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COMMONWEALTH BUREAU OF CENSUS AND STATISTICS,  
CANBERRA.

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OFFICIAL

# YEAR BOOK

OF THE

# COMMONWEALTH OF AUSTRALIA

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No. 25.—1932.

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Prepared under Instructions from  
The Honorable the Treasurer,

BY

E. T. MCPHEE,  
COMMONWEALTH STATISTICIAN.

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## PREFACE.

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By the Constitution of the Commonwealth of Australia, the Parliament of the Commonwealth is empowered "to make laws for the peace, order, and good government of the Commonwealth, with respect to Census and Statistics." In the exercise of the power so conferred, a "Census and Statistics Act" was passed in 1905, and in the year following, the "Commonwealth Bureau of Census and Statistics" was created. The first Official Year Book was published early in 1908. The publication here presented is the twenty-fifth Official Year Book issued under the authority of the Commonwealth Government.

The synopsis on pp. ix to xxii immediately following shows the general arrangement of the work. The special index (following the usual general index) provided at the end of the volume, together with certain references given in the various Chapters, will assist in tracing in previous issues matter which, owing to limitations of space, has been omitted or is not printed fully in the present volume.

Economic and financial conditions during recent years have caused a demand for new information, or information expressed in new terms, concerning many matters of finance, trade, production and industry. The need for economy hampers the collection of this material, and the need for abbreviation precludes adequate presentation of some that is available. The editing of the Year Book has, therefore, become particularly difficult, involving as it does the continual balancing of the claims of old material and new. Some progress has been made in the previous issue and in the present volume towards bringing closer to present day requirements the Chapters dealing with production, trade, finance, population and vital statistics, etc., while the Appendix furnishes a summary, brought up to the latest available date, of the chief events in connexion with the financial crisis. It is not proposed to refer here to the whole of the new matter or to the new treatment of existing matter, incorporated in the present volume, but attention may be drawn to the following :—

- Chapter III. General Government—Cost per Head of Population of Principal State Government Services (pp. 76, 77).
- Chapter VI. Trade—Balance of Trade with Principal Countries (p. 155).  
Trade in Calendar Years (pp. 161, 162).  
(See also Appendix).
- Chapter VII. Transport, etc.—Shipping—Nationality of Cargo Vessels (pp. 197–198).  
Railways—Grafton—South Brisbane (Uniform Gauge) Line (p. 201).  
Summary of Operations, all Railways (p. 204).
- Chapter VIII. Public Finance—Additional information and new treatment of existing information (pp. 281–287).  
Sales Tax (p. 288).  
Price of Gold, London and Australia (p. 313).  
Estimated Legal Tender Extant (p. 315).  
State Debts—Variations of Interest Rates (p. 330).  
Commonwealth and State Debts—Year of Maturity and Interest Payable (p. 335).
- Chapter XIII. Public Hygiene—Organization for the Control of Cancer (p. 417).
- Chapter XVI. Population—Oversea Migration (Various, pp. 489 to 494).
- Chapter XVII. Vital Statistics—Revised Classification of Causes of Deaths (pp. 531–536).

- Chapter XIX. Pastoral Production—Agreements regarding Meat at the Ottawa Conference (p. 607).  
Imports of Chilled and Frozen Meat into United Kingdom (pp. 608-9-13-14).
- Chapter XX. Agricultural Production—Net Value of Production (p. 628).  
Exports and Imports of Wheat, Principal Countries (pp. 637, 638).  
Stocks of Wheat and Flour (p. 640).
- Chapter XXI. Farmyard, etc., Products—Agreements at Ottawa Conference (p. 679).
- Chapter XXII. Forestry—The Australian Forestry School (p. 697).
- Appendix—Balance of Payments (p. 832).  
The Financial Crisis (p. 840).

Later information which has come to hand since the various Chapters were sent to press has been incorporated in the Appendix (pp. 831 to 858).

The material contained in each issue is always carefully examined, but it would be idle to hope that all error has been avoided. I shall be grateful to those who will be kind enough to point out defects or make suggestions.

My best thanks are due to the State Statisticians, who have collected and compiled the data on which the greater part of the information given in the Year Book is based. Thanks are also due to the responsible officers of the various Commonwealth and State Departments, and to others, who have kindly, and often at considerable trouble, supplied information.

I wish to express my keen appreciation of the valuable work performed by Mr. J. Stonham, M.A., the Editor of the Year Book, and of the services rendered by the officers in charge of the various branches of the Commonwealth Bureau of Census and Statistics, upon whom has devolved the duty of revising the Chapters relative to their respective branches.

In conclusion, I desire to refer very briefly to the great loss to statistical and economic science occasioned by the retirement—through a breakdown in health—from the position of Commonwealth Statistician and Actuary of Mr. Chas. H. Wickens, I.S.O., F.S.S., F.I.A., Hon. M.S.S. (Paris).

Mr. Wickens, who had been on the staff of the Bureau since its inception in 1906, was appointed Commonwealth Statistician in succession to the late Sir George Knibbs (the first Commonwealth Statistician) on the 1st August, 1922, and, after a brilliant and useful career as Statistician and Economist, was invalided from the Commonwealth Service on the 12th April, 1932.

In addition to his outstanding worth as statistician, actuary, and economist, Mr. Wickens rendered valuable service to the Commonwealth Government in connexion with many important matters, both in Australia and as Commonwealth representative overseas.

From the 16th April, 1931, to the 31st December, 1933, Professor L. F. Giblin, Ritchie Professor of Economics at the University of Melbourne, at the special request of the Government, acted as Commonwealth Statistician, and this volume was prepared under his direction.

E. T. MCPHEE,  
Commonwealth Statistician.

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STATISTICAL SUMMARY.

STATISTICAL SUMMARY, AUSTRALIA.

Heading.		Years.						
		1871.	1881.	1891.	1901.	1911.	1921.	1931.
Population(a)	Males	928,918	1,247,059	1,736,617	2,004,836	2,382,232	2,708,727	3,324,287
	Females	771,970	1,059,677	1,504,368	1,820,077	2,191,554	2,710,346	3,201,633
	Total	1,700,888	2,306,736	3,240,985	3,824,913	4,573,786	5,509,073	6,525,920
Births	No.	63,625	80,004	110,187	102,945	122,193	136,198	118,509
	Rate	38.00	35.26	34.47	27.16	27.21	24.95	18.23
Deaths	No.	22,175	33,327	47,430	46,330	47,869	54,076	56,560
	Rate	13.24	14.69	14.84	12.22	10.66	9.91	8.70
Marriages	No.	11,623	17,244	23,862	27,753	39,482	46,869	38,882
	Rate	6.94	7.60	7.47	7.32	8.79	8.59	5.98
		1871-72.	1881-82.	1891-92.	1901-02.	1911-12.	1921-22.	1930-31.
Agriculture—								
Wheat	Area, acs.	1,279,778	3,002,064	3,335,528	5,115,965	7,427,834	9,719,042	18,164,920
	Yld., bshl.	11,917,741	21,443,862	25,675,265	38,561,619	71,636,347	129,088,806	213,594,391
Oats	Area, acs.	9.31	7.16	7.79	7.54	9.64	13.28	11.76
	Yld., bshl.	225,492	194,816	246,129	461,430	616,794	733,406	1,082,101
Barley	Area, acs.	4,251,630	4,795,897	5,726,256	9,789,854	9,561,833	12,147,433	16,658,058
	Yld., bshl.	18.85	24.62	23.27	21.22	15.50	16.56	15.39
Maize	Area, acs.	48,164	75,864	68,068	74,511	116,466	298,910	382,887
	Yld., bshl.	726,158	1,353,580	1,178,560	1,519,819	2,050,836	6,085,085	6,560,911
Hay	Area, acs.	15.08	17.84	17.31	20.40	17.66	20.36	17.40
	Yld., tons	142,078	165,777	284,428	294,819	340,065	305,186	293,450
Potatoes(b)	Area, acs.	4,576,635	5,726,266	9,261,922	7,034,786	8,939,855	7,840,438	8,025,619
	Yld., tons	32.21	34.54	32.56	23.86	26.29	25.69	27.35
Sugar Cane..	Area, acs.	303,274	768,388	942,166	1,688,402	2,518,351	2,994,519	3,323,463
	Yld., tons	375,871	767,194	1,067,255	2,024,608	2,867,973	3,992,189	4,449,661
Vineyards	Area, acs.	1.24	1.00	1.13	1.20	1.14	1.30	1.25
	Yld., tons	67,911	76,265	112,884	109,685	130,463	149,144	141,716
Total value all agricultural production	Area, acs.	212,896	243,216	380,477	322,524	301,489	388,091	364,724
	Yld., tons	3.13	3.19	3.37	2.94	2.31	2.60	2.57
Pastoral, dairying, etc.—	Area, acs.	11,576	19,708	45,444	86,950	101,010	128,350	229,661
	Yld., tons	176,632	349,627	737,573	1,367,802	1,682,250	2,436,890	3,688,869
Live Stock	Wine, gal.	15.25	17.74	16.23	15.73	16.65	18.99	16.06
	Area, acs.	16,253	14,570	48,882	63,677	60,602	92,414	112,970
Wool prod., lb. (greasy)	Wine, gal.	2,104,000	1,488,000	3,438,000	5,816,087	4,975,147	8,542,573	13,078,218
	Sheep No.	40,072,955	65,092,719	106,421,068	72,040,211	96,886,234	86,119,068	110,568,279
Butter production	Cattle	11,112,112	8,010,991	11,112,112	8,491,428	11,828,954	14,441,309	11,720,916
	Horses	701,530	1,088,029	1,584,737	1,620,420	2,278,226	2,438,182	1,792,734
Cheese	Pigs	586,017	703,188	845,888	931,309	1,110,721	960,385	1,071,679
	Wool prod., lb. (greasy)	179,000,000	322,759,000	631,587,000	543,131,661	721,298,288	721,678,346	912,141,253
Bacon and ham	Butter production lbs.	(d)	(d)	42,314,585	103,747,295	212,073,745	267,071,340	350,405,104
	Cheese (c)	(d)	(d)	10,130,945	11,845,153	15,886,712	32,653,003	33,099,781
Total estimated value of pastoral and dairying production	Bacon and ham	(d)	(d)	16,771,886	34,020,629	53,335,092	58,626,469	71,050,133
	Total value of pastoral and dairying production	£ 20,736,000	£ 29,538,000	£ 39,256,000	£ 36,890,000	£ 72,883,000	£ 119,399,000	£ 112,566,000
		1871.	1881.	1891.	1901.	1911.	1921.	1931.
Mineral production—								
Gold	£	7,916,627	5,194,390	5,281,861	14,017,538	10,551,624	4,018,685	3,563,519
	£	36,046	45,622	3,736,352	2,248,598	3,022,177	1,539,092	1,443,897
Copper	£	830,242	714,003	367,373	2,215,431	2,564,278	803,957	567,558
	£	24,020	1,145,889	560,502	448,234	1,209,973	418,418 (f)	216,205
Tin	£	369	200	2,979	4,067	1,415,169	283,455	512,795
	£	330,510	637,865	1,912,353	2,602,733	3,927,360	10,983,757 (f)	6,103,735
Total value all mineral production	£	9,190,330	7,820,290	12,074,106	21,816,772	23,302,878	19,977,384 (f)	13,343,674
	Forestry production—							
Quantity of local timber sawn or hewn	1,000 sup. ft.	(d)	(d)	(d)	452,131	604,794	590,495	266,891
	Manufactories—							
No. of factories	£	(g)	(g)	(g)	(g)	14,455	18,023	21,751
	£	(g)	(g)	(g)	(g)	311,710	378,540	338,843
Hands employed	£	(g)	(g)	(g)	(g)	27,528,377	68,050,861	62,454,859
	£	(g)	(g)	(g)	(g)	51,259,004	121,674,119	118,310,123
Total value of output	£	(g)	(g)	(g)	(g)	133,022,090	320,331,765	290,798,564

(a) At 31st December. (b) Partly estimated 1871 and 1881. (c) Area of productive cane. (d) Information not available. (e) Years ended December, except for last column which refers to year ended June. (f) Incomplete. (g) Owing to variation in classification and lack of information effective comparison is impossible.

STATISTICAL SUMMARY, AUSTRALIA—continued.

Heading.	Years.							
	1871.	1881.	1891.	1901.	1911.	1921-22.	1930-31.	
Shipping—								
Oversea vessels ent. & cleared	{ No. ton.	2,748	3,284	3,778	4,028	4,174	3,111	3,107
Commerce—		1,312,642	2,519,364	4,726,307	6,541,991	9,984,801	9,081,278	11,250,190
Imports oversea	£	17,017,000	29,067,000	37,711,000	42,434,000	66,967,488	103,066,436	(a) 60,959,633
per head	£	10/3/3	12/16/2	11/16/0	11/3/11	14/18/2	18/14/1	9/8/3
Exports oversea	£	21,725,000	27,528,000	36,043,000	49,096,000	79,482,258	127,346,535	(a) 88,904,142
per head	£	12/19/6	12/2/8	11/5/6	13/2/2	17/13/10	23/4/1	13/14/7
Total oversea trade	£	38,742,000	56,595,000	73,754,000	92,130,000	146,449,746	230,912,971	(a) 149,863,775
per head	£	23/2/9	24/18/10	23/1/6	24/6/1	32/12/0	41/18/2	23/2/10
Customs and excise duties	£	(b)	4,809,326	7,440,869	8,656,530	13,515,005	27,565,199	28,221,016
per head	£	(b)	2/2/5	2/6/7	2/5/8	2/19/2	5/0/1	4/7/2
Principal Oversea Ex- ports (c)								
Wool	lbs. (greasy)	176,635,800	328,369,200	619,259,800	518,018,100	720,364,900	927,833,700	860,214,218
	£	9,459,629	13,173,026	19,940,029	15,237,454	26,071,193	47,977,044	32,001,760
Wheat	centals	479,954	3,218,792	5,876,875	12,156,935	33,088,704	59,968,334	71,533,974
	£	193,732	1,189,762	1,938,864	2,774,643	9,641,608	28,644,155	14,744,468
Flour	tons	12,988	49,549	33,363	96,814	175,891	359,734	524,243
	£	170,415	519,635	328,425	589,604	1,391,529	5,519,881	3,513,573
Butter	lb.	1,812,700	1,298,800	4,239,500	34,007,400	101,722,100	127,347,400	103,180,695
	£	45,813	39,383	206,868	1,451,168	4,637,362	7,968,078	8,120,165
Skins and hides	£	100,123	316,878	873,695	1,250,938	3,227,336	3,136,810	3,635,577
Tallow	£	914,278	644,149	571,069	677,745	1,935,836	1,441,795	643,405
Meats	£	566,780	362,965	460,894	2,611,244	4,303,159	5,542,102	5,747,995
Timber (undressed)	£	42,586	118,117	38,448	731,501	1,023,960	1,158,166	619,647
Gold	£	7,184,833	6,445,365	5,703,532	14,315,741	12,045,769	3,483,239	12,273,562
Silver and lead	£	37,891	57,954	1,932,278	2,359,253	3,212,584	2,697,130	3,283,488
Copper	£	598,538	676,515	417,687	1,619,145	2,345,961	705,358	494,316
Coal	£	134,355	361,081	645,972	986,957	900,622	1,099,899	411,612
Govt. Railways—								
1/4th. of line open, mls.		970	3,832	9,541	12,579	16,078	23,502	26,890
Capital cost	£	19,269,786	42,741,350	99,764,090	123,223,779	152,194,603	244,353,233	341,544,692
Gross revenue	£	1,102,650	3,910,122	8,654,085	11,038,468	17,847,837	38,194,630	38,985,433
Working expenses	£	608,332	2,141,735	5,630,182	7,133,617	10,945,727	29,817,970	31,727,975
Per cent. of working expenses on earn- ings	%	55.17	54.77	65.06	64.63	61.33	78.07	81.38
Postal—								
Letters and postcards dealt with	No.	24,382,000	67,640,000	157,297,000	220,853,000	453,063,000	561,973,105	(d) 761,507,854
per head		14.54	29.61	49.07	58.26	100.90	102.01	117.65
Newspapers dealt with	No.	3,336,000	38,063,000	83,280,000	102,727,000	141,638,000	140,477,184	152,326,448
per head		7.95	16.66	26.61	27.10	31.54	25.50	23.53
Cheque-paying Banks(e)—								
Note circulation	£	2,456,487	3,978,711	4,417,269	3,399,462	3,718,458	(f) 213,868	198,478
Coin & bullion held	£	6,168,869	9,108,243	16,712,923	19,780,528	33,470,770	21,626,832	2,545,475
Advances	£	26,039,573	57,732,824	129,741,583	86,352,832	108,578,774	193,435,760	276,584,784
Deposits	£	21,856,959	53,849,455	98,315,338	91,487,148	143,446,910	273,866,737	(h) 301,687,858
Savings Banks(i)—								
Total deposits	£	3,193,285	7,854,480	15,536,592	30,882,645	59,393,682	154,396,051	193,375,397
Aver. per head of population	£	1/18/9	3/10/5	4/18/7	8/3/0	13/8/5	28/9/4	29/14/11
State Schools—								
Number of schools	No.	2,502	4,494	6,231	7,012	8,060	9,445	10,257
Teachers	No.	4,641	9,028	12,564	14,500	16,971	26,120	33,533
Enrolment	No.	236,710	432,320	561,153	638,478	638,850	819,042	914,043
Aver. attendance	No.	137,767	255,143	350,773	450,246	463,799	666,498	801,729

(a) British currency values. The corresponding recorded values were Imports £60,959,633, and Exports £102,103,316. (b) Not available. (c) Australian produce, except gold, which includes re-exports. (d) Includes packets. (e) Figures for the first three years are averages for the December quarter; the remainder for the June quarter. (f) Decrease due to prohibition of re-issue. (g) Includes Commonwealth Savings Bank Deposits. (h) Excludes Commonwealth Savings Bank Deposits. (i) First three years—at 31st December; remainder, 30th June.

# CHRONOLOGICAL TABLE.

## CHRONOLOGICAL TABLE OF CHIEF EVENTS SINCE THE ESTABLISHMENT OF SETTLEMENT IN AUSTRALIA.

NOTE.—The Government was centralized in Sydney, New South Wales, up to 1825, when Tasmania (Van Diemen's Land) was made a separate colony. In the Table, the names now borne by the States serve to indicate the localities.

Year.

- 1788 N.S.W.—Arrival of "First Fleet" at Botany Bay. Land in vicinity being found unsuitable for settlement, the expedition moved to Sydney Cove. Formal proclamation of colony on 7th February. Branch Settlement established at Norfolk Island. French navigator Lapérouse visited Botany Bay. First cultivation of wheat and barley. First grape vines planted.
- 1789 N.S.W.—First wheat harvest at Parramatta, near Sydney. Discovery of Hawkesbury River.
- 1790 N.S.W.—"Second Fleet" reached Port Jackson. Landing of the New South Wales Corps.
- 1791 N.S.W.—Arrival of "Third Fleet." Territorial seal brought by Governor King.
- 1792 N.S.W.—Visit of *Philadelphia*, first foreign trading vessel.
- 1793 N.S.W.—First free immigrants arrived in the *Bellona*. First Australian church opened at Sydney. Tas.—D'Entrecasteaux discovered the Derwent River.
- 1794 N.S.W.—Establishment of settlement at Hawkesbury River.
- 1795 N.S.W.—Erection of the first printing press at Sydney. Descendants of strayed cattle discovered at Cowpastures, Nepean River.
- 1796 N.S.W.—First Australian theatre opened at Sydney. Coal discovered by fishermen at Newcastle.
- 1797 N.S.W.—Introduction of merino sheep from Cape of Good Hope.
- 1798 Tas.—Insularity of Tasmania proved by voyage of Bass and Flinders.
- 1800 N.S.W.—First export of coal. First Customs House in Australia established at Sydney. Flinders' charts published.
- 1801 N.S.W.—First colonial manufacture of blankets and linen.
- 1802 Vic.—Discovery of Port Phillip by Lieut. Murray. S.A.—Discovery of Spencer's and St. Vincent Gulfs by Flinders. Q'land.—Discovery of Port Curtis and Port Bowen by Flinders.
- 1803 N.S.W.—First Australian wool taken to England by Capt. Macarthur. Issue of "The Sydney Gazette," first Australian newspaper. Vic.—Attempted settlement at Port Phillip by Collins. Discovery of Yarra by Grimes. Tas.—First settlement formed at Risdon by Lieut. Bowen.
- 1804 N.S.W.—Insurrection of convicts at Castle Hill. Vic.—Abandonment of settlement at Port Phillip. Tas.—Foundation of settlement at Hobart by Collins, and at Yorktown by Colonel Paterson.
- 1805 N.S.W.—First extensive sheep farm established at Camden by Capt. Macarthur. Portion of settlers from Norfolk Island transferred to Tasmania.
- 1806 N.S.W.—Shortage of provisions. Tas.—Settlement at Launceston.
- 1807 N.S.W.—Final transfer of convicts from Norfolk Island. First shipment of merchantable wool (245 lb.) to England.
- 1808 N.S.W.—Deposition of Governor Bligh.
- 1809 N.S.W.—Isaac Nichols appointed to supervise delivery of overseas letters.
- 1810 N.S.W.—Post-office officially established at Sydney, Isaac Nichols first post-master. First race meeting in Australia at Hyde Park, Sydney. Tas.—First Tasmanian newspaper printed.
- 1813 N.S.W.—Passage across Blue Mountains discovered by Wentworth, Lawson, and Blaxland. Macquarie River discovered by Evans.
- 1814 N.S.W.—Flinders suggested the name "Australia," instead of "New Holland." Creation of Civil Courts.
- 1815 N.S.W.—First steam engine in Australia erected at Sydney. Lachlan River discovered by Evans. Tas.—Arrival of first immigrant ship with free settlers. First export of wheat to Sydney.

- Year.
- 1816 N.S.W.—Botanic Garden formed at Sydney.
- 1817 N.S.W.—Oxley's first exploration inland. Discovery of Lakes George and Bathurst and the Goulburn Plains by Meehan and Hume. First bank in Australia—Bank of New South Wales—opened at Sydney.
- 1818 N.S.W.—Liverpool Plains, and the Peel, Hastings, and Manning Rivers discovered by Oxley, and Port Essington by Captain King.
- 1819 N.S.W.—First Australian Savings Bank opened at Sydney.
- 1820 Tas.—First importation of pure merino sheep.
- 1821 Tas.—Establishment of penal settlement at Macquarie Harbour.
- 1823 N.S.W.—New South Wales Judicature Act passed. Discovery of gold at Fish River by Assistant-Surveyor McBrien. Qld.—Brisbane River discovered by Oxley.
- 1824 N.S.W.—Erection into Crown Colony. Executive Council formed. Establishment of Supreme Court at Sydney, and introduction of trial by jury. First Australian Enactment (Currency Bill) passed by the Legislative Council. Proclamation of freedom of the press. First manufacture of sugar. Vic.—Hume and Hovell, journeying overland from Sydney, arrived at Corio Bay. Qld.—Penal settlement founded at Moreton Bay (Brisbane). Fort Dundas Settlement formed at Melville Island, N. Terr.
- 1825 N.S.W.—Extension of western boundary to 129th meridian. Tas.—Separation of Van Diemen's Land (Tasmania). Qld.—Major Lockyer explored Brisbane River to its source, and discovered coal.
- 1826 N.S.W.—Settlement in Illawarra District. Vic.—Settlement at Corinella, Western Port, formed by Captain Wright.
- 1827 N.S.W.—Colony became self-supporting. Qld.—Darling Downs and the Condamine River discovered by Allan Cunningham. W.A.—Military Settlement founded at King George's Sound by Major Lockyer. First official claim of British Sovereignty over all Australia.
- 1828 N.S.W.—Second constitution. First Census. Sturt's expedition down Darling River. Cotton first grown in Sydney Botanical Gardens. Gas first used at Sydney. Richmond and Clarence Rivers discovered by Captain Rous. Vic.—Abandonment of settlement at Western Port. Qld.—Cunningham discovered a route from Brisbane to the Darling Downs, and explored Brisbane River.
- 1829 N.S.W.—Sturt's expedition down Murrumbidgee River. W.A.—Foundation of settlement at Swan River. Foundation of Perth.
- 1830 N.S.W.—Insurrection of convicts at Bathurst. Sturt, voyaging down Murrumbidgee and Murray Rivers, arrived at Lake Alexandrina. Tas.—Trouble with natives. Black line organized to force aborigines into Tasman's Peninsula, but failed. Between 1830 and 1835, however, George Robinson, by friendly suasion, succeeded in gathering the small remnant of aborigines (203) into settlement on Flinders Island.
- 1831 N.S.W.—Crown lands first disposed of by public competition. Mitchell's explorations north of Liverpool Plains. Arrival at Sydney of first steamer, *Sophia Jane*, from England. SS. *Surprise*, first steamship built in Australia, launched at Sydney. First coal shipped from Australian Agricultural Company's workings at Newcastle, N.S.W. First assisted immigration to N.S.W. S.A.—Wakefield's first colonization committee. W.A.—Appointment of Executive and Legislative Councils.
- 1832 N.S.W.—Savings Bank of N.S.W. established.
- 1833 N.S.W.—First School of Arts established at Sydney.
- 1834 N.S.W.—First settlement at Twofold Bay. Vic.—Settlement formed at Portland Bay by Henty Bros. Qld.—Leichhardt reached Gulf of Carpentaria. S.A.—Formation of the South Australian Association. W.A.—Severe reprisals against natives at Pinjarrah.
- 1835 Vic.—John Batman arrived at Port Phillip; made treaty with the natives for 600,000 acres of land; claim afterwards disallowed by Imperial Government. Foundation of Melbourne.



- Year.
- 1836 N.S.W.—Mitchell's overland journey from Sydney to Cape Northumberland. Vic.—Proclamation of Port Phillip district as open for settlement. S.A.—Settlement founded at Adelaide under Governor Hindmarsh.
- 1837 N.S.W.—Appointment in London of Select Committee on Transportation. Vic.—Melbourne named by Governor Bourke. First overlanders from Sydney arrived at Port Phillip.
- 1838 N.S.W.—Discontinuance of assignment of convicts. Qld.—Settlement of German missionaries at Brisbane. S.A.—“Overlanding” of cattle from Sydney to Adelaide along the Murray route by Hawden and Bonney. Settlement at Port Essington, Northern Territory, formed by Captain Bremer.
- 1839 N.S.W.—Gold found at Vale of Clwydd by Count Strzlecki. S.A.—Lake Torrens discovered by Eyre. Port Darwin discovered by Captain Stokes. W.A.—Murchison River discovered by Captain Grey.
- 1840 N.S.W.—Abolition of transportation to New South Wales. Land regulations—proceeds of sales to be applied to payment for public works and expenditure on immigration. Vic.—Determination of northern boundary. Qld.—Penal settlement broken up and Moreton Bay district thrown open. S.A.—Eyre began his overland journey from Adelaide to King George's Sound.
- 1841 N.S.W.—Gold found near Hartley by Rev. W. B. Clarke. W.A.—Completion of Eyre's overland journey from Adelaide to King George's Sound. Tas.—Renewal of transportation.
- 1842 N.S.W.—Incorporation of Sydney. Vic.—Incorporation of Melbourne. S.A.—Discovery of copper at Kapunda.
- 1843 N.S.W.—First Representative Constitution (under Act of 1842). First Manufacture of tweed. Qld.—Moreton Bay granted legislative representation.
- 1844 S.A.—Sturt's last expedition inland. Qld.—Leichhardt's expedition from Condamine River to Port Essington.
- 1845 N.S.W.—Mitchell's explorations on the Barcoo. Qld.—Explorations by Mitchell and Kennedy. S.A.—Discovery of the Burra copper deposits. Sturt discovered Cooper's Creek.
- 1846 N.S.W.—Initiation of meat preserving. Qld.—Foundation of settlement at Port Curtis. S.A.—Proclamation of North Australia. W.A.—Foundation of New Norcia (Benedictine) Mission.
- 1847 N.S.W.—Iron smelting commenced near Berrima. Overland mail established between Sydney and Adelaide. Vic.—Melbourne created a City. Qld.—Explorations by Leichhardt, Burnett, and Kennedy.
- 1848 Qld.—Leichhardt's last journey. Kennedy speared by the blacks at York Peninsula. Chinese brought in as shepherds.
- 1849 N.S.W.—Indignation of colonists at arrival of convict ship *Hashemy*. Exodus of population to goldfields of California. Vic.—*Randolph* prevented from landing convicts. Qld.—Assignment of convicts per *Hashemy* to squatters on Darling Downs. W.A.—Commencement of transportation to Western Australia.
- 1850 N.S.W.—Final abolition of transportation. First sod of first Australian railway turned at Sydney. Vic.—Gold discovered at Clunes by Hon. W. Campbell. Representative government granted. S.A.—Representative government granted. W.A.—Pearl oysters found by Lieut. Helpman at Saturday Island Shoal. Tas.—Representative government granted. Sydney University founded.
- 1851 N.S.W.—Payable gold discovered by Hargraves at Lewis Ponds and Summerhill Creek. Telegraph first used. Vic.—Separation of Port Phillip—erected into independent colony under the name of Victoria. Discovery of gold in various localities. “Black Thursday,” 6th Feb., a day of intense heat. W.A.—Proclamation of Legislative Council Act.
- 1852 N.S.W.—Arrival of the *Chusan*, first P. and O. mail steamer from England. S.A.—First steamer ascends the Murray River to the junction with the Darling. Tas.—Meeting of first elective Council protests against transportation. Payable gold discovered at The Nook, near Fingal, and at Nine Mile Springs.
- 1853 Tas.—Abolition of transportation. Vic.—Melbourne University founded.

- Year.
- 1854 Vic.—Opening of first Victorian railway—Flinders-street to Port Melbourne. Riots on Ballarat gold-fields. Storming of the Eureka Stockade. 3rd Dec.
- 1855 N.S.W.—Opening of railway—Sydney to Parramatta. Mint opened. Gregory's expedition in search of Leichhardt.
- 1856 N.S.W.—Pitcairn Islanders placed on Norfolk Island. W.A.—A. C. Gregory's expedition in search of Leichhardt.  
Responsible Government in N.S.W., Vic., S.A., and Tas. (Act of 1855).
- 1857 N.S.W.—Wreck of the *Dunbar* (119 lives lost), and *Catherine Adamson* (21 lives lost), at Sydney Heads. Select Committee on Federation. Vic.—Manhood suffrage and vote by ballot. S.A.—Passage of Torrens' Real Property Act.
- 1858 N.S.W.—Establishment of manhood suffrage and vote by ballot. Telegraphic communication between Sydney, Melbourne, and Adelaide. Qld.—Canoona gold rush.
- 1859 Qld.—Proclamation of Queensland as separate colony. Tas.—First submarine cable, via Circular Head and King Island to Cape Otway.
- 1860 Vic.—Burke and Wills left Melbourne and crossed to Gulf of Carpentaria. S.A.—Copper discoveries at Wallaroo and Mōonta. McDouall Stuart reached centre of continent and named "Central Mount Stuart."
- 1861 N.S.W.—Anti-Chinese riots at Lambing Flat and Burrangong gold-fields. Opening of first tramway in Sydney. Regulation of Chinese immigration. Vic.—Burks and Wills perished at Cooper's Creek, near Innamineka, S.A.
- 1862 N.S.W.—Abolition of State aid to religion. Real Property Act. S.A.—Stuart crossed the Continent from south to north. W.A.—First export of pearl-shell.
- 1863 Vic.—Intercolonial Conference at Melbourne. S.A.—Northern Territory taken over. W.A.—Initiation of settlement in the North-west district. Henry Maxwell Lefroy discovered and traversed area now comprised in the Coolgardie-Kalgoorlie gold-field.
- 1864 Qld.—First railway begun and opened. First sugar made from Queensland cane. Tas.—First successful shipment of English salmon ova.
- 1865 N.S.W.—Destruction by fire of St. Mary's Cathedral, Sydney.
- 1866 N.S.W.—Passage of Public Schools Act of (Sir) Henry Parkes. S.A.—Introduction of camels for exploration, etc.
- 1867 Vic.—Imposition of protective tariff. Qld.—Discovery of gold at Gympie.
- 1868 N.S.W.—Attempted assassination of the Duke of Edinburgh at Clontarf, near Sydney. W.A.—Arrival of the *Hougomont*, last convict ship. Tas.—First sod of first railway (Launceston and Western) turned by Duke of Edinburgh.
- 1869 W.A.—First telegraph line opened from Perth to Fremantle.
- 1870 N.S.W.—Intercolonial Exhibition opened at Sydney. Imperial troops withdrawn. Vic.—Intercolonial Congress at Melbourne. S.A.—Commencement of trans-continental telegraph.
- 1871 N.S.W.—Permanent military force raised. W.A.—Passage of Elementary Education Act. Forrest's explorations. Tas.—Discovery of tin at Mount Bischoff. Launceston-Western railway opened for traffic.
- 1872 N.S.W.—International Exhibition at Sydney. Vic.—Mint opened. S.A.—Cable from Java to Port Darwin. Completion of transcontinental telegraph line.
- 1873 N.S.W.—Intercolonial Conference at Sydney. First volunteer encampment. Inauguration of mail service with San Francisco.
- 1874 N.S.W.—Triennial Parliaments Act passed. Intercolonial Conference. W.A.—John and Alexander Forrest arrived at Overland Telegraph from Murchison. S.A.—University of Adelaide founded.
- 1875 Qld.—Transfer of Port Albany Settlement to Thursday Island.
- 1876 N.S.W.—Completion of cable—Sydney (La Perouse) to Wellington (Wakapuaka). W.A.—Giles crosses colony from east to west. Tas.—Death of Truganini, last representative of Tasmanian aborigines.
- 1877 W.A.—Opening of telegraphic communication with South Australia.
- 1878 Qld.—Restriction of Chinese immigration.

Year.

- 1879 N.S.W.—First artesian bore at Killara. International Exhibition at Garden Palace, Sydney. First steam tramway. W.A.—A. Forrest's explorations in the Kimberley district, and discovery of the Fitzroy pastoral country.
- 1880 N.S.W.—Public Instruction Act passed. Vic.—Opening of first Victorian International Exhibition at Melbourne. Federal Conference at Melbourne and Sydney.
- 1881 N.S.W.—Further restrictions on Chinese immigration. Visit to Australia of T.R.H. Prince Albert Victor and Prince George.
- 1882 N.S.W.—Garden Palace destroyed by fire. W.A.—Nugget of gold found between Roebourne and Cossack.
- 1883 N.S.W.—Discovery of silver at Broken Hill. Completion of railway between New South Wales and Victoria. Qld.—Annexation of New Guinea—repudiated by Imperial authorities. Federal Conference held at Sydney. Federal Council created.
- 1884 Federation Bill passed in Victoria and rejected in New South Wales. British protectorate declared over New Guinea.
- 1885 N.S.W.—Military contingent sent to the Sudan. Opening of the Broken Hill Proprietary Silver Mines. W.A.—Gold found by prospectors on the Margaret and Ord Rivers in the Kimberley district. Tas.—Silver-lead discovered at Mount Zeehan.
- 1886 Tas.—Discovery of gold and copper at Mount Lyell. First session of Federal Council met at Hobart on the 26th January.
- 1887 N.S.W.—Disaster at Bulli coal mine (81 lives lost). Peat's Ferry (Hawkesbury River) railway accident. S.A.—International Exhibition at Adelaide. W.A.—Cyclone destroyed nearly the whole pearling fleet off the Ninety-Mile Beach—200 lives lost. Gold discovered at Southern Cross. First "Colonial" Conference in London. Australasian Naval Defence Force Act passed.
- 1888 N.S.W.—Centennial celebrations. Restrictive legislation against Chinese, imposing poll-tax of £100. Vic.—Second Victorian International Exhibition held at Melbourne. Qld.—Railway communication opened between Sydney and Brisbane. Conference of Australian Ministers at Sydney to consider question of Chinese immigration. First meeting of the Australasian Association for the Advancement of Science held in Sydney.
- 1889 Qld.—Direct railway communication established between Brisbane and Adelaide. W.A.—Framing of new Constitution. Tas.—University of Tasmania founded.
- 1890 W.A.—Responsible Government granted. Meeting at Melbourne of Australasian Federation Conference.
- 1891 N.S.W.—Election to Legislative Assembly of 35 Labour members. Arrival of Australian Auxiliary Squadron. Cessation of assisted immigration. W.A.—Discovery of gold on the Murchison. First Federal Convention in Sydney: draft bill framed and adopted.
- 1892 W.A.—Discovery of gold by Messrs. Bayley and Ford at Coolgardie.
- 1893 N.S.W.—Departure by the *Royal Tar* of colonists for "New Australia." Financial crisis, chiefly affecting the eastern States.
- 1895 N.S.W.—Free-trade tariff. Land and income taxes introduced. Conference of Premiers on Federation at Hobart.
- 1896 N.S.W.—People's Federal Convention at Bathurst.
- 1897-8 Sessions of Federal Convention at Adelaide, Sydney, and Melbourne.
- 1898 N.S.W.—First surplus of wheat for export. Draft Federal Constitution Bill submitted to electors in Victoria, New South Wales, South Australia, and Tasmania. Requisite statutory number of votes not obtained in New South Wales.

- Year.
- 1899 First contingent of Australian troops sent to South Africa. Conference of Premiers in Melbourne to consider amendments to Federal Constitution Bill. Referendum—Bill accepted by New South Wales, Victoria, Queensland, South Australia, and Tasmania. First Labour Government (Queensland).
- 1900 N.S.W.—Old-age pensions instituted.  
Contingents of naval troops sent to China. Commonwealth Constitution Act received Royal Assent, 9th July. Proclamation of Commonwealth signed, 17th September. Mr. (afterwards Sir) Edmund Barton formed first Federal Ministry.
- 1901 Vic.—Old-age pensions instituted.  
Proclamation of the Commonwealth at Sydney. First Federal Parliament opened at Melbourne by the Duke of Cornwall and York. Interstate freetrade established.
- 1902 N.S.W.—Disastrous explosion at Mount Kembla Colliery—95 lives lost. W.A.—Opening of pumping station at Northam in connexion with Gold-fields water supply. Completion of Pacific Cable (all-British).  
First Federal Tariff.
- 1903 W.A.—Coolgardie and Kalgoorlie Water Supply Scheme completed.  
Inauguration of the Federal High Court.
- 1905 N.S.W.—Re-introduction of assisted immigration.
- 1906 Wireless telegraphy installed between Queenscliff, Vic., and Devonport, Tas. Papua taken over by Commonwealth.
- 1907 N.S.W.—Telephone, Sydney to Melbourne, opened.  
Imperial Conference in London.
- 1908 Canberra chosen as site of Federal Capital. Visit of U.S.A. fleet to Australia.
- 1909 Imperial Defence Conference in London—Commonwealth ordered two destroyers and one first-class cruiser for fleet unit. Visit of Lord Kitchener to report and advise on Commonwealth military defence. Loss of the *Waratah* with 300 passengers and crew. Queensland University founded.
- 1910 Referendum on financial relations between the Commonwealth and the States. Penny Postage. Arrival of the *Yarra* and *Parramatta*, first vessels of Australian navy. Australian Notes Act passed and first Commonwealth notes issued. Admiral Sir R. Henderson visited Australia to advise on naval defence.
- 1911 First Federal Census. Transfer of Northern Territory to Commonwealth. Introduction of compulsory military training. Launch of Commonwealth destroyer *Warrego* at Sydney. Establishment of penny postage to all parts of British Empire. University of Western Australia founded.
- 1912 Opening of Commonwealth Bank. First payments of Maternity Bonus. First sod turned at Port Augusta of Trans-Australian Railway (Port Augusta to Kalgoorlie).
- 1913 Arrival of battle cruiser *Australia*, and cruisers *Melbourne* and *Sydney*. Federal Capital named Canberra and foundation stone laid. Appointment of Interstate Commission.
- 1914 Visit of General Sir Ian Hamilton to report on military defence scheme. Double dissolution of Federal Parliament. Visit of British Association for the Advancement of Science.  
European War declared 4th August. Australian Navy transferred to British Navy. Australian offer to equip and furnish 20,000 troops accepted. German possessions in South-West Pacific seized by Australian Naval and Military Expeditionary Force. German cruiser *Emden* destroyed by H.M.A.S. *Sydney* at Cocos Islands, 9th November. First contingent landed in Egypt. Australian and New Zealand Army Corps (A.N.Z.A.C.) formed under Sir William Birdwood.

Year.

- 1915 Opening of Broken Hill Proprietary's Ironworks at Newcastle, N.S.W. Navy Department created.  
 Australian and New Zealand troops landed at Gallipoli, 25th April. Battle of Sari Bair (Lone Pine), 6th-10th August. Evacuation, 18th-20th December. Australian warships with Grand Fleet, in Atlantic, Malaysia, and elsewhere overseas during remainder of war.
- 1916 Record wheat harvest (180,000,000 bushels). Purchase of steamships by the Commonwealth.  
 Australian and New Zealand mounted troops organized in mounted divisions and camel corps, operating thereafter in Egypt, Palestine, and Syria. Battle of Romani, 4th August. Other troops with reinforcements organized as four infantry divisions (1st, 2nd, 4th, and 5th) with some other units, and transferred to France. Fromelles, 19th July; the Somme, 1st July-18th November (Pozières, Mouquet Farm, Flers). 3rd Division, formed in Australia, landed in France. First proposal for compulsory military service defeated by referendum.
- 1917 National Ministry formed. Kalgoorlie-Port Augusta railway completed.  
 German withdrawal from Somme; Arras offensive (Bullecourt, 11th April and 3rd May); Messines, 7th June; Third Battle of Ypres, 1st July-10th November (Menin Road, Polygon Wood, Broodseinde, Passchendaele). Palestine-Gaza, 26th March, 19th April, 31st October (Beersheba). Australian Flying Corps operating with R.F.C. in Palestine and France. Second proposal for compulsory military service defeated by referendum.
- 1918 Population of Australia reaches 5,000,000. Australia House (Strand, London) opened by the King.  
 Five Australian divisions in France formed into army corps, 1st January. Sir William Birdwood succeeded by Sir John Monash, 30th May. Defensive campaign on Somme, 21st March-25th April, Dernancourt, Villers-Bretonneux; Battles of the Lys, 9th-29th April (Hazebrouck); Hamel, 4th July; Battle of Amiens, 8th August; Mont St. Quentin, 31st August; Hindenburg Line, 18th September-5th October. Palestine-Megiddo, 19th September; Damascus, 1st October. Armistice with Germany, 11th November. Repatriation Department created.
- 1919 Mr. Hughes and Mr. Cook represented Australia at Peace Conference. Return of Australian troops. Aerial flight England to Australia by Capt. Sir Ross Smith and Lieut. Sir Keith Smith. Visit to Australia of General Sir W. Birdwood. Visit of Admiral Lord Jellicoe.
- 1920 Visit to Australia of H.R.H. the Prince of Wales. Wholesale prices rose to more than double the 1914 level.
- 1921 Second Commonwealth Census. Germany's indemnity fixed (Australia's share approximately £63,000,000). Mandate given to Australia over Territory of New Guinea. First direct wireless press message, England to Australia.
- 1922 First lock on River Murray opened at Blanchetown, South Australia. Queensland Legislative Council abolished.
- 1923 First sod, site of Federal Parliament House at Canberra, turned.
- 1924 H.M.A.S. *Australia* sunk. Visit of British cruiser squadron. Directorate of Commonwealth Bank appointed. Loan by British Government of £34,000,000 for Imperial migration and development. Australian Loan Council formed.
- 1925 Visit of American fleet. Solar Observatory established at Canberra. Brisbane-Kyogle railway commenced. North Shore (Sydney) Bridge commenced.
- 1926 Population of Australia reached 6,000,000. Council for Scientific and Industrial Research established. Imperial Conference. Dominion Status defined; "Paterson" butter marketing plan came into operation.
- 1927 Transfer of Seat of Federal Government from Melbourne to Canberra. New Parliament House opened by H.R.H. the Duke of York. Beam Wireless established.

## Year.

- 1928 Aerial flights from England to Australia by Mr. Bert Hinkler (solo); from America to Australia, and from Australia to New Zealand and return by Messrs. Kingsford Smith and Ulm. Visit of British Economic Mission to report on the development of Australian resources. Financial agreement of Commonwealth and States; Loan Council reconstituted; State debts to be taken over; Referendum carried, November.
- 1929 Arrival of H.M.A.S. *Canberra*. Beginning of fall in export prices. Commonwealth Bank empowered to mobilize gold reserves. Substantial export of gold reserves towards end of year.
- 1930 Wireless phone service with other countries inaugurated. Miss Amy Johnson, first woman to fly solo from United Kingdom to Australia. East to west Trans-Atlantic flight of Capt. Kingsford Smith and an international crew in "Southern Cross" plane. Export prices fell to half 1928 level. Stoppage of overseas loans. Tariff embargoes and rationing of imports. Visit of Sir Otto Niemeyer, of Bank of England, to discuss financial questions. Heavy export of gold reserves. Exchange Pool formed. £28,000,000 Conversion Loan fully subscribed. Gold bonus granted. Net emigration of 11,408. Government deficits total nearly £11,000,000. First Australian—Right Hon. Sir Isaac Alfred Isaacs, P.C., K.C.M.G., Chief Justice of the High Court—appointed Governor-General of the Commonwealth.
- 1931 Depression continues; Australia substantially off gold standard with exchange rate at 130 in January; 10 per cent. cut in Federal basic wage. First experimental air mail England to Australia and return. New South Wales Savings Bank suspension and subsequent absorption by Commonwealth Bank. Postponement of sinking fund payments on war debt to British Government for two years. Initiation of Premiers' Conference plan to meet the financial situation, i.e., by conversion of internal loans at lower interest rates, economy in governmental expenditure, etc.; bank deposit rates lowered. Commonwealth Bank Act amended to provide for temporary lower reserve against notes; substantial export of gold reserves. Hoover Moratorium on War Debts. England departs from gold standard in September; depreciation of Australian £1 on sterling maintained. Wheat bounty granted. Commonwealth Bank assumes control of exchange rate and lowers it to 125. Net emigration of 12,061. Government deficits total £25,500,000, 1930-31. Death of General Sir John Monash.
- 1932 Sydney Harbour Bridge opened. Australian Broadcasting Commission established. New South Wales Government default in interest payments made good by Commonwealth Government; conflict of Commonwealth and New South Wales governments. Lang Ministry dismissed in New South Wales. Emergency restrictions on imports loosened. Power taken to hold note reserve in sterling securities, and subsequent shipping of gold. Governmental economy and wage reductions in New South Wales. Imperial Economic Conference at Ottawa, with consequential tariff agreements. Sugar Agreement modified. Taxation reductions and assistance to wheat-growers. Substantial fall in net emigration. Government deficits reduced to £19,500,000 for 1931-32.

# OFFICIAL YEAR BOOK

OF THE

## COMMONWEALTH OF AUSTRALIA, 1931,

AND EARLIER YEARS.

### CHAPTER I.

#### DISCOVERY, COLONIZATION, AND FEDERATION OF AUSTRALIA.

##### § 1. General.

Previous issues of the *Official Year Book*, up to and including No. 22, contained in this Chapter some account of the traditional ideas regarding the existence of a "Terra Australis," together with brief details relating to the discovery and annexation of the Australian continent, but it is not proposed to repeat this information in the present volume. (It may be noted here that Captain Cook's arrival and landing at Botany Bay took place on the same day, i.e., 29th April, 1770. See *Official Year Book* No. 22, page 3.)

##### § 2. Establishment of the Commonwealth of Australia.

1. **General.**—On the 1st January, 1901, the six colonies (now known as States) and the Northern Territory were federated under the name of the "Commonwealth of Australia." The dates of creation and the areas of its component parts, as determined on the final adjustment of their boundaries, are shown in the following table:—

##### THE COMMONWEALTH OF AUSTRALIA.—AREA, ETC., OF COMPONENT PARTS.

State.	Year of Formation into Separate Colony.	Present Area in Square Miles.	State.	Year of Formation into Separate Colony.	Present Area in Square Miles.
New South Wales <sup>(a)</sup>	1786	310,372	Tasmania ..	1825	26,215
Victoria ..	1851	87,884	Northern Territory	1863	523,620
Queensland ..	1859	670,500			
South Australia ..	1834	380,070	(b) Area of the Commonwealth ..	..	2,974,581
Western Australia	1829	975,920			

(a) On the 1st January, 1911, the Federal Capital Territory embracing an area of 912 square miles was taken over by the Commonwealth from the State of New South Wales, and on 12th July, 1915, assent was given to an Act taking over a further area of 28 square miles at Jervis Bay; the area of that State therefore is now 309,432 square miles.

(b) The present Dominion of New Zealand became a separate colony in 1841. The addition of its area, 103,862 square miles, to the total shown in the table above, gives a total for Australasia of 3,078,443 square miles.

2. **Transfer of the Northern Territory to the Commonwealth.**—On the 7th December, 1907, the Commonwealth and the State of South Australia entered into an agreement for the surrender to and acceptance by the Commonwealth of the Northern Territory, subject to approval by the Parliaments of the Commonwealth and the State. This approval was given by the South Australian Parliament under the Northern Territory

Surrender Act 1907 (assented to on the 14th May, 1908), and by the Commonwealth Parliament under the Northern Territory Acceptance Act 1910 (assented to on the 16th November, 1910). The Territory accordingly was transferred to the Commonwealth by proclamation on the 1st January, 1911.

3. **Transfer of the Federal Capital Territory to the Commonwealth.**—On the 18th October, 1909, the Commonwealth and the State of New South Wales entered into an agreement for the surrender to and acceptance by the Commonwealth of an area of 912 square miles as the seat of Government of the Commonwealth. In December, 1909, Acts were passed by the Commonwealth and New South Wales Parliaments approving the agreement, and on the 5th December, 1910, a proclamation was issued vesting the Territory in the Commonwealth on and from the 1st January, 1911. By the Jervis Bay Territory Acceptance Act 1915, which was assented to on 12th July, 1915, an area of 28 square miles at Jervis Bay, surrendered by New South Wales according to an agreement made in 1913, was accepted by the Commonwealth.

4. **Transfer of British New Guinea or Papua.**—Under the administration of the Commonwealth, but not included in it, is British New Guinea or *Papua*, finally annexed by the British Government in 1884. This territory was for a number of years administered by the Queensland Government, but was transferred to the Commonwealth by proclamation on the 1st September, 1906, under the authority of the Papua Act (Commonwealth) of 16th November, 1905. The area of Papua is about 90,540 square miles.

5. **Transfer of Norfolk Island.**—Although administered for many years by the Government of New South Wales, this island was, until 1st July, 1914, a separate Crown colony. On that date it was taken over by the Federal Parliament as a territory of the Commonwealth.

### § 3. The Exploration of Australia.

A fairly complete, though brief, account of the Exploration of Australia was given in Year Book No. 2 (pp. 20 to 39), and a summary of the more important facts relating to the subject was embodied in this Chapter in succeeding issues up to and including No. 22.

### § 4. The Constitutions of the States and of the Commonwealth.

1. **General.**—Information regarding the development of the Constitutions of the various Colonies (now States), together with a brief history of the Federal movement in Australia, were embodied in this Chapter in issues of the Official Year Book up to No. 22. In this issue the Constitution of the Commonwealth as at present amended is printed in full, together with the Financial Agreement of 1928 between the Commonwealth and States, made under the provisions of Section 105A of the Constitution.

2. **Commonwealth Constitution Act.**—The Commonwealth of Australia Constitution Act, 63 and 64 Vict., Chapter 12, namely, "An Act to constitute the Commonwealth of Australia," as amended by the Constitution Alteration (Senate Elections) 1906, the Constitution Alteration (State Debts) 1909, and the Constitution Alteration (State Debts) 1928 is given *in extenso* hereunder.

#### THE COMMONWEALTH OF AUSTRALIA CONSTITUTION ACT, 63 & 64 VICT., CHAPTER 12.

*An Act to constitute the Commonwealth of Australia. [9th July, 1900.]*

**W**HEREAS the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, humbly relying on the blessing of Almighty God, have agreed to unite in one indissoluble Federal Commonwealth under the Crown of the United Kingdom of Great Britain and Ireland, and under the Constitution hereby established :

And whereas it is expedient to provide for the admission into the Commonwealth of other Australasian Colonies and possessions of the Queen :

Be it therefore enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :—

1. This Act may be cited as the Commonwealth of Australia Constitution Act.



2. The provisions of this Act referring to the Queen shall extend to Her Majesty's heirs and successors in the sovereignty of the United Kingdom.

3. It shall be lawful for the Queen, with the advice of the Privy Council, to declare by proclamation that, on and after a day therein appointed, not being later than one year after the passing of this Act, the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, and also, if Her Majesty is satisfied that the people of Western Australia have agreed thereto, of Western Australia, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia. But the Queen may, at any time after the proclamation, appoint a Governor-General for the Commonwealth.

4. The Commonwealth shall be established, and the Constitution of the Commonwealth shall take effect, on and after the day so appointed. But the Parliaments of the several colonies may at any time after the passing of this Act make any such laws, to come into operation on the day so appointed, as they might have made if the Constitution had taken effect at the passing of this Act.

5. This Act, and all laws made by the Parliament of the Commonwealth under the Constitution, shall be binding on the courts, judges, and people of every State and of every part of the Commonwealth, notwithstanding anything in the laws of any State; and the laws of the Commonwealth shall be in force on all British ships, the Queen's ships of war excepted, whose first port of clearance and whose port of destination are in the Commonwealth.

6. "The Commonwealth" shall mean the Commonwealth of Australia as established under this Act.

"The States" shall mean such of the colonies of New South Wales, New Zealand, Queensland, Tasmania, Victoria, Western Australia, and South Australia, including the northern territory of South Australia, as for the time being are parts of the Commonwealth, and such colonies or territories as may be admitted into or established by the Commonwealth as States; and each of such parts of the Commonwealth shall be called "a State."

"Original States" shall mean such States as are parts of the Commonwealth at its establishment.

7. The Federal Council of Australasia Act, 1885, is hereby repealed, but so as not to affect any laws passed by the Federal Council of Australasia and in force at the establishment of the Commonwealth.

Any such law may be repealed as to any State by the Parliament of the Commonwealth, or as to any colony not being a State by the Parliament thereof.

8. After the passing of this Act the Colonial Boundaries Act, 1895, shall not apply to any colony which becomes a State of the Commonwealth; but the Commonwealth shall be taken to be a self-governing colony for the purposes of that Act.

9. The Constitution of the Commonwealth shall be as follows:—

#### THE CONSTITUTION.

This Constitution is divided as follows:—

Chapter	I.—The Parliament :
Part	I.—General :
Part	II.—The Senate :
Part	III.—The House of Representatives :
Part	IV.—Both Houses of the Parliament :
Part	V.—Powers of the Parliament :
Chapter	II.—The Executive Government :
Chapter	III.—The Judicature :
Chapter	IV.—Finance and Trade :
Chapter	V.—The States :
Chapter	VI.—New States :
Chapter	VII.—Miscellaneous :
Chapter	VIII.—Alteration of the Constitution.
	The Schedule.

## CHAPTER I.—THE PARLIAMENT.

## PART I.—GENERAL.

1. The legislative power of the Commonwealth shall be vested in a Federal Parliament, which shall consist of the Queen, a Senate, and a House of Representatives, and which is hereinafter called "The Parliament," or "The Parliament of the Commonwealth."

2. A Governor-General appointed by the Queen shall be Her Majesty's representative in the Commonwealth, and shall have and may exercise in the Commonwealth during the Queen's pleasure, but subject to this Constitution, such powers and functions of the Queen as Her Majesty may be pleased to assign to him.

3. There shall be payable to the Queen out of the Consolidated Revenue Fund of the Commonwealth, for the salary of the Governor-General, an annual sum which, until the Parliament otherwise provides, shall be ten thousand pounds.

The salary of a Governor-General shall not be altered during his continuance in office.

4. The provisions of this Constitution relating to the Governor-General extend and apply to the Governor-General for the time being, or such person as the Queen may appoint to administer the Government of the Commonwealth; but no such person shall be entitled to receive any salary from the Commonwealth in respect of any other office during his administration of the Government of the Commonwealth.

5. The Governor-General may appoint such times for holding the sessions of the Parliament as he thinks fit, and may also from time to time, by Proclamation or otherwise, prorogue the Parliament, and may in like manner dissolve the House of Representatives.

After any general election the Parliament shall be summoned to meet not later than thirty days after the day appointed for the return of the writs.

The Parliament shall be summoned to meet not later than six months after the establishment of the Commonwealth.

6. There shall be a session of the Parliament once at least in every year, so that twelve months shall not intervene between the last sitting of the Parliament in one session and its first sitting in the next session.

## PART II.—THE SENATE.

7. The Senate shall be composed of senators for each State, directly chosen by the people of the State, voting, until the Parliament otherwise provides, as one electorate.

But until the Parliament of the Commonwealth otherwise provides, the Parliament of the State of Queensland, if that State be an Original State, may make laws dividing the State into divisions and determining the number of senators to be chosen for each division, and in the absence of such provision the State shall be one electorate.

Until the Parliament otherwise provides there shall be six senators for each Original State. The Parliament may make laws increasing or diminishing the number of senators for each State, but so that equal representation of the several Original States shall be maintained and that no Original State shall have less than six senators.

The senators shall be chosen for a term of six years, and the names of the senators chosen for each State shall be certified by the Governor to the Governor-General.

8. The qualification of electors of senators shall be in each State that which is prescribed by this Constitution, or by the Parliament, as the qualification for electors of members of the House of Representatives; but in the choosing of senators each elector shall vote only once.

9. The Parliament of the Commonwealth may make laws prescribing the method of choosing senators, but so that the method shall be uniform for all the States. Subject to any such law, the Parliament of each State may make laws prescribing the method of choosing the senators for that State.

The Parliament of a State may make laws for determining the times and places of elections of senators for the State.

10. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State, for the time being, relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections of senators for the State.

11. The Senate may proceed to the despatch of business, notwithstanding the failure of any State to provide for its representation in the Senate.

12. The Governor of any State may cause writs to be issued for elections of senators for the State. In case of the dissolution of the Senate the writs shall be issued within ten days from the proclamation of such dissolution.

13. As soon as may be after the Senate first meets, and after each first meeting of the Senate following a dissolution thereof, the Senate shall divide the Senators chosen for each State into two classes, as nearly equal in number as practicable; and the places of the Senators of the first class shall become vacant at the expiration of [*the third year*] *three years*,\* and the places of those of the second class at the expiration of [*the sixth year*] *six years*,\* from the beginning of their term of service; and afterwards the places of senators shall become vacant at the expiration of six years from the beginning of their term of service.

The election to fill vacant places shall be made [in the year at the expiration of which] *within one year before*\* the places are to become vacant.

For the purposes of this section the term of service of a senator shall be taken to begin on the first day of [*January*] *July*\* following the day of his election, except in the cases of the first election and of the election next after any dissolution of the Senate, when it shall be taken to begin on the first day of [*January*] *July*\* preceding the day of his election.

14. Whenever the number of senators for a State is increased or diminished, the Parliament of the Commonwealth may make such provision for the vacating of the places of senators for the State as it deems necessary to maintain regularity in the rotation.

15. If the place of a Senator becomes vacant before the expiration of his term of service, the Houses of Parliament of the State for which he was chosen shall, sitting and voting together, choose a person to hold the place until the expiration of the term, or until the election of a successor as hereinafter provided, whichever first happens. But if the Houses of Parliament of the State are not in session at the time when the vacancy is notified, the Governor of the State, with the advice of the Executive Council thereof, may appoint a person to hold the place until the expiration of fourteen days after the beginning of the next session of the Parliament of the State, or until the election of a successor, whichever first happens.

At the next general election of members of the House of Representatives, or at the next election of senators for the State, whichever first happens, a successor shall, if the term has not then expired, be chosen to hold the place from the date of his election until the expiration of the term.

The name of any senator so chosen or appointed shall be certified by the Governor of the State to the Governor-General.

16. The qualifications of a senator shall be the same as those of a member of the House of Representatives.

17. The Senate shall, before proceeding to the despatch of any other business, choose a senator to be the President of the Senate; and as often as the office of President becomes vacant the Senate shall again choose a senator to be the President.

The President shall cease to hold his office if he ceases to be a senator. He may be removed from office by a vote of the Senate, or he may resign his office or his seat by writing addressed to the Governor-General.

18. Before or during any absence of the President, the Senate may choose a senator to perform his duties in his absence.

19. A senator may, by writing addressed to the President, or to the Governor-General if there is no President or if the President is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

\* As amended by section 2 of the Constitution Alteration (Senate Elections) 1906. The words in square brackets have been repealed; amendments are shown in italics.

20. The place of a senator shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the Senate, fails to attend the Senate.

21. Whenever a vacancy happens in the Senate, the President, or if there is no President or if the President is absent from the Commonwealth the Governor-General, shall notify the same to the Governor of the State in the representation of which the vacancy has happened.

22. Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the senators shall be necessary to constitute a meeting of the Senate for the exercise of its powers.

23. Questions arising in the Senate shall be determined by a majority of votes, and each senator shall have one vote. The President shall in all cases be entitled to a vote; and when the votes are equal the question shall pass in the negative.

### PART III.—THE HOUSE OF REPRESENTATIVES.

24. The House of Representatives shall be composed of members directly chosen by the people of the Commonwealth, and the number of such members shall be, as nearly as practicable, twice the number of the senators.

The number of members chosen in the several States shall be in proportion to the respective numbers of their people, and shall, until the Parliament otherwise provides, be determined, whenever necessary, in the following manner:—

- (i) A quota shall be ascertained by dividing the number of the people of the Commonwealth, as shown by the latest statistics of the Commonwealth, by twice the number of the senators:
- (ii) The number of members to be chosen in each State shall be determined by dividing the number of the people of the State, as shown by the latest statistics of the Commonwealth, by the quota; and if on such division there is a remainder greater than one-half of the quota, one more member shall be chosen in the State.

But notwithstanding anything in this section, five members at least shall be chosen in each Original State.

25. For the purposes of the last section, if by the law of any State all persons of any race are disqualified from voting at elections for the more numerous House of the Parliament of the State, then, in reckoning the number of the people of the State or of the Commonwealth, persons of that race resident in that State shall not be counted.

26. Notwithstanding anything in section twenty-four, the number of members to be chosen in each State at the first election shall be as follows:—

New South Wales ..	23		South Australia ..	..	6
Victoria ..	20		Tasmania ..	..	5
Queensland ..	8				

Provided that if Western Australia is an Original State, the numbers shall be as follows:—

New South Wales ..	26		South Australia ..	..	7
Victoria ..	23		Western Australia ..	..	5
Queensland ..	9		Tasmania ..	..	5

27. Subject to this Constitution, the Parliament may make laws for increasing or diminishing the number of the members of the House of Representatives.

28. Every House of Representatives shall continue for three years from the first meeting of the House, and no longer, but may be sooner dissolved by the Governor-General.

29. Until the Parliament of the Commonwealth otherwise provides, the Parliament of any State may make laws for determining the divisions in each State for which members of the House of Representatives may be chosen, and the number of members to be chosen for each division. A division shall not be formed out of parts of different States.

In the absence of other provisions, each State shall be one electorate.

30. Until the Parliament otherwise provides, the qualification of electors of members of the House of Representatives shall be in each State that which is prescribed by the law of the State as the qualification of electors of the more numerous House of Parliament of the State; but in the choosing of members each elector shall vote only once.\*

31. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State for the time being relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections in the State of members of the House of Representatives.

32. The Governor-General in Council may cause writs to be issued for general elections of members of the House of Representatives.

After the first general election, the writs shall be issued within ten days from the expiry of a House of Representatives or from the proclamation of a dissolution thereof.

33. Whenever a vacancy happens in the House of Representatives, the Speaker shall issue his writ for the election of a new member, or if there is no Speaker or if he is absent from the Commonwealth the Governor-General in Council may issue the writ.

34. Until the Parliament otherwise provides, the qualifications of a member of the House of Representatives shall be as follows :—

- (i) He must be of the full age of twenty-one years, and must be an elector entitled to vote at the election of members of the House of Representatives, or a person qualified to become such elector, and must have been for three years at the least a resident within the limits of the Commonwealth as existing at the time when he is chosen :
- (ii) He must be a subject of the Queen, either natural-born or for at least five years naturalized under a law of the United Kingdom, of a colony which has become or becomes a State, or of the Commonwealth, or of a State.

35. The House of Representatives shall, before proceeding to the despatch of any other business, choose a member to be the Speaker of the House, and as often as the office of Speaker becomes vacant the House shall again choose a member to be the Speaker.

The Speaker shall cease to hold his office if he ceases to be a member. He may be removed from office by a vote of the House, or he may resign his office or his seat by writing addressed to the Governor-General.

36. Before or during any absence of the Speaker, the House of Representatives may choose a member to perform his duties in his absence.

37. A member may by writing addressed to the Speaker, or to the Governor-General if there is no Speaker or if the Speaker is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

38. The place of a member shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the House, fails to attend the House.

39. Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the members of the House of Representatives shall be necessary to constitute a meeting of the House for the exercise of its powers.

40. Questions arising in the House of Representatives shall be determined by a majority of votes other than that of the Speaker. The Speaker shall not vote unless the numbers are equal, and then he shall have a casting vote.

#### PART IV.—BOTH HOUSES OF THE PARLIAMENT.

41. No adult person who has or acquires a right to vote at elections for the more numerous House of the Parliament of a State shall, while the right continues, be prevented by any law of the Commonwealth from voting at elections for either House of the Parliament of the Commonwealth.

42. Every senator and every member of the House of Representatives shall before taking his seat make and subscribe before the Governor-General, or some person authorized by him, an oath or affirmation of allegiance in the form set forth in the schedule to this Constitution.

\* The franchise qualification was determined by the Commonwealth Franchise Act 1902.

43. A member of either House of the Parliament shall be incapable of being chosen or of sitting as a member of the other House.

44. Any person who—

- (i) Is under any acknowledgment of allegiance, obedience, or adherence to a foreign power, or is a subject or a citizen or entitled to the rights or privileges of a subject or a citizen of a foreign power : or
- (ii) Is attainted of treason, or has been convicted and is under sentence, or subject to be sentenced, for any offence punishable under the law of the Commonwealth or of a State by imprisonment for one year or longer : or
- (iii) Is an undischarged bankrupt or insolvent : or
- (iv) Holds any office of profit under the Crown, or any pension payable during the pleasure of the Crown out of any of the revenues of the Commonwealth : or
- (v) Has any direct or indirect pecuniary interest in any agreement with the Public Service of the Commonwealth otherwise than as a member and in common with the other members of an incorporated company consisting of more than twenty-five persons :

shall be incapable of being chosen or of sitting as a senator or a member of the House of Representatives.

But sub-section iv. does not apply to the office of any of the Queen's Ministers of State for the Commonwealth, or of any of the Queen's Ministers for a State, or to the receipt of pay, half-pay, or a pension by any person as an officer or member of the Queen's navy or army, or to the receipt of pay as an officer or member of the naval or military forces of the Commonwealth by any person whose services are not wholly employed by the Commonwealth.

45. If a senator or member of the House of Representatives—

- (i) Becomes subject to any of the disabilities mentioned in the last preceding section : or
- (ii) Takes the benefit, whether by assignment, composition, or otherwise, of any law relating to bankrupt or insolvent debtors : or
- (iii) Directly or indirectly takes or agrees to take any fee or honorarium for services rendered to the Commonwealth, or for services rendered in the Parliament to any person or State :

his place shall thereupon become vacant.

46. Until the Parliament otherwise provides, any person declared by this Constitution to be incapable of sitting as a senator or as a member of the House of Representatives shall, for every day on which he so sits, be liable to pay the sum of one hundred pounds to any person who sues for it in any court of competent jurisdiction.

47. Until the Parliament otherwise provides, any question respecting the qualification of a senator or of a member of the House of Representatives, or respecting a vacancy in either House of the Parliament, and any question of a disputed election to either House, shall be determined by the House in which the question arises.

48. Until the Parliament otherwise provides, each senator and each member of the House of Representatives shall receive an allowance of four hundred pounds a year, to be reckoned from the day on which he takes his seat.\*

49. The powers, privileges, and immunities of the Senate and of the House of Representatives, and of the members and the committees of each House, shall be such as are declared by the Parliament, and until declared shall be those of the Commons House of Parliament of the United Kingdom, and of its members and committees, at the establishment of the Commonwealth.

50. Each House of the Parliament may make rules and orders with respect to—

- (i) The mode in which its powers, privileges, and immunities may be exercised and upheld :
- (ii) The order and conduct of its business and proceedings either separately or jointly with the other House.

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\* By the Parliamentary Allowances Act 1907, the amount of the allowance was increased to £600 a year : and by the Parliamentary Allowances Act 1920 to £1,000 a year. (The latter Act also apportioned special allowances to the President of the Senate ; the Speaker of the House of Representatives ; the Chairman of Committees in each House ; and the Opposition Leader in each House.) The Income Tax (Salaries) Act 1930, provided for a tax of 10 per cent. on each periodical payment of the allowance. - This Act was repealed by the Financial Emergency Act 1931, which reduced the amount of the allowance to £800 a year.

## PART V.—POWERS OF THE PARLIAMENT.\*

51. The Parliament shall, subject to this Constitution, have power to make laws for the peace, order, and good government of the Commonwealth with respect to—

- (i) Trade and commerce with other countries, and among the States :
- (ii) Taxation ; but so as not to discriminate between States or parts of States :
- (iii) Bounties on the production or export of goods, but so that such bounties shall be uniform throughout the Commonwealth :
- (iv) Borrowing money on the public credit of the Commonwealth :
- (v) Postal, telegraphic, telephonic, and other like services :
- (vi) The naval and military defence of the Commonwealth and of the several States, and the control of the forces to execute and maintain the laws of the Commonwealth :
- (vii) Lighthouses, lightships, beacons and buoys :
- (viii) Astronomical and meteorological observations :
- (ix) Quarantine :
- (x) Fisheries in Australian waters beyond territorial limits :
- (xi) Census and statistics :
- (xii) Currency, coinage, and legal tender :
- (xiii) Banking, other than State banking ; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money :
- (xiv) Insurance, other than State insurance ; also State insurance extending beyond the limits of the State concerned :
- (xv) Weights and measures :
- (xvi) Bills of exchange and promissory notes :
- (xvii) Bankruptcy and insolvency :
- (xviii) Copyrights, patents of inventions and designs, and trade marks :
- (xix) Naturalization and aliens :
- (xx) Foreign corporations, and trading or financial corporations formed within the limits of the Commonwealth :
- (xxi) Marriage :
- (xxii) Divorce and matrimonial causes ; and in relation thereto, parental rights, and the custody and guardianship of infants :
- (xxiii) Invalid and old-age pensions :
- (xxiv) The service and execution throughout the Commonwealth of the civil and criminal process and the judgments of the courts of the States :
- (xxv) The recognition throughout the Commonwealth of the laws, the public Acts and records, and the judicial proceedings of the States :
- (xxvi) The people of any race, other than the aboriginal race in any State, for whom it is deemed necessary to make special laws :
- (xxvii) Immigration and emigration :
- (xxviii) The influx of criminals :
- (xxix) External affairs :
- (xxx) The relations of the Commonwealth with the islands of the Pacific :
- (xxxi) The acquisition of property on just terms from any State or person for any purpose in respect of which the Parliament has power to make laws :
- (xxxii) The control of railways with respect to transport for the naval and military purposes of the Commonwealth :
- (xxxiii) The acquisition, with the consent of a State, of any railways of the State on terms arranged between the Commonwealth and the State :
- (xxxiv) Railway construction and extension in any State with the consent of that State :
- (xxxv) Conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State :
- (xxxvi) Matters in respect of which this Constitution makes provision until the Parliament otherwise provides :

\* Particulars of proposed laws which were submitted to referenda are referred to in Chapter III., General Government.

- (xxxvii) Matters referred to the Parliament of the Commonwealth by the Parliament or Parliaments of any State or States, but so that the law shall extend only to States by whose Parliaments the matter is referred, or which afterwards adopt the law :
- (xxxviii) The exercise within the Commonwealth, at the request or with the concurrence of the Parliaments of all the States directly concerned, of any power which can at the establishment of this Constitution be exercised only by the Parliament of the United Kingdom or by the Federal Council of Australasia :
- (xxxix) Matters incidental to the execution of any power vested by this Constitution in the Parliament or in either House thereof, or in the Government of the Commonwealth, or in the Federal Judicature, or in any department or officer of the Commonwealth.
52. The Parliament shall, subject to this Constitution, have exclusive power to make laws for the peace, order, and good government of the Commonwealth with respect to—
- (i) The seat of Government of the Commonwealth, and all places acquired by the Commonwealth for public purposes :
  - (ii) Matters relating to any department of the public service the control of which is by this Constitution transferred to the Executive Government of the Commonwealth :
  - (iii) Other matters declared by this Constitution to be within the exclusive power of the Parliament.
53. Proposed laws appropriating revenue or moneys, or imposing taxation, shall not originate in the Senate. But a proposed law shall not be taken to appropriate revenue or moneys, or to impose taxation, by reason only of its containing provisions for the imposition or appropriation of fines or other pecuniary penalties, or for the demand or payment or appropriation of fees for licences, or fees for services under the proposed law.
- The Senate may not amend proposed laws imposing taxation, or proposed laws appropriating revenue or moneys for the ordinary annual services of the Government.
- The Senate may not amend any proposed laws so as to increase any proposed charge or burden on the people.
- The Senate may at any stage return to the House of Representatives any proposed law which the Senate may not amend, requesting, by message, the omission or amendment of any items or provisions therein. And the House of Representatives may, if it thinks fit, make any of such omissions or amendments, with or without modifications.
- Except as provided in this section, the Senate shall have equal power with the House of Representatives in respect of all proposed laws.
54. The proposed law which appropriates revenue or moneys for the ordinary annual services of the Government shall deal only with such appropriation.
55. Laws imposing taxation shall deal only with the imposition of taxation, and any provisions therein dealing with any other matter shall be of no effect.
- Laws imposing taxation, except laws imposing duties of customs or of excise, shall deal with one subject of taxation only ; but laws imposing duties of customs shall deal with duties of customs only, and laws imposing duties of excise shall deal with duties of excise only.
56. A vote, resolution, or proposed law for the appropriation of revenue or moneys shall not be passed unless the purpose of the appropriation has in the same session been recommended by message of the Governor-General to the House in which the proposal originated.
57. If the House of Representatives passes any proposed law, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, and if after an interval of three months the House of Representatives, in the same or the next session, again passes the proposed law with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may dissolve the Senate and the House of Representatives simultaneously. But such dissolution shall not take place within six months before the date of the expiry of the House of Representatives by effluxion of time.



If after such dissolution the House of Representatives again passes the proposed law, with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may convene a joint sitting of the members of the Senate and of the House of Representatives.

The members present at the joint sitting may deliberate and shall vote together upon the proposed law as last proposed by the House of Representatives, and upon amendments, if any, which have been made therein by one House and not agreed to by the other, and any such amendments which are affirmed by an absolute majority of the total number of the members of the Senate and House of Representatives shall be taken to have been carried, and if the proposed law, with the amendments, if any, so carried is affirmed by an absolute majority of the total number of members of the Senate and House of Representatives, it shall be taken to have been duly passed by both Houses of the Parliament, and shall be presented to the Governor-General for the Queen's assent.

58. When a proposed law passed by both Houses of the Parliament is presented to the Governor-General for the Queen's assent, he shall declare, according to his discretion, but subject to this Constitution, that he assents in the Queen's name, or that he withholds assent, or that he reserves the law for the Queen's pleasure.

The Governor-General may return to the House in which it originated any proposed law so presented to him, and may transmit therewith any amendments which he may recommend, and the Houses may deal with the recommendation.

59. The Queen may disallow any law within one year from the Governor-General's assent, and such disallowance on being made known by the Governor-General by speech or message to each of the Houses of the Parliament, or by Proclamation, shall annul the law from the day when the disallowance is so made known.

60. A proposed law reserved for the Queen's pleasure shall not have any force unless and until within two years from the day on which it was presented to the Governor-General for the Queen's assent the Governor-General makes known, by speech or message to each of the Houses of the Parliament, or by Proclamation, that it has received the Queen's assent.

## CHAPTER II.—THE EXECUTIVE GOVERNMENT.

61. The executive power of the Commonwealth is vested in the Queen and is exercisable by the Governor-General as the Queen's representative, and extends to the execution and maintenance of this Constitution, and of the laws of the Commonwealth.

62. There shall be a Federal Executive Council to advise the Governor-General in the government of the Commonwealth, and the members of the Council shall be chosen and summoned by the Governor-General and sworn as Executive Councillors, and shall hold office during his pleasure.

63. The provisions of this Constitution referring to the Governor-General in Council shall be construed as referring to the Governor-General acting with the advice of the Federal Executive Council.

64. The Governor-General may appoint officers to administer such departments of State of the Commonwealth as the Governor-General in Council may establish.

Such officers shall hold office during the pleasure of the Governor-General. They shall be members of the Federal Executive Council, and shall be the Queen's Ministers of State for the Commonwealth.

After the first general election no Minister of State shall hold office for a longer period than three months unless he is or becomes a senator or a member of the House of Representatives.

65. Until the Parliament otherwise provides, the Ministers of State shall not exceed seven in number, and shall hold such offices as the Parliament prescribes, or, in the absence of provision, as the Governor-General directs.\*

66. There shall be payable to the Queen out of the Consolidated Revenue Fund of the Commonwealth, for the salaries of the Ministers of State, an annual sum which until the Parliament otherwise provides, shall not exceed twelve thousand pounds a year.\*

\* By the Ministers of State Acts 1915 and 1917, the Ministers of State may exceed seven, but shall not exceed nine. £15,300 annually was allotted by these Acts for their salaries; and £800 per annum each was added by the Parliamentary Allowances Act 1920. The Income Tax (Salaries) Act 1930 provided for a tax of 15 per cent. on each periodical payment of salary and allowance. This Act was repealed by the Financial Emergency Act 1931, which reduced the abovementioned amounts to £11,857 10s. od. and £620 respectively.

67. Until the Parliament otherwise provides, the appointment and removal of all other officers of the Executive Government of the Commonwealth shall be vested in the Governor-General in Council, unless the appointment is delegated by the Governor-General in Council or by a law of the Commonwealth to some other authority.

68. The command in chief of the naval and military forces of the Commonwealth is vested in the Governor-General as the Queen's representative.

69. On a date or dates to be proclaimed by the Governor-General after the establishment of the Commonwealth the following departments of the public service in each State shall become transferred to the Commonwealth :—

Posts, telegraphs, and telephones :	Lighthouses, lightships, beacons, and buoys :
Naval and military defence :	Quarantine.

But the departments of customs and of excise in each State shall become transferred to the Commonwealth on its establishment.

70. In respect of matters which, under this Constitution, pass to the Executive Government of the Commonwealth, all powers and functions which at the establishment of the Commonwealth are vested in the Governor of a Colony, or in the Governor of a Colony with the advice of his Executive Council, or in any authority of a Colony, shall vest in the Governor-General, or in the Governor-General in Council, or in the authority exercising similar powers under the Commonwealth, as the case requires.

### CHAPTER III.—THE JUDICATURE.

71. The judicial power of the Commonwealth shall be vested in a Federal Supreme Court, to be called the High Court of Australia, and in such other federal courts as the Parliament creates, and in such other courts as it invests with federal jurisdiction. The High Court shall consist of a Chief Justice, and so many other Justices, not less than two, as the Parliament prescribes.

72. The Justices of the High Court and of the other Courts created by the Parliament—

- (i) Shall be appointed by the Governor-General in Council :
- (ii) Shall not be removed except by the Governor-General in Council, on an address from both Houses of the Parliament in the same session, praying for such removal on the ground of proved misbehaviour or incapacity :
- (iii) Shall receive such remuneration as the Parliament may fix ; but the remuneration shall not be diminished during their continuance in office.

73. The High Court shall have jurisdiction, with such exception and subject to such regulations as the Parliament prescribes, to hear and determine appeals from all judgments, decrees, orders, and sentences—

- (i) Of any Justice or Justices exercising the original jurisdiction of the High Court :
  - (ii) Of any other federal court, or court exercising federal jurisdiction ; or of the Supreme Court of any State, or of any other court of any State from which at the establishment of the Commonwealth an appeal lies to the Queen in Council :
  - (iii) Of the Inter-State Commission,\* but as to questions of law only :
- and the judgment of the High Court in all such cases shall be final and conclusive.

But no exception or regulation prescribed by the Parliament shall prevent the High Court from hearing and determining any appeal from the Supreme Court of a State in any matter in which at the establishment of the Commonwealth an appeal lies from such Supreme Court to the Queen in Council.

Until the Parliament otherwise provides, the conditions of and restrictions on appeals to the Queen in Council from the Supreme Courts of the several States shall be applicable to appeals from them to the High Court.

74. No appeal shall be permitted to the Queen in Council from a decision of the High Court upon any question, howsoever arising, as to the limits inter se of the Constitutional powers of the Commonwealth and those of any State or States, or as to the limits inter se of the Constitutional powers of any two or more States, unless the High Court shall certify that the question is one which ought to be determined by Her Majesty in Council.

\* See note\* on page 16.

The High Court may so certify if satisfied that for any special reason the certificate should be granted, and thereupon an appeal shall lie to Her Majesty in Council on the question without further leave.

Except as provided in this section, this Constitution shall not impair any right which the Queen may be pleased to exercise by virtue of Her Royal prerogative to grant special leave of appeal from the High Court to Her Majesty in Council. The Parliament may make laws limiting the matters in which such leave may be asked, but proposed laws containing any such limitation shall be reserved by the Governor-General for Her Majesty's pleasure.

75. In all matters—

- (i) Arising under any treaty :
- (ii) Affecting consuls or other representatives of other countries :
- (iii) In which the Commonwealth, or a person suing or being sued on behalf of the Commonwealth, is a party :
- (iv) Between States, or between residents of different States, or between a State and a resident of another State :
- (v) In which a writ of Mandamus or prohibition or an injunction is sought against an officer of the Commonwealth :

the High Court shall have original jurisdiction.

76. The Parliament may make laws conferring original jurisdiction on the High Court in any matter—

- (i) Arising under this Constitution, or involving its interpretation :
- (ii) Arising under any laws made by the Parliament :
- (iii) Of Admiralty and maritime jurisdiction :
- (iv) Relating to the same subject-matter claimed under the laws of different States.

77. With respect to any of the matters mentioned in the last two sections the Parliament may make laws—

- (i) Defining the jurisdiction of any federal court other than the High Court :
- (ii) Defining the extent to which the jurisdiction of any federal court shall be exclusive of that which belongs to or is invested in the courts of the States :
- (iii) Investing any court of a State with federal jurisdiction.

78. The Parliament may make laws conferring rights to proceed against the Commonwealth or a State in respect of matters within the limits of the judicial power.

79. The federal jurisdiction of any court may be exercised by such number of judges as the Parliament prescribes.

80. The trial on indictment of any offence against any law of the Commonwealth shall be by jury, and every such trial shall be held in the State where the offence was committed, and if the offence was not committed within any State the trial shall be held at such place or places as the Parliament prescribes.

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#### CHAPTER IV.—FINANCE AND TRADE.

81. All revenues or moneys raised or received by the Executive Government of the Commonwealth shall form one Consolidated Revenue Fund, to be appropriated for the purposes of the Commonwealth in the manner and subject to the charges and liabilities imposed by this Constitution.

82. The costs, charges, and expenses incident to the collection, management, and receipt of the Consolidated Revenue Fund shall form the first charge thereon ; and the revenue of the Commonwealth shall in the first instance be applied to the payment of the expenditure of the Commonwealth.

83. No money shall be drawn from the Treasury of the Commonwealth except under appropriation made by law.

But until the expiration of one month after the first meeting of the Parliament the Governor-General in Council may draw from the Treasury and expend such moneys as may be necessary for the maintenance of any department transferred to the Commonwealth and for the holding of the first elections for the Parliament.

84. When any department of the public service of a State becomes transferred to the Commonwealth, all officers of the department shall become subject to the control of the Executive Government of the Commonwealth.

Any such officer who is not retained in the service of the Commonwealth shall, unless he is appointed to some other office of equal emolument in the public service of the State, be entitled to receive from the State any pension, gratuity, or other compensation, payable under the law of the State on the abolition of his office.

Any such officer who is retained in the service of the Commonwealth shall preserve all his existing and accruing rights, and shall be entitled to retire from office at the time, and on the pension or retiring allowance, which would be permitted by the law of the State if his service with the Commonwealth were a continuation of his service with the State. Such pension or retiring allowance shall be paid to him by the Commonwealth; but the State shall pay to the Commonwealth a part thereof, to be calculated on the proportion which his term of service with the State bears to his whole term of service, and for the purpose of the calculation his salary shall be taken to be that paid to him by the State at the time of the transfer.

Any officer who is, at the establishment of the Commonwealth, in the public service of a State, and who is, by consent of the Governor of the State with the advice of the Executive Council thereof, transferred to the public service of the Commonwealth, shall have the same rights as if he had been an officer of a department transferred to the Commonwealth and were retained in the service of the Commonwealth.

85. When any department of the public service of a State is transferred to the Commonwealth—

- (i) All property of the State of any kind, used exclusively in connexion with the department, shall become vested in the Commonwealth; but, in the case of the departments controlling customs and excise and bounties, for such time only as the Governor-General in Council may declare to be necessary:
- (ii) The Commonwealth may acquire any property of the State, of any kind used, but not exclusively used in connexion with the department; the value thereof shall, if no agreement can be made, be ascertained in, as nearly as may be, the manner in which the value of land, or of an interest in land, taken by the State for public purposes is ascertained under the law of the State in force at the establishment of the Commonwealth:
- (iii) The Commonwealth shall compensate the State for the value of any property passing to the Commonwealth under this section; if no agreement can be made as to the mode of compensation, it shall be determined under laws to be made by the Parliament:
- (iv) The Commonwealth shall, at the date of the transfer, assume the current obligations of the State in respect of the department transferred.

86. On the establishment of the Commonwealth, the collection and control of duties of customs and of excise, and the control of the payment of bounties, shall pass to the Executive Government of the Commonwealth.

87. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, of the net revenue of the Commonwealth from duties of customs and of excise not more than one-fourth shall be applied annually by the Commonwealth towards its expenditure.

The balance shall, in accordance with this Constitution, be paid to the several States, or applied towards the payment of interest on debts of the several States taken over by the Commonwealth.

88. Uniform duties of customs shall be imposed within two years after the establishment of the Commonwealth.

89. Until the imposition of uniform duties of customs—

- (i) The Commonwealth shall credit to each State the revenues collected therein by the Commonwealth.
- (ii) The Commonwealth shall debit to each State—
  - (a) The expenditure therein of the Commonwealth incurred solely for the maintenance or continuance, as at the time of transfer, of any department transferred from the State to the Commonwealth ;
  - (b) The proportion of the State, according to the number of its people, in the other expenditure of the Commonwealth.
- (iii) The Commonwealth shall pay to each State month by month the balance (if any) in favour of the State.

90. On the imposition of uniform duties of customs the power of the Parliament to impose duties of customs and of excise, and to grant bounties on the production or export of goods, shall become exclusive.

On the imposition of uniform duties of customs all laws of the several States imposing duties of customs or of excise, or offering bounties on the production or export of goods, shall cease to have effect, but any grant of or agreement for any such bounty lawfully made by or under the authority of the Government of any State shall be taken to be good if made before the thirtieth day of June, one thousand eight hundred and ninety-eight, and not otherwise.

91. Nothing in this Constitution prohibits a State from granting any aid to or bounty on mining for gold, silver, or other metals, nor from granting, with the consent of both Houses of the Parliament of the Commonwealth expressed by resolution, any aid to or bounty on the production or export of goods.

92. On the imposition of uniform duties of customs, trade, commerce, and intercourse among the States, whether by means of internal carriage or ocean navigation, shall be absolutely free.

But notwithstanding anything in this Constitution, goods imported before the imposition of uniform duties of customs into any State, or into any Colony which, whilst the goods remain therein, becomes a State, shall, on thence passing into another State within two years after the imposition of such duties, be liable to any duty chargeable on the importation of such goods into the Commonwealth, less any duty paid in respect of the goods on their importation.

93. During the first five years after the imposition of uniform duties of customs, and thereafter until the Parliament otherwise provides—

- (i) The duties of customs chargeable on goods imported into a State and afterwards passing into another State for consumption, and the duties of excise paid on goods produced or manufactured in a State and afterwards passing into another State for consumption, shall be taken to have been collected not in the former but in the latter State :
- (ii) Subject to the last sub-section, the Commonwealth shall credit revenue, debit expenditure, and pay balances to the several States as prescribed for the period preceding the imposition of uniform duties of customs.

94. After five years from the imposition of uniform duties of customs, the Parliament may provide, on such basis as it deems fair, for the monthly payment to the several States of all surplus revenue of the Commonwealth.

95. Notwithstanding anything in this Constitution, the Parliament of the State of Western Australia, if that State be an original State, may, during the first five years after the imposition of uniform duties of customs, impose duties of customs on goods passing into that State and not originally imported from beyond the limits of the Commonwealth ; and such duties shall be collected by the Commonwealth.

But any duty so imposed on any goods shall not exceed during the first of such years the duty chargeable on the goods under the law of Western Australia in force at the imposition of uniform duties, and shall not exceed during the second, third, fourth, and fifth of such years respectively, four-fifths, three-fifths, two-fifths, and one-fifth of such latter duty, and all duties imposed under this section shall cease at the expiration of the fifth year after the imposition of uniform duties.

If at any time during the five years the duty on any goods under this section is higher than the duty imposed by the Commonwealth on the importation of the like goods, then such higher duty shall be collected on the goods when imported into Western Australia from beyond the limits of the Commonwealth.

96. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, the Parliament may grant financial assistance to any State on such terms and conditions as the Parliament thinks fit.

97. Until the Parliament otherwise provides, the laws in force in any Colony which has become or becomes a State with respect to the receipt of revenue and the expenditure of money on account of the Government of the Colony, and the review and audit of such receipt and expenditure, shall apply to the receipt of revenue and the expenditure of money on account of the Commonwealth in the State in the same manner as if the Commonwealth, or the Government or an officer of the Commonwealth, were mentioned whenever the Colony, or the Government or an officer of the Colony, is mentioned.

98. The power of the Parliament to make laws with respect to trade and commerce extends to navigation and shipping, and to railways the property of any State.

99. The Commonwealth shall not, by any law or regulation of trade, commerce, or revenue, give preference to one State or any part thereof over another State or any part thereof.

100. The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation.

101. There shall be an Inter-State Commission, with such powers of adjudication and administration as the Parliament deems necessary for the execution and maintenance, within the Commonwealth, of the provisions of this Constitution relating to trade and commerce, and of all laws made thereunder.\*

102. The Parliament may by any law with respect to trade or commerce forbid, as to railways, any preference or discrimination by any State, or by any authority constituted under a State, if such preference or discrimination is undue and unreasonable, or unjust to any State; due regard being had to the financial responsibilities incurred by any State in connexion with the construction and maintenance of its railways. But no preference or discrimination shall, within the meaning of this section, be taken to be undue and unreasonable, or unjust to any State, unless so adjudged by the Inter-State Commission.

103. The members of the Inter-State Commission—

(i) Shall be appointed by the Governor-General in Council :

(ii) Shall hold office for seven years, but may be removed within that time by the Governor-General in Council, on an address from both Houses of the Parliament in the same session praying for such removal on the ground of proved misbehaviour or incapacity :

(iii) Shall receive such remuneration as the Parliament may fix ; but such remuneration shall not be diminished during their continuance in office.

104. Nothing in this Constitution shall render unlawful any rate for the carriage of goods upon a railway, the property of a State, if the rate is deemed by the Inter-State Commission to be necessary for the development of the territory of the State, and if the rate applies equally to goods within the State and to goods passing into the State from other States.

105. The Parliament may take over from the States their public debts [as existing at the establishment of the Commonwealth],† or a proportion thereof according to the respective numbers of their people as shown by the latest statistics of the Commonwealth, and may convert, renew, or consolidate such debts, or any part thereof ; and the State shall indemnify the Commonwealth in respect of the debts taken over, and thereafter

\* The Commission was brought into existence in 1913, under Act No. 33 of 1912, by the appointment of Commissioners for seven years. When this period expired no fresh appointments were made.

† Under section 2 of the Constitution Alteration (State Debts) 1909, the words in square brackets are omitted.

the interest payable in respect of the debts shall be deducted and retained from the portions of the surplus revenue of the Commonwealth payable to the several States, or if such surplus is insufficient, or if there is no surplus, then the deficiency or the whole amount shall be paid by the several States.

105A.\* (i) *The Commonwealth may make agreements with the States with respect to the public debts of the States, including—*

- (a) *the taking over of such debts by the Commonwealth ;*
- (b) *the management of such debts ;*
- (c) *the payment of interest and the provision and management of sinking funds in respect of such debts ;*
- (d) *the consolidation, renewal, conversion, and redemption of such debts ;*
- (e) *the indemnification of the Commonwealth by the States in respect of debts taken over by the Commonwealth ; and*
- (f) *the borrowing of money by the States or by the Commonwealth, or by the Commonwealth for the States.*

(ii) *The Parliament may make laws for validating any such agreement made before the commencement of this section.*

(iii) *The Parliament may make laws for the carrying out by the parties thereto of any such agreement.*

(iv) *Any such agreement may be varied or rescinded by the parties thereto.*

(v) *Every such agreement and any such variation thereof shall be binding upon the Commonwealth and the States parties thereto notwithstanding anything contained in this Constitution or the Constitution of the several States or in any law of the Parliament of the Commonwealth or of any State.*

(vi) *The powers conferred by this section shall not be construed as being limited in any way by the provisions of section one hundred and five of this Constitution.*

#### CHAPTER V.—THE STATES.

106. The Constitution of each State of the Commonwealth shall, subject to this Constitution, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be, until altered in accordance with the Constitution of the State.

107. Every power of the Parliament of a Colony which has become or becomes a State, shall, unless it is by this Constitution exclusively vested in the Parliament of the Commonwealth or withdrawn from the Parliament of the State, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be.

108. Every law in force in a Colony which has become or becomes a State, and relating to any matter within the powers of the Parliament of the Commonwealth, shall, subject to this Constitution, continue in force in the State ; and, until provision is made in that behalf by the Parliament of the Commonwealth, the Parliament of the State shall have such powers of alteration and of repeal in respect of any such law as the Parliament of the Colony had until the Colony became a State.

109. When a law of a State is inconsistent with a law of the Commonwealth, the latter shall prevail, and the former shall, to the extent of the inconsistency, be invalid.

110. The provisions of this Constitution relating to the Governor of a State extend and apply to the Governor for the time being of the State, or other chief executive officer or administrator of the government of the State.

111. The Parliament of a State may surrender any part of the State to the Commonwealth ; and upon such surrender, and the acceptance thereof by the Commonwealth, such part of the State shall become subject to the exclusive jurisdiction of the Commonwealth.

112. After uniform duties of customs have been imposed, a State may levy on imports or exports, or on goods passing into or out of the State, such charges as may be necessary for executing the inspection laws of the State ; but the net produce of all charges so levied shall be for the use of the Commonwealth ; and any such inspection laws may be annulled by the Parliament of the Commonwealth.

\* Under section 2 of the Constitution Alteration (State Debts) 1928, the Constitution was amended by the insertion of this section.

113. All fermented, distilled, or other intoxicating liquids passing into any State or remaining therein for use, consumption, sale, or storage, shall be subject to the laws of the State as if such liquids had been produced in the State.

114. A State shall not, without the consent of the Parliament of the Commonwealth, raise or maintain any naval or military force, or impose any tax on property of any kind belonging to the Commonwealth, nor shall the Commonwealth impose any tax on property of any kind belonging to a State.

115. A State shall not coin money, nor make anything but gold and silver coin a legal tender in payment of debts.

116. The Commonwealth shall not make any law for establishing any religion, or for imposing any religious observance, or for prohibiting the free exercise of any religion, and no religious test shall be required as a qualification for any office or public trust under the Commonwealth.

117. A subject of the Queen, resident in any State, shall not be subject in any other State to any disability or discrimination which would not be equally applicable to him if he were a subject of the Queen resident in such other State.

118. Full faith and credit shall be given, throughout the Commonwealth, to the laws, the public Acts and records, and the judicial proceedings of every State.

119. The Commonwealth shall protect every State against invasion and, on the application of the Executive Government of the State, against domestic violence.

120. Every State shall make provision for the detention in its prisons of persons accused or convicted of offences against the laws of the Commonwealth, and for the punishment of persons convicted of such offences, and the Parliament of the Commonwealth may make laws to give effect to this provision.

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#### CHAPTER VI.—NEW STATES.

121. The Parliament may admit to the Commonwealth or establish new States, and may upon such admission or establishment make or impose such terms and conditions, including the extent of representation in either House of the Parliament, as it thinks fit.

122. The Parliament may make laws for the government of any territory surrendered by any State to and accepted by the Commonwealth, or of any territory placed by the Queen under the authority of and accepted by the Commonwealth, or otherwise acquired by the Commonwealth, and may allow the representation of such territory in either House of the Parliament to the extent and on the terms which it thinks fit.

123. The Parliament of the Commonwealth may, with the consent of the Parliament of a State, and the approval of the majority of the electors of the State voting upon the question, increase, diminish, or otherwise alter the limits of the State, upon such terms and conditions as may be agreed on, and may, with the like consent, make provision respecting the effect and operation of any increase or diminution or alteration of territory in relation to any State affected.

124. A new State may be formed by separation of territory from a State, but only with the consent of the Parliament thereof, and a new State may be formed by the union of two or more States or parts of States, but only with the consent of the Parliaments of the States affected.

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#### CHAPTER VII.—MISCELLANEOUS.

125. The seat of government of the Commonwealth shall be determined by the Parliament, and shall be within territory which shall have been granted to or acquired by the Commonwealth, and shall be vested in and belong to the Commonwealth, and shall be in the State of New South Wales, and be distant not less than one hundred miles from Sydney.



Such territory shall contain an area of not less than one hundred square miles, and such portion thereof as shall consist of Crown lands shall be granted to the Commonwealth without any payment therefor.

The Parliament shall sit at Melbourne until it meet at the seat of Government.

126. The Queen may authorize the Governor-General to appoint any person, or any persons jointly or severally, to be his deputy or deputies within any part of the Commonwealth, and in that capacity to exercise during the pleasure of the Governor-General such powers and functions of the Governor-General as he thinks fit to assign to such deputy or deputies, subject to any limitations expressed or directions given by the Queen; but the appointment of such deputy or deputies shall not affect the exercise by the Governor-General himself of any power or function.

127. In reckoning the numbers of the people of the Commonwealth, or of a State or other part of the Commonwealth, aboriginal natives shall not be counted.

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#### CHAPTER VIII.—ALTERATION OF THE CONSTITUTION.

128 This Constitution shall not be altered except in the following manner:—

The proposed law for the alteration thereof must be passed by an absolute majority of each House of the Parliament, and not less than two nor more than six months after its passage through both Houses the proposed law shall be submitted in each State to the electors qualified to vote for the election of members of the House of Representatives.

But if either House passes any such proposed law by an absolute majority, and the other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, and if after an interval of three months the first-mentioned House in the same or the next session again passes the proposed law by an absolute majority with or without any amendment which has been made or agreed to by the other House, and such other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, the Governor-General may submit the proposed law as last proposed by the first-mentioned House, and either with or without any amendments subsequently agreed to by both Houses, to the electors in each State qualified to vote for the election of the House of Representatives.

When a proposed law is submitted to the electors the vote shall be taken in such manner as the Parliament prescribes. But until the qualification of electors of members of the House of Representatives becomes uniform throughout the Commonwealth, only one-half the electors voting for and against the proposed law shall be counted in any State in which adult suffrage prevails.

And if in a majority of the States a majority of the electors voting approve the proposed law, and if a majority of all the electors voting also approve the proposed law, it shall be presented to the Governor-General for the Queen's assent.

No alteration diminishing the proportionate representation of any State in either House of the Parliament, or the minimum number of representatives of a State in the House of Representatives, or increasing, diminishing, or otherwise altering the limits of the State, or in any manner affecting the provisions of the Constitution in relation thereto, shall become law unless the majority of the electors voting in that State approve the proposed law.

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#### SCHEDULE.

##### OATH.

I, A.B., do swear that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law. SO HELP ME GOD!

##### AFFIRMATION.

I, A.B., do solemnly and sincerely affirm and declare that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law. (NOTE.—The name of the King or Queen of the United Kingdom of Great Britain and Ireland for the time being is to be substituted from time to time.)

3. **The Royal Proclamation.**—The preceding Act received the Royal assent on the 9th July, 1900. This made it lawful to declare that the people of Australia should be united in a Federal Commonwealth. This proclamation, made on the 17th September, 1900, constituted the Commonwealth as from the 1st January, 1901; it reads as follows:—

BY THE QUEEN.

A PROCLAMATION.

(Signed) VICTORIA R.

WHEREAS by an Act of Parliament passed in the Sixty-third and Sixty-fourth Years of Our Reign, intituled "An Act to constitute the Commonwealth of *Australia*," it is enacted that it shall be lawful for the Queen, with the advice of the Privy Council, to declare by Proclamation, that, on and after a day therein appointed, not being later than One year after the passing of this Act, the people of *New South Wales, Victoria, South Australia, Queensland, and Tasmania*, and also, if Her Majesty is satisfied that the people of *Western Australia* have agreed thereto, of *Western Australia*, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia.

And whereas We are satisfied that the people of *Western Australia* have agreed thereto accordingly.

We therefore, by and with the advice of Our Privy Council, have thought fit to issue this Our Royal Proclamation, and We do hereby declare that on and after the First day of *January* One thousand nine hundred and one, the people of *New South Wales, Victoria, South Australia, Queensland, Tasmania, and Western Australia* shall be united in a Federal Commonwealth under the name of the Commonwealth of *Australia*.

Given at Our Court at *Balmoral* this Seventeenth day of *September*, in the Year of Our Lord One thousand nine hundred, and in the Sixty-fourth Year of Our Reign.

GOD SAVE THE QUEEN.

4. **Financial Agreement, 1928.**—Whereas with a view to making provision for the adjustment of Commonwealth and State financial relations the general principle of a draft scheme was affirmed by a Conference of Commonwealth and State Ministers in Melbourne which commenced on the sixteenth day of June One thousand nine hundred and twenty-seven;

And whereas permanent effect cannot be given to the proposals contained in the said scheme unless the Constitution of the Commonwealth is altered so as to confer on the Parliament of the Commonwealth power to make laws for carrying out or giving permanent effect to such proposals;

And whereas pending the submission to the electors of a proposed law for the alteration of the said Constitution as aforesaid and in order to obtain immediately some of the advantages which would result from united action by adoption of the said scheme the Commonwealth and the States have agreed that for the period commencing on the first day of July One thousand nine hundred and twenty-seven and ending on the thirtieth day of June One thousand nine hundred and twenty-nine certain of the proposed provisions of the said scheme shall be temporarily adopted:

Now this Agreement Witnesseth:

#### PART I.

1. This Agreement shall have no force or effect and shall not be binding on any party unless and until it is approved by the Parliaments of the Commonwealth and of the States.

2. DEFINITIONS.

In this Agreement—

“*Net Public debt of a State existing on 30th June, 1927,*” means in respect of each State the amount of debt set forth hereunder opposite to the name of that State, viz. :—

	£
New South Wales .. .. .	234,088,501
Victoria .. .. .	136,949,942
Queensland .. .. .	101,977,855
South Australia .. .. .	84,834,364
Western Australia .. .. .	61,060,675
Tasmania .. .. .	22,434,060
	641,345,397

The said amount of the net public debt of each State includes the debts of that State secured by—

- (i) Inscribed Stock, including Local Inscribed Stock and Government Inscribed Stock ;
- (ii) Instalment Stock ;
- (iii) Registered Stock ;
- (iv) Funded Stock ;
- (v) Stock payable to bearer ;
- (vi) Bonds, including registered bonds ;
- (vii) Debentures, including registered debentures and instalment debentures ;
- (viii) Treasury Bills not repayable within twelve months from the date of issue ; or
- (ix) Fixed deposit receipts or special deposit receipts for moneys borrowed for other than temporary purposes ;

issued or created by the State or by or on behalf of a Colony the predecessor of the State in respect of moneys borrowed by the Colony or State together with debts of the State to the Commonwealth of the amount set out respectively hereunder opposite to the name of the State so far as those last-mentioned debts are not included by being secured in manner aforesaid :—

	£
New South Wales .. .. .	12,553,698
Victoria .. .. .	23,688,269
Queensland .. .. .	16,082,583
South Australia .. .. .	18,446,197
Western Australia .. .. .	16,739,872
Tasmania .. .. .	3,948,613
	91,459,232

after deducting therefrom the amount for which the Commonwealth by this Agreement assumes liability under Part III., Clause 4, of this Agreement and the amount of any moneys or securities standing to the credit of a sinking fund, redemption fund, or a fund of a like nature of the State as on 30th June, 1927, and does not include any moneys raised by the State by way of overdraft, fixed deposit, or special deposit for temporary purposes only.

The said sum of £234,088,501 (being the amount of the debt of New South Wales above-mentioned) comprises the debts referred to in, and has been computed in the manner shown in, the statement signed by representatives of the Commonwealth and of New South Wales.

“*Gross Public Debt of a State existing on 30th June, 1927,*” means in respect of each State the amount of debt set forth hereunder opposite to the name of that State, viz. :—

	£
New South Wales .. .. .	239,441,363
Victoria .. .. .	144,844,530
Queensland .. .. .	105,259,916
South Australia .. .. .	87,614,005
Western Australia :. . . .	70,705,913
Tasmania .. .. .	24,254,688
	672,120,415

The said amount of the gross public debt of each State includes the net public debt of that State together with the amount for which the Commonwealth by this Agreement assumes liability under Part III., Clause (4), of this Agreement and the amount of any moneys or securities standing to the credit of any sinking fund redemption fund or fund of a like nature of the State as on 30th June, 1927.

“*Transferred Properties*” means the properties mentioned or specified in the Schedule of Transferred Properties signed by representatives of the Commonwealth and the States as revised to the 30th June, 1927, being properties which became vested in the Commonwealth pursuant to Section 85 (i) of the Constitution of the Commonwealth.

“*The Loan Council*” means the Australian Loan Council created in pursuance of this Agreement.

“*Bondholder*” means an owner of any—

- (i) Inscribed Stock, including Local Inscribed Stock and Government Inscribed Stock ;
- (ii) Instalment Stock ;
- (iii) Registered Stock ;
- (iv) Funded Stock ;
- (v) Stock payable to bearer ;
- (vi) Bonds, including registered bonds ;
- (vii) Debentures including registered debentures and instalment debentures ;
- (viii) Treasury Bills not repayable within twelve months from the date of issue or
- (ix) Fixed deposit receipts or special deposit receipts for moneys borrowed for other than temporary purposes ;

issued or created by a State or by or on behalf of a Colony the predecessor of the State in respect of borrowed moneys but does not include the Commonwealth.

### 3. AUSTRALIAN LOAN COUNCIL.

(a) There shall be an Australian Loan Council, which shall consist of one Minister of State of the Commonwealth to be appointed in writing from time to time by the Prime Minister of the Commonwealth to represent the Commonwealth, and one Minister of State of each State to be appointed in writing from time to time by the Premier of that State to represent that State. Provided that, if in the opinion of the Prime Minister or of any Premier of a State, special circumstances exist at any time which make it desirable so to do, a person who is not a Minister may instead of a Minister be appointed by the Prime Minister or the Premier as the case may be to represent the Commonwealth or a State as a member of the Loan Council. The name of each person appointed to represent a State shall be notified in writing by the Premier of that State to the Prime Minister.

(b) The member representing the Commonwealth on the Loan Council shall hold office during the pleasure of the Prime Minister of the Commonwealth and a member representing a State shall hold office during the pleasure of the Premier of the State which the member was appointed to represent.

(c) A decision in which all the members for the time being of the Loan Council concur shall be a unanimous decision of the Loan Council notwithstanding any vacancy then existing in its membership.

(d) A meeting of the Loan Council may at any time be convened by the member representing the Commonwealth, and shall be so convened upon the request of at least three members representing States.

(e) A majority of the members of the Loan Council shall constitute a quorum of the Loan Council for the exercise of its powers at any meeting. Provided that—

- (i) a member may at any time appoint in writing a deputy to act in his absence ; and any deputy so appointed may in the absence of the member exercise all the powers and functions of the member and his presence shall be deemed the presence of the member ; and
- (ii) an absent member who has not appointed a deputy may vote by letter or by telegram, and in such case that member shall be counted as being present in relation only to the questions on which he has voted.

(f) The Loan Council may make rules of procedure including rules relating to places, times, and notices of meetings, and conduct of business at meetings, and from time to time may alter such rules.

(g) The Commonwealth and each State will from time to time while Part II. of this Agreement is in force, and while Part III. of this Agreement is in force, submit to the Loan Council a programme setting forth the amount it desires to raise by loans for each financial year for purposes other than the conversion, renewal or redemption of existing loans or temporary purposes. Each programme shall state the estimated total amount of such loan expenditure for the year, and the estimated amount of repayments which will be available towards meeting that expenditure. Any revenue deficit to be funded shall be included in such loan programme, and the amount of such deficit shall be set out. Loans for Defence purposes approved by the Parliament of the Commonwealth shall not be included in the Commonwealth's loan programme or be otherwise subject to this agreement.

(h) If the Loan Council decides that the total amount of the loan programme for the year cannot be borrowed at reasonable rates and conditions it shall decide the amount to be borrowed for the year, and may by unanimous decision allocate such amount between the Commonwealth and the States.

(i) If the members of the Loan Council fail to arrive at a unanimous decision under the last preceding sub-clause allocating the amount to be borrowed for any year, the amount to be borrowed for that year shall be allocated as follows :—

- (i) The Commonwealth shall, if it so desires, be entitled to have one-fifth or any less proportion of such amount allocated to the Commonwealth ; and
- (ii) Each State shall be entitled to have allocated to it a sum (being a portion of the balance of such amount) bearing to the balance of such amount the same proportion which the net loan expenditure of that State in the preceding five years bears to the net loan expenditure of all the States during the same period. Provided that any State may, if it so desires, have allocated to it a sum less than the sum to which it is entitled under this sub-clause or no sum, and that when a less sum or no sum has been allocated to any State or States in manner aforesaid the amount then remaining available for allocation shall be allocated to the other States in the proportion which the net loan expenditure of each of such other States in the preceding five years bears to the net loan expenditure of all such other States during the same period. For the purposes of this sub-clause net loan expenditure does not include expenditure for the conversion, renewal, or redemption of loans, but means the gross other loan expenditure of a State less any amounts of such expenditure repaid to the State other than moneys repaid to the State in manner stated in Part II., clause 4 (e), or Part III., clause 3 (i), of this Agreement.

(j) If the total amount to be borrowed as aforesaid for any year is to be borrowed by means of more than one loan the Loan Council may by unanimous decision apportion between the Commonwealth and the States the amount to be borrowed by each such loan other than the loan by means of which the balance of the total amount to be borrowed as aforesaid for the year is borrowed.

(k) If the members of the Loan Council fail to arrive at a unanimous decision under the last preceding sub-clause apportioning the amount to be borrowed as aforesaid by any loan the amount to be borrowed by that loan shall be apportioned between the Commonwealth and the States in proportion to the amount then to be borrowed as aforesaid for the Commonwealth and for each State for the year.

(l) The Commonwealth and each State will also from time to time, while Part II. of this Agreement is in force and while Part III. of this Agreement is in force, submit to the Loan Council a statement setting out the amount it requires for each financial year for the conversion, renewal or redemption of existing loans.

(m) If the members of the Loan Council fail to arrive at a unanimous decision on any matter other than the matters referred to in sub-clauses (h) and (j) of clause 3 and sub-clause (b) of clause 4 of this part of this Agreement, the matter shall be determined by a majority of votes of the members.

On every question for decision by the Loan Council the member representing the Commonwealth shall have two votes and a casting vote, and each member representing a State shall have one vote.

(n) A decision of the Loan Council in respect of a matter which the Loan Council is by this Agreement empowered to decide shall be final and binding on all parties to this Agreement.

(o) In this clause the expressions "Prime Minister" and "Premier" include the persons for the time being respectively acting as such.

#### 4. FUTURE BORROWINGS OF COMMONWEALTH AND STATES.

(a) Except in cases where the Loan Council has decided under sub-clause (b) of this clause that moneys shall be borrowed by a State, the Commonwealth, while Part II. or Part III. of this Agreement is in force, shall, subject to the decisions of the Loan Council and subject also to clauses 5 and 6 of this Part of this Agreement, arrange for all borrowings for or on behalf of the Commonwealth or any State, and for all conversions, renewals, redemptions, and consolidations of the Public Debts of the Commonwealth and of the States.

(b) If at any time the Loan Council by unanimous decision so decides, a State may in accordance with the terms of the decision borrow moneys outside Australia in the name of the State, and issue securities for the moneys so borrowed. The Commonwealth shall guarantee that the State will perform all its obligations to bondholders in respect of the moneys so borrowed. For all the purposes of this Agreement, including the making of sinking fund contributions, the moneys so borrowed shall be deemed to be moneys borrowed by the Commonwealth for and on behalf of that State.

(c) If any State after the 30th June, 1927, and before this Agreement has been approved by the Parliaments of the Commonwealth and of the States, has borrowed moneys in the name of the State and issued securities for the moneys so borrowed, such moneys shall for all the purposes of this Agreement, including the making of sinking fund contributions, be deemed to be moneys borrowed by the Commonwealth for and on behalf of that State.

(d) While Part II. or Part III. of this Agreement is in force, moneys shall not be borrowed by the Commonwealth or any State otherwise than in accordance with this Agreement.

## 5. BORROWING BY STATES.

For any purpose (including the redemption of securities given or issued at any time for moneys previously borrowed or used in manner stated in this clause) a State may, while Part II. or Part III. of this Agreement is in force :—

- (a) Subject to any maximum limits decided upon by the Loan Council from time to time for interest, brokerage, discount and other charges, borrow moneys within the State from authorities, bodies, funds or institutions (including Savings Banks) constituted or established under Commonwealth or State law or practice and from the public by counter sales of securities, and
- (b) use any public moneys of the State which are available under the laws of the State.

Any securities that are issued for moneys so borrowed or used shall be Commonwealth securities, to be provided by the Commonwealth upon terms approved by the Loan Council.

Where any such borrowing or use is solely for temporary purposes, the provisions of this Agreement, other than this clause, shall not apply.

Where any such borrowing or use is not solely for temporary purposes, and Commonwealth securities are issued in respect thereof, the moneys borrowed or used shall be deemed to be moneys borrowed by the Commonwealth for and on behalf of the State, and may be retained by the State. A State may convert securities given or issued at any time by that State for moneys previously borrowed or used in manner stated in this clause. New securities issued on any such conversion shall be Commonwealth securities to be provided by the Commonwealth upon terms approved by the Loan Council. The amount for which such new securities are issued shall be deemed to be moneys borrowed by the Commonwealth for and on behalf of the State.

If the moneys deemed under this clause to be moneys borrowed by the Commonwealth on behalf of a State, together with the amounts raised by the Commonwealth for and on behalf of the State exceed the total amount of loan moneys decided upon by the Loan Council as the moneys to be raised for and on behalf of the State for the financial year in which the money is deemed to be borrowed, the excess shall, unless the Loan Council otherwise decides, be deemed to be moneys received by the State in the following year on account of its loan programme for that year.

For the purposes of this clause counter sales of securities shall be deemed to mean sales of securities made at the office of the State Treasury, and at such other places as may be decided upon by the Loan Council.

The Commonwealth shall not be under any obligation to make sinking fund contributions in respect of moneys borrowed or used pursuant to this clause to meet a revenue deficit of a State, but the provisions of clause 4 (d) of Part II. and of clause 3 (j) of Part III. of this Agreement shall apply respectively to all moneys borrowed or used for that purpose.

Except in cases where the Loan Council has otherwise decided under sub-clause (b) of clause 4 of Part I. of this Agreement a State shall not have the right to invite loan subscriptions by the issue of a public prospectus.

Notwithstanding anything contained in this Agreement, any State may use for temporary purposes any public moneys of the State which are available under the laws of the State, or may, subject to maximum limits (if any) decided upon by the Loan Council from time to time for interest, brokerage, discount, and other charges, borrow money for temporary purposes by way of overdraft, or fixed, special, or other deposit, and the provisions of this Agreement other than this paragraph shall not apply to such moneys.

## 6. BORROWING BY COMMONWEALTH.

For any purpose (including the redemption of securities given or issued at any time for moneys previously borrowed or used in manner stated in this clause) the Commonwealth may—while Part II. or Part III. of this Agreement is in force—

- (a) Subject to any maximum limits decided upon by the Loan Council from time to time for interest, brokerage, discount and other charges, borrow moneys within the Commonwealth from authorities, bodies, funds or institutions (including Savings Banks) constituted or established under Commonwealth or State law or practice and from the public by counter sales of securities, and
- (b) use any public moneys of the Commonwealth which are available under the laws of the Commonwealth.

Any securities that are issued for moneys so borrowed or used shall be Commonwealth securities, to be provided by the Commonwealth upon terms approved by the Loan Council.

Where any such borrowing or use is solely for temporary purposes, the provisions of this Agreement, other than this clause, shall not apply.

Where any such borrowing or use is not solely for temporary purposes, and Commonwealth securities are issued in respect thereof, the moneys borrowed or used may be retained by the Commonwealth. The Commonwealth may convert securities given or issued at any time by the Commonwealth for moneys previously borrowed or used in manner stated in this clause. New securities issued on any such conversion shall be Commonwealth securities to be provided by the Commonwealth upon terms approved by the Loan Council.

If the moneys so borrowed or used are not borrowed or used solely for temporary purposes and Commonwealth securities are issued in respect thereof, and such moneys, together with other moneys borrowed by the Commonwealth for and on behalf of the Commonwealth as part of the total amount of loan moneys decided upon by the Loan Council as the moneys to be raised for and on behalf of the Commonwealth for the financial year in which the securities are issued, exceed such total amount the excess shall unless the Loan Council otherwise decides be deemed to be moneys received by the Commonwealth in the following year on account of its loan programme for that year.

For the purposes of this clause counter sales of securities shall be deemed to mean sales of securities made at the offices of the Commonwealth Treasury, and at such other places as may be decided upon by the Loan Council.

Notwithstanding anything contained in this Agreement, the Commonwealth may use for temporary purposes any public moneys of the Commonwealth which are available under the laws of the Commonwealth or may, subject to maximum limits (if any) decided upon by the Loan Council from time to time for interest, brokerage, discount, and other charges, borrow money for temporary purposes by way of overdraft, or fixed, special or other deposit, and the provisions of this Agreement other than this paragraph shall not apply to such moneys.

## 7. PAYMENT OF INTEREST AND SINKING FUNDS.

[*Not reprinted.*—This section which is obsolete provided for payment of interest and sinking fund on certain loans in the event of Part III. of the Agreement not coming into force.]

## PART II.

[*Not reprinted.*—This Part which is obsolete provided for interest and sinking fund during the period 1st July, 1927, up to the actual taking over of States' debts by the Commonwealth on 1st July, 1929. The intention was to carry out the permanent arrangements proposed in Part III. so far as they were applicable to the interim period.]



PART III.

This Part of this Agreement shall not come into force or be binding upon any party hereto unless before the 1st July, 1929, the Constitution of the Commonwealth has been altered in accordance with the proposals referred to in Part IV. of this Agreement and a law of the Parliament of the Commonwealth has been made thereunder validating this Agreement, but shall come into full force and effect if and when before the said date the Constitution is so altered and this Agreement is so validated.

When this Part of this Agreement comes into force every matter or thing done and payment made under or in pursuance of Part II. of this Agreement shall be deemed, so far as is practicable, to have been done or made under this Part of this Agreement to the same extent as if this Part had then in fact been in force, and all necessary adjustments shall be made in respect of moneys so paid in order to ensure that no party hereto shall be liable for or make double payments in respect of the same matter.

PERMANENT PROVISIONS.

*1. Taking over States' Public Debts.*

Subject to the provisions of this Part of this Agreement the Commonwealth will take over on the 1st July, 1929 :—

- (i) the balance then unpaid of the gross public debt of each State existing on 30th June, 1927 ; and
  - (ii) all other debts of each State existing on the 1st July, 1929, for moneys borrowed by that State which by this Agreement are deemed to be moneys borrowed by the Commonwealth for and on behalf of that State—
- and will in respect of the debts so taken over assume as between the Commonwealth and the States the liabilities of the States to bondholders.

*2. Payment of Interest.*

(a) Subject to this clause the Commonwealth will pay to bondholders from time to time interest payable on the Public Debts of the States taken over by the Commonwealth as aforesaid other than debts due by the States to the Commonwealth.

(b) The Commonwealth will in each year during the period of 58 years, commencing on 1st July, 1927, provide by equal monthly instalments the following amounts in respect of each State as shown hereunder towards the interest payable by that State :—

	£
New South Wales .. .. .	2,917,411
Victoria .. .. .	2,127,159
Queensland .. .. .	1,096,235
South Australia .. .. .	703,816
Western Australia .. .. .	473,432
Tasmania .. .. .	266,859
	£7,584,912

(c) Each State shall in each year during the same period of 58 years pay to the Commonwealth the excess over the amounts to be provided by the Commonwealth under the last preceding sub-clause necessary to make up as they fall due the interest charges falling due in that year on the public debt of that State taken over by the Commonwealth as aforesaid and then unpaid, and on any moneys borrowed by the Commonwealth on behalf of that State and then unpaid, and after the expiration of the said period each State shall in each year pay to the Commonwealth, as they fall due, the whole of the interest charges on any debt then unpaid and included in the public debt of that State taken over by the Commonwealth as aforesaid, and on any moneys borrowed by the Commonwealth on behalf of that State and then unpaid.

(d) The method by which payments shall be made by a State under sub-clause (c) of this clause shall be arranged from time to time between the Commonwealth and that State.

(e) The rate of interest payable under sub-clause (c) of this clause in respect of moneys borrowed by the Commonwealth on behalf of a State shall be the full rate of interest payable by the Commonwealth in respect of the loan by which such moneys were borrowed or such other rate of interest as may be payable by the State to the Commonwealth under any Agreement made or to be made between the Commonwealth and that State in respect of such moneys and such interest shall be payable by the State for the full term of that loan.

### 3. *Sinking Funds.*

(a) A sinking fund at the rate of 7s. 6d. per annum for each £100 of the net public debts of the States existing on 30th June, 1927, shall be established in the manner hereinafter set forth.

(b) During the period of fifty-eight years commencing on the 1st July, 1927, the Commonwealth shall pay from revenue annually a sinking fund contribution at the rate of 2s. 6d. for each £100 of the net public debts of the States existing on 30th June, 1927, and each State (other than the State of New South Wales) shall in each year during the said period pay from revenue a sinking fund contribution at the rate of 5s. for each £100 of the net public debt of such State existing on 30th June, 1927. The State of New South Wales during the period of fifty-eight years commencing on the 1st July, 1928, shall in each year pay from revenue a sinking fund contribution at the rate of 5s. for each £100 of the net public debt of that State existing on 30th June, 1927.

(c) Where in respect of any debt included in the gross Public Debt of a State existing at the 30th June, 1927, there is under laws or contracts existing at that date an obligation to provide a sinking fund at a rate in excess of 7s. 6d. per annum for each £100, any amount to be so provided in excess of 7s. 6d. per annum for each £100 shall be provided out of the National Debt Sinking Fund, established under the laws of the Commonwealth. Provided that if any law imposing such an obligation is repealed or is amended so as to reduce the rate of sinking fund to be provided the only amount (if any) to be provided out of the National Debt Sinking Fund pursuant to this sub-clause in respect of that debt shall as from the date of such repeal or amendment be the amount (if any) by which the reduced rate of sinking fund for the time being exceeds 7s. 6d. per annum for each £100.

(d) When a loan is issued for the conversion, renewal, or redemption of any debt of a State included in the gross Public Debt of that State existing on 30th June, 1927, the only sinking fund contributions to be made by the Commonwealth and that State in respect of the debt so converted, renewed, or redeemed shall be sinking fund contributions at the same rate and for the same period and upon the same amount as if such debt had not been converted, renewed, or redeemed.

(e) Subject to sub-clauses (h) and (j) of this clause a sinking fund at the rate of 10s. per annum for each £100 of the amount of each new loan raised by a State or by the Commonwealth for and on behalf of a State after 30th June, 1927, shall be established.

(f) Subject to sub-clauses (h) and (j) of this clause, in each year during the period of fifty-three years from the date of the raising after 30th June, 1927, of any new loan by a State or by the Commonwealth for and on behalf of a State the Commonwealth and that State shall each pay from revenue a sinking fund contribution of a sum equal to 5s. for each £100 of the amount of the new loan.

Provided that the period of fifty-three years during which the State of New South Wales shall make sinking fund contributions in respect of new loans raised in the financial year beginning on the 1st July, 1927, shall commence on the 1st July, 1928.

(g) For the purpose of the last two preceding sub-clauses a loan issued after the 30th June, 1927, to meet a revenue deficit which accrued on or before that date shall be deemed to be a new loan, but a loan issued for the conversion, renewal or redemption of a debt shall not be deemed to be a new loan, and where a loan is issued partly for the conversion, renewal, or redemption of a debt and partly for other purposes so much only of the loan as has been issued for other purposes, shall be deemed to be a new loan.

(h) Where it is agreed between the Commonwealth and a State that a loan or any portion of a loan raised after 30th June, 1927, and expended or to be expended upon wasting assets should be redeemed within a shorter period than fifty-three years, the annual sinking fund contributions of the State in respect of that loan or the portion thereof, shall be increased to an amount which with the sinking fund contributions of the Commonwealth in respect of that loan or the portion thereof will provide for the redemption of that loan or the portion thereof within such shorter period. All sinking fund contributions of the State in respect of that loan or the portion thereof shall cease on the expiration of the shorter period, but the Commonwealth contributions in respect of that loan shall continue for the remainder of the period of fifty-three years from the date of the raising of that loan, and during such remainder of the period the State contributions to the sinking fund in respect of other loans of that State shall be reduced by the amount of the Commonwealth contributions during that remainder of the period in respect of such redeemed loan or the portion thereof. For the purposes of this sub-clause the sinking fund contributions of the Commonwealth and the State shall be deemed to accumulate at the rate of  $4\frac{1}{2}$  per centum per annum compounded.

(i) Where loan moneys have been advanced by a State under terms providing for the repayment of such moneys the State shall as and when such moneys are repaid pay such moneys either to the State Loan Fund or to the account or fund from which such moneys were advanced, or to the sinking fund and shall in addition make from revenue its sinking fund contributions in respect of the loan or loans from which the moneys so advanced were provided.

Provided that when loan moneys have been advanced by a State to a Public or Local Authority or body constituted by the State or under the laws of the State and the Authority or body repays such moneys out of its revenue the State may out of moneys so repaid make its sinking fund contributions in respect of the loan moneys so advanced.

(j) In respect of any loan raised after the 30th June, 1927, by a State or by the Commonwealth for and on behalf of a State to meet a revenue deficit accruing after that date no sinking fund contributions shall be payable by the Commonwealth, but that State shall for a period sufficient to provide for the redemption of that loan pay from revenue in each year during such period a sinking fund contribution at a rate of not less than 4 per centum per annum of the amount of that loan. For the purposes of this sub-clause the sinking fund contributions of the State shall be deemed to accumulate at the rate of  $4\frac{1}{2}$  per centum per annum compounded.

(k) All sinking fund contributions to be made in pursuance of this part of this Agreement shall be debts payable to the National Debt Commission as follows:—

(i) As regards the net public debt of a State existing on 30th June, 1927—by half-yearly instalments on 30th September and 31st March in each financial year or on such other dates as may be agreed between the Commonwealth and that State.

(ii) As regards loans raised after 30th June, 1927—by equal instalments on the dates on which interest on such loans is payable or on such other dates as may be agreed upon between the Commonwealth and the State concerned.

(l) Subject to the next succeeding sub-clause all moneys and securities standing to the credit of sinking funds, redemption funds and funds of a like nature of a State existing on 30th June, 1929, shall forthwith be transferred by the States to the National Debt Commission. Nothing in this sub-clause contained shall be deemed to limit the power of a State to cancel before 30th June, 1929, any such securities.

(*m*) Where the conditions relating to sinking funds, redemption funds, and funds of a like nature as aforesaid held by a State on trust or by trustees under statutory or contractual obligations preclude the transfer of those funds to the National Debt Commission, such funds shall remain under the control of the State or those trustees, and the National Debt Commission will either directly or through the State concerned make all future payments to the State or to those trustees from the sinking fund.

(*n*) The sinking funds to be established under this Agreement shall be controlled by the National Debt Commission. The National Debt Commission may arrange with any State to act as its agent in connexion with payments due to bondholders.

(*o*) Sinking Fund contributions made under this Agreement in respect of the debts of a State and funds of that State transferred to the National Debt Commission under sub-clause (*l*) of this clause will not be accumulated, but (subject to sub-clauses (*m*) and (*p*) of this clause) will be applied to the redemption of the public debts of that State and of loans raised by the Commonwealth for and on behalf of that State, or to the purchase of securities issued in respect thereof.

(*p*) If at any time it is deemed inexpedient by the National Debt Commission to apply sinking funds in the manner set forth in sub-clause (*o*) of this clause, such funds may be temporarily invested in any securities in which the National Debt Commission is from time to time by law authorized to invest moneys.

(*q*) When a security issued in respect of a public debt of a State or of a loan raised by the Commonwealth for and on behalf of a State is repurchased or redeemed by the National Debt Commission such security shall be cancelled—

(i) if a repurchased security—on the last day of September, December, March, or June next ensuing after the date of repurchase, or on the date of maturity of the security whichever shall first occur; and

(ii) if a redeemed security—on the date of redemption.

In addition to the sinking fund contributions otherwise payable in respect of that debt or loan the State concerned shall—

(i) as from the date of cancellation of each security and for the full period during which the said sinking fund contributions are payable make from revenue a further sinking fund contribution at the rate of  $4\frac{1}{2}$  per centum per annum of the face value of the cancelled security; and

(ii) also pay to the National Debt Commission interest on the face value of each repurchased security at the rate provided by the security from the last date preceding the repurchase upon which interest was payable under the terms of the security up to the date of cancellation of the security.

#### 4. TRANSFERRED PROPERTIES.

It is agreed that all questions between the Commonwealth and the States relating to State properties transferred to the Commonwealth or acquired by the Commonwealth under section 85 of the Constitution shall be settled as follows :—

The States will as from 1st July, 1929, and as between the Commonwealth and the States be completely free and discharged from all liability whether in respect of principal, interest or sinking fund, or otherwise, which liability shall be assumed by the Commonwealth in respect of so much of the public debts of the States bearing interest at the rate of 5 per centum per annum, taken over by the Commonwealth as aforesaid as amounts to the agreed value of transferred properties, namely, £10,924,323, apportioned to the several States as follows :—

	£
New South Wales .. .. .	4,788,005
Victoria .. .. .	2,302,862
Queensland .. .. .	1,560,639
South Australia .. .. .	1,035,631
Western Australia .. .. .	736,432
Tasmania .. .. .	500,754
Total .. .. .	10,924,323

The particular portion of the public debt of each State in respect of which the States shall become free and discharged from liability shall be determined by the Commonwealth.

Each State will issue to the Commonwealth freehold titles (or, if the laws of any State do not permit of the issue of freehold titles, then titles as near to freehold as the laws of that State will permit) for transferred properties consisting of land or interests in land in that State, and all liability of the Commonwealth to the State in respect of transferred properties shall as from the 1st July, 1929, be extinguished.

The provisions of clauses 2 and 3 of this Part of this Agreement shall not apply to the said amount of £10,924,323.

#### PART IV.—MISCELLANEOUS.

##### I. EXPENSES OF LOAN FLOTATION.

Each State shall repay to the Commonwealth all expenses incurred or payments made by the Commonwealth in the performance of this Agreement in relation to the State including the following expenses and payments :—

- (i) Loan flotation charges ;
- (ii) Management charges ;
- (iii) Stamp duties on transfer of securities ;
- (iv) Commission on payment of interest ;
- (v) Expenses incurred in the conversion renewal redemption or consolidation of loans ;
- (vi) Exchange on transference of moneys.

Unless it is otherwise agreed between the Commonwealth and a State the Commonwealth will not do anything in connexion with a loan of that State existing on the 30th June, 1927, or raised thereafter pursuant to this Agreement which if done by that State would be a breach of any now existing agreement by that State with any Bank.

A certificate by the Auditor-General of the Commonwealth stating the amount to be repaid by a State to the Commonwealth and the matter in respect of which the repayment is to be made shall in the event of a dispute be conclusive as to the amount and matter stated.

##### 2. ALTERATION OF THE CONSTITUTION.

The Commonwealth will take the necessary action to submit to the Parliament of the Commonwealth and to the electors proposals for the alteration of the Constitution of the Commonwealth in the following form :—

“ 105A. (1) The Commonwealth may make agreements with the States with respect to the public debts of the States, including—

- (a) the taking over of such debts by the Commonwealth ;
- (b) the management of such debts ;
- (c) the payment of interest and the provision and management of sinking funds in respect of such debts ;
- (d) the consolidation, renewal, conversion, and redemption of such debts ;
- (e) the indemnification of the Commonwealth by the States in respect of debts taken over by the Commonwealth ; and
- (f) the borrowing of money by the States or by the Commonwealth or by the Commonwealth for the States.

(2) The Parliament may make laws for validating any such agreement made before the commencement of this section.

(3) The Parliament may make laws for the carrying out by the parties thereto of any such agreement.

(4) Any such agreement may be varied or rescinded by the parties thereto.

(5) Every such agreement and any such variation thereof shall be binding upon the Commonwealth and the States parties thereto, notwithstanding anything contained in this Constitution or the constitution of the several States or in any law of the Parliament of the Commonwealth or of any State.

(6) The powers conferred by this section shall not be construed as being limited in any way by the provisions of section 105 of this Constitution."

[For result of referendum see Chapter III., § 2-4.]

### 3. INDEMNITY.

Each State agrees with the Commonwealth that it will by the faithful performance of its obligations under this Agreement indemnify the Commonwealth against all liabilities whatsoever in respect of the public debt of that State taken over by the Commonwealth as aforesaid (other than the liabilities of the Commonwealth under this Agreement to pay interest and to make sinking fund contributions and under clause 4 of Part III. of this Agreement), and in respect of all loans of that State in respect of which this Agreement provides that sinking fund contributions shall be made.

### 4. ACCOUNTS.

Separate accounts shall be kept by the Commonwealth for each State in respect of Debt, Interest, and Sinking Funds.

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[*Note re Validity of Act.*—Consequent upon the failure of the State of New South Wales to provide certain interest payments on its public debts in accordance with the Financial Agreement, the Commonwealth Parliament passed a *Financial Agreement Enforcement Act* (No. 3 of 1932). The State of New South Wales attacked the validity of this act as being *ultra vires* the Commonwealth Parliament and an infringement of State rights in respect to the appropriation of public moneys for specific services. The High Court by a majority decision of four to two held that this was a valid law and dismissed the action, subsequently refusing leave to appeal to the Privy Council.]

## CHAPTER II.

## PHYSIOGRAPHY.

## § 1. General Description of Australia.

1. **Geographical Position.**—(i) *General.* The Australian Commonwealth, which includes the island continent of Australia proper and the island of Tasmania, is situated in the Southern Hemisphere, and comprises in all an area of about 2,974,581 square miles, the mainland alone containing about 2,948,366 square miles. Bounded on the west and east by the Indian and Pacific Oceans respectively, it lies between longitudes 113° 9' E. and 153° 39' E., while its northern and southern limits are the parallels of latitude 10° 41' S. and 39° 8' S., or, including Tasmania, 43° 39' S. On its north are the Timor and Arafura Seas and Torres Strait—on its south the Southern Ocean and Bass Strait. The extreme points are “Steep Point” on the west, “Cape Byron” on the east, “Cape York” on the north, “Wilson’s Promontory” on the south, or, if Tasmania be included, “South-East Cape.”

(ii) *Tropical and Temperate Regions.* Of the total area of Australia nearly 40 per cent. lies within the tropics. Assuming, as is usual, that the latitude of the Tropic of Capricorn is 23° 30' S. (its mean value for 1931 was 23° 26' 53.51"), the areas within the tropical and temperate zones are approximately as follows:—

## AUSTRALIA—AREAS OF TROPICAL AND TEMPERATE REGIONS.

(STATES AND TERRITORY PARTIALLY WITHIN TROPICS.)

Area.	Queensland.	Western Australia.	Northern Territory.	- Total.
	Sq. Miles.	Sq. Miles.	Sq. Miles.	Sq. Miles.
Within Tropical Zone .. .. .	359,000	364,000	426,320	1,149,320
Within Temperate Zone .. .. .	311,500	611,920	97,300	1,020,720
Ratio of Tropical part to whole State ..	0.535	0.373	0.814	0.530
Ratio of Temperate part to whole State	0.465	0.627	0.186	0.470

Thus the tropical part is roughly about one-half (0.530) of the three territories mentioned above, or about five-thirteenths of the whole of Australia (0.386).

2. **Area of Australia compared with Areas of other Countries.**—It is not always realized that the area of Australia is nearly as great as that of the United States of America, that it is four-fifths of that of Canada, that it is over one-fifth of the area of the whole of the British Empire, that it is more than three-fourths of the whole area of Europe, and that it is about 25 times as large as Great Britain and Ireland or Italy.

This great area, coupled with a limited population, renders the solution of the problem of Australian development a particularly difficult one. The areas of Australia and of certain other countries are given in the following table:—

AREA OF AUSTRALIA AND OF OTHER COUNTRIES.

Country.	Area.	Country.	Area.
<b>Continental Divisions—</b>	Sq. miles.	<b>AFRICA—continued.</b>	Sq. miles.
Europe .. .. .	3,845,154	Belgian Congo .. .. .	918,000
Asia .. .. .	16,627,997	Algeria .. .. .	847,500
Africa .. .. .	11,226,845	Angola .. .. .	486,207
North and Central America and West Indies .. .. .	8,553,436	South African Union .. .. .	471,917
South America .. .. .	7,067,201	Portuguese East Africa .. .. .	287,756
Australasia and Polynesia	3,463,363	Tripolitania .. .. .	347,497
		Egypt .. .. .	383,000
Total, exclusive of Arctic and Antarctic Conts. . . . .	50,783,996	Tanganyika Territory .. .. .	374,000
		Abyssinia .. .. .	350,000
<b>Europe—</b>		Nigeria and Protectorate .. .. .	335,700
Russia .. .. .	1,765,332	South-west Africa .. .. .	332,400
France .. .. .	212,659	Northern Rhodesia .. .. .	287,950
Spain (inc. possessions) .. .. .	196,607	Cyrenaica .. .. .	285,640
Germany .. .. .	181,723	Bechuanaland Protectorate	275,000
Sweden .. .. .	173,156	Madagascar .. .. .	241,094
Poland .. .. .	149,958	Kenya Colony and Protec- torate .. .. .	224,960
Finland .. .. .	132,589		
Norway .. .. .	125,086	<b>North and Central America—</b>	
Roumania .. .. .	122,282	Canada .. .. .	3,684,723
Italy .. .. .	119,710	United States .. .. .	3,026,789
Yugoslavia .. .. .	96,134	Mexico .. .. .	767,198
Great Britain and Northern Ireland .. .. .	94,633	Alaska .. .. .	590,884
		Newfoundland and Labra- dor .. .. .	162,734
		Nicaragua .. .. .	51,660
<b>Asia—</b>			
Russia .. .. .	6,475,318	<b>South America—</b>	
China and Dependencies .. .. .	4,279,170	Brazil .. .. .	3,275,510
British India and Adminis- tered Territories .. .. .	1,094,300	Argentine Republic .. .. .	1,153,119
Arabia and Autonomous States .. .. .	1,000,000	Peru .. .. .	532,047
Feudatory Indian States .. .. .	711,032	Bolivia .. .. .	514,155
Persia .. .. .	628,000	Colombia (exc. of Panama)	447,536
Dutch East Indies .. .. .	573,023	Venezuela .. .. .	393,874
Turkey .. .. .	285,334	Chile .. .. .	290,119
Japan (and Dependencies)	265,129	Ecuador .. .. .	109,978
Afghanistan .. .. .	245,000		
Siam .. .. .	200,148	<b>Australasia and Polynesia—</b>	
		Commonwealth of Australia	2,974,581
<b>Africa—</b>		Dutch New Guinea .. .. .	160,692
French West Africa .. .. .	1,440,191	New Zealand and Depen- dencies .. .. .	103,862
Anglo-Egyptian Sudan .. .. .	1,008,100	Papua .. .. .	90,540
French Equatorial Africa	912,049	Territory of New Guinea .. .. .	89,252
		<b>British Empire .. .. .</b>	<b>13,355,426</b>

The figures quoted in the table have, in most cases, been extracted from the Statesman's Year Book for 1931.



3. Areas of Political Subdivisions.—As already stated, Australia consists of six States and the Northern and Federal Capital Territories. The areas of these, and their proportions of the total of Australia, are shown in the following table :—

**AUSTRALIA—AREA OF STATES AND TERRITORIES.**

State or Territory.	Area.	Percentage on Total.
	Sq. miles.	%
New South Wales .. .. .	309,432	10.40
Victoria .. .. .	87,884	2.96
Queensland .. .. .	670,500	22.54
South Australia .. .. .	380,070	12.78
Western Australia .. .. .	975,920	32.81
Tasmania .. .. .	26,215	0.88
Northern Territory .. .. .	523,620	17.60
Federal Capital Territory .. .. .	940	0.03
Total .. .. .	2,974,581	100.00

4. Coastal Configuration.—(i) *General.* There are no striking features in the configuration of the coast; the most remarkable indentations are the Gulf of Carpentaria on the north, and the Great Australian Bight on the south. The Cape York Peninsula on the extreme north is the only other remarkable feature in the outline. In Year Book No. 1, an enumeration of the features of the coast-line of Australia was given (see pp. 60 to 68).

(ii) *Coast-line.* The lengths of coast-line, exclusive of minor indentations, of each State and of the whole continent, and the area per mile of coast-line, are shown in the following table :—

**AUSTRALIA—COAST LINE AND AREA PER MILE THEREOF.**

State.	Coast-line.	Area per Mile of Coast-line.	State.	Coast-line.	Area per Mile of Coast-line.
	Miles.	Sq. miles.		Miles.	Sq. miles.
New South Wales(a)	700	443	South Australia ..	1,540	247
Victoria .. .. .	680	129	Western Australia	4,350	224
Queensland .. .. .	3,000	223	Continent (b) ..	11,310	261
Northern Territory	1,040	503	Tasmania .. .. .	900	29

(a) Including Federal Capital Territory.

(b) Area 2,948,366 square miles;

For the entire Commonwealth of Australia this gives a coast-line of 12,210 miles and an average of 244 square miles for one mile of coast-line. According to Strelbitski, Europe has only 75 square miles of area to each mile of coast-line, and, according to recent figures, England and Wales have only one-third of this, viz., 25 square miles.

(iii) *Historical Significance of Coastal Names.* It is interesting to trace the voyages of some of the early navigators by the names bestowed by them on various coastal features—thus Dutch names are found on various points of the Western Australian coast, in Nuyts' Archipelago, in the Northern Territory, and in the Gulf of Carpentaria;

Captain Cook can be followed along the coasts of New South Wales and Queensland; Flinders' track is easily recognized from Sydney southwards, as far as Cape Catastrophe, by the numerous Lincolnshire names bestowed by him; and the French navigators of the end of the eighteenth and the beginning of the nineteenth century have left their names all along the Western Australian, South Australian, and Tasmanian coast.

5. **Geographical Features of Australia.**—In each of the earlier issues of this Year Book fairly complete information has been given concerning some special geographical element. The nature of this information and its position in the various Year Books can be readily ascertained on reference to the special index following the index to maps and graphs at the end of this work.

6. **Fauna, Flora, Geology, and Seismology of Australia.**—Special articles dealing with these features have appeared in previous Year Books, but limits of space naturally preclude their repetition in each volume. As pointed out in 5 *supra*, however, the nature and position of these articles can be readily ascertained from the special index.

## § 2. Climate and Meteorology of Australia.\*

1. **Introductory.**—In Year Book No. 3, pp. 79, 80, some account was given of the history of Australian meteorology, including reference to the development of magnetic observations and the equipment for the determination of various climatological records. In Year Book No. 4, pp. 84 and 87, will be found a short sketch of the creation and organization of the Commonwealth Bureau of Meteorology, and a résumé of the subjects dealt with at the Meteorological Conference in 1907. Space will not permit of the inclusion of this matter in the present issue.

2. **Meteorological Publications.**—Reference to publications issued by the Central Meteorological Bureau will be found in Official Year Book No. 22, pp. 40, 41. The following publications have since been issued:—Volume of "Results of Rainfall Observations made in Western Australia," for all years of record to 1927; Map of Normal Meteorological Conditions in Australia affecting Aviation; and a Paper "A Basis for Seasonal Forecasting", by H. A. Hunt.

3. **General Description of Australia.**—A considerable portion (0.530) of three divisions of Australia is north of the tropic of Capricorn—that is to say, within the States of Queensland and Western Australia, and the Northern Territory, no less than 1,149,320 square miles belong to the tropical zone, and 1,020,720 to the temperate zone. The whole area of Australia within the temperate zone, however, is 1,825,261 square miles; thus the tropical part is about 0.386, or about five-thirteenths of the whole, or the "temperate" region is half as large again as the "tropical" (more accurately 1.588). By reason of its insular geographical position, and the absence of striking physical features, Australia is, on the whole, less subject to extremes of weather than are regions of similar area in other parts of the globe, and latitude for latitude Australia is, on the whole, more temperate.

The altitudes of the surface of Australia range up to a little over 7,300 feet, hence its climate embraces a great many features, from the characteristically tropical to what is essentially alpine, a fact indicated in some measure by the name Australian Alps given to the southern portion of the great Dividing Range.

On the coast, the rainfall is often abundant and the atmosphere moist, but in some portions of the interior it is very limited, and the atmosphere dry. The distribution of forest, therefore, with its climatic influence, is very uneven. In the interior, in places, there are fine belts of trees, but there are large areas also which are treeless, and where the air is hot and parching in summer. Again, on the coast, even so far south as latitude 35°, the vegetation is tropical in its luxuriance, and to some extent also in character. Climatologically, therefore, Australia may be said to present a great variety of features.

4. **Meteorological Divisions.**—(i) *General.* Reference to the divisions adopted by the Commonwealth Meteorologist will be found in Official Year Book No. 22, p. 41.

\* Prepared from data supplied by the Commonwealth Meteorologist, W. S. Watt, Esquire.

(ii) *Special Climatological Stations.* The latitudes, longitudes, and altitudes of special stations, the climatological features of which are graphically represented hereinafter are as follows :—

## SPECIAL CLIMATOLOGICAL STATIONS—AUSTRALIA.

Locality.	Height above Sea Level.	Latitude. S.	Longitude. E.	Locality.	Height above Sea Level.	Latitude. S.	Longitude. E.
	Feet.	deg. min.	deg. min.		Feet.	deg. min.	deg. min.
Perth ..	197	31 57	115 50	Canberra ..	1,837	35 20	149 15
Adelaide ..	140	34 56	138 35	Darwin ..	97	12 28	130 51
Brisbane ..	137	27 28	153 2	Alice Springs	1,926	23 38	133 37
Sydney ..	138	33 52	151 12	Dubbo ..	870	32 18	148 35
Melbourne ..	115	37 49	144 58	Laverton, W.A.	1,530	28 40	122 23
Hobart ..	177	42 53	147 20	Coolgardie ..	1,389	30 57	121 10

5. *Temperatures.*—(i) *Comparisons with other Countries.* In respect of Australian temperatures generally, it may be pointed out that the isotherm for 70° Fahrenheit extends in South America and South Africa so far south as latitude 33°, while in Australia it reaches only so far south as latitude 30°, thus showing that, on the whole, Australia has latitude for latitude a more temperate climate than other places in the Southern Hemisphere.

The comparison is even more favourable when the Northern Hemisphere is included, for in the United States the 70° isotherm extends in several of the western States so far north as latitude 41°. In Europe, the same isotherm reaches almost to the southern shores of Spain, passing, however, afterwards along the northern shores of Africa till it reaches the Red Sea, when it bends northward along the eastern shore of the Mediterranean till it reaches Syria. In Asia, nearly the whole of the land area south of latitude 40° N. has a higher temperature than 70°.

The extreme range of shade temperatures in summer and winter in a very large part of Australia amounts to probably only 81°. In Siberia, in Asia, the similar range is no less than 171°, and in North America 153°, or approximately double the Australian range.

Along the northern shores of Australia the temperatures are very equable. At Darwin, for example, the difference in the means for the hottest and coldest months is only 8.4°, and the extreme readings for the year, or the highest maximum in the hottest month and the lowest reading in the coldest month, show a difference of under 50°.

Coming southward, the extreme range of temperature increases gradually on the coast, and in a more pronounced manner inland.

(ii) *Hottest and Coldest Parts.* A comparison of the temperatures recorded at coast and inland stations shows that, in Australia, as in other continents, the range increases with increasing distance from the coast.

In the interior of Australia, and during exceptionally dry summers, the temperature occasionally reaches or exceeds 120° in the shade, and during the dry winters the major portion of the country to the south of the tropics is subject to ground frosts. An exact knowledge of temperature disposition cannot be determined until the interior becomes more settled, but from data procurable it would appear that the hottest area of the

continent is situated in the northern part of Western Australia about the Marble Bar and Nullagine goldfields, where the maximum shade temperature during the summer sometimes exceeds 100° continuously for days and weeks. The coldest part of Australia is the extreme south-east of New South Wales and extreme east of Victoria—the region of the Australian Alps. Here the temperature seldom, if ever, reaches 100° even in the hottest of seasons.

Tasmania as a whole enjoys a most moderate and equable range of temperature throughout the year, although occasionally hot winds may cross the Straits and cause the temperature to rise to 100° in the low-lying parts.

(iii) *Monthly Maximum and Minimum Temperatures.* The normal monthly maximum and minimum temperatures can be best shown by means of graphs, which exhibit the nature of the fluctuation of each for all available years. In the diagram herein for nine representative places in Australia, the upper heavy curves show the mean maximum, and the lower heavy curves the mean minimum temperatures based upon daily observations, while the other curves show the humidities.

6. *Humidity.*—After temperature, humidity is the most important element of climate, as regards its effect on human comfort, rainfall supply, and in connexion with engineering problems generally.

In this publication the *absolute humidity* has been graphically represented in the form of inches of vapour pressure (i.e., that portion of the barometric pressure due to vapour). It is this total quantity of moisture in the air which affects personal comfort, plays an important part in varying the density of the atmosphere, and in heating and refrigerating processes. The more commonly quoted value, called the *relative humidity*, refers to the ratio which the actual moisture contents of the air bear to the total amount possible if saturation existed at the given temperature, and is usually quoted as a percentage. The relative humidity is an important factor in all drying operations, but is much less important than the absolute humidity as affecting animal life.

The mean monthly vapour pressure has also been added to the tables of climatological data for the capital cities included herein.

The normal monthly values of vapour pressure, it should be noted, combine to make the annual curve for this element which is comparable with the maximum and minimum temperature curves, but the relative humidities consisting as they do of the extremes for each month, do not show the normal annual fluctuation which would be approximately midway between the extremes.

The order of stations in descending values of vapour pressure is Darwin, Brisbane, Sydney, Perth, Melbourne, Adelaide, Canberra, Hobart and Alice Springs, while the relative humidity diminishes in the order, Sydney, Canberra, Darwin, Brisbane, Melbourne, Adelaide, Hobart, Perth and Alice Springs.

7. *Evaporation.*—(i) *General.* The rate and quantity of evaporation in any territory is influenced by the prevailing temperature, and by atmospheric humidity, pressure, and movement. In Australia, the question is of perhaps more than ordinary importance, since in its drier regions water has often to be conserved in “tanks”\* and dams. The magnitude of the economic loss by evaporation will be appreciated from the tabular records herein, which show that the yearly amount varies from about 32 inches at Hobart to 95 inches at Alice Springs in the centre of the continent. Over the *inland* districts of the continent it has been calculated that evaporation equals the rainfall where the annual totals are about 36 inches, the variations above and below this quantity being inverse.

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\* In Australia, artificial storage ponds or reservoirs are called “tanks”.

(ii) *Monthly Evaporation Curves.* The curves showing the mean monthly evaporation in various parts of Australia disclose how characteristically different are the amounts for the several months in different localities. The evaporation for representative places is shown on the diagram herein.

(iii) *Loss by Evaporation.* In the interior of Australia the possible evaporation is greater than the actual rainfall. Since the loss by evaporation depends largely on the exposed area, tanks and dams so designed that the surface shall be a minimum are advantageous. Further, the more protected from the direct rays of the sun and from winds, by means of suitable tree planting, the less will be the loss by evaporation. These matters are naturally of more than ordinary concern in the drier districts of Australia.

8. *Rainfall.*—(i) *General.* As even a casual reference to climatological maps indicating the distribution of rainfall and prevailing direction of wind would clearly show, the rainfall of any region is determined mainly by the direction and route of the prevailing winds, by the varying temperatures of the earth's surface over which they blow, and by the physiological features generally.

Australia lies within the zones of the south-east trades and prevailing westerly winds. The southern limit of the south-east trade strikes the eastern shores at about 30° south latitude, and, with very few exceptions, the heaviest rains of the Australian continent are precipitated along the Pacific slopes to the north of that latitude, the varying quantities being more or less regulated by the differences in elevation of the shores and of the chain of mountains upon which the rain-laden winds blow from the New South Wales northern border to Thursday Island. The converse effect is exemplified on the north-west coast of Western Australia, where the prevailing winds blowing from the interior of the continent instead of from the ocean, result in the lightest coastal rain in Australia.

The westerly winds, which skirt the southern shores, are responsible for the very reliable, although generally light to moderate, rains enjoyed by the south-western portion of Western Australia, by the south-eastern agricultural areas of South Australia, by a great part of Victoria, and by the whole of Tasmania.

(ii) *Factors determining Distribution and Intensity of Rainfall.* (iii) *Time of Rainfall.* In Official Year Book No. 6 (see pp. 72 to 74) some notes were given of the various factors governing the distribution, intensity, and period of Australian rainfall.

(iv) *Wettest and Driest Regions.* The wettest known part of Australia is on the north-east coast of Queensland, between Port Douglas and Cardwell, where three stations situated on, or adjacent to, the Johnstone and Russell Rivers have an average annual rainfall of between 144 and 165 inches. The maximum and minimum falls there are :—Goondi, 241.53 in 1894 and 67.88 inches in 1915, or a range of 173.65 inches; Innisfail, 211.24 in 1894 and 69.87 inches in 1902, or a range of 141.37 inches; Harvey Creek, 254.77 in 1921 and 80.47 inches in 1902, or a range of 174.30 inches.

On four occasions more than 200 inches have been recorded at Goondi, the last of these being in 1910, when 204.82 inches were registered. The record at this station covers a period of 45 years.

Harvey Creek, in the shorter period of 27 years, has three times exceeded 200 inches, the total for 1921 being 254.77 inches, and at the South Johnstone Sugar Experiment Station, where a gauge was established twelve years ago, 202.52 inches were recorded in 1921.

In Tasmania the wettest part is in the West Coast region, the mean annual rainfall at Lake Margaret being 147.26 inches, with a maximum of 175.12 inches in 1924.

The driest known part of the continent is in the Lake Eyre district in South Australia (the only part of the continent below sea level), where the annual average is only 5 inches, and where the fall rarely exceeds 10 inches for the twelve months.

The inland districts of Western Australia were at one time regarded as the driest part of Australia, but authentic observations in recent years over settled districts in the east of that State show that the annual average is from 10 to 12 inches.

(v) *Quantities and Distribution of Rainfall.* The departure from the normal rainfall increases progressively from the southern to the northern shores of the continent, and similarly also at all parts of the continent subject to capricious monsoonal rains, as the comparisons hereunder will show. The general distribution is best seen from the rainfall map herein, which shows the areas subject to average annual rainfalls lying between certain limits. The areas enjoying varying quantities of rainfall determined from the latest available information are shown in the following table :—

#### AVERAGE ANNUAL RAINFALL DISTRIBUTION.

Average Annual Rainfall.	N.S.W. (a)	Victoria.	Queens- land.	South Australia	Northern Territory.	Western Australia.	Tas- mania. (b)	Total. (b)
	sqr. mls.	sqr. mls.	sqr. mls.	sqr. mls.	sqr. mls.	sqr. mls.	sqr. mls.	sqr. mls.
Under 10 inches	48,749	nil	80,496	310,660	140,500	486,952	nil	1,067,357
10—15 "	78,454	19,270	81,549	36,460	132,780	255,092	nil	603,605
15—20 "	55,762	13,492	111,833	19,940	63,026	94,101	304	358,458
20—25 "	45,140	14,170	143,610	8,620	49,157	44,340	3,844	308,881
25—30 "	30,539	15,579	99,895	3,258	41,608	31,990	3,016	225,885
30—40 "	33,557	14,450	61,963	1,036	37,642	59,520	5,027	213,195
Over 40 "	18,171	10,923	91,154	96	58,907	3,925	11,247	194,423
Total area ..	310,372	87,884	670,500	380,070	523,620	975,920	23,438	2,971,804

(a) Including Federal Capital Territory. (b) Over an area of 2,777 square miles no records are available.

Referring first to the capital cities, the records of which are given in the next table, it will be seen that Sydney, with a normal rainfall of 47.82 inches, occupies the chief place; Brisbane, Perth, Melbourne, Hobart, Canberra, and Adelaide following in that order, Adelaide with 21.10 inches being the driest. The extreme range from the wettest to the driest year is greatest at Brisbane (72.09 inches) and least at Adelaide (19.48 inches).

In order to show how the rainfall is distributed throughout the year in various parts of the continent, the figures for representative towns have been selected. (See map). The figures for Darwin, typical of the Northern Territory, show that nearly the whole of the rainfall occurs there in the summer months, while little or none falls in the middle of the year. The figures for Perth, as representing the south-western part of the continent, are the reverse, for while the summer months are dry, the winter ones are very wet. In Melbourne and Hobart the rain is fairly well distributed throughout the twelve months, with a maximum in October for the former, and in November for the latter. The records at Alice Springs and Daly Waters indicate that in the central parts of Australia the wettest months are in the summer and autumn. In Queensland, as in the Northern Territory, the heaviest rains fall in the summer months, but good averages are also maintained during the other seasons.

On the coast of New South Wales, the first six months of the year are the wettest, with a maximum in the autumn; the averages during the last six months are fair, and moderately uniform. Generally it may be said that approximately one-third of the

area of the continent, principally in the eastern and northern parts, enjoys an annual average rainfall of from 20 to 50 or more inches, the remaining two-thirds averaging from 5 to 20 inches.

(vi) *Curves of Rainfall and Evaporation.* The relative amounts of rainfall and evaporation at different times through the year are clearly indicated in the graphs herein. Inspection thereof will show how large is the evaporation when water is fully exposed to the direct rays of the sun and to wind.

(vii) *Tables of Rainfall.*—(a) *Years 1901 to 1931.* The table of rainfall for a long period of years for each of the various Australian capitals affords information as to the variability of the fall in successive years, and the list of the more remarkable falls furnishes information as to what may be expected on particular occasions. The capitals are dealt with in the order in which they occur in the adopted meteorological divisions.

## RAINFALL—AUSTRALIAN CAPITAL CITIES.

Year.	CANNBERRA(a).		PERTH.		ADELAIDE.		BRISBANE.		SYDNEY.		MELBOURNE.		HOBART.	
	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.
	in.		in.		in.		in.		in.		in.		in.	
1901 ..	..	..	36.75	122	18.01	124	38.48	110	40.10	149	27.45	113	25.11	149
2 ..	..	..	27.06	93	16.02	123	16.17	87	43.07	180	23.08	102	25.85	150
3 ..	..	..	35.69	140	25.47	134	49.27	136	38.62	173	28.43	130	25.86	139
4 ..	..	..	34.35	125	20.31	117	33.23	124	45.93	158	29.72	128	22.41	139
5 ..	..	..	34.61	116	22.28	131	36.76	108	5.03	145	25.64	129	32.09	168
6 ..	..	..	32.37	121	26.51	127	42.85	125	31.89	160	22.29	114	23.31	155
7 ..	..	..	40.12	132	17.78	125	31.46	119	31.32	132	22.26	102	25.92	166
8 ..	..	..	30.52	106	24.56	125	44.01	125	45.65	167	17.72	130	16.50	148
9 ..	..	..	39.11	107	27.69	138	34.06	111	32.45	177	25.86	171	27.29	170
1910 ..	..	..	37.02	135	24.62	116	49.00	133	46.91	160	24.61	167	25.22	205
11 ..	..	..	23.38	108	15.99	127	35.21	128	50.24	155	36.61	168	26.78	193
12 ..	19.27	76	27.85	123	19.57	116	41.30	114	47.51	172	20.37	157	23.14	181
13 ..	16.38	71	38.28	141	18.16	102	40.81	115	37.70	141	21.17	157	19.36	165
14 ..	18.49	81	20.21	128	11.39	91	33.99	141	56.42	149	18.57	129	15.42	154
15 ..	22.31	87	43.61	164	19.38	117	25.66	93	34.83	117	20.95	167	20.91	196
16 ..	31.26	119	35.16	128	28.16	142	52.80	136	44.91	161	38.04	170	43.39	203
17 ..	29.70	144	45.64	146	28.90	153	40.92	127	52.40	151	30.57	171	30.62	214
18 ..	18.27	95	39.58	138	17.41	107	24.95	121	42.99	149	27.13	160	26.94	179
19 ..	16.31	85	30.66	120	17.21	108	19.36	96	58.71	152	24.89	141	22.48	153
20 ..	29.30	107	40.35	124	26.70	119	39.72	122	43.42	159	28.27	162	18.00	182
21 ..	..	..	41.09	135	22.64	100	54.31	167	43.34	140	29.76	154	18.04	159
22 ..	..	..	31.86	135	23.20	117	35.82	109	39.35	136	25.02	151	28.27	180
23 ..	..	..	44.47	134	29.79	139	23.27	93	37.01	123	22.64	158	32.93	198
24 ..	25.95	68	33.79	119	23.44	143	41.08	114	37.01	136	36.48	171	28.76	197
25 ..	33.71	59	31.41	126	21.91	118	53.10	139	50.35	145	17.57	144	22.40	171
26 ..	20.53	97	49.22	167	22.20	116	30.82	111	37.07	127	20.81	149	25.79	187
27 ..	21.40	83	36.50	133	16.92	101	62.08	130	48.56	138	17.98	135	20.02	183
28 ..	17.82	96	44.88	140	19.43	107	52.64	145	40.07	130	24.09	151	30.23	205
29 ..	22.34	88	36.77	172	17.51	119	39.78	118	57.90	129	28.81	168	26.55	194
30 ..	16.52	86	39.80	129	18.65	116	41.22	144	44.47	141	25.41	145	19.38	152
31 ..	24.25	105	39.18	118	22.26	146	66.72	136	49.22	153	28.63	164	27.17	179
Average	22.58	91	34.78	121	21.10	123	45.36	128	47.82	152	26.07	139	23.91	151
No. of Years	17	17	56	56	93	93	82	72	92	92	88	76	89	88

NOTE.—The above average rainfall figures for Brisbane, Sydney and Melbourne differ slightly from the mean annual falls given in the Climatological Tables and on page 53, which are for a less number of years. Annual totals from 1860 to 1900 inclusive will be found in Official Year Book No. 15, page 53.

(a) Records commenced in 1912; none available for the years 1921 to 1923.

(b) *Ten Years' Means*, 1908 to 1928. The mean rainfall for the decennia ended 1908, 1918 and 1928, respectively, are given hereunder :—

**RAINFALL—AUSTRALIAN CAPITAL CITIES, TEN YEARS' MEANS.**

Ten Years ended—	Canberra.	Perth.	Adelaide.	Brisbane.	Sydney.	Melbourne.	Hobart.
1908 ..	in. (a)	in. 34.05	in. 21.15	in. 36.55	in. 43.41	in. 25.36	in. 23.29
1918 ..	(b)22.24	34.98	21.13	37.87	46.64	26.39	25.82
1928 ..	(c)23.57	38.43	22.34	41.22	43.49	24.75	24.69

(a) Not available.

(b) Seven years ended 1918. (c) Years 1919, 1920, and 1924 to 1931.

9. **Remarkable Falls of Rain.**—The following are the most remarkable falls of rain in the various States and in the Northern Territory which have occurred within a period of twenty-four hours. In New South Wales and Queensland falls of less than 20 inches in the twenty-four hours have not been included. For other very heavy falls at various localities reference may be made to Official Year Book No. 14, pp. 60 to 63 and No. 22, pp. 46 to 48 :—

**HEAVY RAINFALLS—NEW SOUTH WALES, UP TO 1931, INCLUSIVE.**

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
Broger's Creek ..	14 Feb., 1898	ins. 20.05	Towamba ..	5 Mar., 1893	ins. 20.00
" " ..	13 Jan., 1911	20.83	South Head (near		
Cordeaux River ..	14 Feb., 1898	22.58	Sydney) ..	29 Apr., 1841	20.12
Morpeth ..	9 Mar., 1893	21.52	" " ..	16 Oct., 1844	20.41

**HEAVY RAINFALLS—QUEENSLAND, UP TO 1931, INCLUSIVE.**

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
Babinda (Cairns) ..	1 Feb., 1913	ins. 20.51	Mackay ..	21 Jan., 1918a	ins. 24.70
" " ..	24 Jan., 1916	22.30	Macnade Mill ..	6 " 1901	23.33
Buderim Mountain	11 " 1898	26.20	" " ..	4 Mar., 1915	22.00
Cairns ..	2 Apr., 1911	20.16	Mooloolah ..	13 " 1892	21.53
Carbrook ..	23 Jan., 1918	22.66	Mount Callon West	6 Feb., 1931	20.04
Conway ..	29 Mar., 1930	21.82	Mount Molloy ..	31 Mar., 1911	20.00
" " ..	30 " 1930	21.82	" " ..	1 Apr., "	20.00
Crohamhurst			" " ..	2 " "	20.00
(Blackall Range)	2 Feb., 1893	35.71	Nambour ..	9 Jan., 1898	21.00
Dungeness ..	16 Mar., 1893	22.17	Plane Creek		
Goondi ..	30 Jan., 1913	24.10	(Mackay) ..	26 Feb., 1913	27.73
Harvey Creek ..	3 " 1911	27.75	Port Douglas ..	1 Apr., 1911	31.53
" " ..	31 " 1913	24.72	Sarina ..	23 Jan., 1918	22.60
Innisfail (formerly			Tomewin ..	6 Feb., 1931	20.00
Geraldton) ..	29 Dec., 1903	21.22	Tully ..	12 Feb., 1927	23.86
" " ..	7 Apr., 1912	20.50	Woodlands (Yepp'n)	31 Jan., 1893	23.07
" " ..	31 Jan., 1913	20.91	Yandina ..	1 Feb., 1893	20.08
Kamerunga (Cairns)	2 Apr., 1911	21.00	Yarrabah ..	2 Apr., 1911	30.65
Koumala ..	23 Jan., 1918	22.31	" " ..	24 Jan., 1916	27.20
" " ..	24 " "	20.65	Yeppoon ..	31 " 1893	20.05
Kuranda (Cairns) ..	1 Apr., 1911	24.30	" " ..	8 Oct., 1914	21.70
" " ..	2 Apr., 1911	28.80			

(a) 37½ hours.



## HEAVY RAINFALLS—WESTERN AUSTRALIA, UP TO 1931, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Balla Balla ..	21 Mar., 1899	14.40	Obagama ..	24 Dec., 1920	13.02
Beagle Bay ..	19 May, 1931	13.00	" ..	15 Feb., 1930	10.66
Boodarie ..	21 Jan., 1896	14.53	Pilbara ..	2 Apr., 1898	14.04
Broome ..	6 ,, 1917	14.00	Point Torment ..	17 Dec., 1906	11.86
Cossack ..	3 Apr., 1898	12.82	Port George IV. ..	17 Jan., 1915	11.24
" ..	16 ,, 1900	13.23	Roebourne ..	3 Apr., 1898	11.44
Croydon ..	3 Mar., 1903	12.00	Roebuck Plains ..	5 Jan., 1917	14.01
Derby ..	29 Dec., 1898	13.09	" ..	6 ,, "	22.36
" ..	7 Jan., 1917	16.47	Springvale ..	14 Mar., 1922	12.25
" ..	23 Jan., 1931	12.25	Tambray ..	6 ,, 1900	11.00
Exmouth Gulf ..	2 Feb., 1918	12.50	Thangoc ..	17-19 Feb., '96	24.18
Fortescue ..	3 May, 1890	23.36	" ..	28 Dec., 1898	11.15
Frazier Downs ..	3 Mar., 1916	11.25	Whim Creek ..	3 Apr., 1898	29.41
" ..	26 Jan., 1931	12.50	" ..	21 Mar., 1899	18.17
Gnaraloo ..	20 Mar., 1923	11.00	Winderrie ..	17 Jan., 1923	14.23
Kerdiadary ..	7 Feb., 1901	12.00	Woodstock ..	3 Apr., 1898	13.00
Minya ..	15 Jan., 1923	11.50	Wyndham ..	27 ,, 1890	11.60
Mundabullangana ..	12 Feb., 1929	12.05	" ..	4 Mar., 1919	12.50
Obagama ..	28 Feb., 1910	12.00	Yeeda ..	7 Jan., 1917	11.75

## HEAVY RAINFALLS—NORTHERN TERRITORY, UP TO 1931, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Bathurst Island ..			Cosmopolitan Gold Mine ..	24 Dec., 1915	10.60
Mission ..	7 Apr., 1925	11.85	Darwin ..	7 ,, "	11.67
Bonrook ..	24 Dec., 1915	10.60	Groote Eylandt ..	30-31 Mar., '23	12.000
Borroloola ..	14 Mar., 1899	14.00	Koolpinyah ..	6 Mar., 1930	10.35
Brock's Creek ..	4 Jan., 1914	10.68	Lake Nash ..	21 Mar., 1901	10.25
" ..	24 Dec., 1915	14.33	Pine Creek ..	8 Jan., 1897	10.35
Burrundie ..	4 Jan., 1914	11.61			

(a) Approximate only, as gauge was washed away.

## HEAVY RAINFALLS—SOUTH AUSTRALIA, UP TO 1931, INCLUSIVE.

Name of Town or Locality.	Date.	Amount.
Wilmington	{ 28 Feb., 1921 ..	ins.
	{ 1 Mar., 1921 ..	3.97
		7.12

## HEAVY RAINFALLS—VICTORIA, UP TO 1931, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Balook ..	27 Sept., 1916	7.23	Murrungowar ..	7 Sept., 1908	8.81
Blackwarry ..	12 May, 1925	7.65	Omeo Valley ..	22 Mar., 1926	7.90
Bruthen ..	28 Jan., 1920	7.00	Reedy Flat ..	28 Jan., 1920	7.08
Buchan ..	17 July, 1925	8.45	Sarsfield ..	13 July, 1925	7.05
Cann River ..	27 Feb., 1919	9.56	Tambo Crossing ..	13 July, 1923	8.89
Hotham Heights ..	8 Jan., 1926	8.40	" ..	29 Jan., 1920	7.80
Mallacoota ..	14 Mar., 1911	7.95	Tonghi Creek ..	27 Feb., 1919	9.90
Mt. Buffalo ..	6 June, 1917	8.53	Wroxham ..	27 Aug., 1919	7.65
" ..	5 Apr., 1929	7.47			

## HEAVY RAINFALLS—TASMANIA, UP TO 1931, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Cullenswood ..	5 June, 1923	10.50	Lottah ..	3 Mar., 1931	9.98
" ..	5 Apr., 1929	11.12	Mathinna ..	8-10 ,, 1911	15.79
" ..	3 Mar., 1931	7.03	" ..	5 Apr., 1929	13.25
Gormanston ..	3 ,, 1931	6.85	Riana ..	5 ,, 1929	11.08
Gould's Country ..	8-10 Mar., '11	15.33	Riversdale ..	27 ,, 1928	5.90
" ..	5 Apr., 1929	12.13	The Springs ..	30-31 Jan., '16	10.75
Lottah ..	8-10 Mar., '11	18.10	Triabunna ..	5 June, 1923	10.20

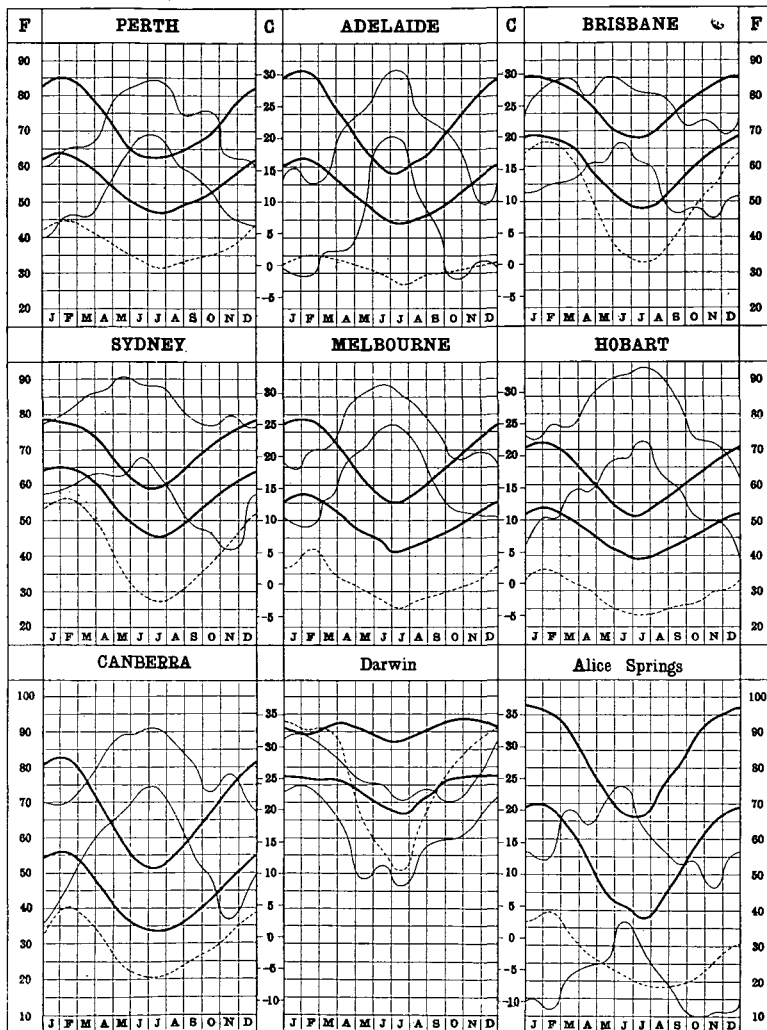
## HEAVY RAINFALLS—FEDERAL CAPITAL TERRITORY, UP TO 1931, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Canberra ..	27 May, 1925	6.84	Land's End ..	27 May, 1925	6.35
Cotter Junction ..	" ..	7.13	Uriarra ..	16 Jan., 1891	5.35
Duntroon ..	" ..	5.87	" ..	27 May, 1925	6.57
Fairlight ..	" ..	6.25			

10. **Snowfall.**—Light snow has been known to fall occasionally so far north as latitude 31° S., and from the western to the eastern shores of the continent. During exceptional seasons, it has fallen simultaneously over two-thirds of the State of New South Wales, and has extended at times along the whole of the Great Dividing Range, from its southern extremity in Victoria so far north as Toowoomba in Queensland. During the winter, for several months, snow covers the ground to a great extent on the Australian Alps, where also the temperature falls below zero Fahrenheit during the night. In the ravines around Kosciusko and similar localities the snow never entirely disappears.

The antarctic "V"-shaped disturbances are always associated with the most pronounced and extensive snowfalls. The barometric gradients are very steep where the "trough line" extends northward, and the apexes are unusually sharp-pointed, and protrude into very low latitudes, sometimes even to the tropics.

## ANNUAL FLUCTUATIONS OF NORMAL MAXIMUM AND MINIMUM TEMPERATURE AND HUMIDITY.



**EXPLANATION**—The upper and lower heavy lines in each graph represent the maximum and minimum temperatures respectively. The Fahrenheit temperature scales are shown on the outer edge of the sheet under "F" and the centigrade scales in the two inner columns under "C."

The broken line shows the normal absolute humidity in the form of 9 a.m. vapour pressures for which the figures in the outer "F" columns represent hundredths of an inch of barometric pressure.

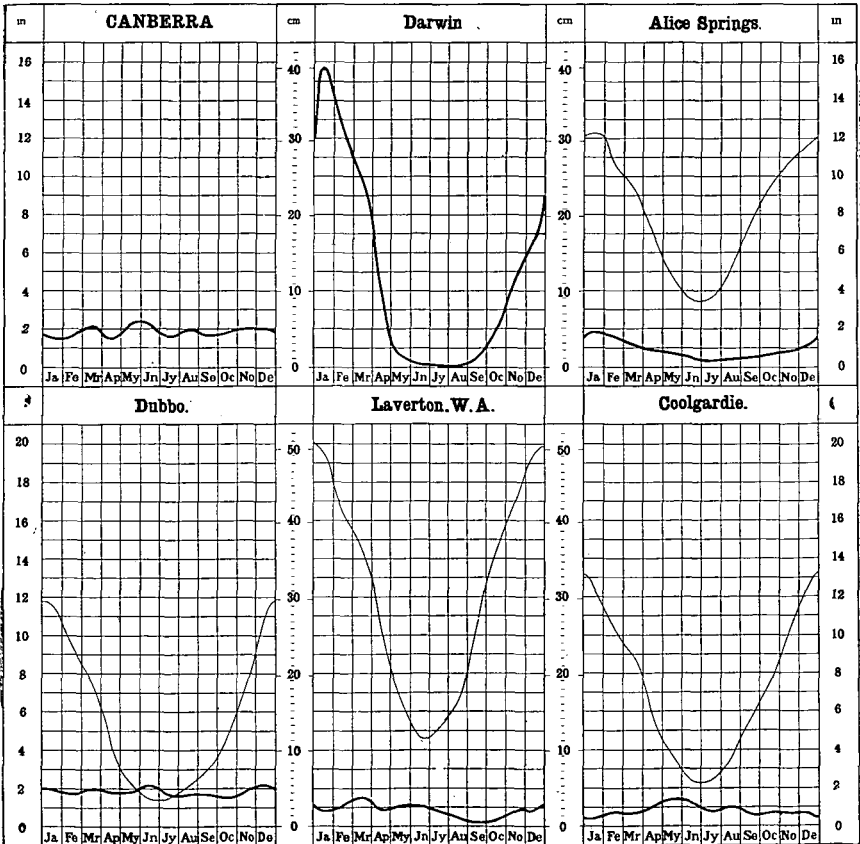
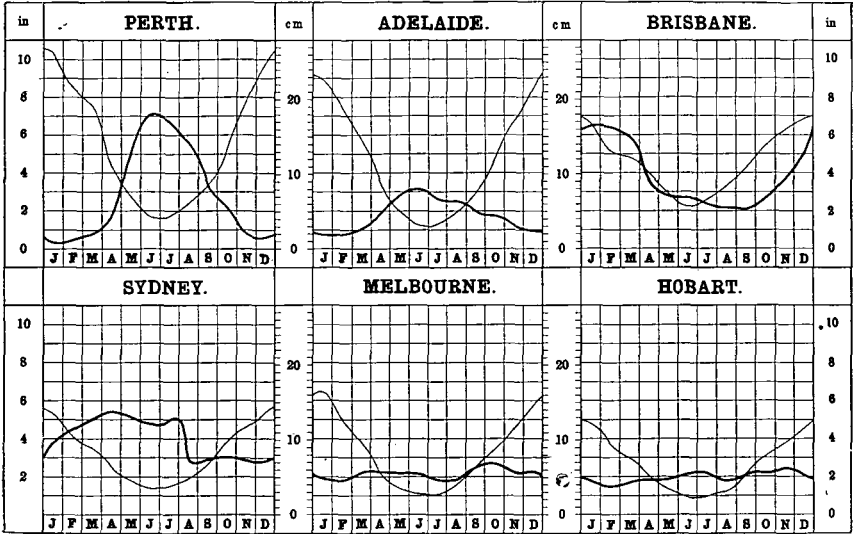
The upper and lower fine lines join the greatest and the least monthly means of relative humidity respectively, the figures under the outer columns "F" indicating percentage values.

The curves for temperature and vapour pressure joining the mean monthly values serve to show the annual fluctuation of these elements, but the relative humidity graphs joining the extreme values for each month do not indicate any normal annual variation.

Comparison of the maximum and minimum temperature curves affords a measure of the mean diurnal range of temperature. At Perth in the middle of January, for instance, there is normally a range of 21° from 63° F. to 84° F., but in June it is only 15° from 48° F. to 63° F.

The relative humidity curves illustrate the extreme range of the mean monthly humidity over a number of years.

MEAN MONTHLY RAINFALL AND EVAPORATION.



EXPLANATION.—On the preceding graphs thick lines denote rainfall, and thin lines evaporation, and show the fluctuation of the mean rate of fall *per month* throughout the year. The results, plotted from the Climatological Tables herein are shown in inches (see the outer columns), and the corresponding metric scale (centimetres) is shown in the two inner columns. The evaporation is not given for Darwin.

At Perth, Adelaide, Brisbane, Melbourne, Hobart, Canberra, Alice Springs, and Coolgardie the results have been obtained from jacketed tanks sunk in the ground. At Sydney and Dubbo sunken tanks without water jackets are used, whilst at Laverton (W.A.) the records are taken from a small portable jacket evaporation dish of 8 inches in diameter.

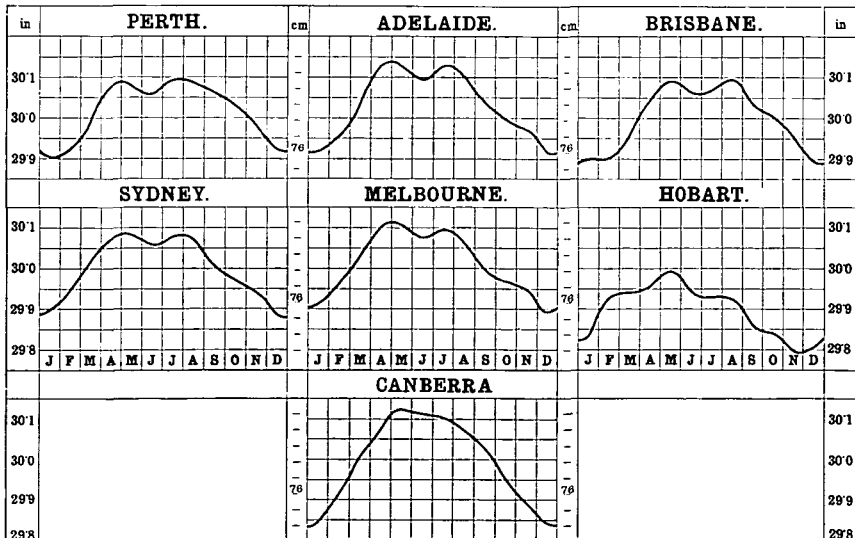
The distance for any date from the zero line to the curve represents the average number of inches, reckoned as per month, of rainfall at that date. Thus, taking the curves for Adelaide in the middle of January, the rain falls on the average at the rate of about three-fourths of an inch per month or, say, at the rate of about 9 inches per year. In the middle of June it falls at the rate of a little over 3 inches per month, or, say, at the rate of about 37 inches per year. At Dubbo, the evaporation is at the rate of nearly 11½ inches per month about the middle of January, and only about 1½ inches at the middle of June.

The mean annual rainfall and evaporation at the places indicated are given in the appended table.

MEAN ANNUAL RAINFALL AND EVAPORATION.

Place.	Rainfall.	Evapora- tion.	Place.	Rainfall.	Evapora- tion.
	In.	In.		In.	In.
Perth ..	34.78	66.17	Canberra ..	22.58	46.28
Adelaide ..	21.10	55.04	Darwin ..	66.28	—
Brisbane ..	45.36	55.27	Alice Springs ..	10.71	95.64
Sydney ..	47.82	39.12	Dubbo ..	22.10	66.37
Melbourne ..	26.07	39.21	Laverton, W.A.	9.79	145.52
Hobart ..	23.91	31.81	Coolgardie ..	10.17	84.99

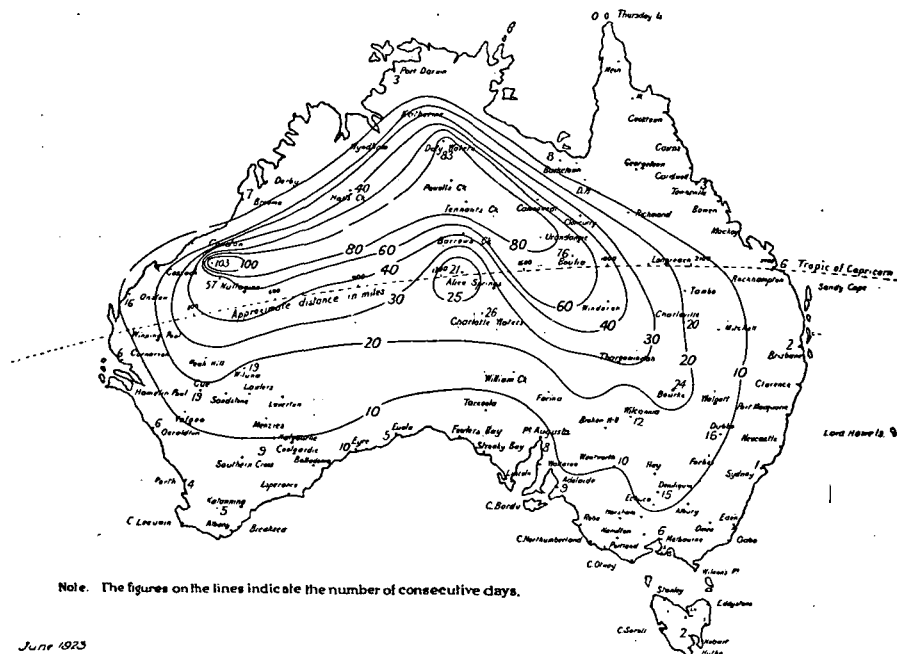
MEAN BAROMETRIC PRESSURE.—CAPITAL CITIES.



EXPLANATION.—The lines representing the yearly fluctuations of barometric pressure at the State capital cities are means for long periods, and are plotted from the Climatological Tables herein. The pressures are shown in inches on about 2½ times the natural scale, and the corresponding pressures in centimetres are also shown in the two inner columns, in which each division represents one millimetre.

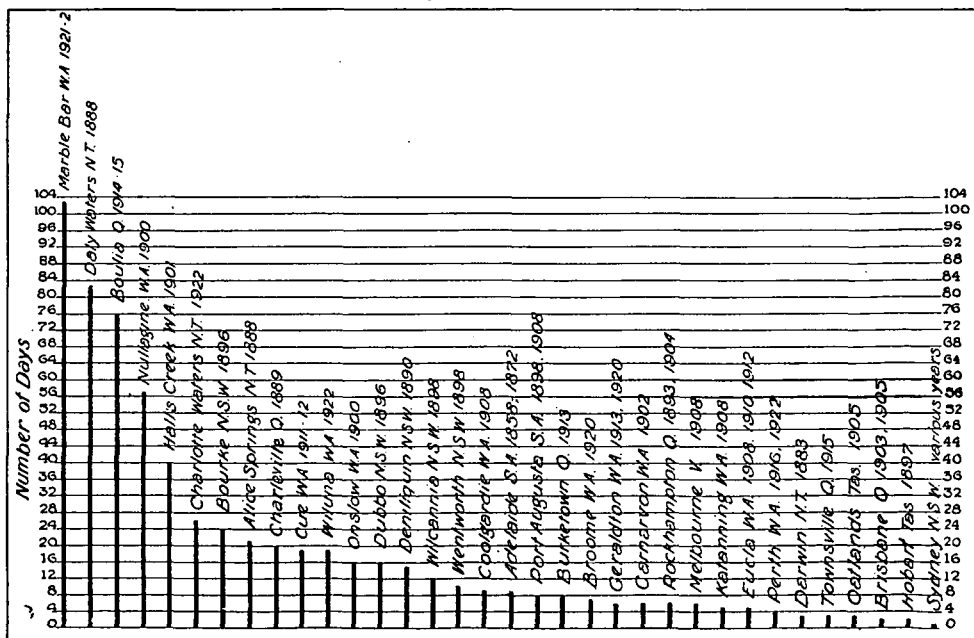
INTERPRETATION.—Taking the Brisbane graph for purposes of illustration, it will be seen that the mean pressure in the middle of January is about 29.87 inches, and there are maxima in the middle of May and August of about 30.99 inches.

Area affected and period of duration of the Longest Heat Waves when the Maximum Temperature for consecutive 24 hours reached or exceeded 100° Fah.



June 1925

Greatest number of consecutive days on which the Shade Temperature was over 100° Fah. at the places indicated.



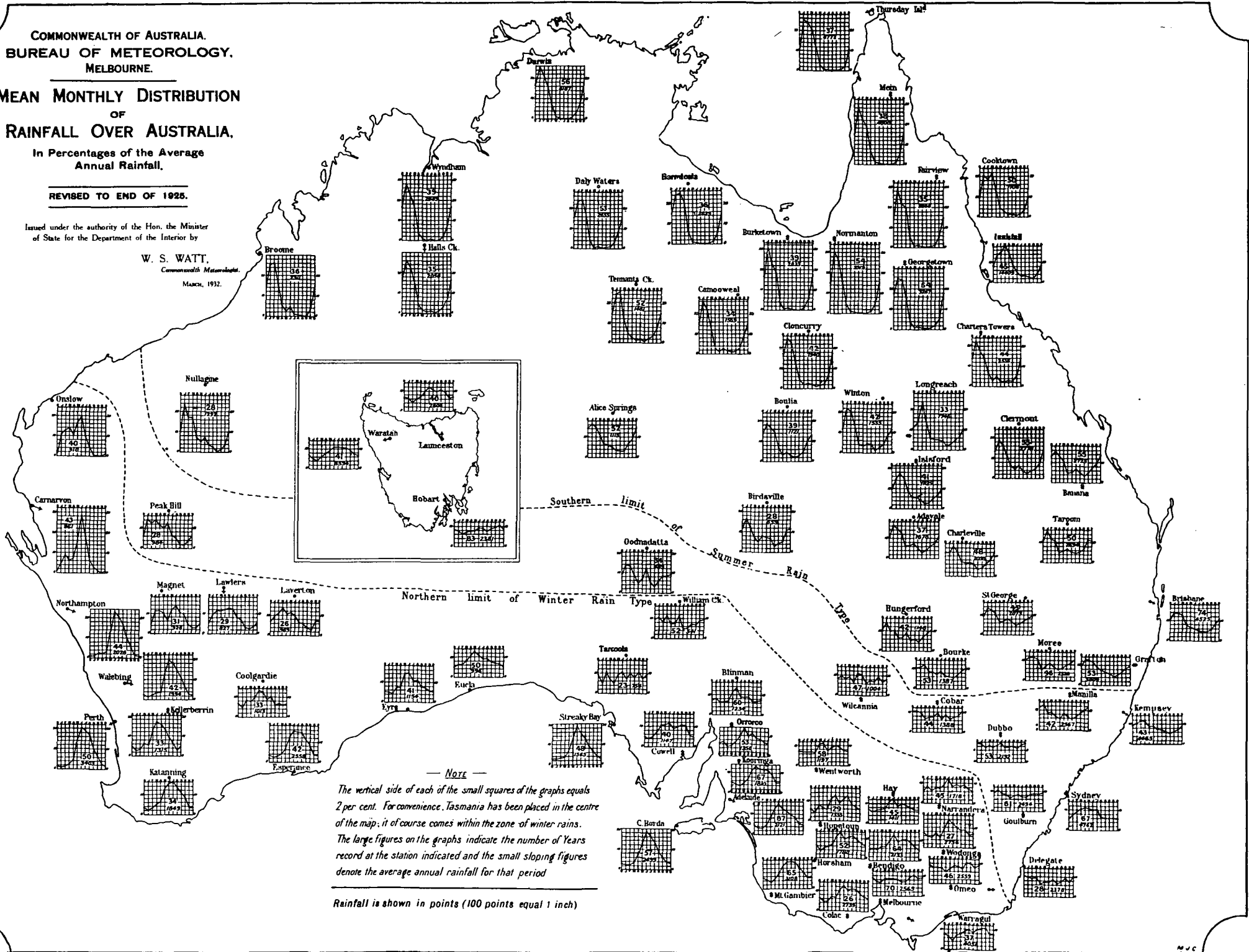
COMMONWEALTH OF AUSTRALIA.  
BUREAU OF METEOROLOGY.  
MELBOURNE.

MEAN MONTHLY DISTRIBUTION  
OF  
RAINFALL OVER AUSTRALIA.  
In Percentages of the Average  
Annual Rainfall.

REVISED TO END OF 1925.

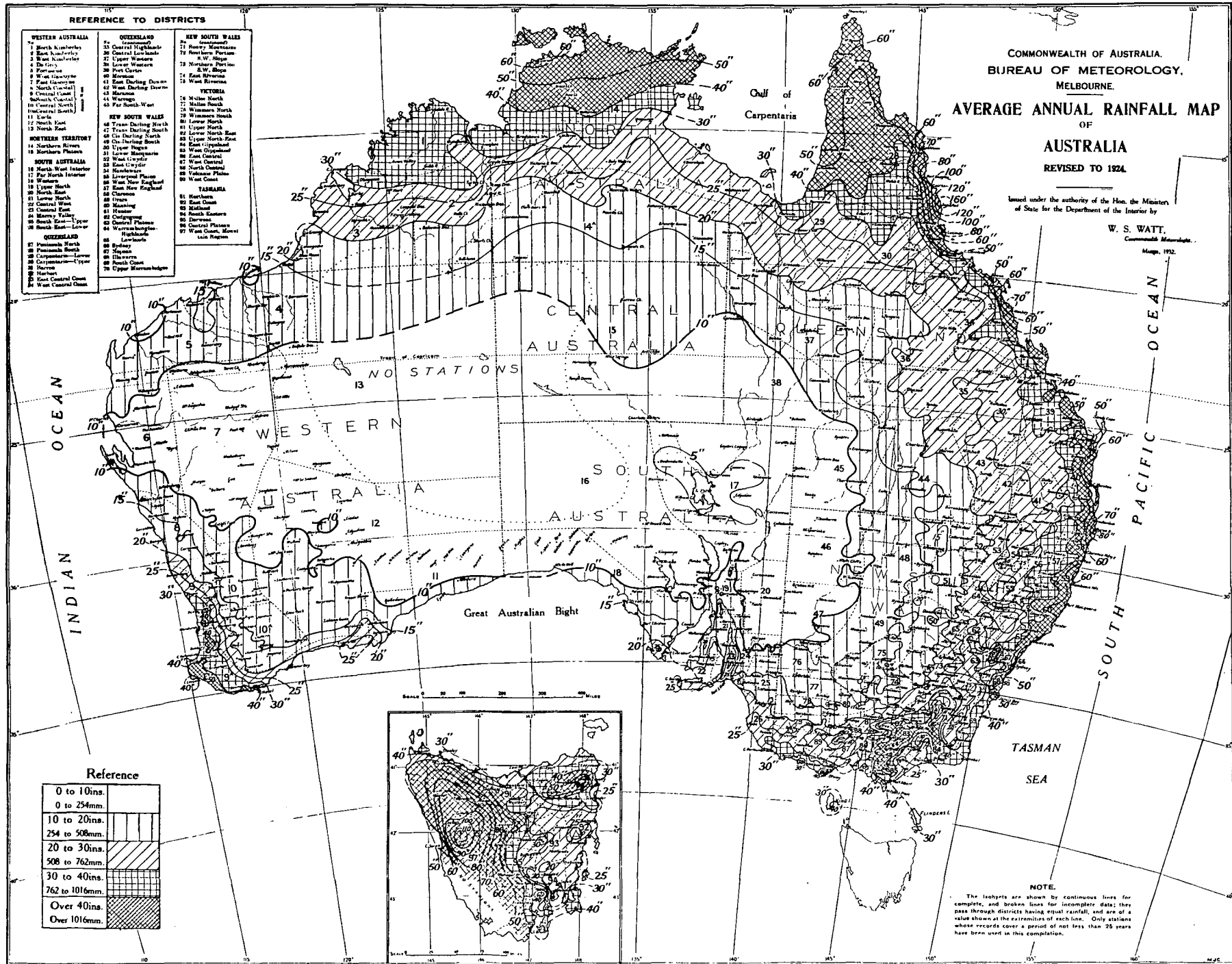
Issued under the authority of the Hon. the Minister  
of State for the Department of the Interior by

W. S. WATT,  
Commonwealth Meteorologist.  
MARCH, 1932.



NOTE —  
The vertical side of each of the small squares of the graphs equals 2 per cent. For convenience, Tasmania has been placed in the centre of the map, it of course comes within the zone of winter rains.  
The large figures on the graphs indicate the number of Years record at the station indicated and the small sloping figures denote the average annual rainfall for that period

Rainfall is shown in points (100 points equal 1 inch)





11. **Hail.**—Hail falls most frequently along the southern shores of the continent in the winter, and over south-eastern Australia during the summer months. The size of the hailstones generally increases with distance from the coast, a fact which lends strong support to the theory that hail is brought about by ascending currents. A summer rarely passes without some station experiencing a fall of stones exceeding in size an ordinary hen-egg, and many riddled sheets of light-gauge galvanized iron bear evidence of the weight and penetrating power of the stones.

The hailstorms occur most frequently when the barometric readings indicate a flat and unstable condition of pressure. They are almost invariably associated with tornadoes or tornado tendencies, and on the east coast the clouds from which the stones fall are generally of a remarkable sepia-coloured tint.

12. **Barometric Pressures.**—The mean annual barometric pressure (corrected to sea-level and standard gravity) in Australia varies from 29.80 inches on the north coast to 29.92 inches over the central and 30.03 inches in the southern parts of the continent. In January, the mean pressure ranges from 29.70 inches in the northern and central areas to 29.95 inches in the southern. The July mean pressure ranges from 29.91 inches at Darwin to 30.11 inches at Alice Springs. Barometer readings corrected to mean sea-level and standard gravity have, under anticyclonic conditions in the interior of the continent, ranged as high as 30.77 inches (at Kalgoorlie on the 23th July, 1901) and have fallen as low as 27.55 inches. This lowest record was registered at Mackay during a tropical hurricane on the 21st January, 1918. An almost equally abnormal reading of 27.88 inches was recorded at Innisfail during a similar storm on the 10th March, 1918. The mean annual fluctuations of barometric pressure for the capitals of Australia are shown on the graph herein.

13. **Wind.**—Notes on the distinctive wind currents in Australia were given in preceding Year Books (see No. 6, page 83), but, owing to limitations of space, have not been included herein.

14. **Cyclones and Storms.**—The "elements" in Australia are ordinarily peaceful, and while destructive cyclones have visited various parts, more especially coastal areas, such visitations are rare, and may be properly described as erratic.

During the winter months, the southern shores of the continent are subject to cyclonic storms, evolved from the V-shaped depressions of the southern low-pressure belt. They are felt most severely over the south-western parts of Western Australia, to the south-east of South Australia, in Bass Strait, including the coast line of Victoria, and on the west coast of Tasmania. Apparently the more violent wind pressures from these cyclones are experienced in their northern half, or in that part of them which has a north-westerly to a south-westerly circulation.

The north-east coast of Queensland is occasionally visited by hurricanes from the north-east tropics. During the first four months of the year, these hurricanes appear to have their origin in the neighbourhood of the South Pacific Islands, their path being a parabolic curve first to the S.W. and finally towards the S.E. Only a small percentage, however, reach Australia, the majority recurring in their path to the east of New Caledonia.

Very severe cyclones, locally known as "willy willies," are peculiar to the north-west coast of Western Australia from the months of November to April inclusive. They apparently originate in the ocean in the vicinity of Cambridge Gulf, and travel in a south-westerly direction with continually increasing force, displaying their greatest energy near Cossack and Onslow, between latitudes 20° and 22° South. The winds in these storms, like those from the north-east tropics, are very violent and destructive, and cause great havoc amongst the pearl-fishers. The greatest velocities are usually to be found in the south-eastern quadrant of the cyclones, with north-east to east winds. After leaving the north-west coast, these storms either travel southwards, following the coastline, or cross the continent to the Great Australian Bight. When they take

the latter course, their track is marked by torrential rains, as much as 29.41 inches, for example, being recorded in 24 hours at Whim Creek from one such occurrence. Falls of 10 inches and over have frequently been recorded in the northern interior of Western Australia from similar storms.

Some further notes on severe cyclones and on "southerly bursters," a characteristic feature of the eastern part of Australia, will be found in previous issues of the Official Year Book (see No. 6, pp. 84, 85, 86).

A special article dealing with "Australian Hurricanes and Related Storms" appeared in Official Year Book No. 16, pp. 80-84.

15. *Influences affecting Australian Climate.*—(i) *General.* Australian history does not cover a sufficient period, nor is the country sufficiently occupied, to ascertain whether or not the advance of settlement has materially affected the climate as a whole. Local changes have, however, taken place, a fact which suggests that settlement and the treatment of the land have a distinct effect on local conditions. For example, the mean temperature of Sydney shows a rise of two-tenths of a degree during the last twenty years, a change probably brought about by the great increase of residential and manufacturing buildings within the city and in the surrounding suburbs. Again, low-lying lands on the north coast of New South Wales, which originally were seldom subject to frosts, have, with the denudation of the surrounding hills from forests, experienced annual visitations, the probable explanation being that through the absence of trees the cold air of the high lands now flows unchecked and untempered down the sides of the hills to the valleys and lower lands.

(ii) *Influence of Forests on Climate.* As already indicated, forests doubtless exercise a great influence on local climate, and hence, to the extent that forestal undertakings will allow, the weather can be controlled by human agency. The direct action of forests is an equalizing one; thus, especially in equatorial regions, and during the warmest portion of the year, they considerably reduce the mean temperature of the air. They also reduce the diurnal extremes of shade temperatures by altering the extent of radiating surface by evaporation, and by checking the movement of air, and while decreasing evaporation from the ground, they increase the relative humidity. Vegetation greatly diminishes the rate of flow-off of rain and the washing away of surface soil, and when a region is protected by trees, a steadier water supply is ensured, and the rainfall is better conserved. In regions of snowfall, the supply of water to rivers is similarly regulated, and without this and the sheltering influence of ravines and "gullies," watercourses supplied mainly by melting snow would be subject to alternate periods of flooding and dryness. This is borne out in the case of the inland rivers, the River Murray, for example, which has never been known to become dry, deriving its steadiness of flow mainly through the causes indicated.

(iii) *Direct Influence of Forests on Rainfall.* Whether forests have a direct influence on rainfall is a debatable question, some authorities alleging that precipitation is undoubtedly induced by forests, while others take the opposite view.

Sufficient evidence exists, however, to prove that, even if the rainfall has not increased, the beneficial climatic effect of forest lands more than warrants their protection and extension. Rapid rate of evaporation, induced by both hot and cold winds, injures crops and makes life uncomfortable on the plains, and, while it may be doubted that the forest aids in increasing precipitation, it must be admitted that it does check winds and the rapid evaporation due to them. Trees as wind-breaks have been successfully planted in central parts of the United States, and there is no reason why similar experiments should not be successful in many parts of the treeless interior of Australia. The belts should be planted at right angles to the direction of the prevailing parching winds, and if not more than half a mile apart will afford shelter to the enclosed areas.

In previous issues some notes on observations made in other countries were added (see Official Year Book No. 6, pp. 86 and 95).

16. *Rainfall and Temperatures, Various Cities.*—The following table shows rainfall and temperature for various important cities throughout the world, for the Federal Capital, and for the capitals of the Australian States.

## RAINFALL AND TEMPERATURE—VARIOUS CITIES.

Place.	Height above M.S.L.	Annual Rainfall.			Temperature.						
		Average.	Highest.	Lowest.	(a) Mean Summer.	(b) Mean Winter.	Highest on Record.	Lowest on Record.	Average Hottest Month.	Average Coldest Month.	
		Ins.	Ins.	Ins.	Fahr.	Fahr.	Fahr.	Fahr.	Fahr.	Fahr.	
Amsterdam	6	27.29	40.59	17.60	63.2	36.8	63.2	90.0	4.1	64.4	35.4
Auckland	125	43.88	74.15	26.32	66.2	52.5	61.0	91.0	31.9	67.1	51.8
Athens	351	15.48	33.33	4.56	79.2	49.1	109.4	19.6	19.6	81.0	47.4
Bergen	72	77.09	111.58	44.49	56.8	34.2	88.5	4.8	57.9	33.6	67.9
Berlin	161	22.72	30.04	14.25	64.8	33.0	98.6	-13.0	66.0	31.8	80.0
Berne	1,877	36.30	58.23	24.69	62.2	30.1	91.4	-3.6	64.4	28.0	77.0
Bombay	37	71.15	114.89	33.41	83.5	75.1	100.0	55.9	84.8	74.2	50.0
Breslau	482	22.52	32.56	16.50	64.1	33.5	100.0	-23.4	65.5	29.3	77.0
Brussels	328	28.35	41.18	17.73	62.6	36.0	95.5	-4.4	63.7	34.5	77.0
Budapest	500	25.20	35.28	16.79	68.6	30.2	98.6	-5.1	70.4	28.2	77.0
Buenos Ayres	82	38.78	79.72	20.04	72.7	50.9	103.1	22.3	73.8	50.0	77.0
Calcutta	21	61.82	98.48	38.43	85.6	68.0	108.2	44.2	86.0	66.4	77.0
Capetown	40	25.50	36.72	17.71	68.1	54.7	102.0	34.0	68.8	53.9	77.0
Caracas	3,420	30.03	47.36	23.70	68.3	65.3	87.8	48.2	69.2	63.7	77.0
Chicago	823	33.28	45.86	24.52	70.0	63.1	103.0	-23.0	72.4	23.7	77.0
Christchurch	25	25.16	35.30	13.54	61.3	43.3	95.7	21.3	61.6	42.4	77.0
Christiana (Oslo)	75	23.23	32.21	16.26	61.0	24.5	95.0	-21.1	62.6	23.9	77.0
Colombo	40	83.83	139.70	51.60	81.5	79.9	95.8	65.0	82.6	79.1	77.0
Constantinople	245	28.75	42.74	14.78	74.0	43.5	103.6	13.0	75.7	42.0	77.0
Copenhagen	10	20.79	25.83	15.47	60.4	33.3	85.5	-3.3	61.9	32.4	77.0
Dresden	115	26.80	34.49	17.72	62.9	32.4	93.4	-15.3	64.4	31.5	77.0
Dublin	47	27.66	35.56	16.60	59.4	42.0	87.2	13.3	60.5	41.6	77.0
Dunedin	300	36.96	54.51	22.15	56.3	42.6	94.0	23.0	57.0	41.7	77.0
Durban	260	40.79	71.27	27.24	75.0	64.4	110.6	41.1	76.7	63.8	77.0
Edinburgh	441	25.21	32.05	16.44	55.8	38.8	87.7	5.0	57.2	38.3	77.0
Geneva	1,328	33.48	46.89	21.14	64.4	33.7	94.0	16.7	66.2	32.2	77.0
Genoa	157	51.29	108.22	28.21	73.8	46.8	94.5	16.7	75.4	45.5	77.0
Glasgow	184	38.49	56.18	29.05	52.7	41.0	84.9	6.6	58.0	38.4	77.0
Greenwich	149	23.50	35.54	16.38	62.0	39.5	100.0	6.9	63.5	38.5	77.0
Hong Kong	109	84.28	119.72	45.84	86.2	64.8	97.0	32.0	86.7	62.9	77.0
Johannesburg	5,750	31.63	50.00	21.66	65.4	54.4	94.0	-23.3	68.2	48.9	77.0
Lepzig	384	24.69	31.37	17.10	63.1	31.5	97.3	-14.8	64.8	30.6	77.0
Leningrad	16	21.30	29.52	13.75	61.1	17.4	97.0	-38.2	63.7	15.2	77.0
Lisbon	312	29.18	52.79	17.32	69.6	51.3	94.1	32.5	70.2	49.3	77.0
London (Kew)	18	23.80	38.20	16.64	61.2	39.8	94.0	9.4	62.7	38.9	77.0
Madrid	22	49.85	88.41	18.45	89.0	76.8	113.0	57.5	89.9	76.1	77.0
Marseilles	2,149	16.23	27.48	9.13	73.0	41.2	107.1	10.5	75.7	39.7	77.0
Moscow	246	22.24	43.03	12.28	70.5	45.3	100.4	11.7	72.3	44.6	77.0
Naples	526	18.94	29.28	12.07	63.4	14.7	99.5	-44.5	66.1	11.9	77.0
New York	489	34.00	56.58	21.75	73.6	48.9	99.1	-23.9	75.4	46.8	77.0
Ottawa	314	44.63	58.68	33.17	71.4	31.8	102.0	-13.0	73.5	30.0	77.0
Paris	236	33.40	53.79	25.63	67.2	44.1	98.0	-33.0	69.7	12.0	77.0
Pekin	144	22.64	29.57	16.46	63.5	37.2	101.1	-14.1	64.9	36.1	77.0
Quebec	143	24.40	36.00	18.09	77.7	25.6	114.0	-5.0	79.2	23.6	77.0
Rome	166	40.50	53.79	32.12	63.5	12.4	96.0	34.2	66.3	10.1	77.0
San Francisco	155	32.37	57.89	12.73	73.5	46.0	104.2	17.2	76.1	44.6	77.0
Shanghai	21	45.00	38.82	9.00	58.8	50.5	101.0	29.0	59.3	49.5	77.0
Singapore	8	91.09	158.68	32.71	81.2	78.6	94.2	63.4	81.7	78.3	77.0
Stockholm	144	19.09	28.27	11.81	59.5	27.3	96.8	-25.6	61.0	26.4	77.0
Tokio	65	61.45	86.37	45.72	74.8	39.2	97.9	17.0	77.7	37.5	77.0
Trieste	85	42.94	63.14	26.57	73.9	47.3	99.5	14.0	76.3	39.9	77.0
Vienna	663	24.50	33.90	16.50	65.7	30.4	97.7	-8.0	67.1	28.0	77.0
Vladivostok	55	19.54	33.60	9.39	63.9	11.0	95.7	-21.8	60.4	6.1	77.0
Washington	112	43.30	61.33	30.85	74.7	34.5	106.0	-15.0	76.8	32.9	77.0
Wellington (N.Z.)	10	48.65	67.68	27.83	61.8	48.6	88.0	28.6	62.5	47.7	77.0
Zürich	1,542	45.15	78.27	29.02	63.3	31.3	94.1	-0.8	65.1	29.5	77.0

## FEDERAL CAPITAL.

Canberra	1,837	22.58	33.71	16.31	(a) 68.0	(b) 44.0	102.6	14.0	69.0	42.7
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## STATE CAPITALS.

Perth	197	34.78	49.22	20.21	(a) 73.0	(b) 56.0	108.4	34.2	73.9	55.2
Adelaide	140	21.10	30.87	11.39	73.0	53.1	116.3	32.0	74.1	51.8
Brisbane	137	45.54	88.26	16.17	76.6	59.8	108.9	36.1	77.2	58.5
Sydney	138	47.50	82.76	21.49	71.0	54.2	108.5	35.9	71.6	52.8
Melbourne	115	25.53	38.04	15.61	66.6	50.0	111.2	27.0	67.7	48.7
Hobart	177	23.91	43.39	13.43	61.5	46.9	105.2	27.0	62.4	45.8

(a) Mean of the three hottest months.

(b) Mean of the three coldest months.

17. Climatological Tables.—The means, averages, extremes, totals, etc., for a number of climatological elements have been determined from long series of observations at the Australian capitals up to and including the year 1931. These are given in the following tables:—

CLIMATOLOGICAL DATA—CANBERRA, FEDERAL CAPITAL TERRITORY.

LAT. 35° 20' S., LONG. 149° 15' E. HEIGHT ABOVE M.S.L. 1837 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. M.S. Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind.				Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m. and 3 p.m.	No. of Clear Days.
		Greatest Number of Miles in One Day.	Mean Hourly Pressure. (lb.)	Total Miles.	Prevailing Direction. 9 a.m.				
No. of yrs. over which observation extends	14	17	15	15	14	10	(a)	13	(a)
January ..	29.842	306 30/13	0.06	3,233	S E	7.65	—	4.0	—
February ..	29.911	465 20/21	0.04	2,541	E S E	5.92	—	4.4	—
March ..	30.006	434 8/13	0.03	2,437	S E & E S E	4.56	—	4.2	—
April ..	30.074	279 27/13	0.02	2,027	S E	2.73	—	4.2	—
May ..	30.126	263 15/13	0.02	2,051	E	1.75	—	4.5	—
June ..	30.116	360 10/15	0.03	2,138	N	1.02	—	4.8	—
July ..	30.104	282 7/31	0.03	2,206	N	1.18	—	4.6	—
August ..	30.076	276 23/25	0.03	2,300	N E	1.65	—	4.5	—
September ..	30.032	374 (b)	0.04	2,692	S E	2.86	—	4.0	—
October ..	29.952	376 10/12	0.04	2,851	W	4.16	—	4.4	—
November ..	29.896	410 18/24	0.05	2,894	W	5.76	—	4.6	—
December ..	29.845	289 7/24	0.05	2,937	W	7.04	—	4.5	—
Year { Totals ..	—	—	—	—	—	46.28	—	—	—
Averages ..	29.998	—	0.04	2,526	S E & W	—	—	4.4	—
Extremes ..	—	465 20/21	—	—	—	—	—	—	—

(a) Not available (b) 10/1912 and 16/1912.

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.).			Extreme Shade Temperature (Fahr.).		Extreme Range.	Extreme Temperature (Fahr.).		Mean Hours of Sunshine.
	Mean Max.	Mean Min.	Mean.	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of yrs. over which observation extends	15	15	15	15	15	15	(a)	12	(a)
January ..	81.9	55.1	68.5	102.0 4/29	38.8 25/28	63.2	—	36.0 4/17	—
February ..	82.4	55.6	69.0	102.6 16/19	37.0 26/25	65.6	—	27.0 22/31	—
March ..	75.9	51.0	63.5	97.0 18/27	32.2 22/20	64.8	—	25.5 24/17	—
April ..	67.0	44.0	55.5	83.0 1/25	26.5 29/17	56.5	—	17.5 28/17	—
May ..	58.9	37.8	48.4	74.7 9/19	19.0 30/24	55.7	—	12.5 28/20	—
June ..	53.4	34.9	44.1	66.2 3/17	18.2 (e)	48.0	—	12.1 15/29	—
July ..	51.8	33.9	42.7	65.0 3/19	14.0 19/24	51.0	—	10.0 19/24	—
August ..	55.4	34.8	45.1	83.2 27/19	25.0 5/19	58.2	—	11.8 5/19	—
September ..	61.3	38.2	49.8	83.2 31/19	25.0 2/18	58.2	—	18.5 25/27	—
October ..	67.7	43.0	55.3	93.8 31/19	28.1 24/15	65.8	—	20.0 (f)	—
November ..	74.7	48.1	61.4	96.6 1/19	28.1 24/15	68.5	—	25.8 2/18	—
December ..	75.8	53.3	66.6	98.0 (c)	32.0 3/24	66.0	—	31.0 (d)	—
Year { Averages ..	67.5	44.1	55.8	102.6	14.0	88.6	—	10.0	—
Extremes ..	—	—	—	16/2/19	19/7/24	—	—	19/7/24	—

(a) Not available. (b) 28/1923 and 23/1924. (c) 12/1914 and 31/1931. (d) 1/1923, 3/1924 and 15 and 16/1931. (e) 15 and 16/1929. (f) 1 and 3/1923.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (inches).	Rel. Hum. (%).				Rainfall (inches).				Dew. Mean No. Days Dew.
		Mean 9 a.m.	Mean 9 p.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	
No. of yrs. over which observation extends	13	13	13	13	17	17	17	17	17	(a)
January ..	0.366	53	69	39	1.49	5	4.30 1927	0.07 1919	2.92 6/27	—
February ..	0.403	59	70	47	1.61	6	3.73 1924	0.13 1926	2.75 23/16	—
March ..	0.374	67	76	56	2.17	6	5.51 1914	0.21 1924	1.86 7/20	—
April ..	0.311	74	84	63	1.48	8	2.87 1916	0.20 1925	1.94 8/21	—
May ..	0.243	80	89	67	2.31	8	13.37 1925	0.20 1927	6.84 27/25	—
June ..	0.218	84	90	73	2.22	9	5.86 1931	0.45 1927	3.95 22/25	—
July ..	0.205	83	91	74	1.70	9	3.77 1912	0.25 1913	1.78 1/20	—
August ..	0.222	83	87	67	1.99	10	3.23 1929	0.01 1914	1.96 18/25	—
September ..	0.233	72	81	55	1.69	8	5.26 1915	0.36 1928	2.18 20/15	—
October ..	0.289	62	73	48	1.92	9	4.59 1917	0.64 1914	1.50 7/30	—
November ..	0.326	57	78	37	1.99	7	6.95 1924	0.09 1918	2.38 5/23	—
December ..	0.373	56	70	45	2.01	7	4.49 1919	0.11 1925	2.10 28/29	—
Year { Totals ..	—	—	—	—	22.58	91	—	—	—	—
Averages ..	0.286	69	—	—	—	—	—	—	—	—
Extremes ..	—	91	37	—	—	—	13.37 5/1925	0.01 8/1914	6.84 27/5/25	—

(a) Not available.

CLIMATOLOGICAL DATA—PERTH, WESTERN AUSTRALIA.

LAT. 31° 57' S., LONG. 115° 50' E. HEIGHT ABOVE M.S.L. 197 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mm. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind.				Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m. and 3 p.m.	No. of Clear Days.
		Greatest Number of Miles in One Day.	Mean Hourly Pressure. (lb.)	Total Miles.	Resultant Direction. 9 a.m. 3 p.m.				
No. of yrs. over which observation extends	47	34	34	34	34	33	34	24	35
January .. .. .	29.909	797 27/98	0.67	11,131	ESE SSW	10.46	1.5	2.8	14.7
February .. .. .	29.925	650 16/08	0.61	9,674	ESE SSW	8.57	1.4	3.1	12.0
March .. .. .	29.986	651 6/13	0.53	9,847	E SSW	7.64	1.4	3.6	12.1
April .. .. .	30.070	955 25/00	0.39	3,186	ENE SSW	4.74	1.3	4.3	8.1
May .. .. .	30.069	815 9/31	0.36	8,119	NE SSW	2.71	2.1	5.5	5.4
June .. .. .	30.057	914 19/27	0.36	7,929	NNE WNW	1.77	2.3	6.0	3.7
July .. .. .	30.088	1,015 20/26	0.40	8,588	NNE W	1.75	2.1	5.7	5.0
August .. .. .	30.085	966 15/03	0.41	8,743	NNE WSW	2.35	1.6	5.6	5.3
September .. .. .	30.061	864 11/05	0.46	8,917	NE WSW	3.36	1.3	5.0	5.9
October .. .. .	30.030	809 6/16	0.52	9,819	SSE SW	5.29	0.9	4.8	6.1
November .. .. .	29.992	777 18/97	0.58	10,008	SE SW	7.66	1.3	3.9	8.5
December .. .. .	29.925	776 6/22	0.64	10,827	SE SSW	9.85	1.8	3.1	12.3
Year { Totals .. .. .	—	—	—	—	—	66.18	19.0	—	99.1
Year { Averages .. .. .	30.016	—	0.49	9,316	E SW	—	—	4.4	—
Year { Extremes .. .. .	—	1,015 20/7/26	—	—	—	—	—	—	—

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.).			Extreme Shade Temperature (Fahr.).		Extreme Range.	Extreme Temperature (Fahr.).		Mean Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of yrs. over which observation extends	35	35	35	35	35	35	33	33	34
January .. .. .	84.5	63.1	73.8	108.4 28/21	48.6 20/25	59.8	177.3 22/14	40.4 1/21	323.5
February .. .. .	84.6	63.2	73.9	107.4 4/23	47.7 1/02	59.7	169.0 4/99	39.8 1/21	271.2
March .. .. .	81.4	61.4	71.4	106.4 14/22	45.8 8/03	60.6	167.0 19/18	36.7 8/03	269.0
April .. .. .	76.2	57.3	66.8	99.7 9/10	39.3 20/14	60.4	157.0 8/16	31.0 20/14	217.2
May .. .. .	68.7	52.6	60.6	90.4 2/07	34.3 11/14	56.1	142.2 8/24	25.3 11/14	175.9
June .. .. .	64.0	49.6	56.8	81.7 2/14	35.0 30/20	46.7	135.5 9/14	26.5 30/20	142.5
July .. .. .	62.7	47.8	55.2	76.4 21/21	34.2 7/16	42.2	132.2 13/15	25.1 30/20	163.4
August .. .. .	63.8	48.3	56.0	81.0 12/14	35.3 31/08	45.6	145.1 29/21	27.9 10/11	184.6
September .. .. .	66.2	50.2	58.2	90.9 30/18	38.8 18/00	52.1	153.6 29/16	29.2 21/16	205.2
October .. .. .	69.0	52.6	60.8	95.3 30/22	40.0 16/31	55.3	154.0 29/14	29.8 16/31	239.2
November .. .. .	75.6	56.8	66.2	104.6 24/13	42.0 1/04	62.6	167.0 30/25	35.5 (a)	287.8
December .. .. .	81.2	60.9	71.0	107.9 20/04	48.0 2/10	59.9	168.7 25/15	39.0 12/20	324.9
Year { Averages .. .. .	73.2	55.3	64.2	—	—	—	—	—	280.4
Year { Extremes .. .. .	—	—	—	108.4 28/1/21	34.2 7/7/16	74.2	177.3 22/1/14	25.1 30/7/20	(b)

(a) 6/1910 and 14/1912. (b) Total for year.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (inches).	Rel. Hum. (%).				Rainfall (inches).				Dew. Mean No. Days Dew.
		Mean 9 a.m.	Mean 9 a.m.	Highest.	Lowest.	Mean Monthly.	Mean No. of Days Rain.	Greatest Monthly.	Least Monthly.	
No. of yrs. over which observation extends	35	35	35	35	56	56	56	56	56	35
January .. .. .	0.453	51	61	41	0.34	3	2.17 1879	0.00 (a)	1.74 27/79	2.6
February .. .. .	0.446	54	65	46	0.42	3	2.98 1915	0.00 (a)	1.63 26/15	3.6
March .. .. .	0.430	57	66	46	0.78	5	4.50 1896	0.00 (a)	2.06 26/23	5.9
April .. .. .	0.399	62	73	51	1.68	7	5.85 1926	0.00 1920	2.62 30/04	9.4
May .. .. .	0.372	74	81	61	5.07	14	12.13 1879	0.98 1903	2.80 20/79	12.5
June .. .. .	0.340	78	83	68	7.03	17	12.80 1923	2.16 1877	3.90 10/20	12.6
July .. .. .	0.327	79	84	69	6.72	17	12.28 1926	2.42 1876	3.00 4/91	13.0
August .. .. .	0.325	74	79	62	5.73	18	12.21 1928	0.46 1902	2.79 7/03	11.5
September .. .. .	0.341	68	75	58	3.49	15	7.84 1923	0.34 1916	1.82 4/31	10.0
October .. .. .	0.350	61	75	54	2.17	12	7.87 1890	0.49 1892	1.38 15/10	5.9
November .. .. .	0.382	54	63	46	0.79	6	2.78 1916	0.00 1891	1.11 30/03	3.8
December .. .. .	0.413	51	63	44	0.57	4	3.05 1888	0.00 1886	1.72 1/88	2.7
Year { Totals .. .. .	—	—	—	—	34.79	121	—	—	—	93.5
Year { Averages .. .. .	0.374	62	—	—	—	—	—	—	—	—
Year { Extremes .. .. .	—	—	84	41	—	—	12.80 6/1923	Nil (b)	3.90 10/6/20	—

(a) Various years. (b) Jan., Feb., March, April, Nov. and Dec., various years.

CLIMATOLOGICAL DATA—ADELAIDE, SOUTH AUSTRALIA.  
 LAT. 34° 56' S., LONG. 138° 35' E. HEIGHT ABOVE M.S.L. 140 FT.  
 BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Min. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind.				Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m. 3 p.m., & 9 p.m.	No. of Clear Days.
		Greatest Number of Miles in One Day.	Mean Hourly Pressure. (lb.)	Total Miles.	Prevailing Direction. 9 a.m. 3 p.m.				
No. of yrs. over which observation extends	75	54	54	54	54	62	60	64	50
January ..	29.918	758 19/99	0.34	7,893	S W S W	9.03	2.3	3.5	8.6
February ..	29.952	691 22/95	0.29	6,659	N E S W	7.39	2.1	3.5	7.6
March ..	30.039	628 9/12	0.24	6,594	S S W	5.88	2.2	3.5	7.3
April ..	30.120	773 10/96	0.21	6,087	N E S W	5.52	1.6	4.5	4.5
May ..	30.122	760 9/80	0.21	6,275	N E N W	5.05	1.6	5.5	2.5
June ..	30.100	750 12/78	0.24	6,500	N E N	1.23	2.0	6.2	1.7
July ..	30.124	674 25/82	0.24	6,705	N E N W	1.20	1.6	5.8	1.8
August ..	30.097	773 31/97	0.28	7,137	N E S W	1.88	2.2	5.6	2.6
September ..	30.040	720 2/87	0.30	7,259	N N E S W	2.87	2.3	5.2	3.4
October ..	29.996	768 28/98	0.33	7,844	N N E S W	4.79	3.3	5.0	4.0
November ..	29.978	677 2/04	0.33	7,498	S W S W	6.61	3.3	4.6	3.4
December ..	29.919	675 12/91	0.34	7,865	S W S W	8.48	2.7	3.9	7.4
Year { Totals ..	—	—	—	—	—	55.04	27.2	—	56.4
Year { Averages ..	30.034	—	0.28	7,026	N E S W	—	—	4.8	—
Year { Extremes ..	—	773 (a)	—	—	—	—	—	—	—

(a) 10/4/96 and 31/8/97.

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.).			Extreme Shade Temperature (Fahr.).		Extreme Range.	Extreme Temperature (Fahr.).		Mean Hour of Sunshine.
	Mean Max.	Mean Min.	Mean.	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of yrs. over which observation extends	75	75	75	75	75	75	54	71	50
January ..	86.0	61.5	73.7	116.3 26/58	45.1 21/84	71.2	180.0 18/82	36.5 14/79	311.1
February ..	86.2	62.0	74.1	113.6 12/99	45.5 23/18	68.1	170.5 10/00	35.8 23/26	264.1
March ..	80.8	58.8	69.8	108.0 12/61	44.8 —/57	63.2	174.0 17/83	33.8 27/80	240.0
April ..	73.4	54.6	64.0	98.0 10/66	39.6 15/59	58.4	155.0 1/83	30.2 16/17	182.3
May ..	65.0	50.2	57.9	89.5 4/21	36.9 (a)	52.6	148.2 12/79	25.6 19/28	148.8
June ..	60.4	46.7	53.5	76.0 23/65	32.5 27/76	43.5	138.8 18/79	22.9 12/13	122.7
July ..	58.9	44.7	51.8	74.0 11/06	32.0 24/08	42.0	134.5 26/90	22.1 30/29	136.9
August ..	62.0	45.9	53.9	85.0 31/11	32.3 17/59	52.7	140.0 31/92	22.8 11/29	164.9
September ..	66.3	47.9	57.1	90.7 23/82	32.7 4/58	58.0	160.5 23/82	25.0 25/27	184.8
October ..	72.4	51.4	61.9	102.9 21/22	36.0 —/57	66.9	162.0 30/21	27.8 (c)	228.8
November ..	78.6	55.4	67.0	113.5 21/65	40.8 2/09	72.7	166.9 20/78	31.5 2/09	264.1
December ..	83.3	59.0	71.2	114.6 29/31	43.0 (b)	71.6	175.7 7/99	32.5 4/84	302.8
Year { Averages ..	72.8	53.2	63.0	—	—	—	—	—	2551.3
Year { Extremes ..	—	—	—	116.3 26/1/58	32.0 24/7/08	84.3	180.0 18/1/82	22.1 30/7/29	(d)

(a) 26/1895 and 24/1904.

(b) 16/1861 and 4/1906.

(c) 2/1918 and 4/1931.

(d) Total for year.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (inches).	Rel. Hum. (%).				Rainfall (inches).					Dew. Mean No. Days Dew.
		Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.		
No. of yrs. over which observation extends	64	64	64	64	93	93	93	93	93	60	
January ..	0.339	38	59	30	0.71	4	4.00 1850	Nil (a)	2.30 2/80	3.8	
February ..	0.357	41	56	30	0.73	4	5.09 1928	Nil (a)	5.57 7/25	5.4	
March ..	0.345	46	58	36	1.01	4	4.66 1878	Nil (a)	3.50 5/78	10.5	
April ..	0.335	55	72	37	1.70	6	6.78 1853	0.03 1923	3.45 5/60	13.6	
May ..	0.316	67	76	49	2.73	16	7.75 1875	0.20 1891	2.75 1/53	15.7	
June ..	0.298	76	84	67	3.12	16	8.58 1916	0.42 1886	2.11 1/20	17.1	
July ..	0.276	76	87	68	2.66	16	5.28 1865	0.37 1899	1.75 10/65	15.9	
August ..	0.285	69	77	54	2.51	16	6.24 1852	0.35 1914	1.23 19/51	16.6	
September ..	0.297	61	72	44	2.06	14	5.83 1923	0.45 1896	1.59 20/23	15.5	
October ..	0.298	51	72	29	1.72	11	3.82 1870	0.17 1914	2.24 16/08	12.8	
November ..	0.307	42	57	31	1.14	7	3.55 1851	0.04 1885	1.88 28/58	6.7	
December ..	0.323	39	50	31	1.01	6	3.98 1861	Nil 1904	2.42 23/13	4.4	
Year { Totals ..	—	—	—	—	21.10	123	—	—	—	138.0	
Year { Averages ..	0.309	53	—	—	—	—	—	—	—	—	
Year { Extremes ..	—	—	87	29	—	—	8.58 6/16	Nil (b)	5.57 7/2/25	—	

(a) Various years.

(b) January, February, March, December, various years.

CLIMATOLOGICAL DATA—BRISBANE, QUEENSLAND.

LAT. 27° 28' S., LONG. 153° 2' E. HEIGHT ABOVE M.S.L. 137 Ft.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. M. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind.				Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m., & 9 p.m.	No. of Clear Days.
		Greatest Number of Miles in One Day.	Mean Hourly Pressure. (lb.)	Total Miles.	Prevailing Direction. 9 a.m. 3 p.m.				
No. of yrs. over which observation extends	45	21	21	21	45	23	45	40	23
January ..	29.868	361 1/22	0.12	4,678	E	6.555	6.0	5.8	3.1
February ..	29.905	503 5/31	0.12	4,353	S E	5.300	5.6	5.8	2.1
March ..	29.964	488 1/20	0.09	4,181	S E	4.888	4.7	5.5	4.8
April ..	30.045	400 1/25	0.09	3,905	S & S E	4.020	3.6	4.5	7.8
May ..	30.084	363 7/16	0.07	3,579	S	3.020	3.3	4.5	8.7
June ..	30.071	455 14/28	0.08	3,479	S W	2.420	3.3	3.5	12.9
July ..	30.072	359 6/23	0.07	3,046	S W	2.631	2.4	3.7	12.9
August ..	30.096	331 2/23	0.08	3,344	S W	3.344	2.7	3.4	12.9
September ..	30.042	329 4/31	0.08	3,713	N E & S	4.621	3.9	4.1	9.0
October ..	30.004	325 25/18	0.10	4,283	N E	5.224	6.0	4.1	6.3
November ..	29.959	371 10/28	0.11	4,502	N E	6.237	8.7	4.7	3.9
December ..	29.889	467 15/26	0.12	4,688	N E	6.940	9.2	5.3	—
Year { Totals ..	—	—	—	—	—	—	—	—	—
Year { Averages ..	30.000	—	0.09	4,068	S & E	55.269	63.6	4.6	93.3
Year { Extremes ..	—	503 5/231	—	—	—	—	—	—	—

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.).			Extreme Shade Temperature (Fahr.).		Extreme Range.	Extreme Temperature (Fahr.).		Mean Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of yrs. over which observation extends	45	45	45	45	45	45	41	45	23
January ..	85.4	68.9	77.2	108.9 14/02	58.8 4/93	50.1	166.4 10/17	49.9 4/93	223.5
February ..	84.4	68.6	76.5	105.7 21/25	58.5 23/31	47.2	165.2 6/10	49.1 22/31	203.4
March ..	82.3	66.3	74.3	99.4 5/19	52.4 29/13	47.0	161.7 4/25	45.4 29/13	210.1
April ..	79.0	61.5	70.3	95.2 (a)	44.4 25/25	50.8	153.8 11/16	36.7 24/25	210.7
May ..	73.6	55.4	64.5	90.3 21/23	41.3 24/99	49.0	147.0 0 1/10	29.8 8/97	203.1
June ..	69.3	51.1	60.2	88.9 19/18	36.3 29/08	52.6	136.0 3/18	25.4 23/88	177.3
July ..	68.5	48.5	58.5	83.4 28/98	36.1 (b)	47.3	146.1 20/15	23.9 11/90	211.4
August ..	71.3	49.9	60.6	88.5 25/28	37.4 6/87	51.1	141.9 20/17	27.1 9/99	235.6
September ..	75.7	54.8	65.3	95.2 2 16/12	40.7 1/96	54.5	155.5 26/03	30.4 2 18/9	240.0
October ..	79.7	59.9	69.8	101.4 18/93	43.3 3/99	58.1	157.4 31/28	34.9 8/89	256.4
November ..	82.8	64.2	73.5	106.1 18/13	48.5 2/05	57.6	162.3 7/89	38.8 1/89	247.6
December ..	85.0	67.4	76.2	105.9 26/93	56.4 13/12	49.5	161.7 27/26	49.1 3/94	246.0
Year { Averages ..	78.1	59.7	68.9	—	—	—	—	—	2665.1
Year { Extremes ..	—	—	—	108.9 14/1/02	36.1 (c)	72.8	166.4 10/1/17	23.9 11/7/90	(d)

(a) 9/96 and 5/03. (b) 12/94 and 2/96. (c) 12/7/94 and 2/7/96. (d) Total for year.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (inches).	Rel. Hum. (%)				Rainfall (inches).				Dew. Mean No. Days Dew.
		Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days Rain.	Greatest Monthly.	Least Monthly.	Greatest In One Day.	
No. of yrs. over which observation extends	45	45	45	45	80	72	80	80	62	45
January ..	0.640	66	79	53	6.49	14	27.72 1895	0.32 1919	18.31 21/87	7.9
February ..	0.648	69	82	55	6.41	14	40.39 1893	0.58 1849	10.61 6/31	8.2
March ..	0.616	72	85	56	5.82	15	34.04 1870	Nil 1849	11.18 14/08	11.6
April ..	0.523	72	80	60	3.75	12	15.28 1867	0.05 1897	4.97 19/28	14.2
May ..	0.425	73	85	61	2.82	10	13.85 1876	Nil 1846	5.62 9/79	15.2
June ..	0.360	74	84	67	2.82	9	14.03 1873	Nil 1847	6.01 9/93	13.3
July ..	0.328	72	81	61	2.22	8	8.46 1889	Nil 1841	3.54 (e)	14.9
August ..	0.350	69	80	56	2.03	7	14.67 1879	Nil (a)	4.89 12/87	13.4
September ..	0.411	64	76	47	1.99	8	5.43 1886	0.10 1907	2.46 2/94	12.9
October ..	0.473	60	72	48	2.53	9	9.99 1882	0.14 1900	3.75 3/27	11.7
November ..	0.537	59	72	45	3.74	10	12.41 1917	Nil 1842	4.46 16/86	7.9
December ..	0.597	61	69	51	4.92	12	13.99 1910	0.35 1865	6.60 28/71	7.4
Year { Totals ..	—	—	—	—	45.54	128	—	—	—	138.6
Year { Averages ..	0.493	68	—	—	—	—	—	—	—	—
Year { Extremes ..	—	—	85	45	—	—	40.39 2/93	Nil (b)	18.31 21/1/87	—

(a) 1862, 1869, 1880. (b) March, May, June, July, August, and November, various years. (c) 15/76 and 16/89.

CLIMATOLOGICAL DATA—SYDNEY, NEW SOUTH WALES.

LAT. 33° 52' S., LONG. 151° 12' E. HEIGHT ABOVE M.S.L. 138 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. M. Sea Level and Standard Gravity from hourly reading f.	Wind.*				Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m., & 9 p.m.	No. of Clear Days.
		Greatest Number of Miles in One Day.	Mean Hourly Pressure. (lb.)	Total Miles.	Prevailing Direction.				
No. of yrs. over which observation extends	73	65	65	65	65	52	72	70	21
January .. ..	29.897	627 3/93	0.27	7,057	NE	5.368	4.9	5.8	5.3
February .. ..	29.944	607 12/69	0.24	6,060	NE	4.323	4.4	5.9	5.4
March .. ..	30.013	754 20/70	0.19	5,879	ENE	3.616	4.1	5.5	5.8
April .. ..	30.072	642 6/82	0.17	5,348	W	2.594	3.7	5.0	7.4
May .. ..	30.086	682 6/98	0.17	5,527	W	1.823	3.0	4.9	9.0
June .. ..	30.063	642 13/08	0.20	5,935	W	1.427	3.0	4.8	7.9
July .. ..	30.070	744 17/79	0.20	6,131	W	1.532	3.3	4.4	10.5
August .. ..	30.068	649 22/72	0.19	5,926	W	1.927	3.3	4.4	11.4
September .. ..	30.008	771 6/74	0.22	6,179	W	2.714	3.8	4.3	10.1
October .. ..	29.968	741 4/72	0.25	6,736	ENE	3.893	4.8	4.9	7.9
November .. ..	29.939	583 12/87	0.25	6,599	ENE	4.623	5.3	5.5	6.0
December .. ..	29.882	750 3/84	0.26	6,964	ENE	5.384	5.6	5.6	5.4
Year { Totals .. ..	—	—	—	—	—	39.122	47.2	—	92.1
{ Averages .. ..	30.000	—	—	6,195	W	—	—	5.0	—
{ Extremes .. ..	—	771 6/9/74	0.22	—	—	—	—	—	—

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.).			Extreme Shade Temperature (Fahr.).		Extreme Range.	Extreme Temperature (Fahr.).		Mean Hours of Sunshine.
	Mean Max.	Mean Min.	Mean.	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of yrs. over which observation extends	73	73	73	73	73	73	70	73	11†
January .. ..	78.4	64.9	71.6	108.5 13/96	51.2 14/65	57.3	164.3 26/15	43.7 6/25	234.9
February .. ..	77.7	65.0	71.3	107.8 8/26	49.3 28/63	58.5	161.2 8/26	43.4 25/91	200.7
March .. ..	75.7	62.9	69.3	102.6 3/69	48.8 14/86	53.8	158.3 10/26	39.9 17/13	194.9
April .. ..	71.3	58.1	64.7	91.0 20/22	44.6 27/64	46.4	144.1 10/77	33.3 24/99	178.1
May .. ..	65.5	52.2	58.8	86.0 1/19	40.2 22/59	45.8	129.7 1/96	29.3 25/17	171.6
June .. ..	61.1	48.3	54.7	80.4 11/31	38.0 5/20	42.4	125.5 2/23	28.1 24/11	154.6
July .. ..	59.7	45.9	52.8	78.3 22/26	35.9 12/90	42.4	124.7 19/77	24.0 4/93	191.1
August .. ..	62.8	47.5	55.2	82.0 31/84	36.8 3/72	45.2	149.0 30/78	26.1 4/09	222.0
September .. ..	67.0	51.4	59.2	92.3 27/19	40.8 18/64	51.5	142.2 12/78	30.1 17/05	223.2
October .. ..	71.3	55.8	63.6	98.9 19/98	42.2 6/27	56.7	151.9 (b)	32.7 9/05	239.2
November .. ..	74.4	59.6	67.0	102.7 21/78	45.8 1/05	56.9	158.5 28/99	36.0 6/06	235.9
December .. ..	77.1	62.9	70.0	107.5 31/04	48.4 3/24	59.1	164.5 27/89	41.4 3/24	224.8
Year { Averages .. ..	70.2	56.2	63.2	—	—	72.6	164.5	—	247.1
{ Extremes .. ..	—	—	—	108.5 13/1/96	35.9 12/7/90	—	27/12/89	24.0 4/7/93	(a)

(a) Total for year. (b) 30, 31/14.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (inches).	Rel. Hum. (%)				Rainfall (inches).					Dew. Mean No. Days Dew.
		Mean 9 a.m.	Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	
No. of yrs. over which observation extends	73	73	73	73	73	73	73	73	73	73	
January .. ..	0.546	67	78	58	3.60	14	15.26 19/11	0.32 19/29	7.08 13/11	1.3	
February .. ..	0.564	70	81	59	4.24	14	18.56 18/73	0.34 19/02	8.90 25/73	2.3	
March .. ..	0.529	72	85	62	5.00	15	18.70 18/70	0.42 18/76	6.52 9/13	4.3	
April .. ..	0.447	76	87	63	5.53	13	24.49 18/61	0.06 18/68	7.52 29/60	6.7	
May .. ..	0.357	78	90	63	5.19	15	23.03 19/19	0.18 18/60	8.36 28/89	7.5	
June .. ..	0.302	78	80	68	4.81	12	16.33 18/85	0.19 19/01	5.17 16/84	6.4	
July .. ..	0.274	76	88	63	4.90	12	13.21 19/00	0.12 18/52	7.80 17/31	6.9	
August .. ..	0.290	71	84	56	2.90	11	14.89 18/99	0.04 18/85	5.33 2/60	6.4	
September .. ..	0.333	66	79	49	2.79	12	14.05 18/79	0.08 18/82	5.69 10/79	4.5	
October .. ..	0.382	63	77	46	2.88	12	11.14 19/16	0.21 18/67	6.37 13/02	3.1	
November .. ..	0.444	63	79	42	2.80	12	9.88 18/65	0.07 19/15	4.23 19/00	2.2	
December .. ..	0.504	64	77	52	2.86	13	15.82 19/20	0.23 19/13	4.75 13/10	1.6	
Year { Totals .. ..	—	—	—	—	47.50	155	—	—	—	53.2	
{ Averages .. ..	0.403	70	—	—	—	—	—	—	—	—	
{ Extremes .. ..	—	90	42	—	—	—	24.49 4/1861	0.04 8/1885	8.90 25/2/73	—	

\* Early records revised during 1929. Values for period 1867—September, 1885, reduced to per cent.; for period September, 1885—March, 1913, reduced to per cent.  
 † From 1921 only; previous records discarded owing to faulty exposure of instruments.



CLIMATOLOGICAL DATA—MELBOURNE, VICTORIA.

LAT. 37° 49' S., LONG. 144° 58' E. HEIGHT ABOVE M.S.L., 115 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mm. Sea Level and Standard gravity from hourly readings.	Wind.				Mean Amount of Evaporation (Inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m. to 3 p.m. & 9 p.m.	No. of Clear Days.
		Greatest Number of Miles in One Day.	Mean Hourly Pressure. (lb.)	Total Miles.	Prevailing Direction. 9 a.m. 3 p.m.				
No. of yrs. over which observation extends	74	58	58	58	58	59	24	74	24
January ..	29.911	583 10/97	0.27	7,042	S W S E	6.459	1.9	5.0	7.2
February ..	29.960	566 8/68	0.24	6,088	S W S E	5.082	2.4	4.9	6.9
March ..	30.035	677 9/81	0.20	6,060	S W S E	3.999	1.7	5.5	5.3
April ..	30.103	597 7/68	0.17	5,476	S W N W	2.410	0.9	5.8	4.7
May ..	30.104	693 12/65	0.17	5,659	N W N E	1.489	0.6	6.5	3.1
June ..	30.080	761 13/76	0.21	6,023	N W N E	1.113	0.6	6.6	2.4
July ..	30.087	755 8/74	0.20	6,125	N W N E	1.080	0.4	6.3	2.9
August ..	30.063	637 14/75	0.23	6,547	N W N E	1.490	1.0	6.3	2.9
September ..	29.995	617 11/72	0.26	6,704	N W S W	2.337	1.3	6.1	3.2
October ..	29.965	899 5/66	0.27	6,998	S W N W	3.382	1.9	6.0	3.8
November ..	29.951	734 13/66	0.26	6,746	S W S E	4.565	2.5	5.9	3.7
December ..	29.898	655 1/75	0.28	7,170	S W S E	5.799	2.0	5.5	4.6
Year { Totals ..	—	—	—	—	—	39.205	17.2	—	50.7
{ Averages ..	30.013	—	0.23	6,386	S W N W	—	—	—	—
{ Extremes ..	—	899 5/10/66	—	—	—	—	—	5.9	—

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.).			Extreme Shade Temperature (Fahr.).		Extreme Range.	Extreme Temperature (Fahr.).		Mean Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of yrs. over which observation extends	76	76	76	76	76	76	71	72	50
January ..	78.0	56.7	67.4	111.2 14/62	42.0 28/85	69.2	178.5 14/62	30.2 28/85	262.1
February ..	78.1	57.2	67.7	109.5 7/01	40.2 24/24	69.3	167.5 15/70	30.9 6/91	240.2
March ..	74.4	54.7	64.5	105.5 2/93	37.1 17/84	68.4	164.5 1/68	28.9 (b)	205.5
April ..	68.2	50.7	59.4	94.0 (a)	34.8 24/88	59.2	152.0 8/61	25.0 23/97	163.6
May ..	61.5	46.8	54.1	83.7 7/05	29.9 29/16	53.8	142.6 2/59	21.1 26/16	138.6
June ..	56.8	44.0	50.4	72.2 1/07	28.0 11/66	44.2	129.0 11/61	19.9 30/29	111.0
July ..	55.6	41.9	48.7	69.3 22/26	27.0 21/69	42.3	125.8 27/30	20.5 12/03	108.4
August ..	58.7	43.4	51.0	77.0 20/85	28.3 11/63	48.7	137.4 29/69	21.3 14/02	154.1
September ..	62.7	45.6	54.2	88.6 28/28	31.1 16/08	57.5	142.1 20/67	22.8 8/18	172.5
October ..	67.1	48.3	57.7	98.4 24/14	32.1 3/71	66.3	154.3 28/68	24.8 22/18	203.5
November ..	71.4	51.3	61.3	105.7 27/94	36.5 2/96	69.2	159.6 29/65	24.6 2/96	236.2
December ..	75.3	54.4	64.8	110.7 15/76	40.0 4/70	70.7	170.3 20/69	33.2 1/04	249.9
Year { Averages ..	67.3	49.6	58.4	—	—	84.2	178.5	19.9	2245.9
{ Extremes ..	—	—	—	111.2 14/1/62	27.0 21/7/69	—	141/1/62	30/6/29	(c)

(a) 6/1865 and 17/1922. (b) 17/1884 and 20/1897. (c) Total for year.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (Inches)	Rel. Hum. (%)				Rainfall (Inches).					Dew. Mean No. Days Dew.
		Mean 9 a.m.	Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	
No. of yrs. over which observation extends	24	24	24	24	76	76	76	76	73	24	
January ..	0.385	58	65	50	1.88	8	5.68 1904	0.04 1878	2.97 9/97	2.6	
February ..	0.416	62	69	48	1.76	7	6.24 1904	0.03 1870	3.37 18/19	3.6	
March ..	0.379	64	71	57	2.25	10	7.50 1911	0.18 1859	3.55 5/19	7.7	
April ..	0.340	71	82	66	2.18	11	6.71 1901	Nil 1923	2.28 22/01	9.3	
May ..	0.310	79	86	71	2.18	13	4.31 1862	0.45 1901	1.85 7/91	9.4	
June ..	0.280	83	89	76	2.06	14	4.51 1859	0.73 1877	1.74 21/04	9.0	
July ..	0.262	82	86	76	1.84	14	7.02 1891	0.57 1902	2.71 12/91	9.0	
August ..	0.268	76	82	70	1.87	15	4.04 1924	0.48 1903	1.94 26/24	8.2	
September ..	0.289	68	76	60	2.38	14	7.93 1916	0.52 1907	2.62 12/80	6.5	
October ..	0.305	62	67	53	2.60	13	7.61 1869	0.29 1914	3.00 17/69	5.5	
November ..	0.330	60	69	52	2.25	11	6.71 1916	0.25 1895	2.57 16/76	1.9	
December ..	0.366	58	69	51	2.28	9	7.18 1863	0.11 1904	2.62 28/07	1.7	
Year { Totals ..	—	—	—	—	25.53	139	—	—	—	74.4	
{ Averages ..	0.323	69	—	—	—	—	—	—	—	—	
{ Extremes ..	—	—	89	48	—	—	7.93 9/1916	Nil 4/1923	3.55 5/3/19	—	

CLIMATOLOGICAL DATA—HOBART, TASMANIA.

LAT. 42° 53' S., LONG. 147° 20' E. HEIGHT ABOVE M.S.L., 177 Ft.  
 BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mm Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind.				Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m., & 9 p.m.	No. of Clear Days.
		Greatest Number of Miles in One Day.	Mean Hourly Pressure. (lb.)	Total Miles.	Prevailing Direction. 9 a.m. 3 p.m.				
No. of yrs. over which observation extends	47	—	—	—	—	21	24	69	25
January	29.827	500	30/16	0.20	6,027	N N W & N S E	4.877	0.9	6.0
February	29.919	605	4/27	0.15	4,751	N & N N W S E	3.752	1.2	6.0
March	29.947	443	19/27	0.13	4,902	N & N N W S E	3.019	1.4	6.0
April	29.969	533	27/26	0.14	4,836	N to N W N W & S E	3.023	0.7	6.1
May	29.988	423	15/27	0.12	4,784	N W to N N to N W	1.419	0.5	6.1
June	29.959	569	27/20	0.12	4,586	N W & N N W N & N N W	0.920	0.5	6.1
July	29.924	489	22/29	0.13	4,916	N N W & N N W to N W	0.961	0.5	5.8
August	29.920	612	19/26	0.14	5,055	N & N N W N & N W	1.308	0.5	6.0
September	29.842	516	26/15	0.19	5,723	N N W & N N W & S E	2.015	0.7	6.1
October	29.827	461	8/12	0.20	6,090	N to N W S E & N W	3.098	0.7	6.3
November	29.806	508	18/15	0.19	5,796	N & N W S E	3.903	0.8	6.4
December	29.810	486	30/20	0.18	5,707	N & N N W S E	4.513	0.9	6.3
Year { Totals	—	—	—	—	—	—	—	—	—
Year { Averages	29.895	—	—	0.16	5,264	N to N W S E & N W	31.808	9.3	—
Year { Extremes	—	612	19/8/26	—	—	—	—	—	23.2

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.).			Extremes Shade Temperature (Fahr.).		Extreme Range.	Extreme Temperature (Fahr.).		Mean Hours of Sunshine.
	Mean.	Mean Min.	Mean.	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of yrs. over which observation extends	61	61	61	85	85	85	44	64	11*
January	71.1	52.8	62.0	105.0 (a)	40.0 3/72	65.0	160.0 (b)	30.6 19/97	241.4
February	71.3	53.4	62.4	104.4 12/99	39.0 20/87	65.4	165.0 24/98	28.3 —/87	202.0
March	67.9	50.8	59.4	99.0 —/61	35.2 31/26	63.8	150.0 3/05	27.5 30/02	204.4
April	62.7	47.7	55.2	90.0 1/56	30.0 25/56	60.0	142.0 18/93	25.0 —/86	151.4
May	57.4	43.8	50.6	77.8 5/21	29.2 20/02	48.6	128.0 (c)	20.0 19/02	139.3
June	52.8	41.0	46.9	75.0 7/74	28.0 22/79	47.0	122.0 12/94	21.0 6/87	121.4
July	52.0	39.5	45.8	72.0 22/77	27.0 18/66	45.0	121.0 12/93	18.7 16/86	126.9
August	55.0	41.1	48.0	77.0 3/76	30.0 10/73	47.0	129.0 —/87	20.1 7/09	165.1
September	58.7	43.2	51.0	81.7 23/26	32.0 12/41	51.7	138.0 23/93	18.3 16/26	170.2
October	62.6	45.5	54.0	92.0 24/14	32.0 12/89	60.0	156.0 9/93	23.8 (d)	190.9
November	65.9	48.2	57.0	98.0 23/88	35.2 5/13	62.8	154.0 19/92	26.0 1/08	223.4
December	69.2	51.2	60.2	105.2 30/97	38.0 13/06	67.2	157.0 30/18	27.2 —/86	229.1
Year { Averages	62.2	46.5	54.4	—	—	78.2	—	—	2165.5
Year { Extremes	—	—	—	105.2 30/12/97	27.0 18/7/66	—	165.0 24/2/98	18.3 16/9/26	(e)

(a) 27/49 and 1/00. (b) 5/86 and 13/05. (c) —/89 and —/93. (d) 1/86 and —/99. (e) Total for year.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (Inches)	Rel. Hum. (%)				Rainfall (inches).				Dew. Mean No. Days Dew.
		Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	
No. of yrs. over which observation extends	45	45	45	45	89	88	89	89	65	72
January	0.332	58	72	47	1.86	10	5.91 1893	0.03 1841	2.96 30/16	0.6
February	0.356	63	77	52	1.48	9	9.15 1854	0.07 1847	4.50 27/54a	1.5
March	0.332	67	77	58	1.70	10	7.60 1854	0.02 1843	2.79 5/19	5.1
April	0.299	72	84	58	1.91	11	6.50 1909	0.07 1904	5.02 20/09	9.8
May	0.269	78	89	65	1.89	13	6.37 1905	0.10 1843	3.22 14/58	12.6
June	0.241	80	91	68	2.23	14	8.15 1889	0.22 1852	4.11 13/89	8.6
July	0.230	80	94	72	2.17	15	6.02 1922	0.30 1850	2.51 18/22	8.6
August	0.238	75	92	64	1.81	14	10.16 1858	0.23 1854	4.35 12/58	8.8
September	0.254	67	85	59	2.09	15	7.14 1844	0.39 1847	2.75 18/44	4.8
October	0.273	64	73	51	2.29	15	6.67 1906	0.26 1850	2.58 4/06	2.8
November	0.293	66	72	50	2.47	14	8.94 1849	0.16 1868	3.97 7/49	1.2
December	0.317	57	67	45	2.01	11	9.00 1875	0.11 1842	2.82 21/29	0.8
Year { Totals	—	—	—	—	23.91	151	—	—	—	65.2
Year { Averages	0.281	67	—	—	—	—	—	—	—	—
Year { Extremes	—	—	94	45	—	—	10.16 8/1858	0.02 3/1843	5.02 20/4/09	—

\* Early records discarded owing to faulty instrument.

(a) 4.18 on 28/54 also.

## CHAPTER III.

## GENERAL GOVERNMENT.

## § 1. Scheme of Parliamentary Government.

1. **General.**—A brief account of the general legislative powers of the Commonwealth and States is given in preceding issues of the *Official Year Book* (see No. 13, pp. 927 to 951, and No. 22, page 64).

2. **Powers and Functions of the Governor-General and of the State Governors.**—A detailed statement of the powers and functions of the Governor-General and of the State Governors will be found in preceding issues of the *Official Year Book* (see No. 18, pp. 78 to 80).

3. **Governor-General and State Governors.**—The present Governor-General is the Right Honorable SIR ISAAC ALFRED ISAACS, P.C., G.C.M.G. He assumed office on the 22nd January, 1931.

The following is a list of the Governors of the various States of the Commonwealth:—

New South Wales ..	Air Vice-Marshal SIR PHILIP WOOLCOTT GAME, G.B.E., K.C.B., D.S.O.
Victoria ..	Lieut.-Governor—SIR WILLIAM HILL IRVINE, K.C.M.G.
Queensland ..	Lieut.-Colonel the RT. HON. SIR LESLIE ORME WILSON, P.C., G.C.S.I., G.C.I.E., C.M.G., D.S.O.
South Australia ..	Brigadier-General SIR ALEXANDER GORE ARKWRIGHT HORE-RUTHVEN, V.C., K.C.M.G., C.B., D.S.O.
Western Australia ..	Lieut.-Governor—SIR JOHN ALFRED NORTHMORE, K.C.M.G.
Tasmania ..	Lieut.-Governor—SIR HERBERT NICHOLLS, K.C.M.G.

4. **The Cabinet and Executive Government.**—(i) *General.* In both the Commonwealth and the State Legislatures the forms of government have been founded on their prototypes in the Imperial Government, and the relations established between the Ministry and the representatives of the people are in accordance with those prevailing in Great Britain. The executive powers in the Commonwealth are vested in the Governor-General in Council, and in the State Governments in the Governor in Council. The Executive Council in the Commonwealth and the majority of the States is practically co-extensive with a group of departmental chiefs, who are usually spoken of as the Cabinet, and who change with the rise and fall of party majorities. In the Commonwealth Government, however, as well as in the States of Victoria and Tasmania, the Cabinet on leaving office remain members of the Executive Council, though they no longer attend its meetings, and it is in fact an essential feature of the Cabinet system of Government that they should not do so, except to assist the Governor in transacting purely formal business, or to advise on non-political questions.

(ii) *The Executive Council.* This body is composed of the Governor and the Ministers of State holding office for the time being. The latter are sworn both as Executive Councillors and as Ministers controlling the different administrative departments. It should be observed that all persons living who have held Ministerial office under former Governments are also technically members of the Executive Council, and are thus liable to be specially summoned for attendance at meetings of that body. The meetings are official in character; they are presided over by the Governor-General (or Governor) and are attended by the clerk, who keeps a formal record of the proceedings. At these meetings the decisions of the Cabinet are put into official form and made effective, appointments are confirmed, resignations accepted, proceedings ordered, and notices and regulations published.

(iii) *The Appointment of Ministers and of Executive Councillors.* Although it is technically possible for the Governor to make and unmake cabinets at his pleasure, under all ordinary circumstances his apparent liberty in choosing his Executive Council is virtually restricted by the operation of constitutional machinery. When a Ministry is defeated in Parliament or at the polls, the procedure both in the Commonwealth and the State Parliaments generally, though not invariably, follows that prevailing in the Imperial Parliament. The customary procedure in connexion with the resignation or acceptance of office by a Ministry is described fully in previous issues of the Year Book. (See No. 6, page 942.)

(iv) *Ministers in Upper or Lower Houses.* The subjoined table shows the number of Ministers with seats in the Upper or Lower Houses of each Parliament in June, 1932.

AUSTRALIAN PARLIAMENTS—MINISTERS IN UPPER OR LOWER HOUSES,  
1932.

Ministers with Seats in—	C'wealth.	N.S.W.	Vict.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
The Upper House ..	3	3	4	(a)	2	1	1	14
The Lower House ..	10	12	8	10	4	6	5	55
Total ..	13	15	12	10	6	7	6	69

(a) Council abolished in 1922.

(v) *The Cabinet.* (a) *General.* The meetings of this body are private and deliberative. The actual Ministers of the day are alone present, no records of the meetings transpire, and no official notice is taken of the proceedings. The members of the Cabinet, being the leaders of the party in power in Parliament, control the bent of legislation, and must retain the confidence of the people and also of the Governor-General (or Governor), to whom they act as an advising body. They also in effect wield, by virtue of their seats on the Executive Council, the whole executive force of the community. In summoning, proroguing, or dissolving Parliament, the Governor-General (or Governor) is usually guided by the advice tendered him by the Cabinet, though legally in no way bound to accept such advice.

(b) *Commonwealth Ministers of State.* A statement showing the names of Ministers of State who have held office from the inauguration of the Commonwealth Government to 1925 will be found in Official Year Book No. 18, pages 82 and 83.

(c) *State Ministries.* A list of the members of the Ministry in each State in June, 1932, will be found in § 3 of this chapter.

5. **Number and Salary of Members of the Legislatures.**—The following table shows the number and annual salary of members in each of the legislative chambers in June, 1932 :—

**MEMBERS OF COMMONWEALTH AND STATE PARLIAMENTS, AND ANNUAL SALARIES, 1932.**

Members in—	C'wealth:	N.S.W.	Vict.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
<b>MEMBERS.</b>								
Upper House ..	36	108	34	(a)	20	30	18	246
Lower House ..	76	90	65	62	46	50	30	419
<b>Total ..</b>	<b>112</b>	<b>198</b>	<b>99</b>	<b>62</b>	<b>66</b>	<b>80</b>	<b>48</b>	<b>665</b>

**ANNUAL SALARY.**

Upper House ..	£ 800	£ ..	£ 177	£ (a)	£ 360	£ 480	£ (b)296-400	..
Lower House ..	800	706	402	500	360	480	(b)320-400	..

(a) Council abolished in 1922. (b) According to area of electorate and distance from the Capital.

The use of the expressions "Upper House" and "Lower House" in the above statement, though not justified constitutionally, is convenient, inasmuch as the legislative chambers are known by different names in the Commonwealth and in some of the States.

6. **Enactments of the Parliament.**—In the Commonwealth, all laws are enacted in the name of the Sovereign, the Senate, and the House of Representatives. The subjects with respect to which the Commonwealth Parliament is empowered to make laws are enumerated in the Constitution Act. In the States, laws are enacted in the name of the Sovereign by and with the consent of the Legislative Council (except in Queensland) and Legislative Assembly or House of Assembly. The Governor-General or the State Governor acts as Viceroy as regards giving the Royal assent to or vetoing Bills passed by the Legislatures, or reserving them for the special consideration of the Sovereign. In the States, the Councils and Assemblies are empowered generally, subject to the Commonwealth Constitution, to make laws in and for their respective States, in all cases whatsoever. Subject to certain limitations, they may alter, repeal, or vary their Constitution. Where a law of a State is inconsistent with a law of the Commonwealth the latter prevails, and the former is, to the extent of the inconsistency, invalid.

**§ 2. Parliaments and Elections.**

1. **Qualifications for Membership and for Franchise.**—The conspectus in § 4 of "General Government" in Year Book No. 13 contains particulars, as in 1920, relating to the legislative chambers in the Commonwealth and State Parliaments, and shows concisely the qualifications necessary for membership and for the franchise in each House. (These are, in the main, applicable in 1932, but it must be remembered that Queensland abolished the Upper House in 1922.) It has further to be remembered that in 1925 the Commonwealth Parliament passed an Act removing the disqualification on racial grounds from (a) natives of British India and (b) persons who have become naturalized. Disqualification of persons otherwise eligible, either as members or voters, is generally on the usual grounds of being of unsound mind or attainted with treason, being convicted of certain offences, and, as regards membership, on the grounds of holding a place of profit under the Crown, being pecuniarily interested in a Government contract except as a member of an incorporated company of more than twenty-five persons, or being an undischarged bankrupt.

2. **The Federal Government.**—The Senate consists of 36 members, six being returned by each of the original federating States. Members of this Chamber are elected for a term of six years, but by a provision in the Constitution half the members retire at the end of every third year, although they are eligible for re-election. In accordance with the Constitution, the total number of members of the House of Representatives must be as nearly as possible double that of the Senate. In the House of Representatives the States are represented on a population basis, and the numbers stand at present as follows:—New South Wales, 28; Victoria, 20; Queensland, 10; South Australia, 7; Western Australia, 5; Tasmania, 5; Northern Territory, 1—total, 76. The member representing the Northern Territory may join in the debates but is not entitled to vote. The Constitution provides for a minimum of five members for each original State. Members of the House of Representatives are elected for the duration of the Parliament, which is limited to three years. In elections for Senators, the whole State constitutes the electorate. For the purposes of elections for the House of Representatives, the State is divided into single electorates corresponding in number with the number of members to which the State is entitled. Members of both Houses are paid at the rate of £800 per annum. Further information regarding the Senate and the House of Representatives is given in earlier issues.

3. **Federal Elections.**—There have been twelve complete Parliaments since the inauguration of Federation. The fifth Parliament, which was opened on the 9th July, 1913, was dissolved on the 30th July, 1914, in somewhat unusual circumstances. Under Section 57 of the Constitution, it is provided that, should the Senate fail to pass, or pass with amendments, any proposed law previously passed by the House of Representatives, and should the latter House, after an interval of three months, again pass the proposed law, with or without the amendments of the Senate, and the Senate for a second time reject it or pass it with amendments to which the lower House will not agree, then the Governor-General may dissolve the two Houses simultaneously. For the first time in the history of the Commonwealth this deadlock between the Senate and the House of Representatives occurred in the second session of the fifth Parliament, and, in accordance with the section of the Constitution referred to above, both Houses were dissolved by the Governor-General. Until 1927 the Parliament met at Melbourne; it now meets at Canberra, the first meeting at Parliament House, Canberra, being opened by H.R.H. the Duke of York, on the 9th May, 1927. The first session of the thirteenth Parliament opened on the 17th February, 1932. Particulars regarding Commonwealth elections since 1917 may be found in the table given hereunder:—

## FEDERAL ELECTIONS.

Date.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Fem.	Total.	Males.	Fem.	Total.	Males.	Fem.	Total.
<b>THE SENATE.</b>									
5th May, 1917 ..	1,444,133	1,391,194	2,835,327	1,184,663	1,018,138	2,202,801	82.03	73.18	77.69
13th December, 1919	1,439,818	1,410,044	2,849,862	1,094,534	938,403	2,032,937	76.02	65.55	71.33
16th December, 1922	1,494,508	1,487,916	2,982,424	966,551	761,695	1,728,246	64.67	51.19	57.95
14th November, 1925	1,656,286	1,645,730	3,302,016	1,515,608	1,499,343	3,014,953	91.51	91.11	91.31
17th November, 1928	1,723,552	1,721,214	3,444,766	1,617,752	1,606,748	3,224,500	93.86	93.35	93.61
12th October, 1929	1,773,014	1,769,936	3,542,950	*	*	*	*	*	*
19th December, 1931	1,827,079	1,822,875	3,649,954	1,741,163	1,727,140	3,468,303	95.30	94.75	95.02

\* No election.

## THE HOUSE OF REPRESENTATIVES.

## (CONTESTED ELECTORATES.)

5th May, 1917 ..	1,262,527	1,207,938	2,470,465	1,041,552	892,926	1,934,478	82.50	73.92	78.30
13th December, 1919	1,395,165	1,367,468	2,762,633	1,063,029	914,816	1,977,845	76.19	66.90	71.59
16th December, 1922	1,396,020	1,378,254	2,774,274	920,177	726,686	1,646,863	65.91	52.72	59.36
14th November, 1925	1,635,842	1,632,897	3,268,739	1,499,006	1,488,194	2,987,200	91.63	91.14	91.39
17th November, 1928	1,450,202	1,463,951	2,914,153	1,362,675	1,366,137	2,728,812	93.96	93.32	93.64
12th October, 1929	1,557,525	1,560,505	3,118,030	1,479,100	1,478,447	2,957,547	94.96	94.74	94.85
19th December, 1931	1,724,730	1,733,343	3,458,073	1,643,604	1,642,870	3,286,474	95.30	94.78	95.04

The percentage of electors who exercised the franchise at each election rose from 53.04 for the Senate and 55.69 for the House of Representatives in 1901 to 77.69 and 78.30 respectively in 1917. The next election in 1919 showed a considerable falling off, and in 1922 the decrease was still more marked, the respective percentages for that year being 57.95 and 59.36, or very little more than those for 1901. Compulsory voting was introduced prior to the election in 1925, and an exceedingly heavy vote (over 91 per cent) was cast in that year. At each succeeding election, moreover, the percentage has increased and at the last election in 1931 reached 95 per cent.

4. **Federal Referenda.**—According to Section 128 of the Constitution, any proposed law for the alteration of the Constitution must, in addition to being passed by an absolute majority of each House of Parliament, be submitted to a referendum of the electors in each State, and must further be approved by a majority of the States and of the electors who voted before it can be presented for Royal Assent. Several referenda have been held from time to time, but in three cases only has any proposed law been assented to by the required majority of the electors. A statement dealing with the various referenda up to and inclusive of the year 1919, and the voting thereon was given in previous issues of the *Official Year Book* (see No. 18, pp. 87 to 89), but space will not permit of the incorporation of this information in the present volume. In the year 1926 a referendum was held in relation to proposed laws entitled respectively "Industry and Commerce" and "Essential Services." The result of the voting was; Industry and Commerce, votes in favour, 1,247,088; votes not in favour, 1,619,655. Essential Services, votes in favour, 1,195,502; votes not in favour, 1,597,793.

A referendum was taken in 1928 in respect of a proposed law entitled "State Debts 1928" and a majority of votes was cast in each State in favour of the proposal, the voting for the Commonwealth being as follows: in favour, 2,237,391; not in favour, 773,852.

5. **The Parliament of New South Wales.**—(i) *Constitution.* The Legislative Council in this State is a nominee chamber, the Legislative Assembly being an elective body. Theoretically the Legislative Council may contain an unlimited number of members, and the number of members in June, 1932, was one hundred and eight. The tenure of the seat is for life; four-fifths of the members must be persons not holding any paid office under the Crown, but this is held not to include officers of His Majesty's sea or land forces on full or half-pay, or retired officers on pensions. A Bill for the abolition of the Legislative Council was passed in December, 1930. The High Court of Australia, however, in a judgment delivered in March, 1931, held that this legislation was in conflict with the Constitution. The matter was made the subject of an appeal to the Privy Council which, by its judgment delivered at the close of May, 1932, confirmed the decision of the High Court. The Legislative Assembly consists of ninety members elected in single-seat electoral districts, who hold their seats during the existence of the Parliament to which they are elected. The duration of Parliament is limited to three years.

(ii) *Particulars of Elections.* Since the introduction of responsible government in New South Wales there have been twenty-nine complete Parliaments, the first of which opened on the 22nd May, 1856, and was dissolved on the 19th December, 1857, while the twenty-ninth was dissolved on the 18th May, 1932. The thirtieth Parliament opened on the 23rd June, 1932. The elections of 1920, 1922, and 1925 were contested on the principle of proportional representation, but a reversion to the system of single seats and preferential voting was made at the later appeals to the people. Particulars of voting at elections from 1920 to 1930 are given on the next page. (Particulars of the elections held in June, 1932, will, if available, be found in the Appendix.)

## LEGISLATIVE ASSEMBLY ELECTIONS, NEW SOUTH WALES.

Year.	Electors Qualified to Vote.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1920	593,244	561,193	1,154,437	363,115	285,594	648,709	61.21	50.89	56.19
1922	636,662	614,361	1,251,023	466,949	408,515	875,464	73.34	66.49	69.98
1925	678,749	660,331	1,339,080	489,126	435,853	924,979	72.06	66.00	69.07
1927	714,886	694,607	1,409,493	591,820	558,957	1,150,777	83.79	81.25	82.54
1930	724,471	716,314	1,440,785	682,747	673,676	1,356,423	95.09	94.79	94.94

The principle of one elector one vote was adopted in 1894, and that of compulsory enrolment in 1922. Compulsory voting was introduced in the 1930 election, and, as the above table shows, the percentage of electors who voted in contested electorates rose to nearly 95.

The franchise was extended to women (Women's Franchise Act) in 1902, and was exercised for the first time at a State election in 1904.

6. **The Parliament of Victoria.**—(i) *Constitution.* Both of the Victorian legislative chambers are elective bodies, but there is a considerable difference in the number of members of each House, as well as in the qualifications necessary for members and electors. The number of members in the Upper House is 34, and in the Lower House, 65. In the Legislative Council the tenure of the seat is for six years, but one member for each of the seventeen provinces retires every third year, except in the case of a dissolution, when one-half of the newly-elected members hold their seats for three years only. Members of the Legislative Assembly are elected for the duration of Parliament, which is limited to three years. An elector for the Legislative Assembly may vote once only, plurality of voting having been abolished in 1899; an elector, however, qualified in more than one district, may select that for which he desires to record his vote. A preferential system of voting (see Year Book No. 6, page 1182) was for the first time adopted in Victoria at the election held in November, 1911.

(ii) *Particulars of Elections.* Since the introduction of responsible government in Victoria there have been thirty complete Parliaments, the first of which opened on the 21st November, 1856, and closed on the 9th August, 1859, while the thirtieth was dissolved on the 22nd April, 1932. The thirty-first Parliament was opened on the 14th June, 1932. The election for the Legislative Assembly in 1927 was the first held since the institution of compulsory voting. At the Legislative Council elections held on the 6th June, 1931, only nine of the seventeen seats were contested. Particulars of voting at elections during the years 1919 to 1932 are given in the subjoined table.

## VICTORIAN ELECTIONS.

## LEGISLATIVE COUNCIL.

Year.	Electors Enrolled.	Electors Enrolled in Contested Electorates.	Electors who Voted.	Percentage of Electors who Voted in Contested Electorates.	
1919	.. ..	317,593	133,058	40,393	30.35
1922	.. ..	353,440	161,731	47,008	29.07
1925	.. ..	399,510	172,875	56,033	32.41
1928	.. ..	444,278	268,164	85,372	31.84
1931	.. ..	470,349	239,975	93,244	38.86



VICTORIAN ELECTIONS.

LEGISLATIVE ASSEMBLY.

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1920	418,085	450,763	868,848	232,604	235,621	468,225	66.23	61.38	63.70
1921	414,818	456,638	871,456	167,812	158,415	326,227	61.29	53.53	57.26
1924	433,357	467,070	900,427	190,153	180,810	370,963	63.02	55.72	59.24
1927	480,485	512,726	993,211	377,941	402,458	780,399	92.02	91.51	91.76
1929	496,996	532,174	1,029,170	308,532	330,836	639,368	94.11	93.36	93.72
1932	510,809	544,492	1,055,301	335,362	351,349	686,711	94.56	93.77	94.16

The franchise was extended to women by the Adult Suffrage Act 1908, and voting at elections for the Legislative Assembly was made compulsory in 1926.

7. **The Parliament of Queensland.**—(i) *Constitution.* As pointed out previously the Legislative Council in Queensland was abolished in 1922, the date of Royal Assent to the Act being the 23rd March. The Legislative Assembly is composed of sixty-two members, and the State is divided into that number of electoral districts. The "Electoral Districts Act of 1931", assented to on the 1st October, 1931, provided, that from and after the end of the twenty-fifth Parliament (dissolved on the 19th April, 1932) the number of members and electoral districts should be reduced from seventy-two to sixty-two. A modified system of optional preferential voting is in operation. (See Year Book No. 6, page 1183.)

(ii) *Particulars of Elections.* Since the establishment of responsible government in Queensland there have been twenty-five complete Parliaments, the first of which opened on the 29th May, 1860, and was dissolved on the 20th May, 1863, while the twenty-fifth Parliament was dissolved on the 19th April, 1932. At the elections held in May, 1915, the principle of compulsory voting was introduced for the first time in Australia. Of the total number of electors enrolled at the 1929 elections, 90.52 per cent. went to the polls. Statistics regarding elections during the years 1918 to 1929 are given below. (Particulars of the elections held in June, 1932, will, if available, be found in the Appendix.)

QUEENSLAND LEGISLATIVE ASSEMBLY ELECTIONS.

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1918	233,342	191,074	424,416	176,768	163,901	340,669	75.75	85.78	80.27
1920	238,750	206,931	445,681	187,575	168,651	356,226	78.57	81.50	79.93
1923	257,001	219,476	476,477	194,287	174,980	369,267	80.72	83.96	82.23
1926	253,571	224,526	478,097	209,139	191,916	401,055	89.77	90.13	89.94
1929	270,327	239,672	509,999	228,601	209,647	438,248	89.69	91.45	90.52

The election of 1907 was the first State election in Queensland at which women voted, the privilege being conferred under the Elections Acts Amendment Act 1905.

8. The Parliament of South Australia.—(i) *Constitution.* In this State there is a Legislative Council composed of twenty members and a House of Assembly with forty-six members, both chambers being elective. The State is divided into five districts, which return four members each to the Legislative Council. For the House of Assembly, eight districts return three members each, and eleven districts two members each.

(ii) *Particulars of Elections.* Since the inauguration of responsible government in South Australia there have been twenty-six complete Parliaments, the first of which was opened on the 22nd April, 1857. The twenty-sixth Parliament opened on the 17th May, 1927, and closed on the 20th February, 1930. The first session of the twenty-seventh Parliament began on the 27th May, 1930. Particulars of voting at recent elections are given below :—

## SOUTH AUSTRALIAN ELECTIONS.

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.

## LEGISLATIVE COUNCIL.

1918	71,510	23,461	94,971	42,987	11,800	54,787	60.11	50.30	57.69
1921	69,986	23,062	93,048	38,597	11,309	49,906	64.23	53.96	61.57
1924	67,429	22,018	89,447	36,626	10,492	47,118	65.79	54.94	63.02
1927	100,376	37,395	137,771	46,686	17,742	64,428	67.55	59.91	65.26
1930	(a)	(a)	133,274	(a)	(a)	100,040	(a)	(a)	75.06

## HOUSE OF ASSEMBLY.

1918	126,669	132,043	258,712	71,501	62,742	134,243	56.45	47.52	51.89
1921	134,091	137,931	272,022	91,451	77,600	169,051	70.10	57.64	63.77
1924	141,944	147,899	289,843	87,712	73,453	161,165	69.65	56.05	62.71
1927	152,997	156,591	309,588	110,127	104,611	214,738	80.64	74.31	77.43
1930	(a)	(a)	325,244	(a)	(a)	222,819	(a)	(a)	71.36

(a) Not available.

It is interesting to note that South Australia was the first of the States to grant women's suffrage (under the Constitution Amendment Act 1894), the franchise being exercised for the first time at the Legislative Assembly election on the 25th April, 1896.

9. The Parliament of Western Australia.—(i) *Constitution.* In this State both Chambers are elective. For the Legislative Council there are thirty members, each of the ten Provinces returning three members, while the Legislative Assembly is composed of fifty members, one member being returned by each of the fifty electoral districts. At the expiration of two years from the date of election to a seat in the Legislative Council, and every two years thereafter, the junior member for the time being for each province retires. Seniority is determined (a) by the date of election, (b) if two or more members are elected on the same day, then the junior is the one who polled the least number of votes (c) if the election be uncontested, or in case of an equality of votes, then the seniority is determined by the alphabetical precedence of surnames and, if necessary, Christian names. Members of the Legislative Assembly are elected for three years.

(ii) *Particulars of Elections.* Since the establishment of responsible government in Western Australia there have been thirteen complete Parliaments, the first of which was opened on the 30th December, 1890, while the fourteenth Parliament was elected on 12th April, and 10th May, 1930. The preferential system of voting in use in

Western Australia is described in Year Book No. 6, page 1184. Particulars relating to Assembly and Council elections for which information is available are given in the tables below.

WESTERN AUSTRALIAN ELECTIONS.

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.

LEGISLATIVE COUNCIL.

1922	40,360	14,838	55,198	17,524	4,763	22,287	46.16	33.81	42.82
1924	43,897	14,904	58,801	16,552	4,569	21,121	47.06	39.25	45.12
1926	39,566	15,120	54,686	23,956	8,136	32,092	60.55	53.80	58.68
1928	54,822	19,076	73,898	24,877	8,151	33,028	51.99	46.75	50.59
1930	54,651	18,927	73,578	20,198	6,252	26,450	51.58	48.50	50.81
1932	57,454	19,889	77,343	17,145	5,508	22,653	56.29	48.29	54.16

LEGISLATIVE ASSEMBLY.

1917	93,106	73,845	166,951	45,453	40,167	85,620	59.46	65.51	62.15
1921	89,523	75,165	164,688	54,747	44,211	98,958	69.16	65.22	67.34
1924	101,717	88,152	189,869	55,591	43,800	99,391	66.00	59.00	62.32
1927	113,072	97,877	210,949	76,307	66,199	142,506	74.32	72.42	73.42
1930	122,576	107,500	230,076	75,206	63,807	139,013	75.44	73.30	74.44

Women's suffrage was granted by the Electoral Act of 1899. At the 1921 elections the first woman member elected to an Australian Parliament was returned.

10. The Parliament of Tasmania.—(i) *Constitution.* In Tasmania there are two legislative chambers—the Legislative Council and the House of Assembly, both bodies being elective. The Council consists of eighteen members, returned from fifteen districts, Hobart returning three, Launceston two, and the remaining thirteen districts sending one member each. There are five House of Assembly districts corresponding to the Commonwealth electoral districts, each returning six members, who are elected under a system of proportional representation which first came into force at the 1909 elections. (See Year Book No. 6, page 1185.) The annual salaries of members of the House of Assembly range from £320 to £400, and of the Legislative Council from £296 to £400 according to the area of the electorate and the distance from the capital.

In 1924 and again in 1925 the House of Assembly contested, with at least temporary success, the power of the Legislative Council to amend money bills. The matter was settled by "The Constitution Act 1926," which provides that all money bills shall originate in the Assembly, that all money votes shall be recommended by the Governor, and that the Council may amend bills other than those for appropriating public moneys or fixing a rate for income or land tax. The Council has no power to insert a provision for the appropriation of money or the imposing of a burden on the people.

(ii) *Particulars of Elections.* The first Tasmanian Parliament opened on 2nd December, 1856, and closed on 8th May, 1861. There have been twenty-three complete Parliaments since the inauguration of responsible government. Particulars of the voting at the last five elections for the House of Assembly are given on the next page :—

## TASMANIAN ELECTIONS, HOUSE OF ASSEMBLY.

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1919	53,205	54,336	107,541	37,037	34,027	71,064	69.61	62.62	66.08
1922	54,958	55,591	110,549	38,457	31,295	69,752	69.96	56.30	63.09
1925	56,667	58,234	114,901	41,322	35,959	77,281	72.92	61.81	67.25
1928	55,058	56,898	111,956	46,769	44,910	91,679	84.94	78.94	81.90
1931	59,024	59,706	118,730	56,674	56,105	112,779	96.02	93.97	94.99

The present members of the Legislative Council have been elected at various dates and the following particulars are given of the last contested election in each case:— Number of electors on the roll, 48,689; number of votes recorded, male 21,155, female, 6,648, total 27,803; percentage of persons who voted to the number on the roll, 57.10.

The suffrage was granted to women under the Constitution Amendment Act 1903 and compulsory voting came into force on the passing of the Electoral Act in 1928.

### § 3. Administration and Legislation.

**I. The Commonwealth Parliaments.**—The first Parliament of the Commonwealth was convened by proclamation dated 29th April, 1901, by His Excellency the late Marquis of Linlithgow, then Earl of Hopetoun, Governor-General. It was opened on the 9th May following by H.R.H. the Duke of Cornwall and York, who had been sent to Australia for that purpose by His Majesty the King, the Rt. Hon. Sir Edmund Barton, P.C., G.C.M.G., K.C., being Prime Minister.

The following table gives the number and duration of Parliaments since Federation:—

#### COMMONWEALTH PARLIAMENTS.

Number of Parliament.	Date of Opening.	Date of Dissolution.
First .. .. .	9th May, 1901 .. .. .	23rd November, 1903
Second .. .. .	2nd March, 1904 .. .. .	5th November, 1906
Third .. .. .	20th February, 1907 .. .. .	19th February, 1910
Fourth .. .. .	1st July, 1910 .. .. .	23rd April, 1913
Fifth .. .. .	9th July, 1913 .. .. .	30th July, 1914 (a)
Sixth .. .. .	8th October, 1914 .. .. .	23rd March, 1917
Seventh .. .. .	14th June, 1917 .. .. .	31st October, 1919
Eighth .. .. .	26th February, 1920 .. .. .	6th November, 1922
Ninth .. .. .	28th February, 1923 .. .. .	3rd October, 1925
Tenth .. .. .	13th January, 1926 .. .. .	9th October, 1928
Eleventh .. .. .	9th February, 1929 .. .. .	16th September, 1929
Twelfth .. .. .	20th November, 1929 .. .. .	27th November, 1931
Thirteenth .. .. .	17th February, 1932 .. .. .	

(a) On this occasion the Governor-General, acting on the advice of the Ministry, and under section 57 of the Constitution, granted a dissolution of both the Senate and the House of Representatives, this being the first occasion since Federation on which a dissolution of both Houses had occurred.

2. **Governors-General and Ministries.**—The following statements show the names of the several Governors-General, and the Ministries which have directed the administration of the affairs of the Commonwealth since its creation :—

(a) GOVERNORS-GENERAL.

- Rt. Hon. EARL OF HOPETOUN (afterwards MARQUIS OF LINLITHGOW), P.C., K.T., G.C.M.G., G.C.V.O. From 1st January, 1901, to 9th January, 1903.  
 Rt. Hon. HALLAM BARON TENNYSON, P.C., G.C.M.G. From 17th July, 1902, to 9th January, 1903 (Acting).  
 Rt. Hon. HALLAM BARON TENNYSON, P.C., G.C.M.G. From 9th January, 1903, to 21st January, 1904.  
 Rt. Hon. HENRY STAFFORD BARON NORTHCOPE, P.C., G.C.M.G., G.C.I.E., C.B. From 21st January, 1904, to 9th September, 1908.  
 Rt. Hon. WILLIAM HUMBLE EARL OF DUDLEY, P.C., G.C.B., G.C.M.G., G.C.V.O., &c. From 9th September, 1908, to 31st July, 1911.  
 Rt. Hon. THOMAS BARON DENMAN, P.C., G.C.M.G., K.C.V.O. From 31st July, 1911, to 18th May, 1914.  
 Rt. Hon. SIR ROLAND CRAUFURD MUNRO FERGUSON (afterwards VISCOUNT NOVAR OF RAITH), P.C., G.C.M.G. From 18th May, 1914, to 6th October, 1920.  
 Rt. Hon. HENRY WILLIAM BARON FORSTER OF LEPE, P.C., G.C.M.G. From 6th October, 1920, to 8th October, 1925.  
 Rt. Hon. JOHN LAWRENCE BARON STONEHAVEN, P.C., G.C.M.G., D.S.O. From 8th October, 1925, to 22nd January, 1931.  
 Lieut.-Colonel the Rt. Hon. ARTHUR HERBERT TENNYSON, BARON SOMERS, K.C.M.G., D.S.O., M.C. From 3rd October, 1930, to 22nd January, 1931 (Acting).  
 Rt. Hon. SIR ISAAC ALFRED ISAACS, P.C., C.C.M.G. From 22nd January, 1931.

(b) MINISTRIES.

- (i) BARTON GOVERNMENT, 1st January, 1901, to 23rd September, 1903.  
 (ii) FIRST DEAKIN GOVERNMENT, 23rd September, 1903, to 26th April, 1904.  
 (iii) WATSON GOVERNMENT (Labour), 26th April to 17th August, 1904.  
 (iv) REID-MCLEAN GOVERNMENT, 17th August, 1904, to 4th July, 1905.  
 (v) SECOND DEAKIN GOVERNMENT, 4th July, 1905, to 12th November, 1908.  
 (vi) FIRST FISHER GOVERNMENT (Labour), 12th November, 1908, to 2nd June, 1909.  
 (vii) THIRD DEAKIN GOVERNMENT, 2nd June, 1909, to 29th April, 1910.  
 (viii) SECOND FISHER GOVERNMENT (Labour), 29th April, 1910, to 24th June, 1913.  
 (ix) COOK GOVERNMENT, 24th JUNE, 1913, to 17th September, 1914.  
 (x) THIRD FISHER GOVERNMENT (Labour), 17th September, 1914, to 27th October, 1915.  
 (xi) FIRST HUGHES GOVERNMENT (Labour), 27th October, 1915, to 14th November, 1916.  
 (xii) SECOND HUGHES GOVERNMENT (Labour), 14th November, 1916, to 17th February, 1917.  
 (xiii) AUSTRALIAN NATIONAL WAR GOVERNMENT, 17th February, 1917, to 10th January, 1918.  
 (xiv) AUSTRALIAN NATIONAL WAR GOVERNMENT, 10th January, 1918, to 9th February, 1923.  
 (xv) BRUCE-PAGE GOVERNMENT, 9th February, 1923, to 22nd October, 1929.  
 (xvi) SCULLIN GOVERNMENT (Labour), 22nd October, 1929, to 6th January, 1932.

(c) LYONS GOVERNMENT, from 6th January, 1932.

DEPARTMENTS.	MINISTERS (June, 1932).
Prime Minister and Treasurer .. .. .	Rt. Hon. JOSEPH ALOYSIUS LYONS, P.C.
Attorney-General, Minister for External Affairs and Minister for Industry .. .. .	Hon. JOHN GREIG LATHAM, C.M.G., K.C.
Minister without Portfolio .. .. .	Rt. Hon. STANLEY MELBOURNE BRUCE, C.H., P.C., M.C.
Minister for Defence .. .. .	Rt. Hon. SIR GEORGE FOSTER PEARCE, P.C., K.C.V.O.
Postmaster-General .. .. .	Hon. JAMES EDWARD FENTON.
Minister for Trade and Customs .. .. .	Hon. HENRY SOMER GULLETT.
Vice-President of the Executive Council .. .. .	Hon. ALEXANDER JOHN MCLACHLAN.
Minister for the Interior .. .. .	Hon. ROBERT ARCHDALE PARKHILL.
Minister for Commerce .. .. .	Hon. CHARLES ALLAN SEYMOUR HAWKER.
Minister for Health and Minister for Repatriation .. .. .	Hon. CHARLES WILLIAM CLANAN MARR, D.S.O., M.C., V.D.
Assistant Ministers .. .. .	{ Hon. WALTER MASSY GREENE. Hon. JOSIAH FRANCIS. Hon. JOHN ARTHUR PERKINS.

3. **State Ministries.**—The names of the members of the Ministries in each State in June, 1932, are shown in the following statement. The date on which each Ministry was sworn in is stated in parentheses :—

## STATE MINISTRIES, 1932.

## NEW SOUTH WALES (16th May, 1932).

(On the 13th May, 1932, the Governor of New South Wales withdrew the commission of the Hon. J. T. Lang and commissioned the Hon. B. S. B. Stevens to form a ministry.)

<i>Premier and Colonial Treasurer</i> — HON. B. S. B. STEVENS.	<i>Minister for Agriculture</i> — HON. H. MAIN.
<i>Deputy Premier and Minister for Transport</i> — LIEUT.-COL. THE HON. M. F. BRUXNER, D.S.O.	<i>Assistant Minister in the Legislative Council</i> — HON. J. RYAN, M.L.C.
<i>Secretary for Public Works and Minister for Health</i> — HON. R. W. D. WEAVER.	<i>Minister for Local Government</i> — HON. J. JACKSON.(a)
<i>Attorney-General and Vice-President of the Executive Council</i> — HON. H. E. MANNING, K.C., M.L.C.(a)	<i>Secretary for Mines and Minister for Forests</i> — HON. R. S. VINCENT.(a)
<i>Secretary for Lands</i> — HON. E. A. BUTTENSCHAW.	<i>Minister of Justice</i> — HON. L. O. MARTIN.(a)
<i>Colonial Secretary</i> — CAPT. THE HON. F. A. CHAFFEY.	<i>Honorary Minister assisting the Colonial Treasurer</i> — HON. E. S. SPOONEB.(a)
<i>Minister for Education</i> — HON. D. H. DRUMMOND.	<i>Honorary Minister assisting the Minister for Labour and Industry</i> — HON. H. M. HAWKINS, M.L.C.(a)
<i>Minister for Labour and Industry</i> — HON. J. M. DUNNINGHAM.	

(a) Sworn in on the 18th June, 1932.

## VICTORIA (19th May, 1932).

<i>Premier, Treasurer, and Minister of Public Health</i> — HON. SIR S. S. ARGYLE, K.B.E.	<i>Minister of Public Instruction</i> — HON. J. W. PENNINGTON, C.B.E.
<i>Chief Secretary, and Minister in Charge of Electrical Undertakings</i> — HON. I. MACFARLAN.	<i>Commissioner of Public Works, Minister of Mines, Minister in Charge of Immigration, and a Vice-President of the Board of Land and Works</i> — HON. J. P. JONES, M.L.C.
<i>Attorney-General, Solicitor-General, and Minister of Railways, and a Vice-President of the Board of Land and Works</i> — HON. R. G. MENZIES, K.C.	<i>Minister of Water Supply and Minister of Labour</i> — HON. G. L. GOUDIE, M.L.C.
<i>Minister of Agriculture, and a Vice-President of the Board of Land and Works</i> — HON. J. ALLAN.	<i>Ministers without Portfolio</i> — COL. THE HON. H. E. COHEN, C.M.G., D.S.O., V.D., M.L.C. HON. A. E. CHANDLER, M.L.C. HON. W. S. KENT-HUGHES. HON. T. C. MANIFOLD.
<i>President of the Board of Land and Works, Commissioner of Crown Lands and Survey, and Minister of Forests</i> — HON. A. A. DUNSTAN.	

## QUEENSLAND (17th June, 1932.) (Labour.)

<i>Premier, Chief Secretary, Treasurer and Vice-President of the Executive Council</i> — HON. W. FORGAN SMITH.	<i>Minister for Transport</i> — HON. J. DASH.
<i>Secretary for Public Lands</i> — HON. P. PEASE.	<i>Secretary for Mines</i> — HON. J. STOPFORD.
<i>Attorney-General</i> — HON. J. MULLAN.	<i>Secretary for Public Instruction</i> — HON. F. A. COOPER.
<i>Home Secretary</i> — HON. E. M. HANLON.	<i>Secretary for Agriculture and Stock</i> — HON. F. W. BULCOCK.
<i>Secretary for Labour and Industry</i> — HON. M. P. HYNES.	<i>Secretary for Public Works</i> — HON. H. A. BRUCE.

## SOUTH AUSTRALIA (17th April, 1930). (Labour.)

<p><i>Premier, Treasurer, and Minister of Education—</i> HON. L. L. HILL.</p> <p><i>Chief Secretary, Minister of Agriculture and Commissioner of Forest Lands—</i> HON. S. R. WHITFORD, M.L.C.</p> <p><i>Attorney-General and Minister of Railways—</i> HON. W. J. DENNY, M.C.</p>	<p><i>Commissioner of Crown Lands and Minister of Mines, Marine, Labour and Employment—</i> HON. R. S. RICHARDS.</p> <p><i>Commissioner of Public Works, and Minister of Industry—</i> HON. J. McINNES.</p> <p><i>Minister of Local Government, of Immigration, of Repatriation, and of Irrigation—</i> HON. J. JELLEY, M.L.C.</p>
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## WESTERN AUSTRALIA (24th April, 1930).

<p><i>Premier and Treasurer—</i> HON. SIR J. MITCHELL, K.C.M.G.</p> <p><i>Minister for Lands, Immigration, and Health—</i> HON. C. G. LATHAM.</p> <p><i>Attorney-General and Minister for Education—</i> HON. T. A. L. DAVY, K.C.</p> <p><i>Minister for Railways, Mines, Police, Forests, and Industry—</i> HON. J. SCADDAN, C.M.G.</p>	<p><i>Minister for Public Works and Labour—</i> HON. J. LINDSAY.</p> <p><i>Chief Secretary, and Minister for Country Water Supplies, and Trading Concerns—</i> HON. C. F. BAXTER, M.L.C.</p> <p><i>Minister for Agriculture—</i> HON. P. D. FERGUSON.</p>
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## TASMANIA (15th June, 1928).

<p><i>Premier, Treasurer, Minister for Agriculture, and Minister Controlling Hydro-Electric Department—</i> HON. J. C. MCPHEE.</p> <p><i>Chief Secretary and Minister for Railways and Mines—</i> HON. C. E. W. JAMES.</p>	<p><i>Attorney-General and Minister for Education—</i> HON. H. S. BAKER.</p> <p><i>Minister for Lands, Works, and Forestry—</i> HON. SIR W. H. LEE, K.C.M.G.</p> <p><i>Ministers without Portfolio—</i> HON. A. L. WARDLAW, M.L.C. HON. E. HOBBS.</p>
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4. **The Course of Legislation**—The actual legislation by the Commonwealth Parliament up to the end of the 1931 session is indicated in alphabetical order in "Vol. XXIX. of the Acts of the Parliament of the Commonwealth of Australia, passed during the year 1931, with Tables, Appendix, and Indexes." A "Chronological Table of Acts passed from 1901 to 1931, showing how they are affected by subsequent legislation or lapse of time" is also given, and further "A Table of Commonwealth Legislation," for the same period, "in relation to the several provisions of the Constitution," is furnished. Reference should be made to these for complete information. In previous issues of the Official Year Book an analytic table was included showing the nature of Commonwealth legislation in force at the end of the latest year available. A classified analysis up to the end of the year 1928 will be found in No. 22, pp. 76 to 84.

5. **Legislation during the Current Year.**—In issues of the Official Year Book prior to No. 23, the plan was adopted of giving a summary of the more important legislative enactments of the Commonwealth and State Parliaments during the current year.

## § 4. Cost of Parliamentary Government.

The following statement shows the cost of parliamentary government in the Commonwealth and in each State, as well as the cost per head of population, for the year ended 30th June, 1931. In order to avoid incorrect conclusions as to the cost of the Governor-General's or Governor's establishment, it may be pointed out that a very large part of the expenditure (with the exception of the item "Governor's salary") under the head of Governor-General or Governor represents official services entirely outside the Governor's personal interests, and carried out at the request of the Government.

## COST OF PARLIAMENTARY GOVERNMENT, 1930-31.

Particulars.	C'with.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
<b>1. Governor-General or Governor—</b>								
£	£	£	£	£	£	£	£	£
Governor's salary ..	110,500	5,000	5,000	2,900	5,000	4,000	1,436	33,836
Official Secretary's salary ..	..	753	(e)	347	100	350	..	1,550
Clerks, etc. ..	343	46	175	..	..	407	..	4,367
Orderlies ..	..	431	622	..	358	340	..	..
Other messengers ..	..	207	..	..	367	..	..	574
Wages—Housemaids, stewards, gamekeepers, etc. ..	m 4,671	1,232	842	927	..	891	643	9,206
Wages—Country residence ..	..	849	500	..	280	113	..	1,742
Furniture, stores, and stationery ..	438	270	93	..	234	51	..	..
Postal, cables, etc. ..	384	209	89	1,657	39	68	..	..
Travelling expenses and conveyance of officers ..	1,781	84	..	..	..	1,395	..	908
Incidental expenses (country residence) ..	..	532	87	..	17	..	..	..
Other expenses ..	6,878	..	667	424	318	493	..	..
Allowance to Lieut-Governor ..	..	..	..	..	..	..	593	593
<b>Total .. ..</b>	<b>24,995</b>	<b>9,613</b>	<b>8,075</b>	<b>7,900</b>	<b>6,713</b>	<b>8,108</b>	<b>3,580</b>	<b>68,984</b>
<b>2. Executive Council—</b>								
Salaries of Officers ..	(a)	716	134	28	..	125	(g)	1,003
Other expenses ..	(a)	3	50	65	..	..	(g)	118
<b>Total .. ..</b>	<b>(a)</b>	<b>719</b>	<b>184</b>	<b>93</b>	<b>..</b>	<b>125</b>	<b>(g)</b>	<b>1,121</b>
<b>3. Ministry—</b>								
Salaries of Ministers ..	15,300	19,907	9,097	10,300	7,058	8,200	4,860	74,722
Ministerial functions ..	(b)	..	(b)	..	324	2,681	123	3,128
Special Reports for Cabinet ..	(b)	15	..	..	33	..	..	48
Premiers' Conference ..	343	..	(b)	..	562	610	..	1,515
Travelling expenses ..	2,564	..	(b)	..	466	4,218	702	7,950
<b>Total .. ..</b>	<b>18,207</b>	<b>19,922</b>	<b>9,097</b>	<b>10,300</b>	<b>8,443</b>	<b>15,709</b>	<b>5,685</b>	<b>87,363</b>
<b>4. Parliament—</b>								
<b>A. Upper House :</b>								
President and Chairman of Committees ..	2,000	1,615	1,084	..	763	1,660	278	7,400
Allowance to members ..	35,504	..	5,771	..	6,602	15,401	7,186	70,464
Railway passes ..	5,760	16,855 d	9,000	..	1,212	5,713	973	39,513
Postage for members ..	1,500	60	(e)	..	25	114	(b)	1,699
<b>B. Lower House :</b>								
Speaker and Chairman of Committees ..	2,000	2,198	1,977	1,700	1,341	1,561	398	11,175
Allowance to members ..	74,012	57,853	27,013	32,266	15,393	26,265	11,376	244,178
Railway passes ..	12,160	18,709	(f)	13,817	2,788	10,316	1,627	59,417
Postage for members ..	4,049	2,704 d	900	1,464	250	320	..	9,687
<b>Carried forward, Parliament</b>	<b>136,985</b>	<b>99,994</b>	<b>45,745</b>	<b>49,247</b>	<b>28,374</b>	<b>61,350</b>	<b>21,838</b>	<b>443,533</b>



COST OF PARLIAMENTARY GOVERNMENT—*continued.*

Particulars.	C'wth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
	£	£	£	£	£	£	£	£
4. <i>Parliament</i> — <i>continued.</i>								
Brought forward ..	136,985	99,994	45,745	49,247	28,374	61,350	21,838	443,533
<i>C. Both Houses :</i>								
Standing Committee on Public Works—								
Remuneration of members ..	906	1,050	1,418	..	1,789	..	..	5,163
Salaries of Staff and contingencies ..	1,942	1,732	1,024	..	1,157	..	48	5,903
Printing—								
<i>Hansard</i> .. ..	14,857	5,677	7,631	5,015	2,899	2,655	..	38,734
Other .. ..	16,787	10,981	4,389	2,133	7,130	935	3,618	45,973
Parliamentary reporting staff—								
Salaries .. ..	13,683	7,564	5,809	2,959	5,622	4,719	..	40,356
Contingencies ..	212	..	45	..	187	68	..	512
Library—								
Salaries .. ..	6,052	2,982	1,941	910	766	100	(h)	12,751
Contingencies ..	2,099	1,051	800	724	340	215	(h)	5,229
Salaries of other officers and staff .. ..	36,224	26,029	12,781	6,052	6,134	7,428	2,704	97,652
Travelling expenses of officers and staff .. ..	661	63	..	..	..	..	(h)	724
Other .. ..	9,495	..	..	..	150	542	(h)	10,187
<i>D. Miscellaneous—</i>								
Fuel, light, heat, power, water .. ..	2,531	267	1,082	740	1,199	..	..	6,829
Posts, telegraphs, telephones .. ..	1,050	..	..	2,043	617	..	..	4,707
Furniture, stores, and stationery .. ..	..	..	1,068	1,427	437	..	..	3,932
Other .. ..	4,8164	1,086	87	1,884	1,059	1,100	764	68,245
<b>Total .. ..</b>	<b>291,648</b>	<b>159,516</b>	<b>83,820</b>	<b>73,134</b>	<b>58,760</b>	<b>79,112</b>	<b>28,972</b>	<b>774,962</b>
5. <i>Electoral—</i>								
Salaries .. ..	81,905	3,956	1,030	3,126	3,231	3,113	(b)	96,361
Cost of elections, contingencies, etc. .. ..	33,868	54,448	13,787	7,082	1,099	675	4,944	115,903
<b>Total .. ..</b>	<b>115,773</b>	<b>58,404</b>	<b>14,817</b>	<b>10,208</b>	<b>4,330</b>	<b>3,788</b>	<b>4,944</b>	<b>212,264</b>
6. <i>Royal Commissions, Select Committees, etc., including fees and other expenses of Commissioners, fees of counsel, costs incurred by Ministers, cost of overtime worked by Departments preparing information, bonuses, etc. ..</i>	603	720	359	5,563	5,158	1,089	503	13,995
<b>Total .. ..</b>	<b>603</b>	<b>720</b>	<b>359</b>	<b>5,563</b>	<b>5,158</b>	<b>1,089</b>	<b>503</b>	<b>13,995</b>
<b>GRAND TOTAL ..</b>	<b>451,226</b>	<b>248,894</b>	<b>116,352</b>	<b>107,198</b>	<b>83,404</b>	<b>107,931</b>	<b>43,684</b>	<b>1,158,689</b>
	(n)							
<i>Cost per head of population ..</i>	1s. 5d.	2s. od.	1s. 4d.	2s. 3d.	2s. 10d.	5s. 2d.	4s. od.	3s. 7d.

(a) Included under Governor-General. (b) Not available separately. (c) Included under Executive Council. (d) Both Houses. (e) Included under Lower House. (f) Included under Upper House. (g) Duties performed by Chief Secretary's Department. (h) Included under Miscellaneous, etc. (i) Includes rent of buildings, Melbourne, £3,888. (k) Includes interest and sinking fund, Parliament House, Canberra, £33,192. (l) Includes £500 allowance to Governor-General for residence at Canberra. (m) Maintenance of house and grounds. (n) Includes the following items, charged to Prime Minister's Department, which are excluded from the table dealing with Expenditure—Commonwealth Parliament in Chapter VIII.—Finance:—Premiers' Conferences, £343; travelling expenses of Commonwealth Ministers, £2,564; and salaries and travelling allowances of officers acting as Secretaries to Leaders of Opposition in Senate and House of Representatives and Leader of Country Party, £2,409.

Figures showing total cost and cost per head during each of the last five years are given in the next table.

## COST OF PARLIAMENTARY GOVERNMENT.

Year.	C'wlth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
TOTAL.								
	£	£	£	£	£	£	£	£
1926-27 ..	530,414	248,744	148,816	109,887	106,703	115,383	37,258	1,297,205
1927-28 ..	473,288	302,880	128,507	115,118	89,166	118,190	49,266	1,276,415
1928-29 ..	614,841	282,762	132,766	134,125	85,621	111,609	46,017	1,407,741
1929-30 ..	602,529	254,513	148,552	118,770	95,072	127,425	45,330	1,392,191
1930-31 ..	451,226	248,894	116,352	107,198	83,404	107,931	43,684	1,158,689

## PER HEAD OF POPULATION.

	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1926-27 ..	1 9	2 1	1 9	2 6	3 9	6 1	3 6	4 3
1927-28 ..	1 6	2 6	1 6	2 7	3 1	6 0	4 7	4 1
1928-29 ..	1 11	2 4	1 6	2 11	2 11	5 6	4 3	4 5
1929-30 ..	1 11	2 1	1 8	2 7	3 3	6 1	4 2	4 4
1930-31 ..	1 5	2 0	1 4	2 3	2 10	5 2	4 0	3 7

## § 5. Strength of the Civil Service.

The strength of the permanent Civil Service at a definite point of time is not available as the dates to which annual records are made up vary in different State Departments. The following table excludes temporary (except railways and Government tramways) and part-time officers (registrars of births and deaths, postal contractors, etc.); naval, air, and military employees; and certain others, such as those employed in State trading undertakings:—

## CIVIL SERVICE—NUMBER OF PERMANENT OFFICERS, 1930-31.

State, etc.	Railways and Tramways (a).		Police.		Teachers.		Other Departments.		Total Persons.
	M.	F.	M.	F.	M.	F.	M.	F.	
Commonwealth ..	1,170		13				24,857	3,476	29,516
New South Wales ..	51,186		3,701	8	5,374	6,912	6,417	1,723	75,321
Victoria ..	26,873		2,107	8	3,963	5,730	3,110	822	42,613
Queensland ..	16,144		1,234	2	2,015	2,251	3,730	1,211	26,587
South Australia ..	6,785		750	12	1,479	2,152	1,529	157	12,864
Western Australia ..	8,070		557	5	762	1,532	1,374	268	12,568
Tasmania ..	1,425		251	1	389	963	580	173	3,782
Northern Territory ..	(b)		41		5	6	(b)	(b)	52
Australia	(c)	(c)	8,654	36	13,987	19,546	41,597	7,830	203,303
	111,653		8,690		33,533		49,427		

(a) Salaried and wages staff; includes temporary employees—Municipal Tramways excluded.  
 (b) Included with Commonwealth. (c) Not available.

## § 6. Cost per Head of Population of Principal State Government Services.

For many purposes, e.g., for assessing State claims for Commonwealth assistance, it is required to compare State expenditure in respect of economy of administration and the scale of provision of social benefits such as education and hospitals. Expenditure per head of population is the natural test, but care should be taken in regard to items of expenditure included. Public debt charges are a heritage from the past, while expenditure on business undertakings has no meaning without reference to the revenue earned by them. These items should undoubtedly be left out of the comparison. The business undertakings omitted include Railways, Water Supply and Sewerage, Harbours, and Electricity Supply. Mineral resources vary so much between the States that it seems better to omit Government expenditure on mining. The expenditure on Lands and Surveys, Agriculture, and Forestry might be put theoretically in the same category as mining expenditure, but as the interest in these activities is widely spread over all States, these items are retained but kept in a separate group.

The first three items in the table hereunder are those which give the most significant comparison at the moment, but it is hoped to include in future issues a table which will provide a more satisfactory measure of States expenditure on all the essential Government services.

**COST PER HEAD OF POPULATION OF PRINCIPAL STATE GOVERNMENT SERVICES.**

State.	Education.	Hospitals and Charities.	Justice.	Lands and Survey, Agriculture and Forestry.	General Government.	Total.
1921-22.						
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
New South Wales ..	35 0	17 5	16 3	10 6	38 11	118 1
Victoria ..	25 0	11 11	11 5	6 5	21 4	76 1
Queensland ..	33 8	25 6	16 10	10 7	17 3	103 10
South Australia ..	23 9	15 1	11 10	15 9	27 6	93 11
Western Australia ..	34 0	21 7	16 10	9 11	47 2	129 6
Tasmania ..	25 11	15 0	10 2	2 11	21 11	75 11
All States ..	30 7	16 11	14 5	9 6	29 8	101 1
1929-30.						
New South Wales ..	39 5	34 3	23 5	8 11	18 11	125 0
Victoria ..	33 5	16 2	15 2	11 4	21 6	97 7
Queensland ..	38 5	23 11	17 9	9 8	15 8	105 5
South Australia ..	35 7	23 11	15 7	14 0	15 9	104 10
Western Australia ..	34 10	23 10	18 0	13 6	37 1	127 3
Tasmania ..	31 2	19 7	13 6	5 8	29 8	99 7
All States ..	36 8	25 7	18 11	10 4	20 5	111 11
1930-31.						
New South Wales ..	36 7	23 8	22 0	8 2	22 0	112 5
Victoria ..	31 6	(a) 28 10	13 7	15 6	17 7	107 0
Queensland ..	33 6	22 11	15 10	8 6	13 11	94 8
South Australia ..	33 3	(a) 43 0	15 1	9 3	14 2	114 9
Western Australia ..	33 10	(a) 38 9	17 4	8 7	29 7	128 1
Tasmania ..	28 2	21 0	12 11	5 8	26 3	94 0
All States ..	34 0	27 7	17 7	10 4	19 6	109 0

(a) See letterpress below.

For the year 1930-31, certain expenditure on unemployment relief has been included under hospitals and charities. The figures for Victoria include expenditure amounting to 13s. 10d. per head, while for South Australia and Western Australia, the expenditure on this service represents 22s. and 20s. 9d. per head respectively. If these amounts are deducted, the expenditure for all States on Hospitals and Charities would be reduced from 27s. 7d. to 20s. 3d. per head. In regard to the other States, some portion of the total expenditure on unemployment relief is undoubtedly included, but such details are not available.

### § 7. Consular Representatives of Foreign Countries in Australia.

The following tabular statement shows the number of consular representatives of foreign countries in each State for the year 1932 :—

#### CONSULAR REPRESENTATIVES IN AUSTRALIA, 1932.

Country.	Number of Consular Representatives in—						
	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total Aust.
Argentine Republic .. ..	1	2	..	1	..	1	5
Austria .. .. .	1	1	..	..	..	..	2
Belgium .. .. .	3	1	1	1	1	1	8
Bolivia .. .. .	..	..	1	..	..	..	1
Brazil .. .. .	2	1	..	..	..	1	4
Chile .. .. .	1	1	..	1	..	..	3
China .. .. .	2	2	..	..	..	..	4
Colombia .. .. .	1	1	..	..	..	..	2
Costa Rica .. .. .	2	..	..	..	..	..	2
Czechoslovakia .. .. .	2	1	1	1	1	..	6
Denmark .. .. .	3	2	3	2	2	1	13
Dominican Republic .. .. .	..	1	..	..	..	..	1
Ecuador .. .. .	1	..	..	..	..	..	1
Estonia .. .. .	1	..	..	..	..	..	1
Finland .. .. .	1	1	1	1	1	..	5
France .. .. .	3	1	1	1	1	1	8
Germany .. .. .	3	..	1	..	1	..	5
Greece .. .. .	3	1	1	1	2	..	8
Guatemala .. .. .	..	1	..	..	..	..	1
Honduras .. .. .	1	1	..	..	..	..	2
Italy .. .. .	1	2	3	1	1	1	9
Japan .. .. .	3	2	1	1	1	..	8
Latvia .. .. .	1	1	1	1	..	..	4
Liberia .. .. .	..	..	..	1	..	..	1
Mexico .. .. .	1	..	..	..	..	..	1
Netherlands .. .. .	3	1	5	1	1	1	12
Nicaragua .. .. .	..	1	..	..	..	..	1
Norway .. .. .	3	2	3	3	3	2	16
Panama .. .. .	1	1	1	..	..	..	3
Paraguay .. .. .	1	..	..	..	1	..	2
Peru .. .. .	2	1	..	1	..	..	4
Poland .. .. .	1	..	..	..	..	..	1
Portugal .. .. .	1	1	1	..	..	..	3
Roumania .. .. .	1	..	..	..	..	..	1
Salvador .. .. .	..	1	..	..	..	..	1
Siam .. .. .	1	..	..	..	..	..	1
Spain .. .. .	2	2	1	1	1	..	7
Sweden .. .. .	3	1	3	3	1	1	12
Switzerland .. .. .	2	1	1	..	..	..	4
U.S.A. .. .. .	5	3	2	2	..	..	12
Uruguay .. .. .	1	1	..	..	..	..	2
Venezuela .. .. .	1	..	..	..	..	..	1
Yugoslavia .. .. .	1	1	..	..	1	..	3
Total .. .. .	66	40	32	24	19	10	191a

(a) In addition, Northern Territory has Consuls for China and the Netherlands, and New Guinea Consuls for China and Sweden.

Countries having Consuls-General in Sydney are Belgium, Chile, China, Costa Rica, Denmark, Ecuador, France, Germany, Greece, Italy, Japan, Netherlands, Norway, Paraguay, Poland, Siam, Sweden, Switzerland, and United States. Those having Consuls-General in Melbourne are Argentine Republic, Colombia, Honduras, Peru and Spain.

## CHAPTER IV. LOCAL GOVERNMENT.

### § 1. Introduction.

1. **General.**—The construction and maintenance of roads, bridges and ferries are generally part of the functions of local authorities, but in New South Wales and South Australia, more especially in the large unincorporated areas, these duties are undertaken directly by the Government. In some States, moreover, a certain proportion of the roads and bridges is constructed and maintained by the Government, which, in addition, advances money for main roads to be expended by municipalities under the supervision of special Boards. Although roads, bridges and ferries constructed and maintained directly by Government do not properly come under the heading of "Local Government," they have been included in this chapter for the sake of convenience.

2. **Municipalities, Shires, etc.**—A description of the various systems of municipal government in the different States, and their development from the earliest date, was published in 1919 by the Commonwealth Bureau of Census and Statistics in a separate work entitled "Local Government in Australia."

3. **Water Supply and Sewerage.**—In the cities of Sydney and Melbourne the control of water supply and sewerage is in the hands of special Boards, while in Adelaide and Perth these services are under the direct supervision of Government Departments. In most of the other cities and towns, the municipal councils, or, in some cases, water trusts, are the controlling bodies which either construct the works out of their own resources or take them over after they have been constructed by the Government.

4. **Harbours.**—The majority of the harbours in Australia are managed by Boards, the members of which are either elected by persons interested or appointed by the Government. In a few instances, however, they are directly controlled by the Government. Only those which are controlled by Boards are dealt with in the following pages.

5. **Fire Brigades.**—In all the States, the management of fire brigades is undertaken by Boards. The members of these Boards are usually elected by the councils of municipalities and insurance companies within the districts placed under their jurisdiction, together with one or more appointed by the Government, while occasionally volunteer or country fire brigades are represented.

### § 2. Government Roads, Bridges, Etc.

1. **New South Wales.**—(i) *General.* The control of all roads, bridges and ferries with the exception of those proclaimed as "National" and of those in the unincorporated areas of the Western Division, which still remain under its jurisdiction, was transferred, in 1920, from the Public Works Department to local authorities. The Government has also adopted the policy of assisting municipal and shire councils to recondition certain main roads by doing the work in the first instance, and recovering in instalments from the councils concerned one-half of the cost.

(ii) *Roads, Bridges and Ferries.* At the 30th June, 1927, the "National" works consisted of 58 miles of roads, 288 bridges with a total length of 108,295 feet, and 18 ferries, while in the unincorporated areas of the Western Division there were 5,688 miles of roads (of which 177 miles were metalled or ballasted, 220 formed only, and 2,932 cleared only), 96 bridges of a total length of 13,495 feet, 489 culverts, and 6 hand punts under the control of the Public Works Department. (Information collected periodically.)

(iii) *Expenditure on Roads, Bridges and Ferries.* The total expenditure by the Government during 1930-31 was £3,721,231, comprising expenditure from votes of the Public Works Department £435,749, from funds of the Main Roads Board £2,368,937 and endowments and grants to Councils from votes of the Local Government Department £916,545.

The Government expenditure in connexion with the Sydney Harbour Bridge, £1,673,003 in 1930-31 and £8,136,946 to the 30th June, 1931, is not included in these figures. Of the total sum expended to date, £6,728,158 was provided by General Loan Account, £1,398,788 from proceeds of municipal and shire rates and £10,000 from the Unemployment Relief Fund.

2. **Victoria.**—(i) *General.* A small sum is expended annually by the State Government on roads and bridges, and a considerable amount of loan money is advanced in each year to the Country Roads Board for the purpose of constructing and maintaining main and developmental roads, the amount so expended during the year ending 30th June, 1930, being £531,363, and in 1930-31, £313,773. An annual payment of £50,000 is also made out of Consolidated Revenue to the Board for maintenance works.

(ii) *Direct Expenditure by Government.* The amount of money expended directly by the Government through the Public Works Department on roads and bridges during the year 1930-31 was £30,977.

(iii) *Country Roads Board.* (a) *Duties.* The duties of this Board were given in some detail in Year Book No. 15, p. 526.

(b) *Finance.* The funds established under the Country Roads Act are the Country Roads Board Fund, the Loan Account, and the Developmental Roads Loan Account.

(1) *Country Roads Board Fund.* All registration fees, licence fees and fines under the Motor Car Act, all licence fees and fines under the Motor Omnibus Act, and all registration fees and fines for traction-engines are credited to this fund. The total receipts for the year were £1,817,231, made up as follows:—Motor registration and licence fees £1,059,194; contributions by municipalities for permanent works £122,398, and for maintenance works £188,973; sale of stores and material £126,882; and other sources £319,784. The expenditure for the year was £1,840,203, comprising maintenance and reconditioning of main roads and State highways £831,178; interest, stores, administration, etc. £740,908; road construction £147,085; and other expenses £121,032.

(2) *Country Roads Board Loan Account.* Loans to the amount of £4,822,000 have been authorized from time to time for permanent works under the Country Roads Acts. One half of the amount expended on permanent works and one-third of the amount expended on maintenance must be refunded by the municipalities affected, 6 per cent. of the amount due in respect of permanent works being payable annually, and the cost of maintenance allocated to each municipality must be paid before the 1st of July in each year. A special rate, not exceeding 6d. in the pound, may be levied in any ward or riding of a municipality for the purpose of such repayment. Expenditure for the year ended 30th June, 1931, was £54,861, and the total to that date £4,613,760.

(3) *Developmental Roads Loan Account.* For the purpose of constructing and maintaining subsidiary or developmental roads, the Government has been authorized to borrow sums aggregating £6,475,000. The work is carried out under the supervision of the Country Roads Board, and the State provides the whole of the money and makes provision out of State funds for liquidating the liability; the municipalities, however, are required to bear a proportion of the interest on the outlay during the period of the loan and to maintain the roads when constructed. The amount expended during the year ended 30th June, 1931, was £155,136, and the total expenditure to that date was £6,076,629.

3. **Queensland.**—Under "The Main Roads Act of 1920" a Main Roads Board was constituted, consisting of three members appointed by the Governor in Council. Subsequently the Board was abolished and its powers conferred upon a single Commissioner.

The duties of the Commissioner, as defined by "The Main Roads Acts, 1920 to 1929," are to carry out such surveys and investigations as are deemed necessary or expedient to determine what roads shall be main, developmental or tourist roads or State highways, and, under certain circumstances, to undertake the construction and maintenance of such roads. Before any road can be proclaimed a main, developmental or tourist road the Local Authorities through whose areas such road passes have the right to lodge objections thereto, and the Commissioner must consider such objections and, if necessary, vary his decision. No such action is necessary in the case of State highways.

Local Authorities are not liable for the return of any expenditure for construction on State Highways or on arterial roads declared under the Federal Aid Roads Act. They are, however, responsible for 50 per cent. of maintenance of the former and 33½ per cent. of the latter roads.

At 30th June, 1931, there were 8,400 miles of roads gazetted in the State, comprising 6,498 miles of main, 439 miles of developmental, 102 miles of tourist roads, and 1,361 miles of State highways; 1,761 miles of roadway and 29,881 lineal feet of bridges had

been completed at that date, and 114 miles of road and 2,337 lineal feet of bridges were in course of construction. In addition, there were at 30th June, 1931, 71 miles of roads in course of construction under the State Unemployment Relief Scheme.

During the year ended 30th June, 1931, the receipts of the Commission amounted to £1,407,811, including £179,250 from the Treasury Loan Fund, £476,720 from motor fees, £427,323 from the Commonwealth for works under the Federal Aid Road scheme and £193,483 from the State Unemployment Relief Scheme. Disbursements amounted to £1,352,555, including £221,811 on permanent works, £555,896 on works under the Federal Aid Roads scheme, £128,130 on the maintenance of roads and £195,058 on works under the State Unemployment Relief scheme.

4. *South Australia.*—The Highways Act 1926 created a Commissioner of Highways and provided for a Main Roads Fund. The Commissioner is virtually empowered to determine upon which roads he will spend the moneys available, in doing which he has to take into account (a) the moneys voted, or likely to be voted, by Parliament for main roads; (b) whether the road is or will be the main trunk route: (i) connecting any large producing area, or any area capable of becoming in the near future a large producing area, with its market or nearest port or railway station; (ii) connecting two or more large producing areas, or areas capable of becoming in the near future large producing areas, or between two or more large centres of population; (iii) between the capital and any large producing area or any large centre of population; (iv) between the capitals of this State and any other State; and (c) whether the area through which the road passes is, or in the near future will be, sufficiently served by a railway or railways.

The Main Roads Fund is to be credited with (a) licence fees and registration fees under the Motor Vehicles Acts 1921 to 1929; (b) licence fees under the Vehicles (Licensing) Act 1925; (c) fines, penalties, and forfeitures in respect of convictions for offences against the Motor Vehicles Acts (exclusive of any sum received for costs), or the Width of Tires Acts; (d) fees for hawkers' licences issued by the Treasurer; (e) contributions from Councils; (f) all sums appropriated by Parliament for main roads; (g) all loans raised and appropriated for main roads. In accordance with legislation passed in 1930 a portion of these receipts is temporarily payable into general revenue.

The expenditure from the Main Roads Fund for the year ended 30th June, 1931, was £361,718; the amount received from the Commonwealth Government for expenditure on Federal Aid Roads was £200,614; the amount allocated for roads in newly settled areas, etc., was £16,750; and grants in aid of rates collected paid to Councils amounted to £30,000. In the sparsely-settled districts outside the incorporated areas, the roads and bridges are constructed and maintained by the Public Works Department under arrangement with the Commissioner of Highways. The amount expended during the same period was £9,915.

5. *Western Australia.*—In Western Australia the construction, maintenance, and management of roads and bridges throughout the State are under the control of municipalities and district road boards which are subsidized by the Government.

6. *Tasmania.*—(i) *Construction.* In Tasmania the cost of construction of roads and bridges is borne almost entirely by the State Government.

Up to the 30th June, 1931, the loan expenditure on these works was £4,988,404 (roads, £4,118,273; tracks, £232,825; bridges, £637,306). In addition, half the proceeds of the sale of land has formed a Crown Lands Fund for the construction of roads to new holdings. Under this provision £684,412 has been expended. This fund has in recent years more than met the demands on it, and expenditure therefrom since 1918 has been limited to £10,000 annually, the balance being used for redemption of debt.

The Government loan expenditure during the year 1930–31 on the construction of roads and bridges was £67,706, and expenditure from the Crown Lands Fund £2,810. In addition, the sum of £183,181 provided by the Commonwealth Government was expended on roads; the conditional expenditure by the State Government is included in the above figures. The amount of new-road mileage for the year was 60½ miles cleared, 76½ miles formed, 49½ miles metalled, and 23 miles gravelled, including 30½, 36½, 26½ and 14 miles respectively constructed out of Federal and State votes under the Federal Aid Roads and Federal Relief schemes.

(ii) *Maintenance.* The maintenance of roads, other than "State highways," is undertaken by the municipalities out of their own funds. All bridges of a value of over £50 are maintained by the State Government. The maintenance of "State highways" is provided for by the *State Highways Act* 1929, which created the State Highways Trust Fund to which is to be paid from Consolidated Revenue and credited annually in each financial year for the purposes of the Act a sum equal to the amount of all motor taxes collected in the immediately preceding financial year and paid into the Treasury, less 2 per cent. The length of "State highways" is 1,019 miles and the expenditure thereon for 1930-31, £63,509.

7. *Summary of Net Loan Expenditure on Roads and Bridges.*—Figures showing the total expenditure on roads and bridges in the States are not available. The subjoined statement, however, gives the amounts of net loan expenditure by the State Governments up to the 30th June, 1931.

**ROADS AND BRIDGES.—GOVERNMENT NET LOAN EXPENDITURE TO THE  
30th JUNE, 1931.**

Expenditure.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
Total to 30/6/31	14,932,682	11,617,988	3,622,863	3,186,007	1,975,797	4,988,404	40,323,741

The following table shows the annual net loan expenditure on roads and bridges by the central Governments in each State during the years 1926-27 to 1930-31 :—

**ROADS AND BRIDGES.—NET LOAN EXPENDITURE, 1927 TO 1931.**

Year ended 30th June—	N.S.W.	Victoria.	Q'land. (a)	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
1927 ..	1,726,420	1,104,345	313,121	475,601	184,911	144,327	3,948,725
1928 ..	2,558,070	917,540	262,203	144,866	364,223	176,118	4,423,020
1929 ..	3,120,075	802,307	342,152	10,856	384,685	204,546	4,804,621
1930 ..	1,615,873	600,916	356,967	Cr. 31,419	315,325	168,531	3,026,193
1931 ..	1,592,919	350,057	181,758	Cr. 16,446	..	67,706	2,175,994

(a) Includes expenditure on main roads through local authorities.

The two tables given above show only a small proportion of the actual expenditure upon roads and bridges in the different States, for the reason that (a) there have been large expenditures from revenue both by the central Governments and by local authorities, and (b) the State Governments have in many cases voted grants and subsidies on the amount of rates collected, and have issued loans to local authorities either for the express purpose of the construction of roads and bridges or for the general purpose of public works construction.

### § 3. Municipalities, Shires, Etc.

1. *New South Wales.*—(i) *General.* Practically the whole of the State, with the exception of the greater portion of the Western Division, has been divided into municipalities and shires, the total area incorporated at the end of 1930 being 184,048 square miles, of which 2,454 square miles are included in the former and 181,594 in the latter. The areas incorporated comprise the whole of the Eastern and Central Divisions of the State (with the exception of Lord Howe Island, the islands in Port Jackson and the quarantine station at Port Jackson) and a small portion of the Western Division consisting of the whole of six and part of two municipalities.



(ii) *Municipalities.*—(a) *Summary.* The following table gives the number, area and population of municipalities, together with the length of roads and the number of bridges and ferries therein for the year 1930 :—

## MUNICIPALITIES, NEW SOUTH WALES.—SUMMARY.

Year.	No. of Municipalities.	Sydney and Suburbs.		Country.		Length of Roads.	Bridges.	Ferries.
		Area.	Population.	Area.	Population.			
		Acres.	No.	Acres.	No.			
1930	181	115,896	1,158,650	1,454,573	633,870	Miles. 10,858	No. 645(a)	No. 38(a)

(a) Year 1927—latest available.

Of the 10,858 miles of roads 5,780 were blocked, metalled, ballasted or gravelled 1,973 formed only, and 1,812 cleared only, while 1,293 miles were natural surface.

(b) *Unimproved and Improved Values.* The table hereunder gives a comparison of the unimproved and improved values for the year 1930 :—

## MUNICIPALITIES, NEW SOUTH WALES.—CAPITAL VALUES.

Year.	Sydney.	Suburbs.	Total Metropolis.	Country.	Grand Total.
UNIMPROVED VALUE.					
1930 .. ..	£ 60,896,333(a)	£ 109,274,611	£ 170,170,944	£ 50,250,787	£ 220,421,731
IMPROVED VALUE.					
1930 .. ..	221,856,440a	304,669,264	526,525,704	154,479,852	681,005,556

(a) Exclusive of Federal Government and other non-rateable properties not now valued.

(c) *Revenue and Expenditure.* Particulars of the revenue and expenditure of municipalities for the year ending 31st December, 1930, under various headings, are given below :—

## MUNICIPALITIES, NEW SOUTH WALES.—REVENUE AND EXPENDITURE.

Particulars.	Sydney.	Suburbs.	Country.	Total.
REVENUE.				
General fund .. ..	£ 4,327,433(a)	£ 3,082,237	£ 1,958,924	£ 5,041,161(b)
Trading accounts .. ..		50,725	1,157,188	1,207,913(b)
Special and local funds .. ..		118,158	516,058	634,216(b)
Gross revenue .. ..	4,327,433	3,251,120	3,632,170	11,210,723
EXPENDITURE.				
General fund .. ..	£ 4,240,286(a)	£ 3,450,476	£ 1,959,234	£ 5,409,710(b)
Trading accounts .. ..		45,005	990,907	1,035,912(b)
Special and local funds .. ..		111,238	478,675	589,913(b)
Gross expenditure .. ..	4,240,286	3,606,719	3,428,816	11,275,821

(a) Items of revenue and expenditure for the city of Sydney cannot be allocated to the different headings shown for municipalities.

(b) Exclusive of Sydney.

The above figures for revenue are exclusive of loan receipts, particulars of which are not available. Loans raised during the year, however, were as follow:—City of Sydney, £2,419,986; suburbs of Sydney, £472,800; country municipalities, £430,338; a total of £3,323,124. The figures for expenditure for the City of Sydney are exclusive of £2,092,548 expenditure from loans. The expenditure included for other municipalities relates to "revenue expenditure" and includes loan moneys expended on road construction and other works not resulting in realizable assets or assets to be used over a period of time in fulfilling ordinary services. The amount of "capital expenditure" from both revenue and loans is not available, but the value of assets purchased during the year (£1,004,499) represents the total "capital expenditure" incurred. It should be noted, however, that certain assets are purchased under time-payment contracts. Redemption and sinking fund payments are also excluded except in the case of the City of Sydney. For the other municipalities the available information under this head is as follows:—In respect of loans, £598,143, and in respect of Government advances and time-payment debts (separate figures not available), £161,494.

(d) *Assets and Liabilities.* The financial position of the municipalities as at the 31st December, 1930, is shown by the following statement of assets and liabilities.

**MUNICIPALITIES, NEW SOUTH WALES.—ASSETS AND LIABILITIES, 1930.**

Particulars.	Sydney.	Suburbs.	Extra Metropolitan.	Country.	Total.
<b>ASSETS.</b>					
	£	£	£	£	£
Bank balances and cash .. .. .	29,706,539 (a)	391,034	59,507	570,336	1,020,877 (b)
Outstanding rates .. .. .		310,119	79,976	350,051	740,145 (b)
Sundry debtors .. .. .		248,986	43,831	411,761	704,578 (b)
Stores and materials .. .. .		49,356	6,219	139,962	195,537 (b)
Land, buildings, furniture, etc. ..		1,893,801	235,290	8,004,637	10,133,728 (b)
Other .. .. .		250,442	49,823	116,439	416,704 (b)
<b>Total .. .. .</b>	<b>29,706,539</b>	<b>3,143,738</b>	<b>474,646</b>	<b>9,593,186</b>	<b>42,918,109</b>

(a) Comprises the following:—Land, buildings, machinery, plant and stores, £23,563,118; sundry debtors, £648,817; cash and bank balances, £1,760,341; investments, £3,734,263.

(b) Exclusive of Sydney.

**LIABILITIES.**

Loans, outstanding interest and sundry creditors .. .. .	28,393,820 (a)	5,696,887	486,788	3,149,961	9,333,636 (b)
Debts due to Government and interest thereon .. .. .		170,718	27,777	3,706,227	3,904,722 (b)
Bank overdrafts .. .. .		521,598	38,417	403,969	963,984 (b)
Other .. .. .		68,778	13,207	111,902	193,887 (b)
<b>Total .. .. .</b>		<b>28,393,820</b>	<b>6,457,981</b>	<b>566,189</b>	<b>7,372,059</b>

(a) Comprises the following:—Debentures, £24,546,946; sundry creditors, £2,479,378; bank overdrafts, £1,367,496.

(b) Exclusive of Sydney.

(iii) *Shires.*—(a) *Summary.* The following table gives the number, area, population, and unimproved capital value of shires, together with the length of the roads, and the number of bridges and ferries therein. It is not possible to give the improved capital value or the assessed annual value, as shires are not compelled to make these valuations.

**SHIRES, NEW SOUTH WALES.—SUMMARY.**

Year.	No. of Shires.	Area.	Population.	Unimproved Capital Value.	Length of Roads.	Bridges.	Ferries.
	No.	sq. miles.	No.	£	miles.	No.	No.
1930 .. .. .	138	181,594	695,100	168,853,695	101,737	3,943(a)	173(a)

(a) Year 1927—latest available.

Of the 101,737 miles of roads, 21,464 were metalled or ballasted, 17,928 formed only, and 30,616 cleared only, the balance being natural surface.

(b) *Revenue and Expenditure.* The revenue and expenditure of shires for the year 1930 are shown in the following table. Included in the receipts are Government grants amounting to £1,472,288, which together with other Government endowment make a total for Government assistance of £1,722,591.

## SHIRES, NEW SOUTH WALES.—REVENUE AND EXPENDITURE, 1930.

Particulars.	Revenue.	Particulars.	Expenditure.
	£		£
<i>General Fund—</i>		<i>General Fund—</i>	
General rates (including interest) .. ..	1,470,046	Administrative expenses .. ..	214,816
Government endowment .. ..	250,303	Public works .. ..	2,700,646
Public works .. ..	1,537,493	Health administration .. ..	140,967
Health administration .. ..	132,022	Public services .. ..	48,444
Public services .. ..	21,378	Shire property .. ..	23,043
Shire property .. ..	44,279	Miscellaneous (a) .. ..	157,300
Loan Rates .. ..	57,262	<i>Special, Local, and Trading Funds</i> .. ..	380,884
Miscellaneous .. ..	17,419		
<i>Special, Local, and Trading Funds</i> .. ..	437,656		
Total revenue .. ..	3,967,858	Total expenditure .. ..	3,666,100

(a) Includes interest on loans and overdraft, etc.—£89,465.

The figures for revenue in the above table are exclusive of loan receipts, particulars of which are not available. Loans raised during the year, however, amounted to £197,266. As in the case of municipalities the expenditure shown for shires relates to "revenue expenditure" (see p. 84). The value of assets purchased during the year was £311,025 and represents total "capital expenditure" incurred. Certain assets are purchased under time-payment contracts. The available particulars of redemption and sinking fund payments, which are excluded from the figures, are as follow:—Loans, £90,809; and Government advances and time-payment debts (separate figures not available) £108,497.

(c) *Assets and Liabilities.* The finances of the shires at the end of the year 1930 showed an excess of assets of £381,103. The following table gives particulars of assets and liabilities as at the 31st December, 1930:—

## SHIRES, NEW SOUTH WALES.—ASSETS AND LIABILITIES, 1930.

Assets.	Amount.	Liabilities.	Amount.
	£		£
Bank balances and cash .. ..	384,585	Loans outstanding, interest and sundry creditors .. ..	1,697,465
Outstanding rates .. ..	434,216	Bank overdrafts .. ..	425,780
Sundry debtors .. ..	186,435	Other .. ..	131,239
Stores and materials .. ..	65,447	Debts due to the Government and interest thereon	418,541
Land, buildings, furniture, plant, machinery, etc. .. ..	1,957,588		
Other .. ..	25,857		
Total .. ..	3,054,128	Total .. ..	2,673,025

2. **Victoria.**—(i) *General.* Local Government is established throughout the State the various divisions being termed cities, towns, boroughs, or shires. Melbourne and Geelong were incorporated under special statutes prior to the establishment of a general system of local government, and except in a few details are not subject to the provisions of the Local Government Act.

The financial years of the cities of Melbourne and Geelong end on the 31st December and the 31st August respectively; those of all other municipalities on the 30th September.

(ii) *Municipalities.* (a) *Summary.* The following table shows the number of cities, towns, boroughs, and shires, with estimated population, number of ratepayers and dwellings, and value of rateable property for the year 1930 :—

#### MUNICIPALITIES, VICTORIA.—SUMMARY.

Year ending 30th September—	Number of Municipalities.	Estimated Population.	Number of Ratepayers	Estimated Number of Dwellings.	Estimated Value of Rateable Property.	
					Total.	Annual.
<b>CITIES, TOWNS, AND BOROUGHS.</b>						
1930 .. ..	No. 56	No. 1,182,300	No. 335,892	No. 277,204	£ 382,243,226	£ 21,248,548
<b>SHIRES.</b>						
1930 .. ..	140	654,420	271,586	162,117	294,447,615	14,784,365

(b) *Revenue and Expenditure.* The table hereunder shows the revenue from various sources, and the expenditure under various heads, of municipalities during the year 1930 :—

#### MUNICIPALITIES, VICTORIA.—REVENUE AND EXPENDITURE, 1930.

Items.	Revenue.	Items.	Expenditure from Revenue.
	£		£
Taxation { Rates .. ..	3,914,438	Salaries, etc. .. ..	474,348
{ Licences .. ..	156,309	Sanitary work, street cleaning, etc. .. ..	496,793
{ Dog fees .. ..	29,966	Health .. ..	118,736
Government endowments and grants .. ..	149,372	Lighting .. ..	190,395
Contributions for streets, etc.	354,732	Contributions to Fire Brigades	73,880
Market and weighbridge dues	144,363	Public Works { Construction	371,776
Sanitary charges .. ..	188,927	{ Maintenance	2,107,164
Rents .. ..	155,187	Formation of private streets, etc. .. ..	473,753
Electric light and gas works ..	1,315,225	Electric Light and Gas Works	989,328
Other sources .. ..	661,174	Redemption of loans .. ..	396,711
		Interest on loans and bank overdrafts .. ..	789,263
<b>Total Revenue .. ..</b>	<b>7,069,693</b>	Charities .. ..	39,773
Loans .. ..	1,194,630	Other expenditure .. ..	783,025
<b>Total Receipts .. ..</b>	<b>8,264,323</b>	<b>Total from Revenue ..</b>	<b>7,304,945</b>

MUNICIPALITIES, VICTORIA.—REVENUE AND EXPENDITURE,  
1930—continued.

Items.	Expenditure from Loans.
	£
Roads and Bridges .. ..	819,256
Water and Irrigation .. ..	2,693
Sewerage and Drainage .. ..	133,769
Electric Light and Gas .. ..	149,023
Public Buildings .. ..	104,857
Other purposes .. ..	223,994
Total from Loan .. ..	1,433,592
Grand Total .. ..	8,738,537

(c) *Assets and Liabilities.* The assets of municipalities may be classified under three heads (a) the municipal fund, (b) the loan fund and (c) property; the liabilities under two heads—(a) the municipal fund, and (b) the loan fund. The following table shows the amount of municipal assets and liabilities for the year 1930 :—

## MUNICIPALITIES, VICTORIA.—ASSETS AND LIABILITIES, 1930.

Items.	Assets.	Items.	Liabilities.
	£		£
<b>MUNICIPAL FUND—</b>		<b>MUNICIPAL FUND—</b>	
Uncollected rates .. ..	592,591	Due on current contracts .. ..	74,295
Streets formed, etc., pay- ments outstanding .. ..	848,215	Arrears due sinking funds .. ..	364
Rents and interest out- standing .. ..	20,515	Overdue interest .. ..	8,545
Cash in hand or in bank .. ..	409,427	Bank overdrafts .. ..	1,024,753
Other assets .. ..	379,635	Other liabilities .. ..	1,091,057
<b>LOAN FUND—</b>		<b>LOAN FUND—</b>	
(a) Sinking funds—		Loans outstanding .. ..	13,915,019
Amount at credit .. ..	617,692	Due on loan contracts .. ..	97,878
Arrears due .. ..	364		
(b) Unexpended balances .. ..	534,595		
<b>PROPERTY—</b>			
Buildings, markets, tram- ways, etc. .. ..	5,561,540		
Waterworks .. ..	422,500		
Gasworks .. ..	208,900		
Electric Light Works .. ..	2,501,760		
Plant and machinery .. ..	669,540		
Other assets .. ..	211,010		
Total .. ..	12,978,284	Total .. ..	16,211,911

3. *Queensland.*—(i) *General.* The whole of the State (except islands along the coast and 606 square miles in area) is incorporated into cities, towns, and shires under the Local Authorities Act of 1902 and its amendments.

(ii) *Municipalities. (a) Summary.* The following table gives particulars of the area, population, number of inhabited dwellings, and assets and liabilities of cities and towns and of shires for the year 1930 :—

**MUNICIPALITIES, QUEENSLAND.—SUMMARY.**

Year.	No.	Area.	Popula- tion.	Number of Inhabited Dwellings.	Rateable Value.	Assets.	Liabilities.	
							Government Loans.	Total.
<b>CITIES AND TOWNS.</b>								
1930(a) ..	26	sq. miles. 797	No. (b)	No. 111,642	£ 31,461,037	£ 21,375,663	£ 6,406,496	£ 24,180,218
<b>SHIRES.</b>								
1930(a) ..	121	669,044	(b)	89,942	49,065,876	1,931,090	1,774,072	2,688,772

(a) Figures relating to assets and liabilities include waterworks, sewerage works, electric light works, and railways and tramways controlled by local authorities.

(b) Estimated population of Queensland, 948,195 persons.

(b) *Revenue and Expenditure.* The revenue and expenditure (including loan moneys) of cities and towns, and of shires for the year 1930 are given hereunder :—

**MUNICIPALITIES, QUEENSLAND.—REVENUE AND EXPENDITURE.**

Year.	Revenue.			Expenditure.			
	Rates.	Government Loans and Subsidies. (a)	Total.	Public Works and Services. (b)	Government Loan Redemption.	Office Expenses and Salaries.	Total.
<b>CITIES AND TOWNS.</b>							
1930 ..	£ 1,580,475	£ 175,756	£ 5,812,788	£ 3,367,115	£ 105,590	£ 284,828	£ 5,755,366
<b>SHIRES.</b>							
1930 ..	989,656	481,405	1,895,579	1,248,126	118,317	143,918	1,877,615

(a) Includes Main Road Receipts.

(b) Includes Expenditure on Main Roads.

The figures in the foregoing tables cover all the activities of the local authorities throughout Queensland such as :—Road repairs, street lighting, etc. ; waterworks, electric light, and railways and tramways controlled by local bodies.

4. *South Australia.*—(i) *General.* A large proportion of South Australia is unincorporated, the balance being under municipal corporations in the larger cities and towns, and district councils in outside areas. These bodies are subsidized by the Government, and special grants allocated on the recommendation of the Commissioner of Highways are given for the maintenance and construction of main roads.

(ii) *Local Authorities. (a) Summary.* The number of corporations and district councils is 196, of which 11 corporations and 10 district councils are in the metropolitan area, and 28 corporations and 147 district councils in outside areas. According to the latest available information there are about 1,056 miles of roads in use for general traffic

under the control of corporations, and about 48,946 miles under the control of district councils, and of these totals, 16 miles are wood-blocked, 211 miles are bitumen and concrete and 14,040 miles are tar-paved, metalled or gravelled. The following table gives the area, population, number of occupied dwellings, capital and assessment values and outstanding loans for corporations and district councils separately for the year 1930 :—

## LOCAL AUTHORITIES, SOUTH AUSTRALIA.—SUMMARY.

Year.	Area.	Estimated Population.	Occupied Dwellings.	Capital Value.	Assessment Value.	Outstanding Loans.
MUNICIPAL CORPORATIONS.						
1930	Acres. 66,063	No. 245,585	No. 56,008	£ 79,699,807	£ 3,994,142	£ 817,410
DISTRICT COUNCILS.						
1930	33,483,527	323,026	75,381	115,612,132	5,744,439	(a) 419,925

(a) Includes advances through District Councils to settlers for vermin-proof fencing, etc., amounting to £285,145.

(b) *Revenue and Expenditure.* The next table gives the revenue and expenditure of corporations and district councils for the year 1930, showing in separate columns the receipts and expenditure on main roads. The figures differ slightly from those shown in the Summary Table in § 4 hereinafter, which exclude transfers between the Government Grants and General Accounts. The financial year of municipal corporations ends on the 30th November and that of district councils on the 30th June.

## LOCAL AUTHORITIES, SOUTH AUSTRALIA.—REVENUE AND EXPENDITURE.

Year.	Local Government (exclusive of Government Grants Account).						Government Grants Account (Main Roads).	
	Revenue (including Loans).			Expenditure.			Revenue.	Expenditure.
	Rates.	Subsidies.	Total.	Roads.	Other Public Works and Services.	Total.		
MUNICIPAL CORPORATIONS.								
1930	£ 521,306	£ 53,155	£ 819,815	£ 348,952	£ 305,984	£ 881,769	£ 13,061	£ 13,509
DISTRICT COUNCILS.								
1930	449,703	101,186	748,159	409,034	124,439	762,510	366,176	364,629

5. *Western Australia.*—(i) *General.* In this State there are three forms of local authorities, namely :—(a) municipalities, (b) district road boards, and (c) local boards of health, the two former covering the whole of the State. Local boards of health are of three descriptions, (a) municipal, the members being the same as those of the municipal council of the municipality in which each is situated, (b) those under the control of road

boards, and (c) those not under the control of road boards or municipalities. Several of the latter two are inactive. The financial year of municipalities and municipal boards of health terminates on the 31st October, and that of road boards and other local boards of health on the 30th June.

(ii) *Municipalities. (a) Summary.* The following table gives various particulars regarding municipalities for the year 1931 :—

**MUNICIPALITIES, WESTERN AUSTRALIA.—SUMMARY.**

Year ended 31st Oct.—	Municipalities.	Area.	Population.	Dwelling Houses.	Valuation of Rateable Property.		Length of Roads and Streets.
					Capital Value.	Annual Value.	
1931 ..	No. 21	Acres. 59,543	No. 195,301	No. 38,748	£ 48,541,463	£ 2,580,690	Miles. (a) 768

(a) Exclusive of cleared roads.

(b) *Revenue and Expenditure.* Revenue and expenditure of municipalities during the year 1931 are given hereunder :—

**MUNICIPALITIES, WESTERN AUSTRALIA.—REVENUE AND EXPENDITURE.**

Year ended 31st October—	Revenue.				Expenditure.			
	From Rates.	From Govt. Grants.	From other Sources.	Total.	Works and Improvements.	Interest and other Charges on Loans.	Other Expenses.	Total.
1931 ..	£ 310,251	£ 90,727	£ 847,008	£ 1,247,986	£ 256,743	£ 288,919	£ 670,233	£ 1,215,895

(c) *Assets and Liabilities.* The table below shows the assets and liabilities of municipalities at the 31st October in the financial year 1931 :—

**MUNICIPALITIES, WESTERN AUSTRALIA.—ASSETS AND LIABILITIES.**

31st October—	Assets.				Liabilities.		
	Balance in Hand.	Value of Property.	Accrued Sinking Funds.	Total.	Outstanding Debentures and Bonds.	Total.	
1931 .. ..	£ 123,890	£ 2,376,237	£ 471,007	£ 3,783,141	£ 2,673,910	£ 3,070,740	

(iii) *District Road Boards. (a) Summary.* The next table shows the unimproved value, and in some instances the returns furnish also the annual value, but those portions of districts rated under the annual value are not included in the area rated under the unimproved capital value. The population at the date of the census of 4th April, 1921, was 160,970, and the number of dwellings 41,662.

On the 30th June, 1931, the population was estimated at 228,436, and the number of dwelling-houses at 55,116.



## DISTRICT ROAD BOARDS, WESTERN AUSTRALIA.—SUMMARY.

Year ended 30th June—	Number of Road Districts.	Area.	Unimproved Capital Value (Approximate).	Length of Roads in Existence.	Assets.	Liabilities.	Outstanding Loans.
	No.	sq. miles.	£	miles.	£	£	£
1931 ..	126	975,823	26,552,509a	21,170b	924,310	867,183	689,632

(a) Rated partly on unimproved capital value and partly on annual value. (b) Exclusive of roads, not formed, used for general traffic.

(b) *Revenue and Expenditure.* The revenue and expenditure of district road boards are shown in the following table for the year 1931 :—

## DISTRICT ROAD BOARDS, WESTERN AUSTRALIA.—REVENUE AND EXPENDITURE.

Year ended 30th June—	Revenue.				Expenditure.			
	Rates.	Government Grants.	Other.	Total.	Administration.	Works.	Other.	Total.
	£	£	£	£	£	£	£	£
1931 ..	237,053	181,604	317,538	736,195	64,249	467,610	229,429	761,288

(iv) *Local Boards of Health.* (a) *General.* On the 31st October, 1931, there were 21 local boards of health within municipalities, and on the 30th June, 1931, 91 under control of road boards, and 16 extra-municipal boards. Of the extra-municipal boards 5 were inactive during the year.

(b) *Finances.* The appended table shows the number of boards, their revenue and expenditure, and the assets and liabilities of such as were active during 1931. The financial year of municipal boards ends on the 31st October, and that of other boards on the 30th June.

## LOCAL BOARDS OF HEALTH, WESTERN AUSTRALIA.—FINANCES.

Year.	Number.	Revenue.			Expenditure.		Assets.	Liabilities.
		Rates.	Sanitary Charges and Rubbish Fees.	Total.	Sanitary and Rubbish Service.	Total.		
		£	£	£	£	£	£	£
1931 ..	128	82,260	66,961	166,105	96,409	152,750	125,182	23,707

6. *Tasmania.*—(i) *General.* The whole State, with the exception of the cities of Hobart and Launceston, which were incorporated under separate Acts, is divided into municipal districts.

(ii) *Municipalities.* (a) *Summary.* The following table gives the number of municipalities, valuations, outstanding loans and length of roads for the year 1930–31. The latest available figure for inhabited dwellings is for the year 1921, when the number was 45,950.

## MUNICIPALITIES, TASMANIA.—SUMMARY.

Year.	Number of Municipalities.	Valuations.			Outstanding Loans.	Length of Roads.
		Annual Value.	Unimproved Value.	Total Capital Value.		

## HOBART AND LAUNCESTON.

1930-31	No.	£	£	£	£	Miles.
..	2	1,210,898	7,070,559	18,851,279	2,579,200	195

## COUNTRY MUNICIPALITIES.

1930-31	..	47	1,577,564	16,236,246	33,060,107	509,256	12,209
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(b) *Revenue and Expenditure.* The next table gives the revenue and expenditure of all municipalities for the year 1930-31 :—

## MUNICIPALITIES, TASMANIA.—REVENUE AND EXPENDITURE.

Year.	Revenue.			Expenditure.			
	Rates.	Government Grants.	Total.	Adminis- tration.	Works and Services.	Interest and Sinking Fund.	Total.

## HOBART AND LAUNCESTON.

1930-31	£	£	£	£	£	£	£
..	286,005	3,751	616,320a	51,644	373,392a	191,497	617,114a

## COUNTRY MUNICIPALITIES.

1930-31	..	183,136	29,436	315,708a	39,823	224,214a	37,826	324,568a
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(a) Excluding loans.

7. *Basis for Municipal Rating and Limits for Rates.*—These matters were dealt with at some length in Official Year Book, No. 17, pp. 124-25.

## § 4. Summary of Local Government Finance.

1. *General.*—In the preceding parts of this chapter certain particulars have been given regarding local authorities in each individual State. In this paragraph, comparative figures are given for each State regarding the financial operations of the local governing bodies referred to in § 3. The particulars in the next two tables refer to financial years as follows :—New South Wales : calendar year 1930. Victoria : 30th September, 1930, except Melbourne, 31st December, and Geelong, 31st August, 1930. Queensland : calendar year 1930. South Australia : Corporations, 30th November, and district councils, 30th June, 1930. Western Australia : Municipalities, 31st October, 1930, district road boards, 30th June, 1930. Tasmania : 30th June, 1931.

2. Number, Revenue, Expenditure, and Valuation of Local Authorities.—The sub-joined table shows the number, revenue, and expenditure, including loan money, and valuation of local authorities in each State and in Australia during the years indicated above. It should be noted that, excepting in Queensland and Tasmania, the metropolitan water supply systems are not under municipal control; the particulars given of revenue and expenditure for the four States other than Queensland and Tasmania do not, therefore, include revenue and expenditure on account of these systems.

## LOCAL AUTHORITIES (a) IN EACH STATE.—FINANCIAL SUMMARY, 1930.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.(b)	Tasmania.	Total.
No. of local authorities(a)	319	196	147	196	147	49	1,054

## RECEIPTS.

Rates—	£	£	£	£	£	£	£
General ..	5,355,555	3,914,438	1,963,389	971,009	451,695	175,806	15,413,310
Other ..	1,476,567						
Government grants, etc. ..	2,333,344	149,372	483,037	501,709	216,460	33,187	3,717,109
Loans and other sources ..	(c) 6,013,115	4,200,513	4,655,199	445,177	1,629,317	538,397	(f)17,481,718
Total ..	(c) 15,178,581	8,264,323	7,708,367	1,917,895	2,502,246	1,040,725	(f)36,612,137

## EXPENDITURE.

Works, services, etc. ..	11,909,071	5,266,089	4,615,241	1,565,137	1,656,841	682,038	25,694,417
Interest on loans and overdrafts ..	1,928,570	789,263	1,275,080	70,538	188,169	229,323	6,839,782
Redemptions, sinking funds, etc. ..	1,193,430	396,711	535,376	53,485	179,837		
Administration ..	(e) 566,969	474,348	428,746	178,430	155,420	91,467	1,895,380
Other ..	302,824	1,812,126	778,538	153,671	347,635	23,286	3,418,080
Total ..	(d) 15,900,864	8,738,537	7,632,981	2,021,261	2,527,902	1,026,114	(f)37,847,659

## VALUATIONS.

Capital value of property ..	£389,275,426	£676,690,841	£80,526,913	£195,311,939	£47,908,676	£51,911,386	(i)
Annual value of property ..	£45,109,732	£36,032,913	(i)	£9,738,581	£2,616,083	£2,788,462	(i)

(a) Including particulars for all areas controlled by local governing bodies responsible for the construction and maintenance of roads and streets, such areas being variously known in the several States as cities, towns, boroughs, shires, municipalities, and road board districts, etc.

(b) Exclusive of Local Boards of Health.

(c) Exclusive of loan receipts, particulars of which are not available. Loans raised during the year amounted to £3,520,390.

(d) Exclusive of the total loan expenditure of the City of Sydney. The expenditure included for other local authorities relates to "revenue expenditure" and includes loan moneys expended on road construction and other works not resulting in realisable assets or assets to be used over a period of time in fulfilling ordinary services. The amount of "capital expenditure" from both revenue and loans is not available. The addition of the following amounts to the above total of £15,900,864 should, however, give a fairly close approximation of total expenditure comparable with the other States:—For City of Sydney, £2,092,548 (expenditure from loans), and for the other local authorities, £1,315,524 (value of assets purchased during the year). This latter figure represents the total "capital expenditure" incurred during the year and not the sum actually expended, as certain of the assets are purchased under time-payment contracts.

(e) General Fund.

(f) See footnotes (c) and (d) relating to New South Wales.

(g) Unimproved capital value. The improved value for shires is not available; for municipalities it is £681,005,556.

(h) Assessed annual value, excluding Shires.

(i) Not available.

(j) Rateable value.

(k) Municipalities only. District Road Boards are rated on unimproved capital value and/or annual value, the total of the unimproved capital value being £25,612,116; the total annual value is not available.

3. Local Government Loans, 1930.—The following table shows the amount of loans raised by local authorities during the year 1930, of loans current at the end of that year, the liability on account of interest and sinking fund, and the loans redeemed during 1930:—

## LOCAL AUTHORITIES.—LOANS, 1930.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£	£	£	£	£	£	£
Loans from General Government—							
Raised during year ..	..	953	174,124	99,483	105,026	17,078	396,664
Current at end of year ..	..	887,334	8,180,568	382,756	318,843	454,680	10,224,181
Loans from other Sources—							
Raised during year ..	3,520,390	1,357,161	1,142,960	16,202	207,935	115,793	6,360,441
Current at end of year ..	34,626,136	13,027,685	15,128,773	854,579	3,108,562	2,633,776	69,379,511
Total—							
Raised during year ..	3,520,390	1,358,114	1,317,084	115,685	312,961	132,871	6,757,105
Current at end of year ..	34,626,136	13,915,019	23,309,341	1,237,335	3,427,405	3,088,456	79,603,692
Current Loans, exclusive of those obtained from General Government, raised within Australia ..	25,277,150	13,027,685	5,622,250	854,579	2,731,246	1,448,776	48,961,686
Annual Liability on account of Interest ..	1,905,735	(b) 720,868	1,216,400	68,749	204,115	179,341	4,295,208
Total Sinking Fund at end of year ..	2,830,328	618,056	1,275,782	26,335	552,722	422,794	5,726,017
Amount of Loans Redeemed during year ..	(a)	(a)	374,678	48,635	129,300	57,789	(a)

(a) Not available.

(b) Interest paid.

## § 5. Water Supply, Sewerage and Drainage.

1. New South Wales.—(i) *General.* In Sydney and its suburbs the water supply and sewerage systems are controlled by the Metropolitan Water, Sewerage and Drainage Board, and in Newcastle and its suburbs by the Hunter District Water Supply and Sewerage Board. In country districts, both waterworks and sewerage works are constructed by the Public Works Department, and, when completed, handed over to the municipalities affected, by which the cost must be repaid.

(ii) *Metropolitan Waterworks.* (a) *General.* Financial conditions necessitated a stoppage of all loan works in March, 1931, but prior to that date good progress had been made on the construction of the two additional storage reservoirs on the Nepean and Woronora Rivers. During the year ended 30th June, 1931 also, the Killara service reservoir was completed, the works embraced in the Sutherland-Cronulla scheme were wholly carried out, certain large trunk mains were laid, and additional pumping units were installed at the Ryde and Lakemba stations. The maximum day's consumption in the metropolitan area was 139,693,000 gallons. The length of mains is now 4,188 miles.

(b) *Water Supplied, etc.* The following table gives the number of houses, the estimated population supplied, and other details for the year ended 30th June, 1931:—

## WATERWORKS, SYDNEY.—WATER SUPPLIED.

Year ended 30th June—	Number of Houses Supplied.	Estimated Population Supplied.	Average Daily Supply.	Total Supply for the Year.	Average Daily Supply.		Mains Laid.
					Per House.	Per Head of Estimated Population.	
	No.	No.	1,000 Gallons.	1,000 Gallons.	Gallons.	Gallons.	Miles.
1931 ..	308,657	1,543,285	84,390	30,802,514	273	54.68	84

(c) *Finances.* The following statement shows the revenue and expenditure on account of the services of waterworks, sewerage and drainage during the year 1930-31 :—

**WATERWORKS, SEWERAGE, AND DRAINAGE, SYDNEY.**

Item.	Revenue.	Working Expenses, Sinking Fund Contribution, and Renewals. (a)	Capital Indebtedness.	Percentage of Working Expenses and Sinking Fund Contribution on Revenue.	Percentage of Revenue on Capital Cost.	Interest. (b)	Surplus or Deficit.
	£	£	£	%	%	£	£
Water ..	1,672,954	514,484	23,381,090	30.75	7.16	1,156,902	+ 1,568
Sewerage	979,389	287,570	14,440,475	29.36	6.78	758,519	- 66,700
Drainage	51,745	13,388	699,450	25.87	7.40	36,504	+ 1,853
<b>Total</b>	<b>2,704,088</b>	<b>815,442</b>	<b>38,521,015</b>	<b>30.16</b>	<b>7.02</b>	<b>1,951,925</b>	<b>- 63,279</b>

(a) Includes payments to State Debt Commissioners in reduction of capital indebtedness as follows :— Water, £58,010; Sewerage, £39,674; and Drainage, £1,872.

(b) Includes exchange as follows :—Water, £93,921; Sewerage, £63,944; and Drainage, £2,624.

(iii) *Metropolitan Sewerage and Drainage Systems.* (a) *General.* In addition to the usual progress made in connecting additional houses, 77 miles of new sewers were laid, the total length at 30th June, 1931, being 1,871 miles. The quantity of sewage pumped was 5,118 million gallons.

(b) *Houses Drained, Population Served, Length of Sewers, etc.* Particulars as at 30th June, 1931, are given hereunder :—

**SEWERAGE AND DRAINAGE SYSTEMS, SYDNEY.—PARTICULARS OF SERVICES.**

Year ended 30th June—	Number of Houses Drained.	Estimated Population Served.	Total Length of Sewers.	Total Length of Storm-water Drains.	Ventilating Shafts Erected.	Sewers Ventilated.
	No.	No.	Miles.	Miles.	Feet.	Miles.
1931 .. .. .	204,772	1,023,860	1,871.32	75.89	618,498	1,442

(iv) *Newcastle Water Supply.* (a) *General.* The supply is drawn from the Chichester Reservoir, and is piped about 50 miles to Newcastle. The storage reservoir capacity is 5,000 million gallons. In addition to supplying Newcastle, water is reticulated in Maitland, 20 miles distant from Newcastle, and the Cessnock coalmining field, as well as areas adjoining these centres. The supply also extends to the farming areas of Miller's Forest and the lakeside resorts of Belmont and Toronto.

Water can also be supplied from the Hunter River at Maitland, if required.

Reservoirs distributed throughout the Water Supply District number 36, with a total storage capacity of 60,480,510 gallons.

The net addition to lengths of water-mains laid was 4 miles, bringing the total length of mains to 860 miles.

(b) *Particulars of Services.* The following table supplies details for the year ended 30th June, 1931 :—

**NEWCASTLE WATER SUPPLY.—SUMMARY.**

Year ended 30th June—	Number of Houses Supplied.	Estimated Population Supplied.	Average Daily Supply.	Total Quantity Supplied for the Year.	Average Daily Supply.		Mains Laid.
					Per House.	Per Head of Estimated Population.	
	No.	No.	1,000 gallons.	1,000 gallons.	Gallons.	Gallons.	Miles.
1931 .. .. .	42,631	213,155	7,960	2,905,391	187	37.34	4

(c) *Finances.* The next table gives the revenue, working expenses, capital debt, and net profit for the year ended 30th June, 1931 :—

## NEWCASTLE WATER SUPPLY.—FINANCES.

Year ended 30th June—	Revenue.	Management, Working Expenses, and Sinking Fund.	Capital Debt.	Percentage of Management and Working Expenses on Revenue.	Percentage of Revenue on Capital Debt.	Interest on Capital Debt.	Deficiency.
1931 ..	£ 235,325	£ 85,823	£ 2,847,998	% 36.47	% 8.26	£ (a) 160,298	£ 10,796

(a) Includes exchange £15,578.

(v) *Newcastle Sewerage Works.* (a) *General.* The sewerage works for Newcastle and suburbs as originally designated have been completed by the Department of Public Works and vested in the Board.

The amplification, extension, and improvement of such sewerage works was authorized by "The Newcastle and Suburbs Sewerage Amplification Act 1928" passed on the 21st May, 1928. The estimated cost of the work, which is still under construction, is £761,625. Schemes for the sewerage of Stockton and West Maitland are being investigated, and the Cessnock system is under construction at a revised estimated cost of £201,845.

The stormwater drainage of Newcastle and adjoining areas is divided into two catchment areas, viz., the works in the Cottage Creek Stormwater Area, estimated to cost £200,000, and the works in the Throsby Creek Stormwater Area, estimated to cost £660,000.

(b) *Sewerage Connexions and Length of Sewers.* During the year ended 30th June, 1931, the number of properties connected with sewers was 241, making a total of 21,471. New sewers of a length of 1 mile were constructed by the Board, bringing the total length of sewers under the Board's control to 200 miles.

(c) *Finances.* Particulars in regard to chief items for the year 1930–31 are given hereunder :—

## NEWCASTLE SEWERAGE.—FINANCES.

Year ended 30th June—	Revenue.	Management, Working Expenses and Sinking Fund.	Capital Debt.	Percentage of Management, Working Expenses and Sinking Fund on Revenue.	Percentage of Revenue on Capital Debt.	Interest on Capital Debt.	Surplus.
1931 ..	£ 91,158	£ 42,713	(a) £ 1,868,802	% 46.86	% 4.88	£ (b) 44,642	£ 3,803

(a) Includes £634,326 expenditure on stormwater drainage works not yet transferred to and vested in the Board. (b) Includes exchange £9,756.

(vi) *Water Supply and Sewerage in Country Towns\*.* (a) *General.* Under the *Local Government Act 1919*, the Public Works Department may, upon application by any municipal or shire council, construct, out of moneys voted therefor by Parliament, waterworks or sewerage works, and when completed transfer the control thereof to the council. In each case the cost, with interest, is repayable by instalments spread over a period corresponding to the probable life of the work.

\* Excluding the area of operations of the Hunter District Water Supply and Sewerage Board (Newcastle).

(b) *Waterworks.* Up to the 30th June, 1931, waterworks in 82 towns had been completed and handed over to the respective local authorities. The debt due to the Government on account of these works was £3,422,916, and the annual repayment instalments were £188,027. In addition to the foregoing, the Broken Hill and Junea water supplies are administered by the Public Works Department under special Acts; these services entailed capital expenditures of £481,795 and £220,308 respectively.

(c) *Sewerage and Stormwater Drainage Works.* Up to the 30th June, 1931, sewerage and stormwater drainage works in nineteen towns had been completed. Capital expenditure thereon was £1,080,769. The repayment instalments were £56,543 per annum.

2. *Victoria.*—(i) *A. Melbourne and Metropolitan Board of Works.* (a) *General.* All land within 13 miles of the Post Office at the corner of Bourke and Elizabeth-streets, Melbourne, together with the remaining areas of the City of Mordialloc and the Shire of Moorabbin and a further portion of the Shire of Dandenong, but excluding 11 square miles in the Shires of Keilor and Braybrook under the control of the Keilor and St. Albans Waterworks Trust, is included within the metropolitan area for water supply, sewerage, main drainage and river improvement purposes. This territory covers 434 square miles of land area, and in 1931 embraced 25 cities, 1 shire, and parts of 12 other shires, or a total of 38 municipalities or portions thereof. In addition, the Board supplies water to certain municipalities outside the metropolitan area.

The Board's liability on the 30th June, 1931, for loans raised was £24,001,131. The Board is still empowered to borrow £1,138,803 before reaching the limit of its borrowing powers.

(b) *Revenue and Expenditure.* The ordinary receipts and expenditure for the year 1930-31 were £1,848,847 and £1,761,433 respectively, and the loan receipts and expenditure, £810,988 and £1,059,359 respectively.

*B. Melbourne Water Supply.* (a) *Quantity of Water, Number of Houses, and Population Supplied.* The following table gives particulars of services for the year 1930-31. The rate levied was sixpence in the pound on the net annual value of the property served.

WATER SUPPLY, MELBOURNE.—PARTICULARS OF SERVICES.

Year ended 30th June—	Number of Houses Supplied.	Estimated Population Supplied.	Average Daily Consumption.	Total Water Consumption for the Year.	Average Daily Consumption.		Length of Mains, Reticulation, etc.
					Per House.	Per Head of Estimated Population.	
	No.	No.	1,000 Gallons.	1,000 Gallons.	Gallons.	Gallons.	Miles.
1931 ..	253,118	1,121,313	55,208	20,150,855	218.11	49.23	2,744

(b) *Capital Cost, Revenue, Working Expenses, Interest and Surplus.* The total cost of construction, revenue, working expenses (exclusive of renewals), percentage of working expenses on revenue, interest and surplus for the year ended 30th June, 1931, are given below. The total capital cost to that date was £10,892,860.

WATER SUPPLY, MELBOURNE.—FINANCES.

Year ended 30th June—	Capital Cost.	Revenue.	Working Expenses. (a)	Percentage of Working Expenses on Revenue.	Interest. (b)	Surplus.
	£	£	£	%	£	£
1931 ..	502,579	771,655	122,889	15.93	554,168	94,598

(a) Exclusive of renewals.

(b) Includes interest on renewals and sinking funds.

C. Melbourne Sewerage. (a) Number of Houses Connected, etc. Particulars of services for the year 1930-31 are given below. The rate levied was elevenpence in the pound on the net annual value of the property served.

## SEWERAGE, MELBOURNE.—PARTICULARS OF SERVICES.

Year ended 30th June—	Number of Houses for which Sewers are Provided.	Estimated Population for which Sewers are Provided.	Average Daily Pumping.	Total Sewage Pumped for the Year.	Average Daily Pumping.		Length of Sewers, etc.
					Per House.	Per Head of Estimated Population.	
	No.	No.	1,000 Gallons.	1,000 Gallons.	Gallons.	Gallons.	Miles.
1931 ..	234,600	1,039,278	42,340	15,454,020	180.5	40.7	2,401

(b) Capital Cost, Revenue, Working Expenses, Interest and Surplus. The total cost of construction, revenue, working expenses (exclusive of renewals), percentage of working expenses on revenue, interest and surplus for the year ended 30th June, 1931, are given below. The total capital cost to that date was £12,595,981.

## SEWERAGE, MELBOURNE.—FINANCES.

Year ended 30th June—	Capital Cost.	Revenue.	Working Expenses. (a)	Percentage of Working Expenses on Revenue.	Interest. (b)	Surplus.
	£	£	£	%	£	£
1931 ..	323,848	906,056	161,085	17.78	697,238	47,733

(a) Exclusive of renewals.

(b) Includes interest on renewals and sinking funds.

(c) Metropolitan Sewage Farm. The total area of the farm at the 30th June, 1931, was 22,634 acres. The following table gives details in connexion therewith for the year 1930-31. The total capital cost to the 30th June, 1931 was £1,122,327.

## METROPOLITAN SEWAGE FARM.—FINANCES.

Year ended 30th June—	Capital Cost.	Revenue.	Working Expenses. (a)	Interest.	Net Cost of Sewage Purification.	Trading Profit.
	£	£	£	£	£	£
1931 ..	50,344	22,605	41,015	59,323	77,733	13,232

(a) Exclusive of renewals.

(d) Disposal of Night-soil from Unsewered Premises. The total number of pans cleaned by the Board at its depots at Brooklyn, Campbellfield, and Moorabbin, where the night-soil was disposed of by burial, was 999,530, for the year 1930-31.



D. Melbourne Drainage and Rivers—Capital Cost, Revenue, Working Expenses, Interest and Surplus. The following table gives details in connexion therewith for the year ended 30th June, 1931. The total capital cost to that date was £1,031,987.

## DRAINAGE AND RIVERS, MELBOURNE.—FINANCES.

Year ended 30th June—	Capital Cost.	Revenue.	Working Expenses. (a)	Percentage of Working Expenses on Revenue.	Interest. (b)	Surplus.
	£	£	£	%	£	£
1931 .. ..	75,954	89,475	15,151	16.93	59,097	15,227

(a) Exclusive of renewals.

(b) Includes interest on renewals and sinking funds.

(ii) *Geelong Waterworks and Sewerage Trust.* (a) *General.* The Geelong Waterworks and Sewerage Trust, constituted in 1908, consists of five commissioners. The amount of loan money which may be raised is limited to £725,000 for water supply undertaking, £710,000 for sewerage undertaking, and £270,000 for sewerage installation to properties under the deferred payment system. The population supplied is about 45,270.

(b) *Water Supply.* The catchment area is about 16,000 acres. The storage capacity of all the reservoirs is 2,738,119,808 gallons, and there are 272 miles of reticulation mains within the city of Geelong and its suburbs. Arrangements have been made with the State Rivers and Water Supply Commission for a supplementary supply of a minimum quantity of 500 million gallons of water per annum from the Commission's works now being constructed to tap the watersheds of the upper reaches of the river Barwon. The total expenditure on waterworks to the 30th June, 1931, was £700,797, and the revenue for the year 1930-31 was £53,194; the sinking fund for redemption of loans amounted to £47,346.

(c) *Sewerage Works.* The sewerage scheme consists of a main outfall sewer to the ocean at Black Rock, about 9 miles from Geelong, and 140 miles of reticulation mains have already been laid. The drainage area is 9,489 acres, and the number of buildings within the drainage area is 11,400, and within the sewered areas 11,110, while 11,071 buildings have been connected with the sewers. The total expenditure to 30th June, 1931 on sewerage works was £641,913, and on the cost of sewerage installations under deferred payment conditions £253,556, of which £44,025 is outstanding. The revenue amounted to £42,498. The sinking fund for redemption of loans amounted to £46,666.

(iii) *The Ballarat Water Commission and the Ballarat Sewerage Authority.* (a) *General.* The Ballarat Water Commission was constituted on 1st July, 1880, and the Ballarat Sewerage Authority on the 30th November, 1920. The members of the Water Commission are the Sewerage Authority. The Commissioners number seven; three (one of whom is chairman) being appointed by the Government, and four being elected by the Council of the City of Ballarat.

(b) *Water Supply.* The Water Supply District embraces an area of about 27 square miles, containing a population of about 43,000. The total storage capacity of the six reservoirs is 2,215,558,327 gallons.

The capital cost of construction of the waterworks is £651,681. The liabilities are loans due to the Government amounting to £301,158 as at 31st December, 1931. The revenue for the year was £34,755.

(c) *Sewerage.* The scheme as designed provides for a population of 90,000 persons. The capital cost of construction to 31st December, 1931, is £324,594. The method of sewage disposal is by sedimentation, oxidation, and sludge digestion. Fifty-four sewered areas have been declared as at 1st January, 1932, comprising 6,798 tenements.

The scheme is being financed by debenture issue loans from various financial institutions, £364,090 having been provided up to 31st December, 1931, for constructional works, and £135,000 for house connexions.

(iv) *Bendigo Sewerage Authority.* The members of the Bendigo City Council constitute this Authority. The sewerage district comprises the populated area of the city of Bendigo. The works when completed are estimated to cost £450,000. Expenditure to end of December, 1931, was £325,303 for sewerage scheme and £174,163 for house connexions.

(v) *Water Supply in Country Towns and Districts.* Most of the country waterworks are controlled by the State Rivers and Water Supply Commission, but in some instances the control is by waterworks trusts or by municipal corporations.

The following table gives particulars regarding waterworks under the control of trusts and municipal corporations for the year 1931 :—

#### COUNTRY WATERWORKS, VICTORIA.—FINANCES.

Year.	Under Waterworks Trusts.				Under Municipal Corporations.			
	Number of Trusts.	Capital Cost.	Capital Indebtedness.	Current Interest Outstanding.	Number of Corporations.	Capital Cost.	Capital Indebtedness.	Current Interest Outstanding.
	No.	£	£	£	No.	£	£	£
1931 ..	105	1,740,826	1,363,880	4,990	28	857,917	558,075	997

3. *Queensland.*—(i) *Water Supply and Sewerage Department, Brisbane City Council.*  
(a) *General.* The whole of the water supply in the metropolitan area and the bulk supply to the City of Ipswich is filtered.

The available storage in the Brisbane River is 500 million gallons, the catchment area being approximately 4,000 square miles. In Lake Manchester the storage capacity is 7,000 million gallons, and the catchment area 28.5 square miles. The capacity of Enoggera and Gold Creek Reservoirs is 1,000 million gallons and 434 million gallons respectively, and the catchment area 12.8 and 3.8 square miles respectively.

The total capacity of the service reservoirs on Tarragindi Hill, Eildon Hill, Bartley's Hill, Highgate Hill, Roles Hill, Wickham Terrace, and Paddington (elevated tank) is approximately 27,356,000 gallons.

(b) *Waterworks. Summary.* The following table gives a summary of operations for the six months ended 30th June, 1931. Figures are available for a half-year only owing to a change from calendar to financial years :—

#### WATERWORKS, BRISBANE.—SUMMARY.

Six Months ended—	Length of Reticulation Mains.	Number of Tenements Connected. (a)	Estimated Population Supplied.	Quantity Supplied.	Average Daily Supply.	Average Daily Supply per Head of Estimated Population.
	Miles.	No.	No.	1,000 Gallons	Gallons.	Gallons.
30th June, 1931	806½	63,498	327,422	2,306,397	12,742,526	38.92

(a) Exclusive of Ipswich, which is a bulk supply.

The total length of the trunk mains is 203½ miles.

(c) *Sewerage.* At the 30th June, 1931, 14,005 premises were connected to the Council's sewerage system, the estimated population served being 70,025 persons. The total length of sewers in operation is 359½ miles, consisting of 206½ miles of sewers within premises, and 152½ miles of main and reticulation sewers.

(d) *Waterworks and Sewerage Works Finances.* The subjoined table gives particulars regarding finance during the six months ended 30th June, 1931. Figures are available for a half-year only owing to a change from calendar to financial years :—

WATER AND SEWERAGE WORKS, BRISBANE.—FINANCE.

Six Months ended—	Capital Cost.	Net Revenue from Rates.	Management and Working Expenses.	New Works Construction.	Interest and Redemption of Loans, including Sinking Fund.
30th June, 1931	£ 8,013,352	£ 321,048	£ 82,657	£ 27,831	(a) £ 268,607

(a) Exclusive of the sum of £39,880 paid as exchange.

(ii) *Country Towns Water Supply.* In addition to the city of Brisbane, there were at the end of the year 1930, forty-one country towns in Queensland provided with water supply systems constructed by municipalities chiefly from Government loans. The subjoined statement gives particulars of all water supply systems, exclusive of Brisbane, for the year 1930 :—

COUNTRY WATER SUPPLY SYSTEMS.—QUEENSLAND.

*Cost of Construction to 31st December, 1930—£2,258,792.*

<i>Receipts.</i>			£	<i>Expenditure.</i>			£
Rates and sales of water	..	..	229,743	Office and salaries	..	..	16,486
Government and other loans	..	..	94,539	Construction	..	..	111,332
Other	..	..	16,000	Maintenance..	..	..	92,784
				Interest and redemption	..	..	107,930
				Other expenses	..	..	13,617
<b>Total</b>	..	..	<b>340,282</b>	<b>Total</b>	..	..	<b>342,149</b>
<b>Assets</b>	..	..	<b>1,934,929</b>	<b>Liabilities</b>	..	..	<b>1,566,481</b>

4. *South Australia.*—(i) *General.* The water supply and sewerage systems in this State are constructed and maintained by the Public Works Department.

(ii) *Adelaide Waterworks.* (a) *Summary.* The following table gives particulars for the year 1930–31, the figures for consumption being recorded by gaugings taken at the reservoirs and including evaporation and absorption. There are 52,327 meters in the Adelaide District.

ADELAIDE WATERWORKS.—SUMMARY.

Year ended 30th June—	Number of Assessments.	Annual Value.	Area Supplied.	Capacity of Reservoirs.	Length of Mains.	Annual Consumption.
1931 .. ..	No. 134,009	£ 5,709,329	Acres. 115,939	Million Gallons. 7,774	Miles. 1,287	1,000 Gallons. 6,100,890

(b) *Finances.* Particulars for the year 1930-31 are given below :—

**ADELAIDE WATERWORKS.—FINANCES.**

Year ended 30th June—	Capita Cost.	Revenue.		Expenses.			Percentage of Net Revenue on Capital Cost.
		Rates.	Total.	Enginer- ing Branch.	Revenue Branch.	Total.	
1931 ..	£ 3,674,062	£ 401,240	£ 462,437	£ 76,614	£ 10,978	£ 87,592	% 10.20

(iii) *Adelaide Sewerage.* Particulars for the year 1930-31 are given hereunder :—

**ADELAIDE SEWERAGE.—SUMMARY.**

Year ended 30th June—	Length of Sewers.	Number of Con- nexions.	Capital Cost of Revenue- Producing Works.	Revenue.		Working Expenses.		Percentage of Net Revenue on Capital Cost.
				Rates, etc.	Total.	Mainten- ance, etc.	Total.	
1931 ..	Miles. 543	No. 56,144	£ 1,600,726	£ 218,166	£ 223,639	£ 31,811	£ 40,493	% 11.44

(iv) *Country Towns Water Supply.* (a) *Summary.* The chief items of information regarding these undertakings are set forth in the table below for the year 1930-31. There are 31,398 meters in country districts.

**COUNTRY TOWNS WATERWORKS, SOUTH AUSTRALIA.—SUMMARY.**

Year ended 30th June—	Number of Assessments.	Area Supplied.	Capacity of Reservoirs.	Length of Mains.	Annual Consumption.
1931 ..	No. 50,051	Acres. 11,837,241	Million Gallons. 9,110	Miles. 4,743	1,000 Gallons. 1,225,455

(b) *Finances.* The next table gives financial information for the year 1930-31 :—

**COUNTRY TOWNS WATERWORKS, SOUTH AUSTRALIA.—FINANCES.**

Year ended 30th June—	Capital Cost.	Revenue.		Working Expenses.			Percentage of Net Revenue on Capital Cost.
		Rates.	Total.	Enginer- ing Branch.	Revenue Branch.	Total.	
1931 ..	£ 9,146,134	£ 187,212	£ 218,940	£ 126,557	£ 8,375	£ 134,932	% 0.92

(v) *Other Sewerage Systems.* Information in summarized form is given below regarding the two suburban sewerage systems, viz., the Glenelg system and the Port Adelaide and Semaphore system, for the year 1930-31 :—

**SUBURBAN SEWERAGE SYSTEMS, SOUTH AUSTRALIA.—SUMMARY.**

Year ended 30th June—	Length of Sewers.	Number of Con- nections.	Capital Cost.	Revenue.		Working Expenses.		Percentage of Net Revenue on Capital Cost.
				Rates.	Total.	Mainten- ance.	Total.	
	Miles.	No.	£	£	£	£	£	%
1931 ..	169	10,773	889,920	35,200	36,358	16,662	17,548	2.11

5. *Western Australia.*—(i) *General.* The water supply and sewerage systems of Western Australia are all under the management of Government Departments, and are divided into the following categories :—(a) Metropolitan Water Supply, Sewerage and Drainage, covering Perth, Fremantle, Claremont, Guildford, Midland Junction, and Armadale District, (b) Goldfields Water Supply, (c) Water Supply of other towns, (d) Agricultural Water Supply, (e) Other Mines Water Supply, and (f) Artesian and sub-artesian waters.

(ii) *Metropolitan Water Supply, Sewerage and Drainage.* (a) *General.* The sources of the metropolitan water supply are the Victoria Reservoir, Mundaring Reservoir, thirteen bores, and the Armadale, Churchman Brook, Canning River, and Wongong pipe head dams. The sewerage system consists of septic tanks and percolating filters for Perth, and septic tanks and ocean outfall for Fremantle and Subiaco. At the 30th June, 1931, the number of premises connected with sewers was 22,956.

(b) *Summary.* The following table gives particulars regarding water supply for the year 1930-31 :—

**METROPOLITAN WATER SUPPLY, WESTERN AUSTRALIA.—SUMMARY.**

Year ended 30th June—	Estimated Population Supplied.	Number of Houses Supplied.	Water Supplied.	Average Daily Supply.		Number of Meters.	Length of Mains.
				Per Head.	Per House.		
	No.	No.	1,000 Gallons.	Gallons.	Gallons.	No.	Miles.
1931 ..	221,000	51,954	3,762,749	45.83	201.92	36,800	846

(c) *Finances.* The table hereunder gives separate information for the water supply and sewerage and drainage branches for the year 1930-31 :—

**METROPOLITAN WATER SUPPLY, AND SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA.—FINANCES.**

Year ended 30th June—	Water Supply.			Sewerage and Drainage.		
	Capital Cost.	Revenue.	Expendi- ture.	Capital Cost.	Revenue.	Expendi- ture.
	£	£	£	£	£	£
1931 ..	3,211,643	282,966	257,875	1,524,970	112,170	100,454

(iii) *Goldfields Water Supply.* The source of supply for the Coolgardie and adjacent goldfields, as well as for towns and districts on or near the pipe-line, is the Mundaring Reservoir, which has a capacity of 4,650 million gallons. There are three classes of

consumers—the railways, the mines, and “other,” and in 1930–31 the railways consumed 7 per cent., the mines 21 per cent., and “other” 72 per cent. of the supply. The following table gives details for the year 1930–31 :—

**GOLDFIELDS WATER SUPPLY, WESTERN AUSTRALIA.—SUMMARY.**

Year ended 30th June—	Total Consumption.	Number of Services.	Length of Water Mains.	Capital Cost.	Revenue.	Expenditure.
1931 ..	1,000 gallons. 1,200,000	No. 10,730	Miles. 1,525	£ 3,739,857	£ 182,562	£ 179,712

(iv) *Water Supply of Other Towns.* During the year 1930–31 water supplied to other towns and districts amounted to 214,246,000 gallons distributed as follows :— Railways, 25,563,000 gallons ; mines, 36,044,000 gallons ; and 152,639,000 gallons to domestic and other consumers.

(v) *Agricultural Water Supply.* During the year 1930–31, one tank was excavated and 12 wells sunk, all of which yielded fresh water. During the twenty-one years from the 1st July, 1910, to the 30th June, 1931, 490 tanks were built, 367 wells sunk, and 3,452 bores put down to a total depth of 152,474 feet. Of the bores mentioned, 517 yielded fresh and 287 stock water.

(vi) *Artesian and Sub-artesian Waters.* Up to the 30th June, 1931, the total number of bores put down in search of artesian or sub-artesian water was 248, including 49 sunk in the metropolitan area, ranging in depth from 30 to 4,006 feet.

6. *Tasmania.*—(i) *Hobart Water Supply.* The cost of this undertaking to the 30th June, 1931, was £458,152, but a considerable amount of reticulation work has been done out of revenue and not charged to capital account. The outstanding loans at 30th June, 1931, amounted to £339,116. At the same date the number of tenements supplied in the city and suburbs was 10,606 and the length of reticulation mains 132 miles. The revenue for the year 1930–31 was £38,202.

(ii) *Hobart Sewerage System.* The revenue for the year ended 30th June, 1931, was £38,590. Up to that date 80½ miles of sewers had been laid in connexion with the original city system at a cost of £214,734 and 8,423 tenements connected. Since the original city was sewered, the Municipalities of Queenborough and New Town have been included in the city, and are now being sewered. In Queenborough 25½ miles of sewers, connecting with 1,455 tenements, have been constructed at a cost of £120,314. In New Town a total of 36½ miles of sewers has been laid, and 1,448 properties connected. The cost to 30th June, 1931, including surveys and sewerage outfall, was £112,096.

## § 6. Harbour Boards and Trusts.

1. *New South Wales.*—(i) *Sydney Harbour Trust.* (a) *General.* The Sydney Harbour Trust, which consists of three Commissioners appointed by the Government, controls the whole of the wharves resumed by the Government in 1901. The Commissioners also provide and maintain the lighting and marking of the harbour, and carry out all necessary dredging. The whole of what might be termed city wharves is owned by the Commissioners and leased to various shipping companies, but the Trust directly operates and maintains a certain number of unleased wharves. Outside the city area the wharves are, to a large extent, privately controlled, but all structures beyond high-water mark are held under leases issued by the Trust. The extent of wharfage accommodation now available for use totals 77,030 lineal feet, inclusive of 9,267 lineal feet privately owned, 4,693 lineal feet of cross wharf and 3,427 lineal feet of ferry wharves.

The depth of water at the entrance to the port is not less than 80 feet, and in the channels there are 40 feet at low-water spring tides. The foreshores of Sydney Harbour are about 200 miles in length. The area of the water in the port is 14,284 acres, of which 3,000 acres have a depth ranging from 35 to 160 feet.

Since its inception, the Trust has incurred capital expenditure of £7,810,700 on the reconstruction and extension of the wharfage and improvements to the port and vested area. Over 14,381 lineal feet of old and obsolete wharfage have been demolished, and 35,962 lineal feet of new berths have been constructed. Other improvements include 3,000,000 square feet (approximately) of floor area of sheds and nearly 4 miles of new roadways.

During the year 1931, 779,300 tons of material were dredged at a cost of £19,282. In the process of towing such material, 25,348 miles were run at a cost of £14,506.

(b) *Finances.* The subjoined table gives particulars concerning the finances of the Trust for the year 1931:—

## SYDNEY HARBOUR TRUST.—FINANCES.

Year ended 30th June	Revenue.				Working Expenditure.	Total Capital Debt.	Interest.	Deficiency.
	Wharfage and Harbour Rates.	Tonnage Rates and Berthing Charges.	Other Sources.	Total.				
	£	£	£	£	£	£	£	£
1931 ..	456,853	42,883	340,341	840,077	295,636	11,622,200	635,572	91,131

(a) Includes £38,400 sinking fund contributions.

2. *Victoria.*—(i) *Melbourne Harbour Trust.* (a) *General.* Information regarding the origin and constitution of this Trust will be found in Official Year Book No. 12, pp. 970 *et seq.* At the 31st December, 1931, the sheds available for wharfage accommodation had a length of 18,939 feet, covering an area of 1,247,830 square feet. The area of water in the bay and River Yarra under the control of the Trust is approximately 5,325 acres and the berthing space in the port is 63,419 feet in length with an area of over 62 acres of wharf space. During 1931 the quantity of material raised by dredging and excavation in the river and bay amounted to 1,285,709 barge yards at a cost of £50,549. The Trust has expended £342,160 in reclaiming land within its jurisdiction by depositing 16,082,401 barge yards thereon.

(b) *Finances.* During the year ended 31st December, 1931, the revenue of the Trust amounted to £425,144, and the ordinary expenditure to £422,674, leaving, after provision for exchange on moneys remitted to London for loan redemption (£112,488) a net deficit on revenue account of £110,018. No appropriation for sinking fund or charge for depreciation, renewals and insurance was made against revenue account for the year. The capital expenditure for the year was £331,028. Up to the 31st December, 1931, the total capital expenditure amounted to £8,680,298. The loan indebtedness at the 31st December, 1931 was £4,410,100.

(ii) *Geelong Harbour Trust.* The Geelong Harbour Trust was constituted in 1905, and is under the control of three Commissioners appointed by the Governor in Council. Ordinary revenue for the year 1931 was £54,336, and proceeds from loans £37,200. Expenditure from revenue was £55,788 and from loans £9,027, while loans outstanding at the end of that year amounted to £616,161.

(iii) *Harbour Boards.* The Harbour Boards Act of 1927 provides for the constitution of Harbour Boards for the following ports:—Gippsland Lakes; Welshpool; Warrnambool; Port Fairy; Portland. These ports have, hitherto, been under the control of the Department of Ports and Harbours of Victoria. The first board to be constituted under this Act is the Warrnambool Harbour Board.

3. *Queensland.*—(i) *Bowen Harbour Board.* (a) *General.* The Bowen Harbour Board consists of seven members, of whom two are appointed by the Governor in Council and the remainder elected by the electors of the Town of Bowen and adjacent shires. The district under its jurisdiction comprises the area within the boundaries of the Town of Bowen, the Shires of Prosperine and Wangaratta, and division I. of the Shire of Ayr.

(b) *Finances.* The capital expenditure for the year 1931 was £306, while for the same period the receipts were £11,847 and the expenditure £11,515.

(ii) *Bundaberg Harbour Board.* (a) *General.* The Bundaberg Harbour Board consists of nine members, of whom one is appointed by the Governor in Council, four elected by the electors of the City of Bundaberg, and two each by the electors of the Shires of Gooburrum and Woongarra.

(b) *Finances.* Receipts for the year 1931 amounted to £6,319 as compared with £6,650 in 1930, while expenditure for corresponding periods totalled £5,577 and £5,433 respectively, with interest and redemption on loans for the half-year ended 31st December, 1931 not yet paid.

(iii) *Cairns Harbour Board.* (a) *General.* The Cairns Harbour Board consists of twelve members, representing the city of Cairns and eight adjoining shires. The wharves which are all under the control of this Board, consist of 1,900 lineal feet, all reinforced ferro-concrete structures, 1,500 feet of which form an unbroken quay line. Railway facilities are provided on the wharves together with cold stores and mechanical sugar handling equipment. The total tonnage of outward cargo from the port for 1931 was 207,533 tons, of which sugar comprised 169,000 tons.

(b) *Finances.* The gross revenue of the Board, derived from harbour, berthage, and miscellaneous dues, etc., for the year 1931, was £50,604.

(iv) *Gladstone Harbour Board.* (a) *General.* The Gladstone Harbour Board is composed of seven members, two of whom are appointed by the Governor in Council and five elected by the electors of the town of Gladstone and the shires of Calliope and Miriam Vale.

(b) *Finances.* The total capital expenditure to the end of 1931 amounted to £91,489. The revenue for 1931 was £7,807 and the expenditure £7,610.

(v) *Mackay Harbour Board.* (a) *General.* The Mackay Harbour Board consists of nine members elected by the electors of the city of Mackay and the shires of Pioneer, Sarina, Mirani, and Nebo.

(b) *Finances.* Capital expenditure for the year 1931 was £1,213, and other expenditure £7,251; receipts totalled £13,853.

(vi) *Rockhampton Harbour Board.* (a) *General.* The Rockhampton Harbour Board consists of eleven members, of whom seven are elected by the electors on the rolls for the city of Rockhampton, and the shires of Mount Morgan, Fitzroy and Livingstone. The remaining four are elected by the councillors of groups of inland shires.

(b) *Finances.* The revenue for the year 1931 was £23,901; and the expenditure was £21,086, which included £1,226 interest on loans and overdraft.

(vii) *Townsville Harbour Board.* (a) *General.* The Townsville Harbour Board is composed of nine members, of whom two are appointed by the Governor in Council and the remaining seven are elected by the electors of Townsville and adjacent towns and shires. All harbour works and conveniences for the use of shipping are under the control of the Board.

(b) *Finances.* The total expenditure since the inception of the Board is £2,028,997, while the receipts for the year 1931 were £53,715 and the expenditure £52,832.

4. *Western Australia.*—(i) *Fremantle Harbour Trust.* (a) *General.* Fremantle Harbour is controlled by a Board of five Commissioners appointed by the Governor in Council. A description of the works was given in a previous Year Book (see No. 12, p. 973). Since that account was written, the inner harbour and entrance channel have been dredged to a depth of 36 feet below the lowest known low water. The berthage accommodation at all the quays has also been deepened to 36 feet.



(b) *Finances.* The following table gives financial data for the year 1930-31 :—

**FREMANTLE HARBOUR TRUST.—FINANCES.**

Year ended 30th June—	Revenue.	Expenditure.	Gross Amount Paid to the Treasury.				
			Interest.	Sinking Fund.	Renewals Fund.	Surplus Revenue.	Total.
	£	£	£	£	£	£	£
1931 .. ..	424,304	305,413	110,254	11,096	2,000	121,225	244,575

(ii) *Bunbury Harbour Board.* (a) *General.* The Bunbury Harbour Board consists of five members, appointed by the Government. The jetty is 4,900 feet long, with berthage accommodation of 2,700 feet on the west side and 3,000 feet on the east side, and is electrically lighted.

(b) *Finances.* Details for the year 1931 are given hereunder. Surplus revenue is paid into Consolidated Revenue Fund to meet interest and sinking fund :—

**BUNBURY HARBOUR BOARD.—FINANCES.**

Year ended 30th June—	Capital Expenditure.	Revenue.	Expenditure.	Paid to Consolidated Revenue Fund.
	£	£	£	£
1931 .. ..	433,048	18,975	(a)35,008	6,350

(a) Includes Interest on Capital Account paid from Consolidated Revenue and not from earnings of the Board.

5. *Tasmania.*—(i) *Marine Board of Hobart.* (a) *General.* The Marine Board of Hobart consists of nine wardens elected by the ship-owners of the Port of Hobart and the importers and exporters of goods into or from any port within the jurisdiction of the Board.

(b) *Finances.* The following table gives details for the year ended 30th June, 1931 :—

**MARINE BOARD OF HOBART.—FINANCES.**

Year ended 30th June—	Capital Debt.	Revenue.			Expenditure.			
		Harbour Improvements, Debentures, etc.	General.	Total.	Harbour Improvements.	Interest and Sinking Fund.	General.	Total.
	£	£	£	£	£	£	£	£
1931 .. ..	15,575	..	39,340	39,340	..	a 6,241	27,155	a 33,396

(a) Including £4,949 from revenue in reduction of loans.

(ii) *Marine Board of Launceston.* (a) *General.* The Marine Board of Launceston consists of five wardens, three elected by the ratepayers of the city of Launceston and two by ratepayers of the municipalities within the Tamar District.

(b) *Finances.* The following table gives details for the year ended 30th June, 1931 :—

MARINE BOARD OF LAUNCESTON.—FINANCES.

Year ended 30th June—					Total Capital Debt.	Revenue.	Expenditure.
					£	£	£
1931	..	..	..	..	313,358	54,449	52,495

(iii) *Marine Board of Burnie.* The length of the breakwater is 1,250 feet, with a depth up to 42 feet at low water, and a wharf alongside, 630 feet in length by 91 feet wide, with a depth at low water from 24 to 40 feet. There are two other timber wharves 600 feet and 400 feet long respectively. The receipts for the year ending 30th June, 1931, were £20,390, and the expenditure £24,678, including £18,513 interest on loans, etc.

## § 7. Fire Brigades.

1. *New South Wales.*—(i) *General.* Under the Fire Brigades Act of 1909–27, a Board of Fire Commissioners consisting of eight members operates, and 108 fire districts have been constituted. The cost of maintenance of fire brigades is borne in proportions of quarter, quarter, and half, by the Government, the municipalities, and the insurance companies concerned, but the expenditure must be so regulated that the proportion payable by the councils in a fire district shall not exceed the amount obtainable from  $\frac{1}{4}$ d. in the £ rate on the unimproved capital value of rateable land in the fire district: provided that the Board, with the consent of the Minister, and at the special request of the councils of the municipalities or shires constituting or forming part of a fire district or a majority in number of such councils may, as to that district, exceed the limit above provided.

(ii) *Board of Fire Commissioners of New South Wales.* At the 31st December, 1931, the Board had under its control 76 fire stations in the Sydney fire district and 136 fire stations in the country fire districts. The Sydney fire district includes the City of Sydney and suburbs, comprising a total area of 255 square miles. The revenue for the year 1931 was £434,201, made up as follows :—From the Government, £106,618, municipalities and shires, £106,618; fire insurance companies, £212,101; firms, £1,135; and from other sources, £7,729. The disbursements for the year were £423,284.

2. *Victoria.*—(i) *General.* The Fire Brigades Act of 1928 provides for a Metropolitan Fire Brigades Board, and a Country Fire Brigades Board, each consisting of nine members, with local committees in country districts. The income of each board is derived in equal proportions from the Treasury, the municipalities, and insurance companies.

(ii) *Metropolitan Fire Brigade Board.* On the 30th June, 1931, the Board had under its control 42 stations. The total receipts for the year 1930–31 were £232,122, comprising contributions £186,724, receipts for services £24,855, and interest and sundries £20,543. The expenditure was £226,573, made up as follows :—Salaries (permanent staff) £119,518, interest and repayments of principal £19,853, and other expenditure £87,202. Loan expenditure during the year was £2,401, and the loan indebtedness at the end of the year amounted to £227,420.

(iii) *Country Fire Brigades Board.* At 30th June, 1931, there were 120 municipal councils and 109 insurance companies included in the operations of the Act. The brigades are composed chiefly of volunteers, but in the large centres a few permanent station-keepers and partially-paid firemen are employed. Complete fire alarm systems are installed in 38 of the larger provincial cities and townships. There were 153 registered brigades at 30th June, 1931. For the year 1930–31 the revenue was £33,500 and the expenditure £33,152.

3. **Queensland.**—(i) *General.* The Act of 1920 made provision for the retention of existing fire districts, and for the constitution of new districts. For each district there must be a Fire Brigades Board consisting of seven members, and the cost of maintenance of each brigade is proportioned as follows :—The Treasurer two-sevenths, insurance companies three-sevenths, and local authorities two-sevenths. All volunteer fire brigades in a district must be registered.

(ii) *Fire Brigades Boards.* At the end of the year 1931 there were fire brigades in 28 towns. The total revenue for the year 1930 was £76,599, received mainly from the following sources :—Government £20,984, local authorities £21,028, and insurance companies £31,313. The total expenditure for the year was £78,921, the chief items being salaries and wages £51,541, buildings, repairs, etc., £3,066, and plant, stores, etc., £7,530.

4. **South Australia.**—(i) *General.* The Fire Brigades Act of 1913 and amendments provide for a Board of five members, and the expenses and maintenance of brigades are defrayed as to two-ninths by the Treasury, five-ninths by insurance companies, and two-ninths by the municipalities concerned. The contribution of the Treasury, however, is limited to £10,000 and if two-ninths of the expenses and maintenance exceeds this amount, five-sevenths of the excess is contributed by the insurance companies and two-sevenths by the municipalities.

(ii) *Fire Brigades Board.* At the end of 1931 there were altogether 27 fire brigade stations. The total revenue for the year 1931 was £44,511.

5. **Western Australia.**—(i) *General.* Under the 1916 Act every municipal or road board district is constituted a fire district under the control of the Western Australian Fire Brigades Board. The income of the Board is derived as to two-eighths from Government, three-eighths from municipalities, and three-eighths from insurance companies.

(ii) *Western Australian Fire Brigades Board.* The whole of the brigades throughout the State are now controlled by the Western Australian Fire Brigades Board, and number 39. The revenue and expenditure for the year ended 30th September, 1931, were £57,195 and £56,490 respectively. The estimated value of land and buildings was £68,600 and of plant £38,500.

6. **Tasmania.**—(i) *General.* The municipal council of any municipality may, under the Act of 1920, petition the Governor to proclaim the municipality or any portion of it to be a fire district, each district to have a Board of five members. The expenses of each Board are borne in equal proportions by contributions from the Treasurer, the municipality concerned, and insurance companies insuring property within the district.

(ii) *Hobart Fire Brigade Board.* The revenue of the Board for the year 1931 amounted to £5,968.

## CHAPTER V.

## LAND TENURE AND SETTLEMENT.

## § 1. Introduction.

1. **General.**—A comprehensive description of the land tenure systems of the several States was given in Official Year Book No. 4 (pp. 235 to 333), while later alterations were referred to in subsequent issues. In this chapter a summary is given of the principal features of existing land legislation. In previous issues an account of the various tenures under which Crown lands may be taken up was given. (See Year Book No. 22, pp. 133-195; also 2 hereunder for a conspectus of legislation at present in force.) Special paragraphs are devoted to the settlement of returned soldiers on the land, the tenure of land by aliens, and advances to settlers. Particulars as to the areas of land alienated in each State and similar matter are also included.

2. **State Land Legislation.**—The legislation in force relating to Crown lands, Closer Settlement, Returned Soldiers' Settlement, and other matters dealt with in this chapter is summarized in the following conspectus :—

## STATE LAND LEGISLATION.

New South Wales.	Victoria.	Queensland.
<b>CROWN LANDS ACTS.</b>		
Crown Lands Act 1913-1931 : Western Lands Act 1901-1931 : Crown Lands Purchase Validation Act 1923. Crown Lands Amendment (Disposal) Act 1923. Crown Lands and Closer Settlement (Amending) Act 1924. Prickly Pear Act 1924-1930.	Land Act 1928.	Land Acts 1910-1931. Upper Burnett and Callide Land Settlement Act 1923. Prickly Pear Land Acts 1923-1931. Sugar Workers' Selections Acts 1923-1930.
<b>CLOSER SETTLEMENT ACTS.</b>		
Closer Settlement Act 1904-1919 : Closer Settlement Purchases Validation Act 1923. Closer Settlement and Returned Soldiers' Settlement (Amendment) Act 1927.	Closer Settlement Act 1928-1929.	Closer Settlement Acts 1906-1931.
<b>MINING ACTS.</b>		
Mining Act 1906-1924 : Mining Leases (Validation) Act 1924.	Mines Act 1928.	Mining Acts 1898-1930 : Mining for Coal and Mineral Oil Act 1912 : Petroleum Acts 1923-1929 : Miners' Homestead Leases Act 1913-1930 : Coal Mining Act 1925-1930.
<b>SOLDIERS' SETTLEMENT ACTS.</b>		
Returned Soldiers' Settlement Act 1916-1928.	Closer Settlement Act 1928-1929 (Part II.).	Discharged Soldiers' Settlement Act 1917-1930.
<b>ADVANCES TO SETTLERS ACTS.</b>		
Government Savings Bank Act 1906-1923 : Returned Soldiers' Settlement Act 1916-1925.	State Savings Bank Act 1915-1922 : Primary Products Advances Act 1919-1922 : Closer Settlement Act 1928-1929 : Fruit Act 1915-1920 : Cultivation Advances Act 1931.	State Advances Act 1916 : Co-operative Agricultural Products and Advances to Farmers Act 1914-1919 : Agricultural Bank Act 1923-1929.

STATE LAND LEGISLATION—*continued.*

South Australia.	Western Australia.	Tasmania.
CROWN LANDS ACTS.		
Crown Lands Act 1929-1931 : Pastoral Act 1904-1929.	Land Act 1898-1931.	Crown Lands Act 1911-1924.
CLOSER SETTLEMENT ACTS.		
Crown Lands Act 1929-1931.	Agricultural Lands Purchase Act 1909-1922 : Closer Settlement Act 1927.	Closer Settlement Act 1913-1924.
MINING ACTS.		
Mining Act 1930-1931.	Mining Act 1904-1923 : Sluicing and Dredging for Gold Act 1899.	Mining Act 1917-1929 : Aid to Mining Act 1924.
RETURNED SOLDIERS' SETTLEMENT ACTS.		
Discharged Soldiers' Settlement Act 1917-1931.	Discharged Soldiers' Settlement Act 1918-1919.	Returned Soldiers' Settlement Act 1916-1923.
AGRICULTURAL GRADUATES SETTLEMENT ACTS.		
Agricultural Graduates Act 1922.	..	..
ADVANCES TO SETTLERS ACTS.		
Irrigation Act 1930 : Discharged Soldiers' Settlement Act 1917- 1931 : State Bank Act 1925- 1928 : Advances to Settlers on Crown Lands Act 1930 : Agri- cultural Graduates Act 1922 : Loans for Fencing and Water Piping Act 1930.	Agricultural Bank Act 1906-1931.	State Advances Act 1907-1927 : Advances to Fruit-growers Act 1918-1921 : Closer Settlement Act 1913-1929 : Returned Sol- diers' Settlement Act 1916- 1923.

3. *Northern Territory Land Legislation.*—In the Northern Territory of Australia the legislation relating to Crown lands is embodied in the Crown Lands Ordinance 1931, that relating to mining in the Northern Territory Mining Act 1903, the Gold Dredging Act 1899, the Tin Dredging Ordinance 1911-1920, the Mineral Oil and Coal Ordinance 1922-1923, and the Encouragement of Mining Ordinance 1913-1926; and that relating to Advances to Settlers in the Wire and Wire Netting Act 1927, and the Encouragement of Primary Production Ordinance 1931.

4. *Federal Capital Territory Land Legislation.*—In the Federal Capital Territory the Ordinances relating to Crown lands are the Leases Ordinance 1918-1927, the Public Parks Ordinance 1928, the City Area Leases Ordinance 1924-1929, the Church Lands Leases Ordinance 1924-1930, and the Leases (Special Purposes) Ordinance 1925-1930.

5. **Administration and Classification of Crown Lands.**—In each of the States there is a Lands Department under the direction of a responsible Cabinet Minister who is charged generally with the administration of the Acts relating to the alienation, occupation and management of Crown lands. The administrative functions of most of the Lands Departments are to some extent decentralized by the division of the States into what are usually termed Land Districts, in each of which there is a Lands Office, under the management of a lands officer, who deals with applications for selections and other matters generally appertaining to the administration of the Acts within the particular district. In some of the States there is also a local Land Board or a Commissioner for each district or group of districts. In the Northern Territory the Land Board, under the control of the Minister for the Interior, is charged with the general administration of the Lands Ordinance and of Crown lands in the Northern Territory. In the Federal Capital Territory the administration of the Leases Ordinances is in the hands of the Department of the Interior.

Crown lands are generally classified according to their situation, the suitability of the soil for particular purposes, and the prevailing climatic and other conditions. The modes of tenure under the Acts, therefore, as well as the amount of purchase money or rent, and the conditions as to improvements and residence, vary considerably. The administration of special Acts relating to Crown lands is in some cases in the hands of a Board under the general supervision of the Minister, e.g., the Western Lands Board in New South Wales.

In each of the States and in the Northern Territory there is also a Mines Department which is empowered under the several Acts relating to mining to grant leases and licences of Crown lands for mining and auxiliary purposes.

6. **Classification of Tenures.**—The tabular statement which follows shows the several tenures under which Crown lands may be acquired or occupied in each State. In the Northern Territory leases (excepting pastoral and “miscellaneous”) are granted in perpetuity, pastoral and “miscellaneous” leases being restricted to periods of not more than 42 and 21 years respectively. The Lands Ordinance provides also for the grant in fee-simple of town lands, agricultural lands, garden lands, and tropical lands, and for the issue of grazing, occupation, and “miscellaneous” licences. The mining leases and holdings are, generally speaking, similar to those of the States. In the Federal Capital Territory only leases are issued.

**STATE CROWN LANDS—TENURES.**

New South Wales.	Victoria.	Queensland.
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**FREE GRANTS AND RESERVATIONS.**

Free Grants : Reservations.	Free Grants : Reservations.	Free Grants : Reservations.
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**UNCONDITIONAL PURCHASES OF FREEHOLD.**

Auction Sales : After-auction Purchases : Special Purchases : Improvement Purchases.	Auction Sales.	Sales (at or after auction) : Unconditional Selections.
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**CONDITIONAL PURCHASES OF FREEHOLD.**

Residential Conditional Purchases : Non-residential Conditional Purchases : Additional Conditional Purchases : Conversions of various Leasehold Tenures into Conditional Purchases : Purchases of Town Leases : Suburban Holdings : Returned Soldiers' Special Holdings : Residential Leases : Week-end Leases.	Residential Selection Purchase Leases : Non-residential Selection Purchase Leases : Licences of Auriferous worked-out Lands : Conditional Purchase Leases of Swamp or Reclaimed Lands : Selection Purchase Leases of Mallee Lands : Murray River Settlements : Special Settlement Areas : Conversions into Selection Purchase Leases.	Agricultural Farms : Agricultural Homesteads : Free Homesteads : Prickly Pear Selections : Prickly Pear Development Selections.
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STATE CROWN LANDS—TENURES—*continued.*

New South Wales.	Victoria.	Queensland.
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LEASES AND LICENCES UNDER LAND ACTS.

<p>Conditional Leases : Conditional Purchase Leases : Special Conditional Purchase Leases : Homestead Farms : Settlement Leases : Special Leases : Annual Leases : Scrub Leases : Snow Leases : Inferior Lands Leases : Crown Leases : Improvement Leases and Leases under Improvement Conditions : Occupation Licences : Leases of Town Lands : Suburban Holdings : Weekend Leases : Residential Leases : Leases in Irrigation Areas : Western Lands Leases : Forest Leases : Forest Permits.</p>	<p>Perpetual Leases : Auriferous Lands Licences : Leases of Swamp or Reclaimed Lands : Perpetual Leases of Swamp or Reclaimed Lands : Grazing Licences : Perpetual Leases (Mallee) : Miscellaneous Leases and Licences : Bee Farm Licences : Bee Range Area Licences : Eucalyptus Oil Licences : Forest Leases : Forest Licences : Forest Townships.</p>	<p>Perpetual Lease Selections : Perpetual Lease Prickly Pear Selections : Perpetual Lease Prickly Pear Development Selections : Pastoral Leases : Preferential Pastoral Leases : Stud Holdings : Prickly Pear Leases : Occupation Licences : Special Leases : Grazing Selections : Development Grazing Selections : Prickly Pear Development Grazing Selections : Auction Perpetual Leases : Pastoral Development Leases.</p>
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CLOSER SETTLEMENT.

<p>Sales by Auction and Tender : After-auction Sales and Tenders : Settlement Purchases.</p>	<p>Sales of Land : Conditional Purchase Leases : Conditional Purchase Leases in Mountainous Areas.</p>	<p>Agricultural Farms : Unconditional Selections : Perpetual Lease Selections : Settlement Farm Leases : Perpetual Town, Suburban and Country Leases.</p>
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LEASES AND LICENCES UNDER MINING ACTS.

<p>Holdings under Miners' Rights : Gold Mining Leases : Mineral Leases : Coal and Oil Mining Leases : Business Licences : Residence Areas.</p>	<p>Holdings under Miners' Rights : Gold Mining Leases : Mineral Leases : Business Areas : Residence Areas.</p>	<p>Holdings under Miners' Rights : Permits to Prospect for Petroleum : Petroleum Leases : Licences to Prospect for Coal and Mineral Oil : Gold Mining Leases : Mineral Leases : Coal Mining Leases : Business Areas : Residence Areas : Miners' Homestead Leases and Miners' Homestead Perpetual Leases.</p>
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SETTLEMENT OF DISCHARGED SOLDIERS AND SAILORS.

<p>Soldiers' Group Purchases : Returned Soldiers' Special Holding Leases : Returned Soldiers' Special Holding Purchases : also Purchases and Leases under Crown Lands Act of lands set apart for application by discharged soldiers exclusively.</p>	<p>(Same Tenures as under the Land and Closer Settlement Acts.)</p>	<p>Agricultural Farms : Perpetual Lease Selections : Perpetual Town and Suburban Leases.</p>
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STATE CROWN LANDS—TENURES—*continued.*

South Australia.	Western Australia.	Tasmania.
<b>FREE GRANTS AND RESERVATIONS.</b>		
Free Grants : Reservations.	Free Grants : Reservations.	Free Grants : Reservations.
<b>UNCONDITIONAL PURCHASES OF FREEHOLD.</b>		
Auction Sales.	Auction Sales.	Auction Sales : After-auction Sales : Sales of Land in Mining Towns.
<b>CONDITIONAL PURCHASES OF FREEHOLD.</b>		
Agreements to Purchase : Special Agreements to Purchase (40 years' term) : Homestead Blocks.	Conditional Purchases with Residence : Conditional Purchases without Residence : Conditional Purchases by Direct Payment : Conditional Purchases of Land for Vineyards, etc. : Conditional Purchases of Inferior Lands : Conditional Purchases by Pastoral Lessees : Conditional Purchases of Grazing Lands : Homestead Farms : Village Allotments : Workingmen's Blocks : Special Settlement Leases.	Selections for Purchase : Additional Selections for Purchase : Homestead Areas : Selections in Mining Areas : Sales by Auction : Sales by Private Contract : After-auction Sales : Special Settlement Areas.
<b>LEASES AND LICENCES UNDER LAND ACTS.</b>		
Perpetual Leases : Special Perpetual Leases (Free Period) : Perpetual Leases of Homestead Blocks : Miscellaneous Leases : Licences : Pastoral Leases : Irrigation Blocks : Town Allotments in Irrigation Areas : Forest Leases.	Pastoral Leases : Special Leases : Residential Leases : Leases of Town and Suburban Lands : Irrigation Leases.	Grazing Leases : Pastoral Leases : Leases of Land covered with Button Grass, etc. : Leases of Mountainous Land : Miscellaneous Leases : Temporary Licences : Occupation Licences : Residence Licences : Business Licences : Forest Leases, Licences and Permits.
<b>CLOSER SETTLEMENT.</b>		
Sales by Auction : Agreements to Purchase : Perpetual Leases : Miscellaneous Leases.	Conditional Purchases : Town and Suburban Areas.	Leases with Right of Purchase : Special Sales.
<b>LEASES AND LICENCES UNDER MINING ACTS.</b>		
Holdings under Miners' Rights : Search Licences : Gold Licences : Mineral Leases : Business Areas : Residence Areas : Miscellaneous Leases (Salt and Gypsum).	Holdings under Miners' Rights : Gold Mining Leases : Mineral Leases : Business Areas : Residence Areas : Miners' Homestead Leases.	Holdings under Miners' Rights : Prospectors' Licences : Gold Mining Leases : Mineral Leases.
<b>SETTLEMENT OF DISCHARGED SOLDIERS AND SAILORS.</b>		
Perpetual Leases : Pastoral Leases : Agreements to Purchase : Miscellaneous Leases.	Ordinary Tenure : Special Tenure.	Free Grants : Ordinary Tenure : Special Tenure.
<b>AGRICULTURAL GRADUATES SETTLEMENT ACTS.</b>		
Agreements to Purchase.	..	..



## § 2. Free Grants and Reservations.

1. **New South Wales.**—(i) *Free Grants.* Crown lands may, by notification in the *Gazette*, be dedicated for public purposes and be granted therefor in fee-simple. Such lands may be placed under the care and management of trustees, not less than three in number, appointed by the Minister.

(ii) *Reservations.* Temporary reservations of Crown lands from sale or lease may be made by the Minister.

(iii) *Areas Granted and Reserved.* During the year 1930–31 the total area for which free grants were prepared was 4,455 acres, including grants of 4,400 acres of land resumed under the 12th clause of the Public Roads Act 1902. During the same period 1,251 acres were dedicated and permanently reserved, the number of separate dedications being 89.

On the 30th June, 1931, the total area reserved, including temporary reserves, was 17,089,905 acres, of which 5,262,723 acres were for travelling stock, 2,183,576 acres for forest reserves, 640,591 acres for water, 1,153,389 acres for mining, and the remainder for temporary commons, railways, recreation reserves and parks, reserves for aborigines, and miscellaneous purposes.

2. **Victoria.**—(i) *Free Grants.* The Governor may grant, convey or otherwise dispose of Crown lands for public purposes.

(ii) *Reservations.* The Governor may temporarily or permanently reserve from sale, lease or licence any Crown lands required for public purposes, and may except any area of Crown lands from occupation for mining purposes or for residence or business under any miner's right or business licence.

(iii) *Areas Granted and Reserved.* During the year 1930, 21 acres were granted without purchase, and reservations of both a permanent and temporary nature, comprising a net area of 268,463 acres, were made. At the end of 1930, the total area reserved was 7,978,334 acres, consisting of roads, 1,794,218 acres; water reserves, 313,532 acres; agricultural colleges, etc., 87,003 acres; permanent forests and timber reserves under Forests Act, 4,678,052 acres; forests and timber reserves under Land Acts, 329,585 acres; reserves in the Mallee, 410,000 acres; and other reserves, 365,944 acres.

3. **Queensland.**—(i) *Free Grants.* The Governor may grant in trust any Crown land which is or may be required for public purposes. Under the Irrigation Act land to be used for the purpose of any undertaking under that Act may be vested in fee-simple in the Irrigation Commission.

(ii) *Reservations.* The Governor may reserve from sale or lease, either temporarily or permanently, any Crown land which is or may be required for public purposes. Reserved lands may be placed under the control of trustees who are empowered to lease the same for not more than 21 years with the approval of the Minister.

Under the State Forests and National Parks Act, the Governor may permanently reserve any Crown lands and declare them to be a State Forest or a National Park.

(iii) *Areas Granted and Reserved.* During the year 1931 the area granted in fee-simple without payment was 194 acres, the area set apart as reserves 145,491 acres, and reserves cancelled 411,351 acres. The total area reserved at the end of 1931 was 17,660,279 acres, made up as follows:—timber reserves, 3,418,572 acres; State forests and national parks, 2,065,831 acres; for use of aborigines, 6,241,916 acres; and general, 5,933,960 acres.

4. **South Australia.**—(i) *Free Grants.* The Governor may dedicate Crown lands for any public purpose and grant the fee-simple of such lands, with the exception of foreshores and land for quays, wharves or landing-places, which are inalienable in fee-simple from the Crown.

(ii) *Reservations.* The Governor may reserve Crown lands for (a) the use and benefit of aborigines, (b) military defence, (c) forest reserves, (d) railway stations, (e) park lands, or (f) any other purpose that he may think fit.

(iii) *Areas Granted and Reserved.* During the year 1931 free grants were issued for a total area of 247 acres. During the same year reserves comprising 9,680 acres were proclaimed. At the 30th June, 1931, the total area reserved was 16,424,004 acres including 14,016,000 acres in the north-west of the State set apart as an aboriginal reserve in 1921.

5. **Western Australia.**—(i) *Free Grants.* The Governor may dispose of, in such manner as for the public interest may seem best, any lands vested in the Crown for public purposes, and may grant the fee-simple of any reserve to secure the use thereof for the purpose for which such reserve was made.

(ii) *Reservations.* The Governor may reserve any lands vested in the Crown for public purposes. Areas not immediately required may be leased from year to year. Reserves may be placed under the control of a local authority or trustees, with power to lease them for a period not exceeding 21 years, or may be leased for 99 years. Temporary reserves may also be proclaimed.

(iii) *Areas Granted or Reserved.* During the year ended 30th June, 1931, a few small areas of land were granted in fee-simple, and approximately 101,062 acres were reserved for various purposes. At the 30th June, 1931, the total area reserved was 40,309,675 acres, comprising State forests, 2,967,912 acres, timber reserves, 1,430,362 acres, and other reserves, 35,911,401 acres.

6. **Tasmania.**—(i) *Free Grants.* The only mention in the Crown Lands Act respecting free grants of land is that the Governor may agree with the Governor-General of the Commonwealth for the grant of any Crown land to the Commonwealth, and it is expressly stated that no lands may be disposed of as sites for religious purposes except by way of sale under the Act. Under the Returned Soldiers' Settlement Act of 1916, returned soldiers who applied prior to 31st March, 1922, are eligible to receive free grants of Crown land not exceeding £100 each in value, but these grants are conditional on the land being adequately improved.

(ii) *Reservations.* The Governor in Council may except from sale or lease, and reserve to His Majesty any Crown land for public purposes, and vest for such term as he thinks fit any land so reserved in any person or corporate body. Any breach or non-fulfilment of the conditions upon which such land is reserved renders it liable to forfeiture. A school allotment, not exceeding 5 acres in area, may also be reserved.

(iii) *Areas Granted or Reserved.* During the year ended 31st December, 1931, the area granted free was 616 acres, all of which was granted to soldiers under the Returned Soldiers' Settlement Act, while during the same year, free leases were issued to 3 local bodies for municipal purposes, and 6,631 acres were reserved. The total area reserved to the end of 1931 was 4,767,842 acres.

7. **Northern Territory of Australia.**—(i) *Reservations.* The Governor-General may resume for public purposes any Crown lands, not subject to any right of or contract for purchase, and may reserve, for the purpose for which they are resumed, the whole or any portion of the land so resumed.

(ii) *Areas Reserved.* The total area of reserves at the 31st December, 1931, was 66,103 square miles, comprising aboriginal native 61,150 square miles, prospecting for mineral oil and coal, 1,000 square miles, mission station 2,022 square miles, and other reserves, 1,931 square miles.

### § 3. Unconditional Purchases of Freehold.

1. **New South Wales.**—(i) *Auction Purchases.* Crown lands, not exceeding in the aggregate 200,000 acres in any one year, may be sold by public auction in areas not exceeding half-an-acre for town lands, 20 acres for suburban lands, and 640 acres for country lands, at the minimum upset price of £8, £2 10s., and 15s. per acre respectively. At least 10 per cent. of the purchase-money must be paid at the time of sale, and the balance within three months, or the Minister may allow the payment of such balance to be deferred for a period not exceeding 10 years, 5 per cent. interest being charged. Town blocks in irrigation areas may also be sold by auction.

(ii) *After-auction Purchases.* In certain cases, land offered at auction and not sold may be purchased at the upset price, but one-quarter of the purchase-money must be paid as deposit with the application, and the balance as notified in the *Gazette*. Any such application is, however, subject to the approval of the Minister.

(iii) *Special Purchases.* Under certain circumstances, land may be sold in fee-simple, the purchaser paying the cost of survey and of reports thereon, in addition to the purchase-money. The minimum upset price per acre is the same as in the case of land sold by auction. Areas not exceeding five acres in extent may be sold, at prices determined by the local land board, to recognized religious bodies and public authorities.

(iv) *Improvement Purchases.* The owner of improvements in authorized occupation by residence, under any mining or Western Lands Act of land within a gold-field or mineral field, may purchase such land without competition at a price determined by the local Land Board, but at not less than £8 per acre for town lands or £2 10s. per acre for other lands. The area must not exceed  $\frac{1}{4}$  acre within a town or village, or 2 acres elsewhere, and no person may purchase more than one such area within 3 miles of a similar prior purchase by him.

(v) *Areas Sold.* During the year ended 30th June, 1931, the total area sold was 3,155 acres, of which 398 acres were sold by auction and 79 acres as after-auction purchases, while 29 acres were sold as improvement purchases and 2,649 acres as special purchases. The amount realized for the sale of the whole area was £67,009.

2. **Victoria.**—(i) *General.* Lands specially classed for sale by auction may be sold by auction in fee-simple, not exceeding 100,000 acres in any one year, at an upset price not less than £1 per acre. The purchaser must pay the survey fee at the time of the sale, together with a deposit of 12½ per cent. of the whole price; the residue is payable in equal half-yearly instalments with interest. Any unsold land in a city, town or borough, areas specially classed for sale, isolated pieces of land not exceeding 50 acres in area, and sites for churches or charitable purposes, if not more than three acres in extent, may be sold by auction on the same terms. Swamp or reclaimed lands may also be sold by auction, subject to the condition that the owner keeps open all drains, etc., thereon.

(ii) *Areas sold at Auction and by Special Sales.* During the year 1930, a total of 1,436 acres was disposed of under this tenure, 734 acres being country lands, while 702 acres of town and suburban lands were sold by auction.

3. **Queensland.**—(i) *General.* During the years 1917 to 1929 the law precluded land being made available for any class of selection which gave the selector the right to acquire the freehold title. By reason of the amending Act of 1929 land may now be made available under terms that will enable the freehold title to be obtained.

(ii) *Sales by Auction.* Crown land may be offered for sale by auction, with no conditions imposed, in areas not exceeding 640 acres. The purchase price is payable on 10 years terms.

(iii) *Unconditional Selection.* The freehold title may also be acquired unconditionally where Crown land is made available and acquired as "Unconditional Selection." The maximum area allowed for this class of selection is 1,280 acres. The purchase price is payable in 20 annual instalments. A deed of grant may be obtained at any time on payment of the balance of the purchase price owing.

(iv) *Areas Sold, etc.* During the year 1930, 2,038 acres were sold at auction, and 138 unconditional selections comprising an area of 38,581 acres were made freehold.

4. **South Australia.**—(i) *Sales by Auction.* The following lands may be sold by auction for cash :—(a) special blocks, (b) Crown lands which have been offered for lease and not taken up within 2 years, (c) town lands, and (d) suburban lands, which the Governor excepts from the operations of the Land Board. A purchaser must pay 20 per cent. of the purchase money in cash, and the balance within one month or within such extended time as the Commissioner of Crown Lands may allow. Town lands may be sold subject to the condition that they cannot be transferred or mortgaged for 6 years without the consent of the Commissioner.

(ii) *Areas Sold, etc.* During the year ended 30th June, 1931, the area of town lands and special blocks sold by auction was 170 acres. In addition, 9,673 acres were sold at fixed prices, and the purchases of 6,692 acres on credit were completed, making a total of 16,535 acres.

5. **Western Australia.**—(i) *Sales by Auction.* Town, suburban, and village lands, after being surveyed into lots and notified in the *Gazette*, must be sold by auction. Ten per cent. of the purchase money must be paid in cash, together with the value of any improvements, and the balance in four equal quarterly instalments. Suburban land must be fenced within 2 years, and, until that is effected, no Crown grant may be issued.

(ii) *Areas Sold.* During the year ended 30th June, 1931, the area of town and suburban allotments sold was 1,014 acres in 395 allotments.

6. **Tasmania.**—(i) *Sales by Auction.* Town lands may be sold by auction for cash or on credit, no conditions being imposed beyond the payment of the purchase money. No town land, the price of which is less than £15, may be sold on credit.

(ii) *After-auction Sales.* Town lands, not within 5 miles of any city, which, after having been offered at auction, have not been sold, may be sold at the upset prices by private contract.

(iii) *Sales of Land in Mining Towns.* Any town land in a mining area may be sold by auction for cash, provided that any person, being the holder of a residence licence or business licence in lawful occupation of a residence area or business area and the owner of permanent improvements of a value equal to or greater than the upset price, is entitled to purchase such area at the upset price, prior to the sale by auction. The upset price of the unimproved value must not be less than £10, and the area must not exceed  $\frac{1}{2}$  acre.

(iv) *Areas Sold.* During the year 1931 the area sold by auction or by special sale amounted to 410 acres.

#### § 4. Conditional Purchases of Freehold.

1. **General.** The various methods of obtaining Crown lands by conditional purchase in the several States are given in some detail in preceding issues of the Official Year Book (see No. 22 pp. 141-9).

2. **New South Wales.**—At the 30th June, 1931, the total number of conditional purchases in existence was 65,093, covering an area of 20,511,043 acres. The following table gives particulars of conditional purchases, including non-residential conditional purchases and special area conditional purchases, for the year ended 30th June, 1931, together with the total area for which deeds had been issued up to 30th June, 1931 :—

#### CONDITIONAL PURCHASES, NEW SOUTH WALES.

Year ended 30th June—	Applications Received. (a)		Applications Confirmed. (a)		Areas for which Deeds have been Issued.	
	Number.	Area.	Number.	Area.	During the Year.	To end of Year.
1931.. ..	219	Acres. 41,727	166	Acres. 32,062	Acres. 320,832	Acres. 24,062,755

(a) Exclusive of conversions from other tenures.

3. **Victoria.**—Exclusive of selection in the Mallee country, the total area purchased conditionally in 1930 was 40,691 acres, comprising 38,359 acres with residence and 2,332 acres without residence. The number of selectors was 223.

The total area of Mallee country purchased conditionally in the same year was 137,242 acres, all with residence, the number of selectors being 176.

4. **Queensland.**—(i) *General.* From 1917 until the passing of “The Lands Acts Amendment Act of 1929” the law prohibited land being made available for any class of selection which gave the selector the right to acquire the freehold title. The 1929 measure, however, amended the law in this respect.

(ii) *Lands Acquired.* During the year 1931 the following new selections were acquired:—Agricultural farms to the number of 339 comprising an area of 144,618 acres, and 68 prickly pear selections of a total area of 42,892 acres, 117 agricultural homesteads of a total area of 19,970 acres, and 426 prickly pear development selections with an area of 358,473 acres. No free homesteads were acquired.

5. **South Australia.**—The land allotted under agreements to purchase during the year 1930–31 was 208,056 acres, comprising Eyre’s Peninsula Railway Lands 169,922 acres, Murray Railway Lands 2,153 acres, Pinnaroo Railway Lands 2,706 acres, Closer Settlement Lands 2,345 acres, Buckleboo Railway Lands 6,672 acres, Homestead Blocks 18 acres, Soldier Settlement Lands 3,738 acres, and other Crown lands 20,502 acres.

6. **Western Australia.**—During the year ended the 30th June, 1931, the number of holdings for which Crown grants were issued was 1,911, covering free homestead farms 38,114 acres and conditional purchases 477,976 acres. The number of holdings conditionally alienated for the year was 2,390, the total area affected being 1,024,262 acres, comprising conditional purchases by deferred payments with residence and without residence of 758,293 and 15,194 acres respectively, conditional purchases by direct payments (without residence) 699 acres, and free homestead farms 250,076 acres. Under the heading “Deferred payments (with residence)” are included conditional purchases of grazing lands.

7. **Tasmania.**—During the year 1930, conditional purchases of 22,562 acres were completed. The total area sold conditionally was 16,576 acres, comprising selections for purchase 15,973 acres, auction sales on credit 30 acres, and town and suburban allotments 573 acres. The numbers of applications received and confirmed during the year were 363 and 184 respectively.

## § 5. Leases and Licences under Land Acts.

1. **General.**—Information regarding the methods of obtaining leases and licences of Crown lands in the several States and Territories is given in preceding issues of the Official Year Book (see No. 22, pp. 149–163). A summary respecting land held under leases and licences will be found at the end of this chapter.

2. **New South Wales.**—On the 30th June, 1931, the area of leases and licences under the control of the Department of Lands, the Water Conservation and Irrigation Commission, and the Western Land Board, comprised 111,977,837 acres of Crown lands compared with 113,381,359 acres at the close of the previous year. The area taken up in 1930–31 was 1,439,715 acres as against 2,388,727 acres in 1929–30.

The following table shows the areas which were granted under lease or licence during the year 1930-31, and those held under various descriptions of leases and licences at the end of that year :—

**AREAS TAKEN UP AND OCCUPIED UNDER LEASE OR LICENCE.—NEW SOUTH WALES, 1930-31.(a)**

Particulars.	Area taken up during the year.	Area occupied at end of year.
<i>Areas taken up under Crown Lands Act.</i>		
Outgoing pastoral leases .. .. .	Acres.	Acres.
Occupation licences—ordinary .. .. .		142,870
preferential .. .. .	16,130	2,106,820
Conditional leases .. .. .	26,078	649,758
Conditional purchase leases .. .. .		11,687,525
Settlement leases .. .. .	4,162	168,508
Improvement leases .. .. .	670	2,771,074
Annual leases .. .. .	71,798	496,790
Scrub leases .. .. .	13,100	1,022,277
Snow leases .. .. .	113,110	179,656
Special leases .. .. .	106,906	365,190
Inferior land leases .. .. .	8,400	735,983
Residential leases (on gold and mineral fields) .. .. .	106	35,022
Church and school lands .. .. .		8,268
Permissive occupancies .. .. .	493,189	11
Prickly pear leases .. .. .	5,336	4,288,786
Crown leases .. .. .	344,192	48,266
Homestead farms .. .. .	135,389	5,673,533
Homestead selections and grants .. .. .	35,008	4,181,736
Suburban holdings .. .. .	1,377	1,389,796
Week-end leases .. .. .	3	47,154
Leases of town lands .. .. .		223
Returned soldiers' special holdings .. .. .		72
Irrigation farms and blocks .. .. .	12,336	16,617
		229,081
<i>Areas taken up under Western Lands Act.</i>		
Leases .. .. .	7,440	75,308,418
Permissive occupancies .. .. .	44,985	424,403
<b>Total .. .. .</b>	<b>1,439,715</b>	<b>111,977,837</b>

(a) See also § 7 (1) hereinafter.

3. **Victoria.**—During 1930 the area of Crown lands taken up under leases and licences was 122,322 acres, comprising Mallee lands, 81,631 acres, and other lands, 40,691 acres. The area of Crown lands occupied under leases and licences in 1930 was 6,607,680 acres (a decrease of 873,989 acres compared with the previous year), comprising grazing licences (exclusive of Mallee) 4,724,674 acres, Mallee lands 1,755,495 acres, auriferous lands (licences) 35,888 acres, swamp lands (leases) 2,314 acres, perpetual leases (other than Mallee) 4,977 acres, and perpetual leases (Mallee) under Land Act 1928, 84,332 acres.

4. **Queensland.**—(i) *General.* In preceding issues of the Official Year Book reference was made to the methods of obtaining leases and licences of Crown lands (see No. 22, pp. 155-7). The Land Acts Amendment Act of 1929, however, amended the law considerably.

(ii) *Areas taken up under Lease or Licence.* The total area taken up under lease or licence during the year 1930 was 56,525,351 acres, made up as follows :—Pastoral leases 43,562,240 acres; occupation licences 9,203,440 acres; grazing farms 691,514 acres; grazing homesteads 1,866,464 acres; perpetual lease selections 53,785 acres; perpetual

lease prickly-pear selections 37,542 acres; agricultural farms 77,697 acres; auction perpetual leases—town 45 acres, suburban 54 acres, and country 911 acres; special leases 28,278 acres; leases of reserves 167,941 acres, and prickly-pear leases 835,440 acres.

The following particulars are available respecting leases taken up in 1931 :—

Grazing farms .. .. .	598,366 acres.
Grazing homesteads .. .. .	1,426,686 "
Perpetual lease selections .. .. .	178,380 "
Perpetual lease prickly-pear selections .. .. .	11,833 "
Agricultural farms .. .. .	144,618 "
Prickly-pear selections .. .. .	42,892 "
Agricultural homesteads .. .. .	19,970 "
Development grazing farms .. .. .	12,857 "
Prickly-pear development grazing farms .. .. .	89,068 "
Prickly-pear development grazing homesteads .. .. .	14,619 "
Prickly-pear development selections .. .. .	358,473 "
Perpetual lease prickly-pear development selections .. .. .	48,113 "

The gross area held at the end of the year 1930 for purely pastoral purposes was 366,440 square miles.

Two non-competitive perpetual leases were issued during 1930, the total area being 2½ acres.

The total areas occupied under lease or licence will be found in a table at the end of this chapter.

5. **South Australia.**—The total area leased during 1930-31 under the different forms of lease tenure was 1,724,233 acres, made up as follows:—Perpetual leases—irrigation and reclaimed lands 244 acres, non-irrigable land in irrigation areas 8,758 acres, village settlement lands 22 acres, and other Crown lands 113,470 acres; pastoral leases 1,530,240 acres; and miscellaneous leases—grazing and cultivation 69,549 acres, and forest lands 1,950 acres.

The total areas held under lease are given in the table at the end of this chapter.

6. **Western Australia.**—The number of leases issued by the Lands Department during the year ended 30th June, 1931, was 240, and the total area of leases issued 3,253,076 acres, comprising pastoral leases 3,062,598 acres, special leases 8,088 acres, and leases of reserves 182,390 acres.

The total areas leased are given in the table at the end of this chapter.

7. **Tasmania.**—The area of pastoral leases during the year 1930 was 124,686 acres.

The total areas leased are given in the table at the end of this chapter.

8. **Northern Territory.**—The total area held under lease, licence and permit at the 31st December, 1931, was 227,974 square miles, comprising pastoral leases 204,372 square miles, pastoral permits 1,671 square miles, grazing licences 20,895 square miles, agricultural leases 161 square miles and miscellaneous leases, including water leases, 875 square miles.

9. **Federal Capital Territory.**—At the end of the year 1931 the area of acquired lands was 213,830 acres; of lands alienated, 66,904 acres; of lands in process of alienation, 39,977 acres; of leases, 288,558 acres; and unoccupied (including Cotter River catchment area, roads, reserves, etc.), 188,221 acres. These figures are exclusive of 17,920 acres in the Jervis Bay area.

The number of leases granted under the City Area Leases Ordinance 1924-29 to the 30th June, 1931, was 505 representing a capital value of £285,492.

Eight leases for church purposes have been granted under the Church Lands Leases Ordinance 1924-30, which requires the lessees to submit a definite building programme within a specified period.

Eight leases have been granted to date under the Leases (Special Purposes) Ordinance 1925-30, for church and scholastic purposes.

Two hundred and one leases granted under the City Area Leases Ordinance have been surrendered or forfeited, representing a capital value of £121,119.

### § 6. Closer Settlement.

1. **General.**—Particulars regarding the methods of acquisition and disposal of land for closer settlement in the several States are given in preceding Year Books (see No. 22, pp. 163-9).

2. **New South Wales.**—Up to the 30th June, 1931, 1,847 estates, including 953 single farm propositions acquired for discharged soldiers or sailors, had been acquired for closer settlement.

The number of farms allotted under the Promotion Sections of the Closer Settlement Acts to date is 3,981, the area 1,834,294 acres, and the amount advanced by the Crown £8,534,916.

The following statement gives particulars of the aggregate areas opened up to the 30th June, 1931 :—

#### CLOSER SETTLEMENT AREAS (a).—NEW SOUTH WALES.

To 30th June—	Areas.			Values.		
	Acquired Lands.	Adjoining Crown Lands.	Total.	Cost of Acquired Lands.	Value of Adjoining Crown Lands.	Total.
	Acres.	Acres.	Acres.	£	£	£
1931.. ..	4,039,655	204,546	4,244,201	14,623,376	355,425	14,978,801

(a) Includes 64 long-term leases resumed for closer settlement.

The total area was divided into 9,252 holdings, comprising 4,135,820 acres, the remaining area being reserved for public purposes (roads, stock routes, schools, etc.).

The following table gives particulars regarding the disposal of the farms by closer settlement purchase at the 30th June, 1931 :—

#### CLOSER SETTLEMENT ALLOTMENTS.—NEW SOUTH WALES.

At 30th June—	Farms Allotted to Date.			Total Amount received in respect of Closer Settlement Farms.
	Number.	Area.	Capital Value.	
	No.	Acres.	£	
1931 .. .. .	8,719	4,128,348	15,853,670	£ 7,325,946



3. Victoria.—The following statement shows the operations under the provisions of the Closer Settlement Acts to the 30th June, 1931 :—

CLOSER SETTLEMENT.—VICTORIA.

(INCLUDING IRRIGATED AREAS.)

To 30th June—	Total Area Acquired by Government.	Total Cost.	How Made Available for Settlement.					Number of Farms.	Total Receipts (Land and Advances).	Repayments of Principal.	Area Available for Settlement at 30th June.
			Farm Allotments.	Workmen's Homes Allotments.	Agricultural Labourers' Allotments.	Town Allotments. (a)	Reserves.				
	Acres.	£	Acres.	Acres.	Acres.	Acres.	No.	£	£	Acres.	
1931	1,167,011	8,584,137	995,200	796	3,509	53,524	3,831	7,790	8,763,629	2,194,280	32,224

(a) Includes all land sold other than under Conditional Purchase Lease.

4. Queensland.—The total area acquired to 30th June, 1931, was 970,778 acres, costing £2,292,881. The following are the particulars of transactions under the Closer Settlement Act up to 30th June, 1931 :—Total area selected 911,726 acres ; number of selectors 3,051 ; agricultural farms 2,140 ; unconditional selections 257 ; perpetual lease selections 562 ; prickly-pear selections 7 ; perpetual lease prickly-pear selections 8 ; area sold by auction 12,957 acres ; and number of settlement farm leases 77.

5. South Australia.—The following table shows the area of land acquired for the purposes of closer settlement, and the manner in which it has been dealt with to the 30th June, 1931 :—

CLOSER SETTLEMENT.—SOUTH AUSTRALIA.

To 30th June—	Area of Lands Repurchased.	Agreements with Covenants to Purchase.	Total Area Leased as Homestead Blocks.		Perpetual Leases.	Miscellaneous Leases.	Sold.	Remainder Un-occupied (including Roads and Land in Irrigation Areas).
			Right of Purchase.	Perpetual Lease.				
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1931..	781,447	523,046	321	1,239	31,649	80	193,453	31,659

The total area repurchased at 30th June, 1931, was 781,447 acres. The purchase money was £2,510,959. Of the total area, 749,788 acres have been allotted to 2,738 persons, the average area to each being 274 acres.

6. Western Australia.—The total area acquired for closer settlement up to the 30th June, 1931, was 561,765 acres, costing £575,368. Of this area, 24,420 acres have been set aside for roads, reserves, etc., leaving a balance of 537,345 acres available for selection. Particulars of operations under the Act for the year ending 30th June, 1931, are as follow :—Area selected during the year 9,306 acres ; number of farms, etc., allotted to date 933 ; total area occupied to date 449,850 acres ; balance available for selection 87,495 acres ; and total revenue £578,093.

7. **Tasmania.**—Up to the 30th June, 1931, 36 areas had been opened up for closer settlement. The total purchase money paid by the Government was £366,097, and the total area acquired amounted to 101,231 acres, including 10,000 acres of Crown lands.

8. **Summary.**—The following table gives particulars of operations under the Closer Settlement Acts at the 30th June, 1931 :—

**CLOSER SETTLEMENT.—TOTAL AREAS ACQUIRED AND ALLOTTED AT  
30th JUNE, 1931.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Area acquired (a) acres	4,244,201	1,167,011	970,778	781,447	561,765	101,231	7,826,433
Purchase price (b) £	14,623,376	8,528,912	2,292,881	2,510,959	575,368	366,097	28,897,593
Farms, etc., allotted	{ No. 8,719 acres 4,128,348	{ (c) 7,790 1,130,956	{ 3,051 911,726	{ 2,738 749,788	{ 933 449,850	{ 310 81,792	{ 23,541 7,452,460

(a) Includes Crown lands—New South Wales, 204,546 acres; Victoria, 112,703 acres; Tasmania, 10,000 acres. (b) Private lands only. (c) Includes 683 allotments of a total area of 77,927 acres granted to discharged soldiers under the Discharged Soldiers Settlement Acts.

### § 7. Leases and Licences under Mining Acts.

1. **General.**—Information regarding the various forms of leases and licences under Mining Acts in the several States and the Northern Territory is given in preceding issues of the Official Year Book (see No. 22, pp. 170-7).

2. **New South Wales.**—The following table gives particulars of operations for the year 1930-31 :—

**AREAS TAKEN UP UNDER MINING ACTS.—NEW SOUTH WALES, 1930-31.**

Purposes for which Issued or Occupied.	Areas Taken up during Year.	Total Areas Occupied at End of Year.
	Acres.	Acres.
Gold-mining .. .. .	4,465	4,579
Mining for other minerals .. .. .	12,644	267,913
Authorities to prospect .. .. .	49,077	11,890
Other purposes .. .. .	226	23,515
<b>Total</b> .. .. .	<b>66,412</b>	<b>307,897</b>

3. **Victoria.**—During the year 1931, leases, licences, etc., were issued covering an area of 32,499 acres, the rent, fees, etc., for which amounted to £1,418. The area occupied at the end of the year was 76,728 acres.

4. Queensland.—During the year 1931, the number of miners' rights issued was 7,818, and of business licences 14. The following table gives particulars regarding the areas of lands taken up under lease or licence, and the total areas occupied for the year 1931. In addition, an area estimated at 22,000 acres was at the end of 1931 held under miners' rights and dredging claims.

## AREAS TAKEN UP UNDER MINING ACTS.—QUEENSLAND, 1931.

Particulars.	Areas Taken up during Year.	Total Areas Occupied at End of Year.
	Acres.	Acres.
Gold-mining .. .. .	2,853	3,502
Mining for other minerals .. .. .	2,226	28,071
Coal-prospecting licences .. .. .	1,762	2,083
Miners' homestead leases .. .. .	20,479	332,358
Petroleum-prospecting permits .. .. .	284,324	691,254
Total .. .. .	311,644	1,057,268

5. South Australia.—The following table gives particulars of operations for the year 1931 :—

## AREAS TAKEN UP UNDER MINING ACTS.—SOUTH AUSTRALIA, 1931.

Particulars.	Areas Taken up during Year.	Total Areas Occupied at End of Year.
	Acres.	Acres.
Gold-mining leases .. .. .	874	1,308
Mineral and miscellaneous leases .. .. .	988	88,558
Claims .. .. .	4,240	5,000
Search licences and permits .. .. .	147,200	162,560
Occupation licences .. .. .	4	56
Total .. .. .	153,306	257,482

6. Western Australia.—The following table gives particulars of operations for the year 1931, the figures being exclusive of holdings under miners' rights and mineral oil licences. Of the areas shown as taken up in 1931, the area under lease was 1,819 acres for gold-mining, 187 for mining for other minerals, and 1,656 for other purposes (including 1,163 for miners' homesteads)—a total of 3,662 acres. The balance was taken up under licences.

## AREAS TAKEN UP UNDER MINING ACTS.—WESTERN AUSTRALIA, 1931.

Particulars.	Areas Taken up during Year.	Total Areas Occupied at End of Year.
	Acres.	Acres.
Gold-mining .. .. .	43,316	36,638
Mining for other minerals .. .. .	5,579	54,652
Other purposes .. .. .	1,698	34,655
Total .. .. .	50,593	125,945

7. *Tasmania*.—During the year 1931, the number of leases issued was 197, of which the more important were 35 for gold-mining, covering 488 acres; and 65 for tin, covering 1,908 acres. The following table gives particulars of operations for the year 1931 :—

AREAS TAKEN UP UNDER MINING ACTS.—TASMANIA, 1931.

Particulars.	Areas Taken up during Year.	Total Areas Occupied at End of Year.
	Acres.	Acres.
Gold-mining .. .. .	2,214	999
Mining for other minerals .. .. .	3,548	24,324
Licences to search for coal or oil .. .. .	..	800
Other purposes .. .. .	152	2,721
<b>Total .. .. .</b>	<b>5,914</b>	<b>28,844</b>

8. *Northern Territory*.—During 1930–31, ten protected mining lease applications (8 for gold comprising 259 acres, and 2 for mineral comprising 160 acres) were taken up. At the 30th June, 1931, there existed 20 mineral leases comprising 504 acres, 6 gold-mining leases comprising 105 acres, and 53 protected mining lease applications comprising 1,384 acres. In addition, 2 exclusive prospecting licences covering approximately 9 square miles were issued.

9. *Summary*.—The following table shows the areas under leases and licences for mining purposes and the total areas occupied for mining purposes for the year 1931 :—

CROWN LANDS, LEASES AND LICENCES FOR MINING PURPOSES.

Year.	N.S.W. (a)	Victoria.	Q'land.(b)	S. Aust.(b)	W. Aust.(c)	Tas. (b)	Total. (d)
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AREAS FOR WHICH LEASES AND LICENCES ISSUED DURING YEAR.

1931 ..	Acres. 66,412	Acres. 32,499	Acres. 311,644	Acres. 153,306	Acres. 50,593	Acres. 5,914	Acres. 620,368
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TOTAL AREAS OCCUPIED AT END OF YEAR.

1931 ..	307,897	76,728	1,057,268	257,482	125,945	28,844	1,854,164
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(a) Year 1930–31. (b) Exclusive of lands held under miners' rights only. (c) Exclusive of holdings under miners' rights and mineral oil licences. (d) Exclusive of Northern Territory, see 8 above.

## § 8. Settlement of Returned Soldiers and Sailors.

1. **General.**—Information in regard to the methods adopted in each State for providing land for the settlement of returned soldiers and sailors, together with the conditions under which such land could be acquired, is given in earlier issues of the Official Year Book (see No. 18, pp. 187–189). Further reference to the settlement on the land of returned soldiers and sailors, and in particular to the losses incurred in connexion therewith, will be found in Chapter XV.—Defence.

Particulars respecting the position of soldier settlement in each State at the latest available date are, however, given in the sub-sections immediately following.

2. **New South Wales.**—At the 30th June, 1931, the area set apart exclusively for soldiers was 9,746,361 acres, of which 1,710,272 acres comprised acquired land purchased at a cost of £8,113,956. The number of settlers to whom farms, etc., had been allotted up to the 30th June, 1931, was 9,465. Farms, etc., occupied at that date numbered 5,554 with an area of 8,072,711 acres, of which 6,460,874 acres were Crown lands (including 4,090,397 acres in the Western Division taken up under the Western Lands Act), 1,523,120 acres of acquired lands, and 88,717 acres within Irrigation Areas.

3. **Victoria.**—At the 30th June, 1931, the area acquired or set apart for soldier settlement was 2,498,296 acres, of which 1,763,214 acres (including land originally purchased for Closer Settlement and later taken over for purposes of Discharged Soldiers Settlement) comprised private land purchased at a cost of £13,361,002. Up to the 30th June, 1931, the number of settlers to whom farms, etc., had been allotted was 10,624, and the number of farms, etc., allotted was 9,665 (including 724 farms originally purchased for Closer Settlement purposes) containing 2,409,445 acres. In addition, 772 share-farmers and holders of leasing agreements and private land had received assistance. The number of farms, etc., occupied at the 30th June, 1931, was 9,292 (including 699 originally purchased for Closer Settlement) containing 2,358,974 acres.

4. **Queensland.**—At the 30th June, 1929, the area acquired or set apart for soldier settlement was 577,633 acres, of which 41,101 acres comprised private land, purchased at a cost of £270,480. The number of farms occupied was 1,148, containing 440,992 acres. Some of these selections were acquired under the ordinary provisions of the Land Act, and do not include areas specially set apart for soldiers.

As special records are not now kept respecting the areas held by discharged soldier settlers later information cannot be given.

5. **South Australia.**—At the 30th June, 1931, the area of land acquired or set apart for soldier settlement was 1,336,612 acres, of which 1,202,653 acres comprised private land purchased at a cost of £3,863,572. These figures are exclusive of mortgages discharged, £494,770 on 360,403 acres representing 300 farms, etc., and 314 settlers. The number of soldiers to whom assistance had been granted under the Discharged Soldiers Settlement Acts up to the 30th June, 1931, was 4,179, and the area of farms, etc. (including mortgages discharged), on which assistance had been granted was 2,740,484 acres. At the 30th June, 1931, farms, etc., occupied numbered 2,385, containing 2,160,745 acres.

6. **Western Australia.**—At the 30th June, 1931, the area of land acquired or set apart for soldier settlement was 14,287,643 acres, of which 345,110 acres comprised private land purchased at a cost of £605,076. Up to the 30th June, 1931, assistance had been given to 5,213 returned soldiers, and the Agricultural Bank held 3,661 properties as security for advances. The area held, including pastoral leases, was approximately 25,864,000 acres, and advances approved amounted to £6,136,187. The number of farms, etc., occupied at the 30th June, 1931, was 2,582.

7. **Tasmania.**—At the 30th June, 1931, the area acquired or set apart for soldier settlement was 339,000 acres, of which 268,209 acres comprised private land purchased at a cost of £2,010,225. Up to the 30th June, 1931, the number of settlers to whom farms, etc., had been allotted was 2,378, and the number of farms, etc., allotted 2,200 containing 339,000 acres. The number of farms, etc., occupied at the 30th June, 1931, was 2,120 containing 323,000 acres.

8. **Summary.**—The following table gives a summary of the area acquired, the purchase price thereof, the number of settlers assisted, and the number and area of farms occupied in all the States to the 30th June, 1931:—

**SOLDIER SETTLEMENT.—AREAS ACQUIRED, SETTLERS ASSISTED AND FARMS OCCUPIED—30th JUNE, 1931.**

Particulars.	New South Wales.	Victoria.	Queens-land.(b)	Sth. Australia.	Western Australia.	Tasmania.	Total.
Area acquired or set apart—							
(i) Private land acquired acres	1,710,272	1,763,214	41,101	21,202,653	345,110	268,209	5,330,559
(ii) Crown lands set apart acres	8,036,089	735,082	536,532	133,959	13,942,533	70,791	23,454,986
Total land acquired or set apart .. acres	9,746,361	2,498,296	577,633	1,336,612	14,287,643	339,000	28,785,545
Price paid by Government for private land acquired £	8,113,956	13,361,002	270,480	63,863,572	605,076	2,010,225	28,224,311
Number of settlers to whom farms, etc., had been allotted up to the 30th June, 1931	9,465 (d)	10,624 (e)	(f)	4,179	5,213	2,378	(e)
Farms, etc., occupied at the 30th June, 1931	5,554 (g)	9,292	1,148	2,385	2,582	2,120	23,081
acres	8,072,711	2,358,974	440,992	2,160,745	(e)	323,000	(e)

(a) Includes land purchased from private owners for Closer Settlement and later taken over for purposes of Discharged Soldiers Settlement. (b) At 30th June, 1929; later information not available. (c) Excludes mortgages discharged. £494,770 on 360,403 acres representing 300 farms, etc., and 314 settlers. (d) In addition 772 share farmers and holders of leasing agreements and private land have received assistance. (e) Not available. (f) Number of soldiers to whom assistance had been granted under the Discharged Soldiers Settlement Acts. (g) Includes 699 farms originally purchased for Closer Settlement purposes.

### § 9. Tenure of Land by Aliens.

Information regarding the terms and conditions under which land can be held by aliens is contained in earlier issues of the Official Year Book (see No. 18, pp. 190-1).

### § 10. Advances to Settlers.

1. **General.**—A detailed statement regarding the terms and conditions governing advances to settlers in the several States and the Northern Territory will be found in preceding issues of the Official Year Book (see No. 22, pp. 179-186).

2. **New South Wales.**—The following table gives particulars respecting advances, etc., to 30th June, 1931:—

#### ADVANCES TO SETTLERS.—NEW SOUTH WALES.

Particulars.	Advances made during 1930-31.	Total Advances at 30th June, 1931.	Amount outstanding at 30th June, 1931.
	£	£	£
Government Savings Bank Advances ..	571,180	26,963,380	14,421,268
Soldier Settlement Advances ..	128,399	7,597,062	3,967,192
Advances for Purchase of Wire Netting ..	17,969	1,078,386	374,277
Advances to Necessitous Farmers ..	664,202	4,997,753	(a) 1,309,486
Advances to Civilian Settlers on Irrigation Areas ..	20,437	645,952	(b) 98,970
Shallow Boring Advances ..	35,391	612,266	260,566
<b>Total ..</b>	<b>1,437,578</b>	<b>41,894,799</b>	<b>20,431,759</b>

(a) Includes interest charges accrued, £53,088. Indebtedness having been written off during 1930-31.

(b) As amended, a large proportion of the

3. **Victoria.**—The following table gives particulars respecting advances, etc., to 30th June, 1931 :—

ADVANCES TO SETTLERS.—VICTORIA.

Authority Making Advances.	Advances made to—	Advances made during 1930-31.	Total Advances at 30th June, 1931.	Amount outstanding at 30th June, 1931.
		£	£	£
State Savings Bank	Civilians .. ..	161,254	10,037,335	5,119,870
	Discharged soldiers ..	20,325	829,816	582,896
Closer Settlement Board	Closer Settlement settlers	767,404	13,310,258	9,658,865
	Soldier settlers .. ..	359,685	22,565,007	18,014,342
Treasurer .. ..	Cool stores, canneries, etc.	..	615,182	372,193
<b>Total .. ..</b>	<b>.. ..</b>	<b>1,308,668</b>	<b>47,357,598</b>	<b>33,748,166</b>

4. **Queensland.**—The following table gives particulars of advances, etc., to 30th June, 1931 :—

ADVANCES TO SETTLERS.—QUEENSLAND.

Act under which Advances were made.	Advances made during Year 1930-31.	Total Advances made to 30th June, 1931.	Amount outstanding at 30th June, 1931.
	£	£	£
Agricultural Bank Acts .. ..	271,055	6,003,945	2,427,538
Discharged Soldiers' Settlement Act (a) .. ..	16,997	2,401,745	1,203,179
Water Facilities .. ..	11,601	70,563	64,312
Wire Netting, Marsupial Proof Fencing, &c. ..	17,287	747,246	527,357
Seed Wheat .. ..	4,092	(b)60,173	8,845
Drought Relief .. ..	..	67,381	44,585
<b>Total .. ..</b>	<b>321,032</b>	<b>9,351,053</b>	<b>4,275,816</b>

(a) Includes advances to group settlements through the Lands Department, as well as advances through the Agricultural Bank. (b) Includes accrued interest to 30th June, 1931.

5. **South Australia.**—The following table gives particulars respecting advances, etc., to 30th June, 1931 :—

ADVANCES TO SETTLERS.—SOUTH AUSTRALIA.

Particulars.	Advances made during 1930-31.	Total Advances at 30th June, 1931.	Amount outstanding at 30th June, 1931.
	£	£	£
<b>Department of Lands—</b>			
Advances to soldier settlers .. ..	60,484	5,393,754	3,931,337
Advances to blockholders .. ..	..	41,451	79
Advances for sheds and tanks .. ..	..	75,693	60,409
Advances in drought-affected areas .. ..	446,034	2,132,895	1,325,018
Advances under Closer Settlement Acts ..	15,595	2,412,776	1,536,371
Advances under Agricultural Graduates Settlement Act .. ..	411	22,563	22,262
<b>Irrigation Commission—</b>			
Civilians .. ..	2,092	257,270	141,027
Soldier settlers .. ..	12,316	(a)1,142,464	1,057,751
<b>State Bank of South Australia .. ..</b>	<b>4,417</b>	<b>4,730,444</b>	<b>1,357,810</b>
Advances to settlers for improvements ..	42,171	811,299	442,522
Advances under Vermin and Fencing Acts	13,541	1,283,248	471,290
Advances under Loans to Producers Act ..	8,642	256,352	227,788
<b>Total .. ..</b>	<b>605,703</b>	<b>18,560,209</b>	<b>10,573,664</b>

(a) Since June, 1927, a considerable sum has been written off advances to soldier settlers under Section 8 of the Discharged Soldiers' Settlement Relief Act 1925.

6. Western Australia.—The following table gives particulars respecting advances, etc., to 30th June, 1931 :—

ADVANCES TO SETTLERS.—WESTERN AUSTRALIA.

Particulars.	Advances made during Year 1930-31.	Total Advances at 30th June, 1931.	Amount outstanding at 30th June, 1931 (inclusive of interest).
	£	£	£
Development loans .. .. .	707,142	8,730,828	6,014,764
Soldier settlement loans .. .. .	40,309	5,977,901	5,045,784
Advances to rural industries .. .. .	..	31,017	38,344
Cropping advances .. .. .	106,550	13,037,292	1,793,819
Group Settlement advances .. .. .	52,503	2,097,891	2,191,262
<b>Total .. .. .</b>	<b>906,504</b>	<b>29,874,929</b>	<b>15,083,973</b>

7. Tasmania.—The following table gives particulars respecting advances, etc., to 30th June, 1931 :—

ADVANCES TO SETTLERS.—TASMANIA.

Authority making Advances.	Particulars.	Advances made during 1930-31.	Total Advances to 30th June, 1931.	Amount outstanding at 30th June, 1931.
		£	£	£
Agricultural Bank ..	State Advances Act and Rural Credits	22,071	446,478	286,580
" ..	Orchardists' Relief, 1926 .. ..	..	46,832	19,040
" ..	Unemployed (Assistance to Primary Producers) Relief Act ..	16,232	16,232	16,135
Minister for Lands ..	Soldier Settlers ..	10,894	700,850	211,746
" ..	Closer Settlers ..	4,156	31,731	15,715
" ..	Fruit Growers ..	..	1,897	543
<b>Total .. .. .</b>	<b>.. .. .</b>	<b>53,353</b>	<b>1,244,020</b>	<b>549,759</b>

8. Northern Territory.—During the financial year 1930-31 the sum of £2,831 was advanced, making the total amount advanced to 30th June, 1931, £21,784 (approximately). The balance outstanding at 30th June, 1931, including interest, was £18,910.

9. Summary of Advances.—The following table gives a summary for each State to the 30th June, 1931 :—

ADVANCES TO SETTLERS.—AUSTRALIA.

State.	Advances made during 1930-31.	Total Advances to 30th June, 1931.	Amount outstanding at 30th June, 1931.
	£	£	£
New South Wales .. .. .	1,437,578	41,894,799	20,431,759
Victoria .. .. .	1,308,668	47,357,598	33,748,166
Queensland .. .. .	321,032	9,351,053	4,275,816
South Australia .. .. .	605,703	18,560,209	10,573,664
Western Australia .. .. .	906,504	29,874,929	15,083,973
Tasmania .. .. .	53,353	1,244,020	549,759
Northern Territory .. .. .	2,831	21,784	18,910
<b>Total .. .. .</b>	<b>4,635,669</b>	<b>148,304,392</b>	<b>84,682,047</b>



### § 11. Alienation and Occupation of Crown Lands.

1. **General.**—The figures given in the previous parts of this chapter show separately the areas alienated, in process of alienation, or occupied under various tenures. The following tables set out in summarized form the position in regard to the tenure of land in each State, in the Northern Territory, and in the Federal Capital Territory during the latest year for which information is available. The area unoccupied includes roads, permanent reserves, forests, etc. In some cases, lands which are permanently reserved from alienation are occupied under leases and licences, and have been included therein. Lands occupied under leases or licences for pastoral purposes are frequently held on short tenures only, and could thus be made available for settlement practically whenever required.

2. **New South Wales.**—At the 30th June, 1931, of the total area of New South Wales, 22.3 per cent. had been alienated absolutely, 12.0 per cent. was in process of alienation, 56.7 per cent. was held under leases and licences, and the remaining 9.0 per cent. was unoccupied.

The following table gives particulars for the year ended 30th June, 1931 :—

#### ALIENATION AND OCCUPATION OF CROWN LANDS.—NEW SOUTH WALES, 1930-31.(a)

Particulars.	Acres.	Particulars.	Acres.
		<i>2. In Process of Alienation.</i>	
		Conditional purchases .. ..	20,511,043
		Closer settlement purchases .. ..	2,823,375
		Soldiers' group purchases .. ..	426,471
		Other forms of sale .. ..	24,183
		Total .. ..	23,785,072
		<i>3. Held under Leases and Licences.</i>	
		Total under Lands Department, Water Conservation and Irriga- tion Commissioner, and Western Lands Commissioners ..	111,977,837
		Mineral and auriferous leases and licences (Mines Department) ..	307,897
		Total .. ..	112,285,734
		<i>4. Unoccupied (b) (approximate)</i>	
			17,887,651
<i>1. Alienated.</i>			
Granted and sold prior to 1862 ..	7,146,579		
Sold by auction and other sales, 1862 to date .. ..	15,013,607		
Conditionally sold, 1862 to date	24,062,806		
Granted under Volunteer Land Regulations, 1867 to date ..	172,198		
Granted for public and religious purposes .. ..	259,119		
	46,654,309		
Less lands resumed or reverted to Crown .. ..	2,579,486		
Total .. ..	44,074,823		

Area of State—198,036,500 acres.

(a) Exclusive of Lord Howe Island, 3,220 acres. (b) Of this area only 4,886,204 acres are available for selection, the balance being comprised within reservations for various public purposes, roads, and river and lake surfaces.

3. **Victoria.**—The total area of the State of Victoria is 56,245,760 acres, of which 46.8 per cent. had been alienated absolutely up to the end of the year 1930: 13.0 per cent. was in process of alienation under deferred payments and closer settlement schemes; 11.8 per cent. was occupied under leases and licences; while 28.4 per cent. was unoccupied.

The following table shows the distribution :—

**ALIENATION AND OCCUPATION OF CROWN LANDS.—VICTORIA, 1930.**

Particulars.	Acres.	Particulars.	Acres.
1. <i>Alienated</i> .. .. .	26,316,492	3. <i>Leases and Licences held—</i>	
2. <i>In Process of Alienation—</i>		Under Lands Department—	
Exclusive of Mallee and Closer		Perpetual Leases .. .. .	89,309
Settlement Lands .. .. .	1,725,122	Other Leases and Licences .. .. .	49,629
Mallee Lands (exclusive of		Temporary (Yearly) Graz-	
Closer Settlement Lands) .. .. .	4,897,694	ing Licences .. .. .	6,480,169
Closer Settlement Lands .. .. .	657,155	Under Mines Department .. .. .	40,000
Village Settlements .. .. .	29	Total .. .. .	6,659,107
Total .. .. .	7,280,000	4. <i>Occupied by the Crown or</i>	
		<i>Unoccupied (a)</i> .. .. .	15,990,161

Total area of State—56,245,760 acres.

(a) These Crown lands comprise the following acreage :—Permanent forests (under Forest Acts) 3,942,163; timber reserves (under Forest Acts) 735,889; State forests and timber reserves (under Land Act) 329,585; water reserves 313,532; reserves for agricultural colleges 87,003; reserves in the Mallee 410,000; other reserves 365,944; roads 1,794,218; water frontages, beds of rivers, lakes, etc., unsold land in cities, towns and boroughs 3,268,649; and other lands (unoccupied) 4,743,178.

4. **Queensland.**—The total area of this State is 429,120,000 acres, of which, on the 31st December, 1930, 4.4 per cent. was alienated absolutely; 1.6 per cent. was in process of alienation; and 73.5 per cent. was occupied under leases and licences. The remainder (20.5 per cent.) was either unoccupied or held as reserves, or for roads.

The distribution is shown in the following table :—

**ALIENATION AND OCCUPATION OF CROWN LANDS.—QUEENSLAND, 1930.**

Particulars.	Acres.	Particulars.	Acres.
1. <i>Alienated Absolutely—</i>		3. <i>Occupied under Leases and</i>	
By Purchase .. .. .	18,642,703	<i>Licences—</i>	
Without Payment .. .. .	88,592	Pastoral Leases .. .. .	200,716,960
Total .. .. .	18,731,295	Occupation Licences .. .. .	21,168,520
2. <i>In Process of Alienation</i> .. .. .	6,860,667	Grazing Farms and Homesteads	75,961,624
		Leases—Special Purposes .. .. .	635,417
		Under Mines Department .. .. .	356,593
		Perpetual Lease Selections .. .. .	3,901,261
		Auction Perpetual Leases .. .. .	12,342
		Prickly-pear Leases .. .. .	12,636,240
		Total .. .. .	315,388,957
		4. <i>Reserves, Surveyed Roads and</i>	
		<i>Surveyed Stock Routes (a)</i> .. .. .	20,856,574
		5. <i>Unoccupied</i> .. .. .	67,282,507

Total area of State—429,120,000 acres.

(a) Includes reserves of a total area of 17,926,139 acres, comprising timber 3,432,945 acres, State forests and national parks 2,058,646 acres, aboriginal 6,241,992 acres, and general 6,192,556 acres; and streets, surveyed roads and surveyed stock routes 2,930,435 acres.

5. **South Australia.**—The area of the State of South Australia is 243,244,800 acres, and at the end of the year 1931, 4.9 per cent. was alienated absolutely; 1.8 per cent. in process of alienation; 46.6 per cent. occupied under leases and licences; and 46.7 per cent. unoccupied.

The subjoined table shows the distribution :—

ALIENATION AND OCCUPATION OF CROWN LANDS.—SOUTH AUSTRALIA, 1931.

Particulars.	Acres.	Particulars.	Acres.
1. <i>Alienated</i> —		3. <i>Held under Lease and Licence</i> —	
Sold .. .. .	11,824,903	Right of Purchase Leases ..	1,722,613
Granted for Public Purposes ..	233,222	Perpetual Leases, including	
		Irrigation Leases ..	15,460,635
		Pastoral Leases .. .. .	94,033,205
		Other Leases and Licences ..	1,783,330
		Mining Leases and Licences ..	257,482
Total .. .. .	12,058,125	Total .. .. .	113,257,265
2. <i>In Process of Alienation</i> ..	4,314,352	4. <i>Area Unoccupied (a)</i> ..	113,615,058

Total area of State—243,244,800 acres.

(a) Includes surveyed roads, railways, and other reserves, 16,424,004 acres (of which 14,016,000 acres comprises an aboriginal reserve in the north-west corner of the State); salt water lakes and lagoons, 7,680,000 acres; and fresh water lakes, 224,000 acres.

6. *Western Australia.*—The total area of Western Australia is 624,588,800 acres, of which, at the 30th June, 1931, 2.4 per cent. was alienated absolutely; 3.4 per cent. was in process of alienation; while 41.1 per cent. was occupied under leases and licences issued either by the Lands or the Mines Departments. The balance of 53.1 per cent. was unoccupied.

The following table shows the distribution :—

ALIENATION AND OCCUPATION OF CROWN LANDS.—WESTERN AUSTRALIA 1930-31.

Particulars.	Acres.	Particulars.	Acres.
1. <i>Alienated Absolutely</i> ..	14,984,035	3. <i>Leases and Licences in Force</i> —	
2. <i>In Process of Alienation</i> —		(i) Issued by Lands Department—	
Midland Railway Concessions ..	54,800	Pastoral Leases ..	254,403,147
Free Homestead Farms ..	806,657	Special Leases ..	16,420
Conditional Purchases ..	6,709,767	Leases of Reserves ..	850,109
Selections from the late W.A. Company ..	5,297	Residential Lots ..	73
Selections under the Agricultural Lands Purchase Act ..	513,223	(ii) Issued by Mines Department—	
Special Occupation Leases and Licences ..	300	Gold-mining Leases ..	6,358
Homestead or Grazing Leases ..	13,107,860	Mineral Leases ..	46,708
Poison Land Leases or Licences ..	26,825	Miners' Homestead Leases ..	30,776
Village Allotments ..	75	(iii) Issued by Forests Department—	
Working-men's Blocks ..		Timber Leases and Concessions ..	25,668
		Timber Permits ..	1,241,396
Total .. .. .	21,224,804	Total .. .. .	256,620,655
		4. <i>Area Unoccupied (a)</i> ..	331,759,306

Total area of State—624,588,800 acres.

(a) These Crown lands comprise the following :—State forests, 2,967,912 acres; timber reserves, 1,430,362 acres; other reserves, 35,911,401 acres; and vacant Crown land, 291,449,631 acres.

7. *Tasmania.*—At the end of the year 1930, 34.1 per cent. of the total area had been alienated absolutely; 3.2 per cent. was in process of alienation; 25.6 per cent. was occupied under leases and licences for either pastoral, agricultural, timber, or mining purposes, or for closer or soldier settlement, or occupied or reserved by the Crown; the remainder (37.1 per cent.) was unoccupied.

The following table shows the distribution :—

**ALIENATION AND OCCUPATION OF CROWN LANDS.—TASMANIA, 1930.**

Particulars.	Acres.	Particulars.	Acres.
1. Alienated Absolutely .. ..	5,721,259	3. Leases and Licences—continued.	
		(i) Issued by Lands Department	
		—continued.	
2. In Process of Alienation .. ..	541,653	Soldier Settlement .. ..	123,238
		Other Leases .. ..	120,083
3. Leases or Licences—		(ii) Issued by Mines Department	33,260
(i) Issued by Lands Department—		Total .. ..	2,772,097
Islands .. ..	110,000		
Ordinary Leased Land .. ..	2,006,363	4. Area Occupied by the Crown or	
Land Leased for Timber	272,000	Unoccupied (a) .. ..	7,742,991
Closer Settlement .. ..	107,148		

Total area of State—16,778,000 acres.

(a) Comprises the following :—Reserves, 1,500,000 acres, including 1,300,000 acres for timber; land occupied by Commonwealth and State Departments, 18,100 acres; the balance (6,224,891 acres) being unoccupied and unreserved.

8. Northern Territory.—The area of Northern Territory is 335,116,800 acres, of which, at the end of 1931, only 0.14 per cent. was alienated absolutely; 43.27 per cent. was held under leases and licences; while the remaining 56.59 per cent. was unoccupied.

The following shows the mode of occupancy of areas at the end of 1931 :—

**ALIENATION AND OCCUPATION OF CROWN LANDS.—NORTHERN TERRITORY, 1931.**

Particulars.	Acres.
1. Alienated .. .. .	477,854
2. Leased—	
Right of purchase .. .. .	.. .. .
Pastoral .. .. .	130,798,000
Other leases and licences .. .. .	14,202,000
Total .. .. .	145,000,000
3. Unoccupied (a) .. .. .	189,638,946
4. Total area .. .. .	335,116,800

(a) Including Aboriginal and other Reserves and Mission Stations.

9. Federal Capital Territory.—Particulars of the alienation and occupation of Crown lands in the Territory (exclusive of Jervis Bay area) for the year 1931 are as follows :—Alienated 66,904 acres; in process of alienation 39,977 acres; leased 288,558 acres; and unoccupied 188,221 acres. The area of acquired lands was 213,830 acres. The total area of the Territory (exclusive of Jervis Bay area, 17,920 acres) is 583,660 acres.

Alienated land in 1931 comprised 11.5 per cent. of the total area, land in process of alienation 6.8 per cent., land held under lease 49.4 per cent., and unoccupied land 32.3 per cent. of the total area.

## 12. Classification of Alienated Holdings According to Size.

The classification of private holdings according to their area is of interest chiefly in relation to the efforts made by the several States in recent years to promote settlement on the land on blocks of suitable size, especially by means of the Closer Settlement Acts.

The following table gives particulars of the number and areas of holdings of alienated land and land in process of alienation at the latest date for which the information has been compiled. A similar classification for the year 1924-25 will be found in Official Year Book No. 22, p. 192.

### CLASSIFICATION OF HOLDINGS (ONE ACRE AND OVER) IN AREA SERIES, 1928-29.

Size of Holdings.	N.S.W. (a)	Victoria.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Total (b)
NUMBER.							
1 and under 50 acres	14,190	19,791	6,202	4,812	3,164	3	48,162
50 " 100 "	7,527	8,388	1,776	874	2,108	1	20,674
100 " 500 "	25,719	25,979	5,907	3,993	4,779	19	65,496
500 " 1,000 "	11,394	12,449	4,570	3,204	726	18	32,361
1,000 " 5,000 "	10,948	6,929	4,032	7,768	775	15	31,067
5,000 " 10,000 "	1,255	297	133	440	146	3	2,274
10,000 " 20,000 "	524	90	33	116	67	1	831
20,000 " 50,000 "	214	15	8	23	29	..	289
50,000 and over	59	..	..	7	5	..	71
Total	71,830	73,938	23,261	20,337	11,799	60	201,225

### AREA.

	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1 and under 50 acres	322,082	374,677	113,921	63,130	58,351	91	932,252
50 " 100 "	584,269	601,533	143,072	72,827	147,259	65	1,549,025
100 " 500 "	6,739,650	6,384,766	1,745,181	746,982	1,095,434	5,267	16,717,280
500 " 1,000 "	8,056,717	8,828,038	3,409,573	2,756,642	593,506	12,778	23,657,254
1,000 " 5,000 "	21,865,261	11,858,819	8,277,929	16,394,494	1,600,262	30,050	60,026,815
5,000 " 10,000 "	8,587,485	2,047,281	912,394	3,003,200	1,017,754	21,354	15,589,468
10,000 " 20,000 "	7,240,069	1,196,469	457,244	1,588,720	924,784	12,600	11,419,886
20,000 " 50,000 "	6,374,610	390,876	188,305	617,972	812,306	..	8,384,069
50,000 and over	5,337,288	..	..	519,326	383,633	..	6,240,247
Total	65,107,431	31,682,450	15,247,619	25,763,293	6,633,289	82,205	144,516,296

(a) Year 1924-25.

(b) Information not available for Queensland and the Northern Territory.

## § 13. Present Position of Land Settlement.

1. Condition of Public Estate.—The position in regard to land settlement in each State and Territory and in Australia as a whole in the years 1920, 1929 and 1930 is shown in the table hereunder.

During the past ten years, the area alienated absolutely in the whole of Australia increased by 13,371,865 acres, and that in process of alienation by 7,362,129 acres, or a total of 20,733,994 acres during the decade, while the area leased decreased from 975,414,867 acres in 1920 to 948,917,301 acres in 1930.

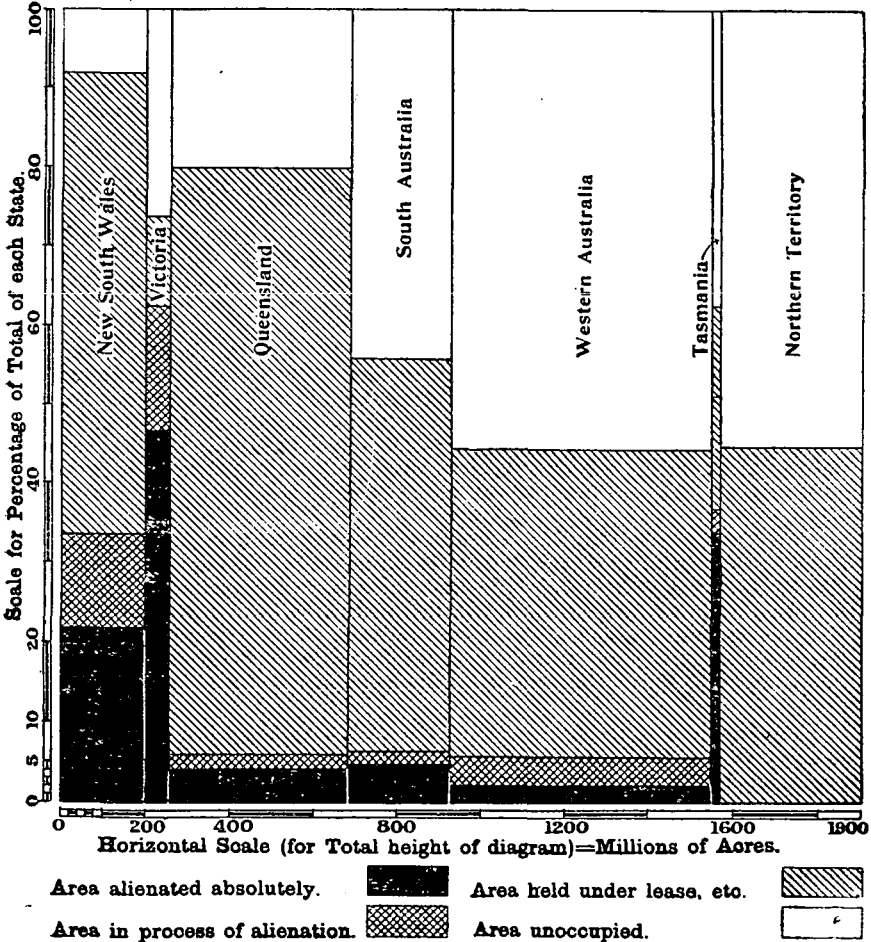
## AREAS ALIENATED, IN PROCESS OF ALIENATION, HELD UNDER LEASE OR LICENCE, AND UNOCCUPIED.

Year.	Alienated.		In Process of Alienation.		Held under Lease or Licence.		Occupied by the Crown or Unoccupied.	
	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.
<b>NEW SOUTH WALES (a).—AREA, 198,036,500 ACRES.</b>								
1920e	40,973,189	20.69	20,876,424	10.54	116,773,795	58.97	19,409,872	9.80
1929e	643,491,984	21.96	23,153,865	11.69	114,164,082	57.65	17,223,349	8.70
1930e	643,750,361	22.09	23,680,891	11.96	113,692,127	57.41	16,909,901	8.54
<b>VICTORIA.—AREA, 56,245,760 ACRES.</b>								
1920	24,793,053	44.08	8,746,102	15.55	10,040,119	17.85	12,666,486	22.52
1929	26,204,928	46.59	7,918,032	14.08	7,539,476	13.40	14,583,324	25.93
1930	26,316,492	46.79	7,230,000	12.94	6,659,107	11.84	15,990,161	28.43
<b>QUEENSLAND.—AREA, 429,120,000 ACRES.</b>								
1920	17,022,300	3.97	8,659,280	2.02	325,853,774	75.93	77,584,646	18.08
1929	18,486,184	4.31	5,911,240	1.38	317,763,259	74.05	86,959,317	20.26
1930	18,731,295	4.36	6,860,667	1.60	315,388,957	73.50	88,139,081	20.54
<b>SOUTH AUSTRALIA.—AREA, 243,244,800 ACRES.</b>								
1920	10,931,966	4.50	3,166,524	1.30	119,554,730	49.15	109,591,580	45.05
1929	12,004,959	4.94	3,933,568	1.62	118,249,913	48.61	109,056,360	44.83
1930	12,044,877	4.95	4,175,985	1.72	116,453,402	47.87	110,570,536	45.46
<b>WESTERN AUSTRALIA (a).—AREA, 624,588,800 ACRES.</b>								
1920	8,763,051	1.40	14,259,769	2.28	257,610,300	41.25	343,955,680	55.07
1929	13,594,254	2.18	21,804,506	3.49	243,724,065	39.02	345,465,975	55.31
1930	14,506,064	2.32	21,533,054	3.45	245,385,249	39.29	343,164,433	54.94
<b>TASMANIA.—AREA, 16,778,000 ACRES.</b>								
1920	5,241,856	31.24	963,915	5.75	2,155,612	12.85	8,416,617	50.16
1929	5,698,697	33.97	560,070	3.34	2,817,535	16.79	7,701,698	45.90
1930	5,721,259	34.10	541,653	3.23	2,772,097	16.52	7,742,991	46.15
<b>NORTHERN TERRITORY.—AREA, 335,116,800 ACRES.</b>								
1920	476,556	0.14	..	..	143,274,151	42.75	191,366,093	57.11
1929	477,853	0.14	..	..	148,905,274	44.44	185,733,673	55.42
1930	477,853	0.14	..	..	148,287,330	44.25	186,351,617	55.61
<b>FEDERAL CAPITAL TERRITORY.—AREA, 601,580 ACRES.</b>								
1920c	41,269	7.07	78,084	13.38	152,386	26.11	311,921	53.44
1929c	46,968	8.05	60,844	10.42	288,919	49.50	186,929	32.03
1930c	66,904	11.46	39,977	6.85	279,032	47.81	197,747	33.88
<b>AUSTRALIA.—AREA, 1,903,732,240 ACRES.</b>								
1920d	108,243,240	5.69	56,750,098	2.98	975,414,867	51.24	763,302,895	40.09
1929d	120,005,827	6.30	63,342,125	3.33	953,452,523	50.08	766,910,625	40.29
1930d	121,615,105	6.39	64,112,227	3.37	948,917,301	49.84	769,066,467	40.40

(a) To 30th June. (b) Excludes lands alienated but subsequently resumed or reverted to the Crown. (c) Excludes Jervis Bay area, 17,920 acres. (d) Excludes Lord Howe Island, 3,220 acres, and Jervis Bay area, 17,920 acres. (e) Excludes Lord Howe Island, 3,220 acres.

2. Diagram showing Condition of Public Estate.—The following diagram shows the condition of the public estate at the end of the year 1929. The square itself represents the total area of Australia, while the relative areas of individual States are shown by the vertical rectangles. The areas alienated absolutely, in process of alienation under systems of deferred payments, and the areas held under leases or licences, are designated by the differently-shaded areas as described in the reference given below the diagram, while the areas unoccupied are left unshaded.

Land Tenure



## CHAPTER VI.

## TRADE.

## § 1. Introductory.

**Constitutional Powers of the Commonwealth in regard to Commerce.**—The powers vested in the Commonwealth Parliament by the Commonwealth Constitution Act with respect to overseas trade and commerce will be found in Sub-section 51 (i) and sections 86 to 95 of the Act.

## § 2. Commonwealth Legislation affecting Oversea Trade.

1. **General.**—In previous issues of the Year Book brief particulars of the various Commonwealth Acts and amendments thereof affecting overseas trade have been given in chronological order. It is not proposed to repeat this information in the present issue.

2. **Customs Tariff 1921-1931.**—The Tariff Schedule now in operation incorporates Customs Tariff 1921 (Act No. 25 of 1921), Customs Tariff 1922 (Act No. 16 of 1922), Customs Tariff (Sugar) 1922 (Act No. 32 of 1922), Customs Tariff 1923 (Act No. 22 of 1923), Customs Tariff 1924 (Act No. 1 of 1924), Customs Tariff 1926 (Act No. 26 of 1926), Customs Tariff (No. 2) 1926 (Act No. 45 of 1926), Customs Tariff 1928 (Act No. 2 of 1928), Customs Tariff (No. 2) 1928 (Act No. 35 of 1928), Customs Tariff (No. 3) 1928 (Act No. 36 of 1928), and Customs Tariff 1930 (Act No. 3 of 1930).

The Tariff Schedule provides a British Preferential Tariff, an Intermediate Tariff, and a General Tariff. The rates of duty set out in the Schedule in the column headed "British Preferential Tariff" apply to goods the produce or manufacture of the United Kingdom, subject to the condition that the goods have been shipped in the United Kingdom to Australia, and have not been transhipped, or, if transhipped, then only if it is proved satisfactorily that the intended destination of the goods, when originally shipped from the United Kingdom, was Australia (Section 8 of Act No. 25 of 1921).

The provisions of the British Preferential Tariff may be applied wholly or in part to any portion of the British Dominions, and the provisions of the Intermediate Tariff may be applied wholly or in part to any portion of the British Dominions or to any foreign country by negotiation.

The rates of duty set out in the column headed "General Tariff" apply to all goods to which the rates set out in either of the columns headed "British Preferential Tariff" or "Intermediate Tariff" do not apply (Act No. 25 of 1921, Section 10). The General Tariff applies to all importations, excepting importations the produce or manufacture of the United Kingdom shipped in the United Kingdom to Australia, and excepting also goods covered by the Customs Tariff (New Zealand Preference) Acts No. 3 of 1922, No. 36 of 1922, and No. 38 of 1926, the Proclamation relating to Canadian Preference, and the Customs Tariff (Papua and New Guinea Preference) Act No. 6 of 1926.

On the 24th November, 1927, an amending Tariff Schedule was introduced into the House of Representatives. This Schedule embodied a reduction or abolition of some revenue-producing items; a further measure of protection to some Australian industries; and an expansion and extension of preference to British trade. The principal



items affected were textiles and metals and machinery. These amendments were ratified by the Customs Tariff Act, 1298 (No. 2 of 1928), and do not affect the operations of the Customs Tariff (New Zealand Preference) Act of 1922-1926, or the Customs Tariff (Papua and New Guinea Preference) Act of 1926.

The Customs Tariff 1921-1928 was amended as from the 23rd August, 1929, by increasing the customs duties payable on ale, spirits, and beverages; tobacco; silk and artificial silk; petroleum; and motor chassis. Certain excise duties were also increased.

On the 22nd November, 1929, another amending schedule to the Customs Tariff 1921-1928 and the Excise Tariff 1921-1928 came into operation. This extensive schedule provided for an increase of import duties under many items, the principal items affected being ale, spirits and beverages; tobacco; agricultural products and groceries; textiles and attire; metals and machinery; petroleum; motor bodies and motor chassis.

On the 11th December, 1929, a further amending schedule came into operation.

The Customs Tariff Act of 1930 amended the schedule so far as the imports of dressed timber n.e.i. are concerned.

A special customs duty of 50 per cent. of the amount of duty already imposed on certain items was introduced as from the 3rd April, 1930. This special duty was removed in regard to twelve items on the 24th May, 1932.

By proclamation of the 4th April, 1930, the importation of 78 items of goods into the Commonwealth was prohibited; the principal items affected being spirits, cigarettes, manufactured tobacco, batteries, and wireless receiving sets. This prohibition of importation was repealed in respect of 43 items on the 24th February, 1932.

Further amending schedules were introduced into the House of Representatives on the following dates, viz.:—19th June, 1930, 9th July, 1930, 25th July, 1930, 5th November, 1930, 3rd December, 1930, 26th March, 1931, and the 29th July, 1931, providing for increased duties on numerous items. Particulars relating to the Acts providing for the validation of collections of Customs duties under these proposals are given on page 145. On the 26th February, 1932, proposals were introduced providing for increased Customs duties on seven items and decreased Customs duties on fifty-six items; also for increased Excise duties on tobacco and decreased Excise duties on certain spirituous liquors. Further amending proposals were introduced on the 17th March, 1932, 3rd May, 1932, and 24th May, 1932.

3. **Primage Duty.**—From the 10th July, 1930, a primage duty of 2½ per cent. *ad valorem* was imposed on all goods, whether dutiable or not dutiable, in addition to the duties collected in accordance with the Customs Tariff 1921-30, excepting bullion, specie, radium and certain special governmental and other imports.

The rate of primage duty was subsequently increased to 4 per cent. as from the 6th November, 1930.

On the 11th July, 1931, a further amendment came into operation (a) exempting certain aids to primary production and minor imports from primage duty, (b) providing for a rate of 4 per cent. *ad valorem* on a few other items, mainly aids to production, and (c) increasing the *ad valorem* rate of primage duty to 10 per cent. on all other articles imported.

4. **Preferential Tariff.**—The Commonwealth Tariff 1908 (Act No. 7, 1908) provided Preferential Tariff rates in favour of goods produced or manufactured in the United Kingdom. Subsequent amendments of the Tariff have extended the list of articles to which the preferential rates apply. The favourable treatment of the United Kingdom was again extended by Customs Tariff 1921 (No. 25 of 1921), and when this Act was incorporated in Customs Tariff 1921-1930 further concessions were granted.

On the introduction of the preferential treatment of British goods by the Commonwealth Tariff, it was required that British material or labour should represent not less than one-fourth the value of such goods. From the 1st September, 1911, it was

required in regard to goods only partially manufactured in the United Kingdom, that the final process or processes of manufacture should have been performed in the United Kingdom and that the expenditure on material of British production and/or British labour should have been not less than one-fourth of the factory or works cost of the finished state. These conditions were superseded during the year 1925.

Important alterations in the conditions governing the entry of goods into the Commonwealth under the British Preferential Tariff were made during 1925. The amended conditions have applied to goods invoiced to Australia since the 1st April, 1925.

Under the new conditions preference is granted in the Commonwealth as follows :—

- (a) To goods which are wholly produced or wholly manufactured in the United Kingdom.

As to manufactured goods, these will be considered "wholly manufactured in the United Kingdom" only if in the raw materials used and in the finished goods no manufacturing process has been performed outside the United Kingdom which is being commercially performed in the United Kingdom.

The Minister shall determine what are to be regarded as raw materials, and in such determination may include partially manufactured Australian materials.

- (b) To goods, not wholly produced or wholly manufactured in the United Kingdom in the terms of paragraph (a), provided they contain at least 75 per cent. of United Kingdom labour and/or material in their factory or works cost.
- (c) Notwithstanding anything contained in the preceding paragraphs, to goods of a class or kind not commercially manufactured in Australia provided they contain at least 25 per cent. of United Kingdom labour and/or material in their factory or works cost.
- (d) It is essential in every case that the final process or processes of manufacture shall take place in the United Kingdom, and that the goods shall be consigned therefrom direct to Australia.

It is also provided that the conditions of preference set out above shall apply (in addition to goods from the United Kingdom) to goods, claiming preference, shipped from any country to which the Commonwealth of Australia has extended tariff preference, whether the rates granted be those of the "British Preferential Tariff," the "Intermediate Tariff," or special rates.

On the basis of the imports during 1913, the preferential provisions of the Tariff of 1908-11 covered 65 per cent. of the imports of merchandise of United Kingdom origin, the margin of preference being equal to 5 per cent. of the value of the goods. On the same basis the Tariff of 1921-31 has extended the application of the Preferential Tariff rates to 90 per cent. of the imports from the United Kingdom, and, at the same time has increased the margin of preference to 13.5 per cent. *ad valorem*. The average equivalent *ad valorem* rate of duty payable in 1930-31 under the Tariff of 1921-1931 on goods of United Kingdom origin is about 33 per cent., whereas the same goods under the General Tariff rates would be called upon to pay an average rate of about 45 per cent.

An application of the Tariff of 1921-31 to the total imports of £23,291,013 from the United Kingdom entered for home consumption during the year 1930-31 shows that the value of the goods of United Kingdom origin which participated in the preferential provisions of the Tariff was £20,533,961, upon which duty to the amount of £3,252,703 was collected. Under the General Tariff the same goods would have been required to pay £6,027,811 duty. Thus, had the conditions of the General Tariff operated on these goods, £2,775,108 additional duty would have been paid, representing an average of 13.5 per cent. on the value of the goods. The principal classes which benefited under the

Preferential Tariff and the additional duty that would have been collected under the General Tariff during the year 1930-31 were textiles, £1,013,702; metals and metal manufactures, £431,845; machines and machinery, £350,828; paper, £235,504; and earthenware, glass, etc., £103,693.

Of £20,533,961 worth of goods mentioned above, £10,639,720 were "free", while the same goods if they had been imported from other countries would have paid duty to the amount of £979,201, representing an average *ad valorem* rate of 11.8 per cent.

From the two preceding paragraphs it appears that, if there had been no preference, and the General Tariff had been operating uniformly, there would have been £3,754,000 more collected in Customs duties in Australia. The consumer in Australia has, therefore, benefited to this amount by preference at the expense of the Treasury, which has had, of course, to make up the loss in other ways. It is improper, however, to speak of this sum as the "Value" of preference to Great Britain. Some of the preferential goods would have come from Great Britain in any case without preference. For the rest, it is not possible to assess in money the value to Great Britain of £1,000,000 of additional export trade.

The value of goods from countries other than the United Kingdom which were adversely affected by the preferential provisions of the Tariff amounted to £16,133,581, and the duty collected thereon was £5,466,020, or £2,461,063 more than would have been paid under the British Preferential Tariff Rates.

5. *Reciprocal Tariffs.*—(i) *General.* The Tariff Act of 1921 introduced a new feature into Australian Tariffs in the form of an Intermediate Tariff. In submitting the Schedule to Parliament, the Minister for Trade and Customs made the following statement of the object of the Intermediate Tariff:—" . . . the Minister is empowered under the Bill to enter into reciprocal arrangements with other Dominions of the British Crown. The Minister will be able, if we can arrange a satisfactory reciprocal agreement, to extend to other Dominions in individual items the British preference rate, or the intermediate rate, or, it may be, the general rate. Such agreements will be subject to the ratification of Parliament. The provision simply means that if any of our sister self-governing Dominions desires to enter into reciprocal trade relationships with us, the Minister, with the British Preferential Tariff, the Intermediate Tariff, and the General Tariff before him, may bargain with the sister Dominion and come to an agreement which, as I say, must subsequently be ratified by Parliament. . . There is a provision of a somewhat similar character in regard to other countries than the Dominions, the only difference being that the Minister is empowered to extend to countries other than the Dominions only the Intermediate Tariff; that is to say, in entering into such negotiations, he is precluded from offering to those countries what we might term, for the purposes of this Bill, the Empire rate. He is confined in his negotiations with these other countries to the Intermediate Tariff."

(ii) *Union of South Africa.* Until 1922, the Union of South Africa was the only British Dominion with which Australia had a reciprocal Tariff arrangement. The Commonwealth Customs Tariff (South African Preference) Act (No. 17 of 1906) and subsequent amending Acts provided preferential rates of duty to be applied to certain imported goods "when those goods are imported from and are the produce or manufacture of any of the British South African Colonies or Protectorates which are included within the South African Customs Union."

The Customs Tariff (South African Preference) 1906 was repealed by the Customs Tariff 1926. The repeal came into operation on the 1st July, 1926, and the provisions of the Customs Tariff 1921-31 now apply to goods imported from South Africa.

(iii) *Dominion of New Zealand.* On the 11th April, 1922, an agreement was made between the Commonwealth of Australia and the Dominion of New Zealand whereby goods specified in the schedule attached to the agreement should be admitted at the rates of duty set out in the schedule. In addition to the goods specially mentioned in the schedule, it is provided that "all other goods being the produce or manufacture of Australia or New Zealand shall be dutiable at the rates applicable to goods being the

produce or manufacture of the United Kingdom, upon entry into New Zealand or Australia respectively." This agreement was ratified by the Commonwealth Parliament in the Customs Tariff (New Zealand Preference) 1922, and by Proclamation dated 24th August, 1922, came into operation on the 1st September, 1922. A variation of the original agreement was ratified by the Customs Tariff (New Zealand Preference) No. 38 of 1926, whilst a further amendment of certain rates of duty came into operation from the 15th June, 1928, under the Customs Tariff (New Zealand Preference) Act No. 25 of 1928.

Of the total imports of £980,838 from New Zealand during 1930-31 it is estimated that goods otherwise dutiable and amounting in value to £292,801 were admitted free under the provisions of the Preferential Tariff and the duty thus remitted was £136,334. In addition, goods valued at £64,832, which were dutiable under both general and preferential tariffs, were admitted under the preferential agreement, the duty remitted on such goods being £7,677. The total value of the preference granted on the import of New Zealand goods thus was £144,001, representing a preference of 40.3 per cent. The principal items which benefited under the preferential provisions were undressed timber, valued at £190,579; fish, £48,506; and tallow, £39,747; the amount of duty remitted being £114,854, £10,869, and £7,948 respectively.

(iv) *Dominion of Canada.* The negotiations for a reciprocal trade treaty between Canada and Australia reached finality during September, 1925, and a reciprocal Tariff agreement between the two countries is now in operation. The commodities on which Canada grants preferential rates of duty to Australia are:—Beeswax, butter, brandy, champagne, cheese, currants, eggs, eucalyptus oil, fruits (dried, fresh, and pulped), fruits in cans, glue, honey, lard, meat (fresh and canned), onions, raisins, sugar, tallow, vegetables in tins, and wine. Australia's preferential duties apply to the following Canadian imports:—Cash registers, corsets, fish, gloves, goloshes and rubber sand boots, etc., iron and steel tubes or pipes, printing machinery, paper (printing, typewriting and writing), typewriters, and vehicles, viz., motor chassis (unassembled and assembled), and vehicle parts, including undergear, axles, springs, hoods, wheels and bodies. By proclamation on the 3rd August, 1931, a further trade agreement was entered into by Canada and Australia, such agreement affirming the principal of granting tariff preferences for their mutual advantage and extending preference mainly as follows, viz.:—Australian goods imported into Canada—hops, sugar, butter, wines and fruit: Canadian goods imported into Australia—fish, timber, and motor chassis.

During 1930-31 the imports from Canada amounted to £1,377,217 and imports of Canadian origin entitled to preference were valued at £784,027, the principal items being paper, £340,261, and fish, £259,037. During 1930-31, £228,089 duty would have been payable under the General Tariff of which the duty remitted under the preferential agreement amounted to £131,041, being equivalent to 16.7 per cent. on the total dutiable imports. Australian exports to Canada subject to preference amounted to £757,242, the principal items being dried fruits, £388,336; fruits, preserved, £103,179; meats, £33,853; sugar, £48,281; and butter, £139,747.

(v) *Papua and New Guinea.* Customs Tariff (Papua and New Guinea) Preference 1926 provides for Customs Preference on goods the produce of Papua and on goods the produce of the Territory of New Guinea. Imports into Australia, direct from the Territory of Papua or the Territory of New Guinea, of such of the goods specified in the schedule to the Act as were produced in the Territory from which they were imported, shall, notwithstanding anything contained in the Customs Tariff 1921-1931 be free of duty. The goods specified in the schedule are coffee, dried litchi fruit, various native fresh fruits, edible fungi, green ginger, coco-nuts, Rangoon beans and kapok and sesame seeds. The total imports from Papua during the year 1930-31 were valued at £177,314, and the value of preference granted amounted to £43,697 on dutiable goods amounting to £140,269. The value of imports from the Territory of New Guinea during 1930-31 was £214,801, and of this total £79,255 was dutiable, the value of preference granted on the dutiable items being £26,348.

6. **Preferential Tariff of the United Kingdom.**—The post-war Tariff of the United Kingdom provides Preferential Customs rates on certain goods where it is shown to the satisfaction of the Commissioners of Customs and Excise that such goods have been consigned from and grown, produced, or manufactured in the British Empire. Manufactured articles generally are not entitled to the preferential rates unless 25 per cent. of their value is the result of labour within the British Empire. The principal items of interest to Australia which are accorded preferential treatment under the Tariff of the United Kingdom are :—Fruits, dried and preserved ; jam ; fruit pulp ; preserved milk ; wine ; and brandy.

In the Budget submitted to the House of Commons during June, 1925, clauses dealing with increased Imperial preference on Empire-grown tobacco, preserved and dried fruits, jams and jellies, spirits, wine, sugar, and hops were proposed and adopted. The new rates of duty took effect on 1st July, 1925, excepting that relating to hops, which came into operation on 16th August, 1925. On the basis of the quantities of dried fruits, spirits, wine, sugar, canned fruits and jams and jellies imported into the United Kingdom from Australia during the year 1930, valued at £4,704,169, as shown in the Annual Statement of the Trade of the United Kingdom, it is estimated that £1,249,164 additional duty would have been collected if the same quantities of goods had been dutiable under the rates applicable to imports from foreign countries. The main items receiving preference and the amount of rebate were sugar, £605,539 ; wine, £379,075 ; and dried fruits, £255,754.

7. **Tariff Board Act.**—This Act (No. 21 of 1921), as amended by Tariff Board Act 1923 (No. 25 of 1923), 1924 (No. 29 of 1924) and 1929 (No. 5 of 1929), provides for the appointment of a Tariff Board consisting of four members, one of whom shall be an administrative officer of the Department of Trade and Customs. This member may be appointed Chairman of the Board. Members of the Board are appointed for a term of not less than one year nor more than three years, and two members may be appointed as a Committee for making special inquiries. The purpose of the Tariff Board is to assist the Minister in the administration of matters relating to trade and customs. The more important matters which the Minister shall refer to the Board for inquiry and report include the classification of goods for duty ; the determination of the value of goods for duty ; any disputes arising out of the interpretation of any Customs or Excise Tariff ; the necessity for new, increased or reduced duties ; the necessity for granting bonuses ; any proposal for the application of the British Preferential Tariff or the Intermediate Tariff to any part of the British Dominions or any foreign country ; and any complaint that a manufacturer is taking undue advantage of the protection afforded him by the tariff by charging unnecessarily high prices for his goods or acting in restraint of trade. The Minister may refer to the Board for inquiry and report the following matters :—the general effect of the working of the Customs Tariff and the Excise Tariff ; the fiscal and industrial effects of the Customs laws of the Commonwealth, the incidence between the rates of duty on raw materials and on finished or partly finished products ; and any other matter affecting the encouragement of primary and secondary industries in relation to the tariff.

Inquiries conducted by the Board relating to any revision of the Tariff, any proposal for a bounty, or any complaints that a manufacturer is taking undue advantage of the protection afforded him by the Tariff, shall be held in public, and evidence in such inquiries shall be taken in public on oath, unless any witness objects to giving any evidence in public which the Board is satisfied is of a confidential nature, when the Board may take such evidence in private. Evidence taken by the Board in connexion with any inquiry under the Customs Tariff (Industries Preservation) Act 1921–22 shall be taken in public on oath.

The latest Annual Report of the Tariff Board, issued in accordance with Section 18 (1) of the Tariff Board Act 1921–29, reviews the work of the Board during the year ended 30th June, 1931. During the year the Board furnished 148 reports to the Minister for Trade and Customs as follows :—Requests for admission of goods under by-law, 1 ; operation of deferred duties, 47 ; operation of the Customs Tariff (Industries

Preservation) Act 1921—22, 6 ; requests for tariff revision and bounty, 91 ; classification of goods under the Customs Tariff, 1 ; drawback and By-law concessions on timber, 1 ; and profits made by certain Australian manufacturers, 1. Among the reports dealing with larger items of trade and production may be mentioned :—Galvanized Iron (22 pages) ; Telephone and Telegraph Cables ; Petroleum, (18 pages) ; Paints and Colours ; Cotton Yarns, (16 pages) ; Aircraft, Kapok ; (14 pages) ; and Cornsacks (13 pages). The report also gives a general statement of the main reasons for the recommendations made by the Board against increased duties ; the danger of prohibitive duties ; the economic re-adjustment and its reaction on Tariff making ; and the need for expansion of export trade.

**8. Customs Tariff (Industries Preservation) Act.**—This Act (No. 28 of 1921), provides that after inquiry and report by the Tariff Board, special duties shall be collected in the following cases when the importation of the goods referred to might be detrimental to an Australian industry :—In the case of goods sold for export to Australia at a price less than the fair market price for home consumption or at a price which is less than a reasonable price, a special dumping duty shall be collected equal to the difference between the price at which the goods were sold and a fair market price. Similar provision is made for goods consigned to Australia for sale. With regard to goods exported to Australia at rates of freight less than the rates prevailing at the time of shipment, there shall be collected a dumping freight duty equal to 5 per cent. of the fair market value of the goods at the time of shipment. Special duties are also imposed in the case of goods imported from countries whose currency is depreciated. Provision is also made for the protection of the trade of the United Kingdom in the Australian market from depreciated foreign currency.

The Act provides that the Minister for Trade and Customs, after inquiry and report by the Tariff Board, may publish a notice in the *Commonwealth Gazette* specifying the goods upon which special rates of duty under this Act shall be charged and collected.

Since the Act came into operation approximately 300 notices have been gazetted, including about 130 which revoked previous gazettals, the majority of the notices being made under Sections 8 and 9 of the Act and relating to commodities from countries with depreciated currency to the detriment of Australian or British industries. Over 50 per cent. of the gazettals relate to goods imported from Germany. Three gazettals affect certain goods imported from all countries, while two affect goods from all countries excepting United Kingdom. Separate notices have been issued relating to goods from 17 different countries. The commodities brought under the various sections of the Act exceed 150, and cover a very wide range of goods.

Several amendments of the Act were recommended by the Tariff Board and put into effect by the Customs Tariff (Industries Preservation) Act 1922.

**9. Commerce (Trade Descriptions) Act.**—This Act (No. 16 of 1905), gives power to compel the placing of a proper description on certain prescribed goods, or on packages containing the same, being imports or exports of the Commonwealth. An amending Act passed in 1926 added brushware to the original list. The goods to which a trade description must be applied are :—(a) Articles used for food or drink by man, or used in the manufacture or preparation of articles used for food or drink by man ; (b) medicines or medicinal preparations for internal or external use ; (c) manures ; (d) apparel (including boots and shoes), and the materials from which apparel is manufactured ; (e) jewellery ; (f) agricultural seeds and plants ; and (g) brushware.

**10. Acts Passed in 1931.**—The following Acts relating to Australian production and trade were assented to during the year 1931 :—

*Wine Export Bounty Act (No. 2 of 1931).* An Act amending the *Wine Export Bounty Act 1930*.

*Customs Tariff (Canadian Preference) Act (No. 13 of 1931).* An Act ratifying the agreement with the Dominion of Canada providing for the application of Preferential Duties of Customs on goods the produce or manufacture of Canada.

- Gold Bounty Act (No. 15 of 1931).* An Act amending the *Gold Bounty Act 1930.*
- Flax and Linseed Bounties Act (No. 43 of 1931).* An Act amending the *Flax and Linseed Bounties Act 1930.*
- Wheat Bounty Act (No. 48 of 1931).* An Act providing for the payment of a bounty on the production of Wheat.
- Customs Tariff Validation Act (No. 53 of 1931).* An Act providing for the validation of collection of Customs duties under Customs Tariff proposals introduced on the 21st November, 1929, 11th December, 1929, 19th June, 1930, 9th July, 1930, 25th July, 1930, 5th November, 1930, 3rd December, 1930, 26th March, 1931, and the 29th July, 1931.
- Excise Tariff Validation Act (No. 54 of 1931).* An Act providing for the validation of collection of Excise duties under Excise Tariff proposals introduced on the 21st November, 1929, 12th March, 1930, 19th June, 1930, 9th July, 1930, 5th November, 1930, 3rd December, 1930, 26th March, 1931, and 29th July, 1931.
- Customs Tariff (Primage Duties) Validation Act (No. 55 of 1931).* An Act providing for the validation of collections of Primage duties under Customs Tariff proposals introduced on the 9th July, 1930, 5th November, 1930, 10th July, 1931, and 14th October, 1931.
- Customs Tariff (Special Duties) Validation Act (No. 56 of 1931).* An Act providing for the validation of collections of special duties under Customs Tariff proposals introduced on the 3rd April, 1930, 19th June, 1930, and 23rd July, 1931.

### § 3. Method of Recording Imports and Exports.

1. **Value of Imports.**—The recorded value of goods imported from countries beyond Australia as shown in the following tables represents the amount on which duty is payable or would be payable if the duty were charged *ad valorem*. The value of goods is taken to be 10 per cent. in advance of their fair market value in the principal markets of the country whence the goods were exported. Acting upon a recommendation of the Tariff Board the section of the Customs Act relating to the valuation of imports was amended, and Section 154 (1) of the Customs Act 1901–1931 now provides that “when any duty is imposed according to value, the value for duty shall be the sum of the following :—

- (a) (i) the actual money price paid or to be paid for the goods by the Australian importer plus any special deduction, or
- (ii) the current domestic value of the goods, whichever is the higher ;
- (b) all charges payable or ordinarily payable for placing the goods free on board at the port of export ; and
- (c) ten per centum of the amounts specified under paragraphs (a) and (b) of this sub-section.

“Current domestic value” is defined as “the amount for which the seller of the goods to the purchaser in Australia is selling or would be prepared to sell for cash, at the date of exportation of those goods, the same quantity of identically similar goods to any and every purchaser in the country of export for consumption in that country.”

Imports are recorded in British currency values, and Section 157 of the Customs Act provides that when the invoice value of imported goods is shown in any currency other than British currency, the equivalent value in British currency shall be ascertained according to a fair rate of exchange. Under this section it was the practice of the Department of Trade and Customs, until the 8th December, 1920, to convert on the basis of the mint par of exchange. Since the date mentioned, in consequence of a ruling of the High Court, all conversions have been based on the commercial rates of exchange.

2. **Value of Exports.**—Prior to the 1st July, 1929, the recorded value of all goods exported was taken as representing the value in the principal markets of the Commonwealth in the ordinary commercial acceptance of the term. Owing to the

inflated values arbitrarily allotted in recent years to commodities which are subject to governmental control or subsidy, some change in the practice of valuation of exports of such commodities became desirable. Accordingly a new basis was adopted as from the 1st July, 1929, for the statistical valuation of exports of sugar, butter and goods on which bounty or rebate is paid which will show for—(a) *Sugar*—the value f.o.b. at which sold to overseas buyers, or an f.o.b. value equal to the London market price if shipped on consignment; (b) *Butter*—the current market value less the amount paid as export bonus; (c) *Goods on which bounty or rebate is paid on export*—the value in the principal markets of the Commonwealth in the ordinary commercial acceptance of the term, less the value of any bounty or rebate.

From the 1st July, 1930, the basis adopted for the value of exports of wool provides that the export value of wool sold in Australia for export will be the actual price paid plus the cost of services incurred in placing the wool on board ship, and for wool shipped on consignment the f.o.b. equivalent of ruling Australian prices is to be adopted.

During the year 1930–31 exports of merchandise generally were recorded in Australian currency and exports of bullion and specie in British currency, but from the 1st July, 1931, exports of bullion and specie are recorded in Australian currency also. The comparison of export values for 1930–31 with those for previous years is complicated by the varying value of the Australian £ in relation to sterling. In all export tables a footnote has been inserted showing the estimated British currency value, and in the summary tables the total overseas trade is shown in sterling.

3. **Customs Area.**—The Customs Area, to which all overseas trade statistics issued by this Bureau apply, is the whole area of the Commonwealth of Australia, comprising the States of New South Wales, Victoria, Queensland, South Australia, Western Australia, Tasmania and Northern Australia (contiguous territory). Other (non-contiguous) territories and mandated areas are treated as outside countries, and trade transactions between the Commonwealth and these non-contiguous territories are part of the overseas trade of the Commonwealth. Such transactions are shown separately, i.e., the trade of the Commonwealth with each particular country is separately recorded and tabulated.

4. **Statistical Classification of Imports and Exports.**—The Oversea Trade Bulletin No. 28 for the year 1930–31, from which the summary figures in this Year Book are extracted, was compiled according to a revised classification which came into operation on 1st July, 1922. In order to meet the demand for more detailed information relating to imports and exports the existing statistical classification was revised and considerably extended during the early part of 1922. The new classification is divided into 21 classes, with 1,660 separate import items and 523 export items.

5. **The Trade Year.**—From the 1st July, 1914, the statistics relating to Oversea Trade are shown according to the fiscal year (July to June). Prior to that date the figures related to the calendar year. A table is given on page 161 showing the total value of imports and exports in the calendar years 1927 to 1931 inclusive.

6. **Records of Past Years.**—In the years preceding federation, each State independently recorded its trade, and in so doing did not distinguish other Australian States from foreign countries. As the aggregation of the records of the several States is necessarily the only available means of ascertaining the trade of Australia for comparison with later years, it is unfortunate that past records of values and the direction of imports and exports were not on uniform lines. The figures in the following table for years prior to federation have been carefully compiled and may be taken as representative of the overseas trade of Australia as a whole. On the introduction of the Customs Act 1901, the methods of recording values were made uniform throughout the States, but it was not until September, 1903, that a fundamental defect in the system of recording transhipped goods was remedied. Prior to 1905 the value of ships imported or exported was not included in the returns of trade.

7. **Ships' Stores.**—Prior to 1906 goods shipped in Australian ports on board overseas vessels as ships' stores were included in the general exports. From 1906, ships' stores have been specially recorded as such, and omitted from the return of exports. A table showing the value of these stores shipped each year since 1906 is given later in this Chapter.



## § 4. Oversea Trade.

1. **Total Oversea Trade.**—The following table shows the total trade of the Commonwealth with oversea countries from the earliest date for which records are available. To economize space, the period 1826 to 1920-21 has been divided into quinquennia, and the figures shown represent the annual averages for the quinquennia specified. The figures for individual years were published in earlier issues of the Year Book. (See note to table below.)

## OVERSEA TRADE.—AUSTRALIA.

(INCLUDING BULLION AND SPECIE.)

Period. (a)	Recorded Value. (c)			Value per Inhabitant.			Percentage of Exports on Imports.
	Imports.	Exports.	Total.	Imports.	Exports.	Total.	
	£1,000.	£1,000.	£1,000.	£ s. d.	£ s. d.	£ s. d.	%
1826 to 30	638	153	791	10 12 5	2 10 11	13 3 4	23.9
1831 „ 35	1,144	613	1,757	11 19 10	6 8 6	18 8 4	53.6
1836 „ 40	2,283	1,112	3,395	14 15 9	7 4 1	21 19 10	48.7
1841 „ 45	1,906	1,378	3,284	9 0 5	6 10 5	15 10 10	72.3
1846 „ 50	2,379	2,264	4,643	6 18 10	6 12 2	13 11 0	95.2
1851 „ 55	11,931	11,414	23,345	19 12 5	18 15 4	38 7 9	95.7
1856 „ 60	18,816	16,019	34,835	18 6 1	15 11 8	33 17 9	85.1
1861 „ 65	20,132	18,699	38,831	15 17 1	14 14 9	30 11 10	93.0
1866 „ 70	18,691	19,417	38,108	12 7 4	12 16 11	25 4 3	103.9
1871 „ 75	21,982	24,247	46,229	12 7 2	13 13 6	26 0 8	110.3
1876 „ 80	24,622	23,772	48,394	11 19 7	11 10 9	23 10 4	96.6
1881 „ 85	34,895	28,955	62,950	14 4 3	11 9 5	25 13 8	80.4
1886 „ 90	34,675	26,579	61,254	11 16 11	9 1 0	20 17 11	76.6
1891 „ 95	27,335	33,683	61,018	8 5 2	10 2 5	18 7 7	123.2
1896 „ 1900	33,763	41,994	74,857	9 5 4	11 5 6	20 10 10	121.7
1901 „ 5	39,258	51,237	90,495	10 1 10	13 2 9	23 4 7	130.5
1906 „ 10	51,508	69,336	120,844	12 4 8	16 9 11	28 14 7	134.6
1911 „ 15-16	73,411	74,504	147,915	15 7 4	15 12 10	31 0 2	101.5
1916-17 to 1920-21	100,735	115,066	215,801	19 7 9	22 2 10	41 10 7	114.2
1921-22 ..	103,066	127,847	230,913	18 14 1	23 4 1	41 18 2	124.0
1922-23 ..	131,758	117,870	249,628	23 7 8	20 18 4	44 6 0	89.5
1923-24 ..	140,618	119,487	260,105	24 9 1	20 15 8	45 4 9	85.0
1924-25 ..	157,143	161,311	318,454	26 15 1	27 9 3	54 4 4	102.7
1925-26 ..	151,638	146,209	297,847	25 6 2	24 8 0	49 14 2	96.4
1926-27 ..	164,717	144,084	308,801	26 19 2	23 11 7	50 10 9	87.5
1927-28 ..	147,945	141,206	289,151	23 14 7	22 12 11	46 7 6	95.4
1928-29 ..	143,648	141,633	285,281	22 13 4	22 7 0	45 0 4	98.6
1929-30 ..	131,081	125,127	256,208	20 8 8	19 10 2	39 18 10	95.5
1930-31(d)	60,960	102,103	..	9 8 3	15 15 4	..	..
(e)	60,960	88,904	149,864	9 8 3	13 14 7	23 2 10	145.8

(a) The figures given for the years 1826 to 1920-21 represent the annual averages for the quinquennial periods. The trade of the individual years will be found in Official Year Book No. 21 and earlier issues. From 1916-17 onwards the particulars relate to fiscal years. (b) Prior to 1906 ships' stores were included in the general exports. For value of these goods shipped each year since 1906 see later table, page 178. (c) For actual values for recent years, showing merchandise and bullion and specie separately, see page 168. (d) Recorded values. (e) British currency values.

The graphs which accompany this Chapter show the movement of Australian oversea trade from 1855 onwards. In previous issues of the Year Book the fluctuations in such trade have been considered in some detail up to the high imports during the

year 1920-21. The enhanced price of commodities and the peculiar conditions affecting Australian trade were responsible for the high value of imports during the year, and in making comparisons with imports during pre-war years, these factors should be taken into consideration.

In 1921-22 the consequent reaction took place and both imports and exports declined. The following year 1922-23, showed an increase in imports, whilst exports decreased still further. In 1923-24, imports had advanced, but exports were practically the same value as in the previous year. The heavy importation of goods continued during 1924-25 and the value of the oversea trade amounted to £318,454,736, of which £157,143,296 represented imports and £161,311,440 exports. These figures, so far as total trade and exports are concerned, are the highest recorded, while the figure of imports has been exceeded on two occasions only. Imports, however, included an exceptionally large quantity of bullion and specie valued at £10,542,807.

During 1925-26 both imports and exports declined; the total oversea trade showing a decrease of £20 millions compared with the previous year. Exports declined over fifteen millions, due to the reduced quantities of wheat and butter exported. In 1926-27 imports were greater than in any previous year, and exceeded those in 1925-26 by £13,078,416. Exports decreased in value, due mainly to smaller exports of sugar, wool, butter, beef, and zinc.

In 1927-28 the total trade was £19,650,280 less than in 1926-27 and was less also than in the two years preceding 1926-27, due to a decline of £16,771,624 in imports and of £4,151,031 in exports when compared with the corresponding figures for 1926-27. Imports of merchandise showed a large decrease of £17,191,219, owing to reduced imports of motor cars; cotton, linen and silk piece goods; petroleum and rubber. A noticeable feature was the increase in exports of merchandise, which was attributable to increased exports of wool, butter, sugar, apples, beef, hides and zinc. The value of imports per head was less than that in any year since 1922-23.

During 1928-29 the total value of oversea trade was £3,870,441 less than that for the previous year, and was responsible for the lowest rate per head of population experienced during the last five years. Imports declined by £4,297,089, but exports increased by £1,578,739. Substantial reductions were experienced in imports of textiles, machinery, rubber, leather, wood and apparel. There was a large decrease in exports of wool and apples, but exports of wheat, sugar, flour, butter, and beef were in excess of those for the previous year.

In the year 1929-30 the decline in trade continued, the total being £29,072,002 less than the previous year. Imports decreased by £12,566,561, and exports by £15,923,977. The value of trade per head of population was the lowest experienced since the war year of 1917-18. There was a heavy fall in imports of textiles, apparel, yarns, metal manufactures, machines and machinery, the result of increased Customs duties and the efforts to improve the national balance of payments overseas. Exports of wool declined by £25,000,000, mainly due to a fall in prices, and wheat by £10,000,000, but these decreases were partly offset by shipments overseas of gold specie amounting to £27,000,000, the excess of imports for the year being £5,954,172.

In 1930-31 the total trade further declined to £149,863,775 (sterling values), a reduction of 42 per cent. on the previous year, and the rate per head of population recorded was the lowest since the year 1903. Imports were £71,121,687 less in value than in 1929-30, a fall of 54 per cent. The heavy decrease in value of imports was common to all classes of goods as the result of increased Customs Duties, prohibition of imports of certain items, and the prevailing financial depression. The heaviest decline occurred in the timber, metals, apparel, spirituous liquors and mineral groups. The recorded value of exports in Australian currency was £102,103,336 and the estimated sterling value £88,904,142. The decrease in the sterling value of exports amounted to £36,223,006, or 29 per cent. less than in 1929-30, due mainly to a further fall in the prices of wool and metals. Exports of wheat and butter, however, were in excess of the previous year.

2. **Balance of Trade.**—The foregoing table shows the percentage of exports on imports for quinquennial periods from 1826 to 1920–21 and for each financial year since 1920–21. Prior to the quinquennial period 1891–95 the balance of trade, with two exceptions, due to temporary dislocations, had been on the side of imports, while from that period to 1919–20 the position was reversed. During the subsequent decennial period to 1929–30, there was an excess of imports, though exports were in excess in the years 1921–22 and 1924–25. For the year 1930–31, however, there was a favourable balance of £27,944,509 sterling values, made up of an excess of exports of merchandise amounting to £15,296,399 and of bullion and specie, £12,648,110.

In recent years, imports and exports of bullion and specie for monetary purposes have impaired the significance of the foregoing table. The balance of commodity trade, including the value of gold and silver produced in Australia, has been separated in the following table, from the monetary movement of precious metals. The export totals for the years 1924–25 to 1928–29 inclusive have been reduced in accordance with the amended basis adopted for the valuation of exports of sugar and butter. Gold and silver have been included in merchandise when exported in an unrefined state, and shown as a separate trade item when produced and refined in Australia.

With the exception of the above-mentioned amendments for the years 1924–25 to 1928–29, the total balance of trade is the same as that previously published as being the recorded excess of exports in each year.

**BALANCE OF TRADE.—IMPORTS AND EXPORTS OF MERCHANDISE, NET EXPORTS OF BULLION AND SPECIE, AND PRODUCTION OF GOLD AND SILVER, AUSTRALIA.**

Year.	Imports of Merchandise.	Exports of Merchandise.	Gold and Silver produced and refined in Australia.	Total Exports of Merchandise and Gold and Silver Production.	Commodity Balance of Trade.	Net Exports of Bullion and Specie above Production.	Total Balance.
	£1,000,000	£1,000,000	£1,000,000	£1,000,000	£1,000,000	£1,000,000	£1,000,000
1910 ..	58.7	69.9	12.0	81.9	23.2	— 8.7	14.5
1911 ..	65.0	67.4	11.1	78.5	13.5	— 1.0	12.5
1912 ..	66.4	66.6	10.4	77.0	0.6	— 0.4	1.0
1913 ..	78.2	74.8	9.9	84.7	6.5	— 7.7	— 1.2
1914 (a) ..	38.9	36.3	4.6	40.9	2.0	— 3.8	— 1.8
1914–15 ..	63.6	57.7	9.0	66.7	— 3.1	— 6.9	— 3.8
1915–16 ..	76.9	64.0	8.3	72.3	— 4.6	1.7	— 2.9
1916–17 ..	75.9	85.9	7.5	93.4	17.5	— 4.2	21.7
1917–18 ..	60.7	74.0	7.3	81.3	20.6	— 1.5	19.1
1918–19 ..	95.3	104.8	7.1	111.9	16.6	— 5.0	11.6
1919–20 ..	98.9	143.2	6.2	149.4	50.5	0.4	50.9
1920–21 ..	163.8	126.7	5.1	131.8	—32.0	0.3	—31.7
1921–22 ..	103.0	123.5	4.7	128.2	25.2	— 0.4	24.8
1922–23 ..	131.7	114.6	4.4	119.0	—12.7	— 1.2	—13.9
1923–24 ..	140.6	115.7	4.2	119.9	—20.7	— 0.4	—21.1
1924–25 ..	146.6	159.3	3.8	163.1	16.5	—12.3	— 4.2
1925–26 ..	151.2	140.7	3.4	144.1	— 7.1	1.7	— 5.4
1926 27 ..	164.1	131.8	3.2	135.0	—29.1	8.5	—20.6
1927–28 ..	146.9	137.4	3.0	140.4	— 6.5	— 0.2	— 6.7
1928–29 ..	143.3	137.7	2.8	140.5	— 2.8	0.8	— 2.0
1929–30 ..	130.8	97.4	2.7	100.1	—30.7	24.7	— 6.0
1930–31 ..	60.6	(b) 75.9	2.6	78.5	17.9	10.0	27.9

(a) First six months only.

(b) Estimated British currency values.

3. **Balance of Payments.**—The balance of visible trade, including the net movement of precious metals, does not present a complete picture of Australia's international transactions during each year. Allowance must also be made for unrecorded imports and exports, for services rendered and received, and for international capital and interest transactions. The values of some of these items are known, and some of those remaining can be estimated with a sufficient measure of accuracy. For many items, however, it is

difficult to make even a rough guess. An investigation is at present being conducted into the values of these "invisible" items in the balance of payments, the results of which will be published in detail in the next issue of the Year Book. Meanwhile tentative estimates of the balance of payments for the years 1928-29 to 1931-32 inclusive will be found in the Appendix.

4. Value of Imports, Production and Exports.—The following table shows the imports and exports of manufactured goods under certain industrial groups during the year 1929-30 compared with the value of the output of factories engaged in corresponding industries in Australia during the same year. In addition, particulars are given concerning the total imports and exports of all commodities, including both manufactured goods and unmanufactured material, and the total Australian production. The balance shown as not exported represents the value of goods which were used mainly for local consumption or carried over into the next year for shipment overseas or otherwise. The basis of valuation of imports is that assessed for duty purposes; in the case of exports it is the value in the principal Australian markets; and for production either the factory cost of the manufactured goods, the export value or wholesale price of the raw material.

VALUE OF IMPORTS, PRODUCTION, AND EXPORTS—AUSTRALIA, 1929-30.

Industrial Group.	Imports.	Value of Australian Production.	Total.	Exports.	Balance not exported.
	£	£	£	£	£
Foodstuffs of Animal Origin ..	2,164,774	37,536,318	39,701,092	14,396,476	25,304,616
Foodstuffs of Vegetable Origin	4,410,297	50,573,898	54,984,195	8,291,794	46,692,401
Spiritous and Alcoholic Liquors	1,583,368	9,861,616	11,444,984	688,660	10,756,324
Tobacco and preparations thereof	653,962	7,523,114	8,177,076	460,648	7,716,428
Apparel, Textiles and Manufactured Fibres—					
Apparel .. .. .	4,622,540	39,383,424	44,005,964	165,739	43,840,225
Textiles .. .. .	22,587,843	9,082,598	31,670,441	77,720	31,592,721
Manufactured Fibres .. .. .	5,273,564	1,626,062	6,899,626	15,957	6,883,669
Oils, Fats and Waxes .. .. .	11,579,605	1,475,540	13,055,145	192,004	12,863,141
Paints and Varnishes .. .. .	686,195	2,314,934	3,001,129	59,548	2,941,581
Stones and Minerals .. .. .	142,304	1,622,967	1,765,271	10,631	1,754,640
Metals, Metal Manufactures and Machinery—					
Machines and Machinery .. .. .	21,766,163	30,146,530	51,912,693	808,351	51,104,342
Metals .. .. .	14,557,145	23,274,748	37,831,893	746,685	37,085,208
Rubber and Leather .. .. .	1,551,818	12,190,587	13,742,405	600,999	13,141,406
Wood and Wicker .. .. .	2,067,909	22,195,191	24,263,100	1,049,401	23,213,699
Earthenware, Cements, China, Glass and Glassware .. .. .	2,504,772	5,893,418	8,398,190	88,720	8,309,470
Paper and Stationery—					
Paper .. .. .	5,456,422	3,910,952	9,367,374	67,018	9,300,356
Stationery .. .. .	2,296,929	16,684,010	18,980,939	204,836	18,776,103
Jewellery, Timepieces and Fancy Goods .. .. .	2,201,423	730,445	2,931,868	37,971	2,893,897
Optical, Surgical and Scientific Instruments .. .. .	1,414,638	388,065	1,802,703	358,314	1,444,389
Drugs, Chemicals and Fertilizers	4,293,074	9,847,592	14,140,666	515,785	13,624,881
Miscellaneous .. .. .	3,809,789	13,595,017	17,404,806	417,710	16,987,096
Total of above manufactured goods .. .. .	115,624,534	299,857,026	415,481,560	29,254,967	386,226,593
All other items (manufactured and unmanufactured)	13,921,401	91,055,347	104,976,748	95,872,181	9,104,567
Grand Total .. .. .	129,545,935	390,912,373	520,458,308	125,127,148	395,331,160

The import figure of £13,921,401 for all other items consists mainly of raw materials. The production total of £91,055,347 for other items comprises raw materials, manufacturing processes, and manufactured items of which there are no imports, whilst the export total of £95,872,181 for the same group consists of raw materials.

### § 5. Direction of Oversea Trade.

1. Imports according to Country of Origin.—The following table shows the value of the imports into Australia of commodities stated to be the produce or manufacture of the undermentioned countries during the past five years:—

#### AUSTRALIAN IMPORTS.—COUNTRIES OF ORIGIN.

(EXCLUDING GOLD BULLION AND GOLD SPECIE.)

Country of Origin.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
United Kingdom .. ..	67,792,633	62,694,584	57,022,757	54,248,339	23,283,784
<b>British Possessions—</b>					
Canada .. .. .	4,324,421	3,278,095	4,871,529	3,502,421	1,377,217
Ceylon .. .. .	2,153,219	1,931,770	1,966,171	2,125,141	1,061,478
India .. .. .	6,661,408	5,559,036	6,052,506	5,021,449	3,778,492
Malaya (British) .. ..	2,025,757	1,804,602	1,133,963	812,513	274,894
New Zealand .. .. .	2,719,461	2,953,451	2,067,970	1,512,774	775,034
<b>Pacific Islands—</b>					
Nauru .. .. .	429,973	342,169	516,544	442,516	229,316
Papua .. .. .	214,394	131,272	117,894	105,098	134,145
Territory of New Guinea ..	493,842	346,754	320,134	226,349	55,714
Other Islands .. .. .	890,075	845,198	848,640	719,391	288,756
South African Union .. ..	927,993	652,283	586,879	302,879	89,823
Other British Possessions ..	754,451	904,745	639,831	867,623	424,887
<b>Total, British Possessions</b>	<b>21,594,994</b>	<b>18,749,375</b>	<b>19,122,061</b>	<b>15,638,154</b>	<b>8,489,756</b>
<b>Total, British Countries ..</b>	<b>89,387,627</b>	<b>81,443,959</b>	<b>76,144,818</b>	<b>69,886,493</b>	<b>31,773,540</b>
<b>Foreign Countries—</b>					
Belgium .. .. .	941,954	936,804	910,797	985,005	312,023
China .. .. .	785,068	683,518	633,217	568,664	347,641
France .. .. .	4,767,123	3,876,942	3,700,279	3,070,645	1,498,306
Germany .. .. .	4,359,514	4,621,469	4,545,501	4,341,678	1,997,056
Italy .. .. .	1,564,843	1,362,061	1,449,629	1,350,849	658,308
Japan .. .. .	5,183,470	4,282,614	4,707,299	4,181,643	2,379,558
Netherlands .. .. .	1,092,242	972,633	1,145,378	1,134,921	631,634
Netherlands East Indies ..	6,451,688	5,703,345	7,091,619	6,282,653	4,011,194
Norway .. .. .	1,055,020	925,867	890,414	655,523	214,440
Pacific Islands .. .. .	157,720	173,802	220,174	268,409	148,271
Philippine Islands .. .. .	215,176	208,547	163,030	174,518	39,957
Sweden .. .. .	1,847,299	1,873,877	1,480,808	1,671,786	822,563
Switzerland .. .. .	2,458,810	2,117,676	1,969,079	1,566,721	926,144
United States of America ..	41,394,024	35,005,223	35,307,343	30,313,535	11,399,005
Other Foreign Countries ..	2,486,505	2,782,535	2,941,046	2,802,069	1,631,293
<b>Total, Foreign Countries ..</b>	<b>74,760,447</b>	<b>65,528,913</b>	<b>67,155,613</b>	<b>59,368,619</b>	<b>27,017,393</b>
<b>Total .. .. .</b>	<b>164,148,074</b>	<b>146,972,872</b>	<b>143,300,431</b>	<b>129,255,112</b> (a)	<b>58,790,933</b> (a)

(a) Excluding Outside Packages 1929-30, £1,535,385, and 1930-31, £1,704,965.

2. Percentage of Imports from Various Countries.—In view of the effect that the varying prices of commodities have upon the value of imports, it is somewhat difficult to ascertain from the preceding table the relative importance of the various countries in the import trade of Australia in successive years. A better idea of the proportion of imports supplied by each country during each year may be obtained from the following table of percentages:—

## AUSTRALIAN IMPORTS.—PERCENTAGES FROM COUNTRIES OF ORIGIN.

(EXCLUDING GOLD BULLION AND GOLD SPECIE.)

Country of Origin.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	per cent.	per cent.	per cent.	per cent.	per cent.
United Kingdom .. ..	41.30	42.66	39.80	41.97	39.60
British Possessions—					
Canada .. ..	2.63	2.22	3.40	2.72	2.34
Ceylon .. ..	1.31	1.31	1.37	1.64	1.81
India .. ..	4.06	3.78	4.22	3.88	6.43
Malaya (British) .. ..	1.23	1.23	0.79	0.63	0.47
New Zealand .. ..	1.66	2.01	1.44	1.17	1.32
Pacific Islands—					
Nauru .. ..	0.26	0.23	0.36	0.34	0.39
Papua .. ..	0.13	0.09	0.08	0.08	0.23
Territory of New Guinea .. ..	0.30	0.24	0.22	0.18	0.09
Other Islands .. ..	0.54	0.58	0.59	0.56	0.49
South African Union .. ..	0.57	0.44	0.42	0.23	0.15
Other British Possessions .. ..	0.46	0.62	0.45	0.67	0.72
Total, British Possessions .. ..	13.15	12.75	13.34	12.10	14.44
Total, British Countries .. ..	54.45	55.41	53.14	54.07	54.04
Foreign Countries—					
Belgium .. ..	0.57	0.64	0.64	0.76	0.53
China .. ..	0.48	0.47	0.44	0.44	0.59
France .. ..	2.90	2.64	2.59	2.38	2.55
Germany .. ..	2.66	3.14	3.17	3.36	3.40
Italy .. ..	0.95	0.93	1.01	1.05	1.12
Japan .. ..	3.16	2.92	3.28	3.24	4.05
Netherlands .. ..	0.67	0.66	0.80	0.88	1.07
Netherlands East Indies .. ..	3.93	3.88	4.96	4.85	6.83
Norway .. ..	0.64	0.63	0.62	0.51	0.36
Pacific Islands .. ..	0.10	0.12	0.15	0.21	0.25
Philippine Islands .. ..	0.13	0.14	0.11	0.13	0.07
Sweden .. ..	1.13	1.27	1.03	1.29	1.40
Switzerland .. ..	1.50	1.44	1.37	1.21	1.58
United States of America .. ..	25.22	23.82	24.64	23.45	19.39
Other Foreign Countries .. ..	1.51	1.89	2.05	2.17	2.77
Total, Foreign Countries .. ..	45.55	44.59	46.86	45.93	45.96
Total .. ..	100	100	100	100	100

The percentage of imports from the United Kingdom during the quinquennial period under review, showed alternate increases and decreases in successive years, with a gradual downward tendency over the whole period. This is a continuation of the decline which has been apparent since the peak of 51.90 per cent. was reached in 1922-23—a noticeable feature being an increase or fall each year corresponding somewhat to the decline or recovery in the imports from the United States of America. Imports from British possessions declined in 1929-30, but increased considerably in 1930-31 as the result mainly of larger imports from India, while those from foreign countries were fairly constant with a slight upward tendency during the quinquennium. Comparing the proportion of imports supplied by the United Kingdom during 1930-31 with that for 1926-27, it will be seen that there was a reduction of 1.70 per cent., whilst trade with British Possessions increased 1.29 per cent., and trade with foreign countries increased 0.41 per cent. During 1930-31 some notable changes took place in the proportions of imports supplied by foreign countries, e.g., increases from Japan and Netherlands East

Indies and a decrease of 4.06 per cent. in the case of the United States. The table on page 151 shows that, while imports from British countries decreased by £38,112,953 in 1930-31, imports from foreign countries decreased to the extent of £32,351,226.

3. **Direction of Exports.**—The following table shows the value, in Australian currency, of commodity exports to the principal countries during the five years 1926-27 to 1930-31 inclusive:—

**EXPORTS FROM AUSTRALIA TO VARIOUS COUNTRIES.**  
(EXCLUDING GOLD BULLION AND GOLD SPECIE.)

Country.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
United Kingdom .. ..	48,346,780	54,269,476	53,142,993	43,357,463	39,556,634
<b>British Possessions—</b>					
Canada .. ..	1,171,687	856,767	813,992	743,742	958,730
Ceylon .. ..	478,106	496,845	460,723	507,191	373,736
Fiji .. ..	447,818	482,382	478,211	456,733	363,965
Hong Kong .. ..	403,041	482,359	600,889	336,315	379,880
India .. ..	2,189,004	1,879,296	8,112,847	3,233,919	2,145,500
Malaya (British) .. ..	1,917,250	2,007,680	1,974,431	1,389,321	818,917
Mauritius .. ..	109,188	87,086	129,752	72,178	52,572
New Zealand .. ..	4,484,395	3,854,635	3,729,147	3,624,395	2,975,300
Papua .. ..	223,298	203,618	173,042	170,692	136,224
South African Union .. ..	1,741,831	2,847,194	1,953,313	1,050,107	496,455
Other British Possessions .. ..	1,336,091	1,231,174	1,524,921	1,222,534	1,188,270
<b>Total, British Possessions ..</b>	<b>14,561,709</b>	<b>14,429,036</b>	<b>19,951,268</b>	<b>12,807,127</b>	<b>9,889,549</b>
<b>Total, British Countries ..</b>	<b>62,908,489</b>	<b>68,698,512</b>	<b>73,094,261</b>	<b>56,164,590</b>	<b>49,446,183</b>
<b>Foreign Countries—</b>					
Belgium .. ..	8,393,127	9,320,508	9,044,614	5,536,231	4,195,186
Chile and Peru .. ..	265,197	356,013	428,431	207,014	115,253
China .. ..	410,073	310,482	1,117,142	295,157	3,342,988
Egypt .. ..	3,853,649	3,046,892	3,915,200	1,732,223	1,470,555
France .. ..	17,627,139	15,166,747	15,141,155	10,134,578	6,747,944
Germany .. ..	9,908,685	12,026,949	9,730,330	6,246,960	5,310,335
Italy .. ..	5,514,300	5,138,034	5,169,404	2,761,293	3,495,342
Japan .. ..	10,362,990	12,571,282	11,518,986	6,555,003	9,500,499
Netherlands .. ..	1,309,668	492,466	653,535	411,603	387,611
Netherlands East Indies .. ..	2,049,443	1,945,734	2,057,664	2,080,722	1,412,506
Norway .. ..	76,800	13,646	5,026	21,891	48,076
Pacific Islands .. ..	448,585	448,218	506,367	358,955	243,187
Philippine Islands .. ..	483,722	456,989	430,993	390,750	329,239
Russia .. ..	1,092	2,204,469	1,574,603	343,023	4,141
Spain .. ..	76,651	3,573	22,395	82,899	115,276
Sweden .. ..	139,046	430,266	413,938	135,405	145,523
United States of America .. ..	8,578,504	6,953,566	5,831,794	4,233,772	2,930,318
Other Foreign Countries .. ..	1,450,798	820,566	1,210,459	466,540	589,612
<b>Total, Foreign Countries ..</b>	<b>70,859,469</b>	<b>71,706,400</b>	<b>68,772,036</b>	<b>42,094,019</b>	<b>40,383,591</b>
<b>Total .. ..</b>	<b>133,767,958</b>	<b>140,404,912</b>	<b>141,866,297</b>	<b>98,258,609</b>	<b>89,829,774</b>

There was a large increase in the value of Australian exports to the United Kingdom during the year 1927-28, a slight decrease in 1928-29, and a heavy fall in 1929-30 and 1930-31. But, as will be seen from the percentage table in paragraph 4, the proportion of the exports to the United Kingdom increased in 1929-30, and was practically stationary in 1930-31. Although the value of exports to British possessions declined from £19,951,268 in 1928-29 to £9,889,549 in 1930-31, nevertheless the proportion of exports to British possessions in the latter year was actually greater than in the former year. Exports to Canada showed an appreciable increase in 1930-31. Compared with the year 1926-27, the value of exports during 1930-31 to China showed an increase, but on a percentage basis an increased proportion of exports is shown for China, Japan and Netherlands East Indies. There has been a steady decline in the proportion exported to Belgium, Egypt, France, Germany, and the United States, the falling off being due to the reduced export prices obtained for Australian primary produce, mainly wool and wheat.

In these comparisons, however, the value of merchandise exports is in Australian currency, so that the 1930-31 merchandise values are inflated by nearly 15 per cent. in terms of sterling, as compared with the values for the previous year. The estimated value in sterling of exports of merchandise, excluding all bullion and specie, shows that exports to British countries declined from £55,284,000 in 1929-30 to £41,489,000 in 1930-31, and exports to foreign countries decreased from £42,094,000 in 1929-30 to £34,368,000 in 1930-31.

4. **Percentage of Exports to Various Countries.**—In consequence of the effects of varying commodity prices on the value of exports, the relative importance of various countries as markets for Australian produce may be shown more clearly by the following table of percentages :—

**EXPORTS FROM AUSTRALIA.—PERCENTAGES TO VARIOUS COUNTRIES.**  
(EXCLUDING GOLD BULLION AND GOLD SPECIE.)

Country.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	per cent.	per cent.	per cent.	per cent.	per cent.
United Kingdom .. ..	36.14	38.65	37.46	44.13	44.04
British Possessions—					
Canada .. ..	0.88	0.61	0.57	0.76	1.07
Ceylon .. ..	0.36	0.35	0.32	0.52	0.42
Fiji .. ..	0.33	0.34	0.35	0.46	0.41
Hong Kong .. ..	0.35	0.34	0.42	0.34	0.42
India .. ..	1.64	1.34	5.72	3.29	2.39
Malaya (British) .. ..	1.43	1.43	1.39	1.42	0.91
Mauritius .. ..	0.08	0.06	0.09	0.07	0.05
New Zealand .. ..	3.35	2.75	2.63	3.69	3.31
Papua .. ..	0.17	0.15	0.13	0.17	0.15
South African Union .. ..	1.30	2.03	1.37	1.07	0.55
Other British Possessions .. ..	1.00	0.88	1.07	1.24	1.32
Total, British Possessions .. ..	10.89	10.28	14.06	13.03	11.00
Total, British Countries .. ..	47.03	48.93	51.52	57.16	55.04
Foreign Countries—					
Belgium .. ..	6.21	6.64	6.38	5.63	4.67
Chile and Peru .. ..	0.20	0.26	0.30	0.21	0.13
China .. ..	0.30	0.22	0.79	0.30	3.72
Egypt .. ..	2.88	2.17	2.76	1.82	1.64
France .. ..	13.18	10.80	10.67	10.31	7.50
Germany .. ..	7.41	8.56	6.86	6.36	5.90
Italy .. ..	4.12	3.66	3.64	2.82	3.89
Japan .. ..	7.75	8.95	8.12	6.67	10.58
Netherlands .. ..	0.98	0.35	0.46	0.46	0.42
Netherlands East Indies .. ..	1.53	1.39	1.45	2.12	1.57
Norway .. ..	0.06	0.01	0.00	0.02	0.05
Pacific Islands .. ..	0.34	0.32	0.36	0.37	0.27
Philippine Islands .. ..	0.36	0.33	0.31	0.40	0.36
Russia .. ..	0.00	1.57	1.10	0.35	0.05
Spain .. ..	0.06	0.00	0.02	0.08	0.13
Sweden .. ..	0.10	0.31	0.30	0.14	0.16
United States of America .. ..	6.41	4.95	4.11	4.31	3.26
Other Foreign Countries .. ..	1.08	0.58	0.85	0.47	0.66
Total, Foreign Countries .. ..	52.97	51.07	48.48	42.84	44.96
Total .. ..	100	100	100	100	100



5. **Balance of Trade with Principal Countries.**—In the following table a comparison is made in British currency values of the total Australian trade in merchandise (excluding bullion and specie) with principal countries during the years 1929–30 and 1930–31:—

**BALANCE OF AUSTRALIAN TRADE WITH PRINCIPAL COUNTRIES.**

(EXCLUDING BULLION AND SPECIE.)

Country.	Imports from—		Exports to—		Excess of Exports.	
	1929–30.	1930–31.	1929–30.	1930–31.	1929–30.	1930–31.
	£1,000 Sterling.	£1,000 Sterling.	£1,000 Sterling.	£1,000 Sterling.	£1,000 Sterling.	£1,000 Sterling.
United Kingdom .. .. .	54,242	23,276	43,330	33,490	— 10,012	10,214
Canada .. .. .	3,502	1,377	744	817	— 2,758	— 560
India .. .. .	5,022	3,788	2,388	1,442	— 2,634	— 2,376
New Zealand .. .. .	1,509	775	3,024	2,532	— 2,115	1,757
Other British Countries ..	5,582	3,020	5,198	3,238	— 384	218
<b>Total, British Countries ..</b>	<b>69,857</b>	<b>32,236</b>	<b>55,284</b>	<b>41,489</b>	<b>— 14,573</b>	<b>9,253</b>
Belgium .. .. .	985	312	5,536	3,573	— 4,551	3,261
China .. .. .	569	348	273	2,819	— 296	2,471
France .. .. .	3,070	1,498	10,135	5,748	7,065	4,250
Germany .. .. .	4,342	1,997	6,205	4,522	1,863	2,525
Italy .. .. .	1,351	658	2,761	2,977	1,410	2,319
Japan .. .. .	4,181	2,380	6,555	8,093	2,374	5,713
Netherlands East Indies ..	6,283	4,011	2,123	1,203	— 4,160	— 2,808
United States of America ..	30,313	11,398	4,234	2,496	— 26,079	— 8,902
Other Foreign Countries ..	8,273	4,444	4,272	2,937	— 4,001	— 1,477
<b>Total, Foreign Countries ..</b>	<b>59,367</b>	<b>27,016</b>	<b>42,094</b>	<b>34,368</b>	<b>— 17,273</b>	<b>7,352</b>

The balance of trade (British currency values) in merchandise with British countries changed from an adverse figure of £14,573,000 in 1929–30 to a favourable one of £9,253,000 in 1930–31 due mainly to an increase of approximately £21 millions in the balance with the United Kingdom. Trade with foreign countries showed a net improvement of £24 millions on the figures for 1929–30 consequent on a decline of £17 millions in the previous year's unfavourable balance with the United States coupled with an increase of £3 millions in the excess of exports to Japan and China. In 1930–31 there were unfavourable balances with Canada, of £560,000; India, £2,376,000; United States, £8,902,000; Netherlands East Indies, £2,808,000; and other foreign countries, £1,477,000. The figures quoted exclude exports of bullion and specie amounting to £13,047,000 in 1930–31 as compared with £27,749,000 in 1929–30. Exports of bullion and specie to United Kingdom in 1930–31 were £11,553,000 (£22,976,000 in the previous year); to India, £1,285,000 (£3,065,000); Other British Countries, £172,000 (£665,000), and to Foreign Countries, £36,248 (£1,042,400).

6. **Principal Imports and Exports.—Countries.**—The total value of imports from, and exports to, each of the more important countries during 1930–31 in order of value of total trade, together with brief particulars of the principal commodities interchanged with such countries, is given hereunder. Should further details be required reference may be made to the annual publication "Oversea Trade Bulletin, No. 28," issued by this Bureau, which gives details of the trade with Australia of 38 of the principal countries of the world during the past five years. This publication also furnishes information regarding the country of origin of each statistical item of import for the years 1929–30 and 1930–31, showing the value and (where available) the quantity imported from each country. The value of each item imported into each of the States is also shown. The publication referred to also gives information as to the country to which each item of exports was shipped during these years.

**United Kingdom.** *Total Imports of United Kingdom Origin*, £23,291,013. The two outstanding classes of goods imported were—Machines, machinery, and manufactures of metal, £7,167,899; and apparel, textiles, yarns, etc., £7,913,673. Imports of the undermentioned goods also contributed largely to the total:—Paper and stationery; drugs and chemicals; whisky; rubber and rubber manufactures; optical, surgical, and scientific instruments; chinaware and earthenware; glass and glassware; and fancy goods.

*Total Exports to United Kingdom*, £50,871,028. Of this total, £50,157,137 represented Australian produce. The principal items of export were—Gold specie, £10,174,993; wool, £10,257,653; butter, £7,189,696; wheat, £4,916,685; and sugar, £1,738,656. Other commodities which bulked largely were—Pig lead; frozen meats; hides and skins; dried and fresh fruits; flour; wine; copper; and zinc.

**United States of America.** *Total Imports of United States Origin*, £11,400,058. The following were the more important items of import:—Petroleum and shale spirit, etc., £2,173,364; metal manufactures and machinery, £2,967,405; unmanufactured tobacco, £1,387,941; apparel and textiles, £744,615; lubricating (mineral) oil; kerosene; musical instruments; paper and stationery; sulphur; sausage casings; and undressed timber.

*Total Exports to United States*, £2,930,896. Of this total, £2,732,693 represented Australian produce. The principal exports were—Wool, £1,116,906; hides and skins, £760,847; sausage casings; pearlshell; and ores. The value of the exports of the above commodities represents 83 per cent. of the total exports to the United States.

**France.** *Total Imports of French Origin*, £1,498,306. Chief imports were—Piece goods of silk or containing silk, £347,984; trimmings for attire, £74,468; velvets, velveteens, plushes, etc., £61,503; blouses, skirts, etc.; woollens; machinery; paper and stationery; perfumery and toilet preparations; gums and resins; lace for attire; gloves; jewellery and fancy goods; fertilizers; drugs and chemicals; and olive oil.

*Total Exports to France*, £6,747,944. Of this total, £6,711,779 was Australian produce. Principal exports were—Wool, £5,479,746; sheep skins, £1,048,218; concentrates; wheat; barley; horns; and frozen mutton.

**Japan.** *Total Imports of Japanese Origin*, £2,379,558. Principal imports—Piece goods of silk or containing silk, £1,259,906; raw silk, £318,619; cotton and linen piece goods, £224,832; undressed timber; apparel and attire; crockery and other household ware; glass and glassware; oils; fancy goods; and fish.

*Total Exports to Japan*, £9,500,499. Of this total, £9,484,622 was Australian produce. Chief exports—Wool, £6,478,587; wheat, £2,173,178; tallow; zinc; pig lead; trochus shell; beef; milk and cream; casein; and infants' and invalids' food.

**Germany.** *Total Imports of German Origin*, £1,997,056. Principal imports—Machinery and metal manufactures, £629,340; apparel and textiles, £448,170; drugs, chemicals and fertilizers, £247,625; jewellery and fancy goods, £168,182; paper and stationery, £138,365; rubber and manufactures; earthenware; china; glass; bags and baskets; and pianos.

*Total Exports to Germany*, £5,310,875. Of this total, £5,267,367 was the produce of Australia. Chief exports were—Wool, £4,165,020; pig lead, £349,591; apples, £226,317; hides and skins, £199,104; beef; sausage casings; zinc bars, blocks, etc.; concentrates; and eucalyptus oil.

**Belgium.** *Total Imports of Belgian Origin*, £312,023. Principal imports were—Glass and glassware, £45,746; paper and stationery, £40,728; velvets, etc., £35,854; apparel and attire, £23,677; metal manufactures and machinery, £46,803; paper; arms; gloves; and drugs and chemicals.

*Total Exports to Belgium*, £4,195,186. Of this total, £4,184,756 was the produce of Australia. Chief items were—Wool, £2,624,011; beef, £299,932; pig lead, £263,152; wheat, £239,686; barley, £229,688; concentrates, £183,620; hides and skins, £87,709; zinc bars, blocks, etc., £130,500; fodders; butter; tallow; and copper in matte.

**India.** *Total Imports of Produce or Manufacture of India*, £3,778,492. Bags and sacks valued at £2,746,241 represent 73 per cent. of the total imports. The other principal items were—Hessians, £276,142; tea, £209,185; linseed, £161,255; hides and skins, £141,247; gums and resins; coffee and chicory; rice; mats, matting of coir; paraffin wax; spices; and jute.

*Total Exports to India*, £2,942,500. Of this total, £2,916,459 represented Australian produce. The chief exports were—Wheat, £1,288,543; gold specie, £797,000; silver £488,203; horses; tallow; wool; milk and cream; zinc bars, blocks, etc.; rubber and manufactures; and jams and jellies.

**Netherlands East Indies.** *Total Imports of Netherlands East Indies Origin*, £4,011,194. The principal imports were—Petroleum spirit, including benzine, etc., £1,676,780; tea, £1,016,867; crude petroleum, £608,783; kerosene, £185,376; kapok, £119,472; flax and hemp; coffee and chicory; and crude rubber.

*Total Exports to Netherlands East Indies*, £1,412,506. Of this total, £1,385,653 was the produce of Australia. Chief exports were—Flour, £534,691; butter, £374,862; preserved milk and cream, £197,753; leather, £37,443; biscuits; bacon and hams; medicines; fresh fruits; metal manufactures and machinery; fruit juices and syrups; and coal.

**New Zealand.** *Total Imports of New Zealand Origin*, £980,838. The principal items were—Gold bar, dust, £205,804; timber, £191,551; hides and skins, £120,465; wool, £74,794; fish, £52,216; flax and hemp, £47,661; tallow, £39,776; horses; linseed and other seeds; and grain and pulse.

*Total Exports to New Zealand*, £2,977,050. Of this total, £2,424,742 was Australian produce. The chief items were—Machinery and metal manufactures, £394,519; timber, £301,589; drugs and chemicals, £230,380; optical, surgical, and scientific instruments, £226,856; manufactured tobacco, £223,790; coal, £223,263; fruits, dried and fresh, £209,611; apparel, textiles and manufactured fibres, £191,366; paper and stationery, £124,182; tea; horses; medicines; earthenware; rubber and manufactures; arms; and wine.

**Italy.** *Total Imports of Italian Origin*, £688,308. Chief imports were—Silk piece goods, £162,945; drugs and chemicals, £128,553; apparel, £81,496; hides and skins, £37,799; metals, metal manufactures and machinery, £30,798; paper and stationery, £25,099; essential oils; flax and hemp; edible nuts; and olive oil.

*Total Exports to Italy*, £3,495,342. Of this total, £3,489,318 was Australian produce. Chief exports were—Wheat, £1,707,596; wool, £1,482,943; hides and skins, £163,864; beef, £65,063; and tallow, £49,759.

**Canada.** *Total Imports of Canadian Origin*, £1,377,217. The principal imports were—Printing paper, £438,807; fish preserved in tins, £236,474; chassis for motor cars, £134,915; other vehicles and parts, £36,032; machines and machinery, £89,328; other metal manufactures, £104,238; timber, undressed, £94,306; surgical, optical, and scientific instruments, £49,997; timber, dressed, £38,346; apparel, £30,813; and drugs and chemicals, £25,578.

*Total Exports to Canada*, £958,730. Of this total, £935,894 was Australian produce. Chief items were—Fruits, dried, £353,556; butter, £139,747; fruits, preserved or pulped, £115,095; wool—greasy, scoured and tops, £109,404; sugar (cane), £31,308; hides and skins, £35,595; machinery and metal manufactures, £35,448; gelatine and glue, £31,308; mutton and lamb, £27,412; fruits, fresh, £23,348; and wine, £10,335.

**Malaya (British).** *Total Imports of Malayan (British) Origin*, £274,894. Principal items were—Rubber and manufactures thereof, £162,089; spices, £59,901; sago and tapioca, £25,729; tin ingots, £11,022; vegetable substances and fibres; and bamboo and cane.

*Total Exports to Malaya (British)*, £818,917. Of this total, £773,264 was the produce of Australia. Chief exports were—Flour, £302,053; milk and cream, £145,330; frozen meats, £83,893; butter, £59,722; metals, metal manufactures and machinery, £41,575; fruits, fresh and preserved; soap; bacon and hams; leather; sheep; coal; and lard and refined animal fats.

**Pacific Islands (British and Foreign).** *Total Imports of Produce of the Pacific Islands*, £881,144. Chief items were—Rock phosphates, £509,126; gold bullion, £159,089; copra, £79,831; wood and wicker; hides and skins; timber; fruits, fresh; molasses; and cocoa beans.

*Total Exports to Pacific Islands*, £1,286,790. Of this amount, £965,114 was the produce of Australia. The exports to these islands cover a very wide range of commodities. The outstanding groups were—Foodstuffs of vegetable origin, £336,178; machines, machinery and metal manufactures, £186,083; foodstuffs of animal origin, £123,521; tobacco, cigars and cigarettes, £108,606; coal and coke, £88,093; and apparel, textiles, etc., £74,314. The chief individual items were—Flour; tobacco; coal; biscuits; meats preserved in tins; timber; bran, pollard, and sharps; tea; oils; stationery; soap; rice; and ale, beer, etc.

**South African Union.** *Total Imports of Produce of South African Union*, £89,823. Principal items were—Fish, £35,216; stones and minerals, £20,696; tobacco; and animal substances.

*Total Exports to South African Union*, £496,455. Of this total, £484,407 was the produce of Australia. Chief exports were—Wheat, £124,385; flour, £69,652; tallow, £67,021; timber, £65,972; milk and cream, £20,648; lead, pig; gelatine and glue of all kinds; and soap.

**Egypt.** *Total Imports of Egyptian Origin*, £24,050. Chief items were—Asphalt, bitumen and natural pitch, £12,838; gums and resins, £5,608; and paper manufactures, £2,974.

*Total Exports to Egypt*, £1,470,555. Principal items were—Flour, £921,042; wheat, £355,125; frozen meat, £101,143; and butter, £65,006.

**Ceylon.** *Total Imports of Ceylon Origin*, £1,061,478. The chief items were—Tea, £952,166; crude rubber, £55,516; nuts, £12,690; fibres; cocoa beans; and yarns.

*Total Exports to Ceylon*, £533,036. Of this total £529,879 was Australian produce. The principal exports were—Gold specie, £159,300; flour, £139,886; undressed timber, £104,668; frozen meats; milk and cream; butter; and fresh fruits.

**Sweden.** *Total Imports of Swedish Origin*, £822,563. Chief items were—Paper, £248,851; wood pulp, £207,714; dairy implements and machinery, £112,022; other machines and machinery, £64,242; vacuum cleaners, £44,310; and timber, £24,101.

*Total Exports to Sweden*, £145,523. Chief items were—Wool, greasy, £55,497; hides and skins, £38,979; and apples, fresh, £32,244.

**Russia.** *Total Imports of Russian Origin*, £81,235. Chief items were—Fish, preserved in tins; dressed furs; bristles, horsehair drafts; and hides and skins.

*Total Exports to Russia*, £4,141. Chief item was tallow, unrefined, £2,152.

**Switzerland.** *Total Imports of Swiss Origin*, £926,144. Chief items were—Piece goods of silk, £250,143; metal manufactures and machinery, £186,132; apparel and attire, £162,191; clocks and watches, £89,919; handkerchiefs; manufactured fibres and yarns; and drugs and chemicals.

*Total Exports to Switzerland*, £18,324. Chief items were—Butter, £4,988; timepieces and parts, £3,316.

**Netherlands.** *Total Imports of Netherlands Origin*, £631,634. Principal items were—Electrical machinery and appliances, £364,566; paper, £29,688; drugs and chemicals, £21,643; caramel, caramel paste, cocoa butter, etc., £14,998; lamps and lampware, £13,973; piece goods and glass and glassware.

*Total Exports to Netherlands*, £387,611. Chief exports were—Wheat, £226,340; wool, £41,616; flour, £27,527; hides and skins, £21,170; and fresh apples, £11,712.

**China.** *Total Imports of Chinese Origin*, £347,641. The principal items were—Tea, £57,485; apparel and attire, £27,871; cosies and cushions, £26,767; ginger, £23,808; silk piece goods, £20,358; nuts, edible, £16,814; bristles, horsehair drafts, £16,664; rice, £15,948; seeds, kapok, and sesame, £12,524; tung, turkey red, etc., oil; and lace for attire.

*Total Exports to China*, £3,342,988. Of this total £3,333,344 was Australian produce. Principal items were—Wheat, £3,037,595; milk and cream, £87,545; timber, £51,827; butter, £41,028; leather, £21,278; sandalwood, £6,363; meats, £8,591; jams and jellies; and infants' and invalids' foods.

*Norway. Total Imports of Norwegian Origin*, £214,440. Principal items were—Paper, £120,446; dressed timber, £31,252; preserved fish, £37,046; wood pulp; and calcium carbide.

*Total Exports to Norway*, £48,076. Chief items were—Vessels transferred abroad, £23,000; and wheat, £20,894.

*Philippine Islands.—Total Imports of Philippine Islands Origin*, £39,957. Chief items were—Hemp, £32,263; tobacco and cigars; and timber.

*Total Exports to Philippine Islands*, £329,239. Principal items were—Frozen meats, £127,835; flour, £76,905; butter, £61,024; coal, £29,798; bacon and hams; milk and cream; jams and jellies; and leather.

*Hong Kong. Total Imports of Hong Kong Origin*, £14,436. Chief items were—Vessels, £7,940; ginger, £2,111; wicker, bamboo and cane, £1,394.

*Total Exports to Hong Kong*, £379,880. Chief Items were—Butter, £58,993; sandalwood, £62,741; leather, £50,743; wheat, £41,061; flour, £40,174; butter, £37,644; milk and cream, £25,781; bêche-de-mer; pig lead; bacon and hams; and tallow.

*Spain.—Total Imports of Spanish Origin*, £112,391. Chief items were—Corks, etc., £40,167; edible nuts, £28,404; chemicals, £14,056; liquorice; wine; and paints and varnishes.

*Total Exports to Spain*, £115,276. Chief items were—Wool, greasy, £103,868; and hides and skins, £9,836.

7. **Imports—States.**—Imports are recorded at the port of landing, and are credited to the State in which the port is situated. Complete records are not obtainable of interstate trade, and the State totals represent, therefore, the value of oversea goods consigned to the various States. They do not, moreover, represent the consumption within each State, as a proportion of the imports into New South Wales and Victoria is subsequently transhipped to the other States. The extent of this transshipment is indicated by the fact that in 1930-31 the excess of exports over imports in New South Wales amounted to £2.0 per head and in Victoria to £3.1 per head, whereas in the other States there was an excess of exports amounting in Queensland to £11.8, per head, South Australia £10.6, Western Australia £27.7, and Tasmania £6.9. The total imports for the last five years are given hereunder.

## IMPORTS.—STATES.

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
New South Wales ..	68,933,904	65,081,801	63,491,751	57,127,427	26,311,411
Victoria ..	55,500,936	47,911,131	46,005,650	42,301,093	20,305,201
Queensland ..	13,497,758	11,760,214	11,594,348	11,540,083	5,556,434
South Australia ..	15,507,260	12,509,300	11,305,866	9,360,275	3,916,258
Western Australia ..	9,447,033	9,011,294	9,453,169	8,879,010	4,060,261
Tasmania ..	1,732,889	1,640,817	1,765,052	1,834,530	790,817
Northern Territory ..	36,814	30,413	32,045	38,902	19,251
<b>Total ..</b>	<b>164,716,594</b>	<b>147,944,970</b>	<b>143,647,881</b>	<b>131,081,320</b>	<b>60,959,633</b> (a)

(a) British currency value.

8. **Exports—States.**—The following table gives the value of exports shipped from each State during the last five years. It must be noted that the value of goods transferred from one State to another for shipment to oversea countries is shown as an export from the State from which the goods were finally dispatched.

## EXPORTS.—STATES.

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
New South Wales ..	62,815,077	51,882,915	49,288,900	35,761,807	31,390,862
Victoria ..	34,741,689	31,728,558	39,437,225	36,499,943	25,857,887
Queensland ..	14,721,201	21,855,054	23,251,716	18,821,824	16,756,413
South Australia ..	17,123,012	18,030,143	14,811,542	15,009,496	10,061,535
Western Australia ..	13,067,922	16,252,679	15,301,307	16,004,694	15,704,211
Tasmania ..	2,396,496	3,434,456	2,706,042	2,970,913	2,317,472
Northern Territory ..	29,786	29,265	53,720	58,471	14,956
<b>Total</b> ..	<b>144,895,183</b>	<b>143,213,070</b>	<b>144,850,452</b>	<b>125,127,148</b>	<b>102,103,336</b>

(a)

(a) Recorded values. The estimated value of exports in British currency is as follows, viz.:—New South Wales, £27,148,000; Victoria, £22,578,000; Queensland, £14,774,000; South Australia, £8,719,000; Western Australia, £13,775,000; Tasmania, £1,892,000; Northern Territory, £18,000; Total, £88,904,000.

9. Trade of Principal Ports.—The next table gives the value of imports received at, and exports dispatched from, the principal ports of Australia during 1929-30 and 1930-31.

## OVERSEA TRADE.—PRINCIPAL PORTS.

Port.	1929-30.			1930-31.		
	Imports.	Exports.	Total.	Imports.	Exports.	Total.
<i>New South Wales.</i>	£	£	£	£	£	£
Sydney ..	54,746,941	34,561,106	89,308,047	25,596,681	30,313,159	55,909,840
Newcastle ..	1,601,026	853,713	2,454,739	665,028	980,417	1,645,445
Other Ports ..	169,241	346,988	516,229	49,702	97,286	146,988
<b>Total</b> ..	<b>56,517,208</b>	<b>35,761,807</b>	<b>92,279,015</b>	<b>26,311,411</b>	<b>31,390,862</b>	<b>57,702,273</b>
<i>Victoria.</i>						
Melbourne ..	40,782,668	34,436,204	75,218,872	19,841,286	23,118,364	42,959,650
Geelong ..	958,265	939,467	1,897,732	380,414	1,915,937	2,296,351
Other Ports ..	140,591	1,124,272	1,264,863	83,501	823,586	907,087
<b>Total</b> ..	<b>41,881,524</b>	<b>36,499,943</b>	<b>78,381,467</b>	<b>20,305,201</b>	<b>25,857,887</b>	<b>46,163,088</b>
<i>Queensland.</i>						
Brisbane ..	9,541,510	13,666,876	23,208,386	4,650,181	12,712,064	17,362,245
Rockhampton ..	303,684	612,583	916,267	139,757	518,006	657,763
Townsville ..	944,482	1,733,962	2,678,444	481,978	1,301,913	1,783,891
Other Ports ..	537,168	2,808,403	3,345,571	284,518	2,224,430	2,508,948
<b>Total</b> ..	<b>11,326,844</b>	<b>18,821,824</b>	<b>30,148,668</b>	<b>5,556,434</b>	<b>16,756,413</b>	<b>22,312,847</b>
<i>South Australia.</i>						
Port Adelaide (including Adelaide)	8,879,188	9,156,449	18,035,637	3,571,621	6,010,787	9,582,408
Port Pirie ..	288,300	3,696,760	3,985,060	301,190	2,630,265	2,931,455
Wallaroo ..	40,543	929,333	969,876	24,618	750,302	774,920
Other Ports ..	20,754	1,226,954	1,247,708	18,829	670,181	689,010
<b>Total</b> ..	<b>9,228,785</b>	<b>15,009,496</b>	<b>24,238,281</b>	<b>3,916,258</b>	<b>10,061,535</b>	<b>13,977,793</b>
<i>Western Australia.</i>						
Fremantle (Perth)	8,409,499	12,323,070	20,732,569	3,822,887	12,993,213	16,816,100
Bunbury ..	20,005	1,194,920	1,214,925	35,309	959,668	994,977
Other Ports ..	331,667	2,486,704	2,818,371	202,065	1,751,330	1,953,395
<b>Total</b> ..	<b>8,761,171</b>	<b>16,004,694</b>	<b>24,765,865</b>	<b>4,060,261</b>	<b>15,704,211</b>	<b>19,764,472</b>

OVERSEA TRADE.—PRINCIPAL PORTS—*continued.*

Port.	1929-30.			1930-31.		
	Imports.	Exports.	Total.	Imports.	Exports.	Total.
	£	£	£	£	£	£
<i>Tasmania.</i>						
Hobart ..	869,947	2,444,565	3,314,512	486,775	1,885,874	2,372,649
Launceston ..	765,099	416,246	1,181,345	268,610	341,631	610,241
Other Ports ..	157,483	110,102	267,585	35,432	89,967	125,399
Total ..	1,792,529	2,970,913	4,763,442	790,817	2,317,472	3,108,289
<i>Northern Australia.</i>						
Darwin ..	37,874	58,471	96,345	19,251	14,956	34,207
Grand Total	129,545,935	125,127,148	254,673,083	60,959,633	102,103,336 (a)	163,062,969 (a)

(a) Recorded values. The estimated value in British currency is as follows, viz.:—Exports, £88,904,142; total, £149,863,775.

10. Trade in Calendar Years.—For the purpose of comparison with countries which record oversea trade in calendar years the following table has been compiled to show Australian imports and exports for each quarter of the calendar years 1927 to 1931 inclusive.

## OVERSEA TRADE, AUSTRALIA.—CALENDAR YEARS.

Year.	Merchandise.		Bullion and Specie.		Total.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
	£1,000 (s).	£1,000 (s).	£1,000 (s).	£1,000 (s).	£1,000 (s).	£1,000 (s).
QUARTER ENDED 31ST MARCH.						
1927 ..	42,063	42,172	173	1,158	42,236	43,330
1928 ..	35,195	42,552	104	517	35,299	43,069
1929 ..	35,416	44,921	99	1,490	35,515	46,411
1930 ..	32,208	(R) 24,246 (S) 24,246	56	(R) 13,853 (S) 13,853	32,264	(R) 38,099 (S) 38,099
1931 ..	12,781	(R) 24,123 (S) 18,975	140	(R) 1,223 (S) 1,223	12,921	(R) 25,346 (S) 20,198
QUARTER ENDED 30TH JUNE.						
1927 ..	38,295	29,429	214	1,979	38,509	31,408
1928 ..	31,166	27,373	592	493	31,758	27,866
1929 ..	35,089	28,602	74	549	35,163	29,151
1930 ..	23,883	(R) 23,607 (S) 22,244	118	(R) 3,214 (S) 3,214	24,001	(R) 26,821 (S) 25,458
1931 ..	9,427	(R) 21,626 (S) 16,572	98	(R) 4,762 (S) 4,762	9,525	(R) 26,388 (S) 21,334
QUARTER ENDED 30TH SEPTEMBER.						
1927 ..	41,633	25,537	132	2,465	41,765	28,002
1928 ..	32,456	21,665	108	1,522	32,564	23,187
1929 ..	37,763	20,048	83	2,879	37,846	22,927
1930 ..	20,295	(R) 16,998 (S) 16,017	72	(R) 6,416 (S) 6,416	20,367	(R) 23,414 (S) 22,433
1931 ..	10,232	(R) 15,934 (S) 12,232	122	(R) 2,044 (S) 1,580	10,354	(R) 17,978 (S) 13,812

(R) Recorded values.

(S) British currency values.

Year.	Merchandise.		Bullion and Specie.		Total.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
	£1,000 (S).	£,1000 (S).	£,1,000 (S).	£,1,000 (S).	£1,000 (S).	£1,000 (S).
QUARTER ENDED 31ST DECEMBER.						
1927 ..	38,943	42,003	180	266	39,123	42,269
1928 ..	40,321	42,518	85	366	40,406	42,884
1929 ..	36,904	29,477	66	7,803	36,970	37,280
1930 ..	18,058	(R) 26,309 (S) 24,293	89	(R) 646 (S) 646	18,147	(R) 26,955 (S) 24,939
1931 ..	11,018	(R) 29,784 (S) 23,144	100	(R) 2,328 (S) 1,834	11,118	(R) 32,112 (S) 24,978
TOTAL FOR YEAR.						
1927 ..	160,934	139,141	699	5,868	161,633	145,009
1928 ..	139,138	134,108	889	2,898	140,027	137,006
1929 ..	145,172	123,048	322	12,721	145,494	135,769
1930 ..	94,444	(R) 91,160 (S) 86,800	335	(R) 24,129 (S) 24,129	94,779	(R) 115,289 (S) 110,929
1931 ..	43,458	(R) 91,467 (S) 70,923	460	(R) 10,357 (S) 9,399	43,918	(R) 101,824 (S) 80,322

(R) Recorded values.

(S) British currency values.

### § 6. Trade with Eastern Countries.

1. Principal Articles Exported.—The following table shows the value of exports of Australian and other produce from Australia to Eastern countries during the last five years. The countries concerned in this trade are China, India and Ceylon, Japan, Netherlands East Indies and Timor (Portuguese), Philippine Islands, Malaya (British), Hong Kong, British Borneo, Korea, French Indo-China, and Siam. During the year 1930-31 the export trade with Eastern countries showed an improvement in value over the year 1929-30 owing to increased shipments of wheat to China and of wool to Japan. Exports of butter, flour and milk declined.

#### TOTAL EXPORTS FROM AUSTRALIA TO EASTERN COUNTRIES.

Article.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Biscuits .. .. .	92,784	88,138	79,107	60,411	41,253
Butter .. .. .	772,296	845,177	883,372	836,253	609,734
Cheese .. .. .	12,109	10,708	10,629	12,163	9,963
Coal .. .. .	215,701	180,628	67,006	27,089	82,540
Copper .. .. .	17,558	..	..	..	..
Grain and pulse—					
Wheat .. .. .	1,991,341	1,415,714	8,756,564	2,645,318	6,540,867
Flour .. .. .	1,874,686	1,832,721	1,978,031	1,969,516	1,193,999
Other (prepared and unprepared) ..	19,708	21,054	56,385	77,226	33,013
Hay, chaff, and compressed fodder ..	30,956	18,797	16,131	20,362	11,648
Horses .. .. .	104,943	111,698	118,296	124,522	95,857
Iron Ore .. .. .	..	..	..	92,831	27,492
Iron and steel (scrap) .. .. .	19,096	12,004	18,307	26,597	1,879
Jams and Jellies .. .. .	60,776	55,914	46,493	33,296	29,306
Lead, Pig .. .. .	144,737	112,063	123,953	92,323	70,180
Leather .. .. .	322,195	300,983	327,355	166,551	124,168
Meats .. .. .	495,169	486,228	568,798	560,698	418,749
Milk and cream .. .. .	930,631	1,131,146	1,283,929	920,558	567,170
Pearl shell and trochus shell .. .. .	87,263	95,950	95,327	66,612	45,925
Sandalwood .. .. .	251,625	194,616	278,238	89,427	72,969
Skins, hoofs, horns, bones, sinews, tallow .. .. .	651,228	547,190	578,041	540,389	430,935
Sulphate of ammonia .. .. .	30,079	3,105	..	..	..
Timber (undressed) .. .. .	332,129	239,806	151,712	139,116	165,488
Wool .. .. .	7,892,553	10,371,126	8,806,489	4,512,341	6,528,817
Other merchandise .. .. .	1,180,336	1,348,213	1,338,164	1,046,900	769,058
Total merchandise .. .. .	17,529,899	19,423,879	25,582,324	14,060,499	17,871,910
Specie, and gold and silver bullion ..	2,274,885	1,669,388	1,845,904	3,516,873	1,477,543
Total Exports .. .. .	19,804,784	21,093,267	27,428,288	17,577,372	19,349,453

(a) Australian currency value. The estimated British currency value is £16,484,621.



2. **Destination of Exports of Merchandise.**—The next table shows the destination of the merchandise exported to Eastern countries during the last five years.

### EXPORTS OF MERCHANDISE FROM AUSTRALIA TO EASTERN COUNTRIES.

Country of Destination.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
China .. .. .	410,073	310,482	1,075,718	273,507	3,310,048
Hong Kong .. .. .	463,041	482,359	600,889	336,315	379,880
India and Ceylon .. .. .	1,757,470	1,499,102	7,702,149	2,894,139	2,031,033
Japan .. .. .	10,362,990	12,571,282	11,518,986	6,555,003	9,500,499
Malaya (British) .. .. .	1,917,250	2,007,680	1,974,431	1,389,321	818,917
Netherlands East Indies .. .. .	2,049,443	1,945,734	2,057,664	2,080,622	1,412,406
Philippine Islands .. .. .	483,722	456,989	430,993	390,750	329,239
Other Eastern Countries .. .. .	85,910	150,251	221,494	140,842	89,888
<b>Total .. .. .</b>	<b>17,529,899</b>	<b>19,423,879</b>	<b>25,582,324</b>	<b>14,060,499</b>	<b>41,787,190</b>

(a) Australian currency value. The estimated British currency value is £15,225,839.

3. **Imports of Merchandise from Eastern Countries.**—The value of imports into Australia from Eastern countries during the last five years is shown in the appended table. The principal commodities imported therefrom in 1930-31, and the countries of origin, were as follows:—Tea—India and Ceylon, £1,161,351, and Netherlands East Indies, £1,016,867; Petroleum—Netherlands East Indies, £2,285,563; Bags and Sacks—India, £2,746,241; Silk Piece Goods—Japan, £1,256,623.

By comparison with the previous table, the balance of trade with Eastern countries can be ascertained and shows an excess of imports into Australia in the years 1926-27, 1927-28 and 1929-30, and an excess of exports from Australia in the years 1928-29 and 1930-31.

### IMPORTS OF MERCHANDISE INTO AUSTRALIA FROM EASTERN COUNTRIES.

Country of Origin.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
China .. .. .	785,068	685,518	633,217	568,013	347,432
Hong Kong .. .. .	7,738	14,421	13,273	17,420	14,436
India and Ceylon .. .. .	8,814,627	7,490,806	8,018,677	7,146,590	4,839,970
Japan .. .. .	5,183,470	4,282,614	4,707,299	4,181,643	2,379,558
Malaya (British) .. .. .	2,025,741	1,804,602	1,133,963	812,513	274,894
Netherlands East Indies .. .. .	6,451,688	5,703,345	7,091,619	6,282,653	4,011,194
Philippine Islands .. .. .	215,176	208,547	163,030	174,518	39,957
Other Eastern Countries .. .. .	211,248	294,956	52,492	122,321	39,744
<b>Total .. .. .</b>	<b>23,694,756</b>	<b>20,484,809</b>	<b>21,813,570</b>	<b>19,305,671</b>	<b>11,947,185</b>

### § 7. Classified Summary of Australian Oversea Trade.

1. Imports.—The following table shows the value of imports into Australia during each of the last five years, arranged in classified order in accordance with the statistical classification which came into operation on 1st July, 1922:—

#### IMPORTS TO AUSTRALIA—CLASSES.

Classes.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
I. Animal foodstuffs, etc. . . . .	3,099,388	2,866,708	2,367,393	2,182,397	911,076
II. Vegetable foodstuffs; non-alcoholic beverages, etc. . . . .	7,553,785	6,605,536	6,246,824	6,037,798	3,372,099
III. Alcoholic liquors, etc. . . . .	1,815,612	1,767,497	1,876,944	1,583,368	530,166
IV. Tobacco, etc. . . . .	2,704,754	2,960,620	2,694,546	2,422,648	1,565,636
V. Live animals . . . . .	167,030	120,007	159,325	213,229	67,628
VI. Animal substances, etc. . . . .	1,731,921	2,182,966	1,972,615	1,953,561	914,821
VII. Vegetable substances, etc. . . . .	3,484,472	3,242,307	3,009,229	2,879,321	1,405,258
VIII. Apparel, textiles, etc. . . . .	42,416,966	38,488,491	36,710,916	32,546,428	15,898,259
IX. Oils, fats, and waxes . . . . .	10,977,790	9,872,014	11,106,944	11,565,261	6,927,042
X. Paints and varnishes . . . . .	814,378	778,663	784,594	686,195	263,079
XI. Stones and minerals, etc. . . . .	941,453	1,060,830	1,010,951	1,668,078	401,293
XII. Metals, metal manufactures, and machinery . . . . .	51,282,059	42,801,886	42,987,433	36,323,308	14,338,793
XIII. Rubber and leather, etc. . . . .	5,593,757	4,157,292	2,943,661	2,070,294	769,959
XIV. Wood and wicker, etc. . . . .	5,516,478	5,818,541	4,880,755	4,629,167	1,113,854
XV. Earthenware, etc. . . . .	2,610,987	2,422,822	2,455,467	2,251,940	818,987
XVI. Paper and stationery . . . . .	7,936,028	7,873,998	7,778,529	7,912,167	4,565,813
XVII. Jewellery, etc. . . . .	2,849,587	2,621,411	2,658,148	2,444,442	895,532
XVIII. Optical, surgical, and scientific instruments . . . . .	1,853,812	1,464,794	1,443,356	1,144,638	1,067,162
XIX. Drugs, chemicals, etc. . . . .	5,027,176	4,811,212	5,213,338	5,082,161	3,066,287
XX. Miscellaneous . . . . .	5,695,935	4,979,163	4,979,198	5,189,196	3,664,865
XXI. Gold and silver; and bronze specie . . . . .	643,226	1,048,152	367,715	325,723	399,024
<b>Total . . . . .</b>	<b>164,716,594</b>	<b>147,944,970</b>	<b>143,647,881</b>	<b>131,081,320</b>	<b>60,959,633</b>

2. Exports.—In the appended tables the exports from Australia are shown in classes according to the same classification as for imports, distinguishing (a) Australian Produce; (b) Other Produce (Re-exports); and (c) Total Exports.

#### EXPORTS FROM AUSTRALIA.—CLASSES.

Classes.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
<b>A. AUSTRALIAN PRODUCE.</b>					
	£	£	£	£	£
I. Animal foodstuffs, etc. . . . .	11,639,999	13,086,175	15,475,951	14,649,566	15,059,866
II. Vegetable foodstuffs; non-alcoholic beverages, etc. . . . .	32,117,370	27,186,943	33,543,785	22,515,068	25,569,888
III. Alcoholic liquors, etc. . . . .	875,036	1,103,910	544,538	601,653	555,713
IV. Tobacco, etc. . . . .	382,669	379,976	420,499	363,457	282,908
V. Live animals . . . . .	246,348	235,584	279,189	240,763	136,659
VI. Animal substances, etc. . . . .	69,168,778	76,563,648	71,456,567	43,827,255	36,174,451
VII. Vegetable substances, etc. . . . .	398,192	553,415	594,334	337,089	212,657
VIII. Apparel, textiles, etc. . . . .	164,180	180,923	172,474	200,859	175,401
IX. Oils, fats, and waxes . . . . .	1,589,341	1,274,373	1,624,812	1,070,626	689,739
X. Paints and varnishes . . . . .	47,306	34,858	50,320	51,567	39,428
XI. Stones and minerals, etc. . . . .	2,174,545	2,585,864	1,644,414	1,944,020	1,291,729
XII. Metals, metal manufactures, and machinery . . . . .	6,143,178	6,097,113	5,395,367	5,774,982	4,312,849
XIII. Rubber and leather, etc. . . . .	655,949	628,192	576,419	523,887	426,172
XIV. Wood and wicker, etc. . . . .	1,492,037	1,260,689	1,178,698	1,042,042	783,732
XV. Earthenware, etc. . . . .	89,426	120,945	77,680	89,260	59,549
XVI. Paper and stationery . . . . .	157,294	158,884	162,908	178,437	158,848
XVII. Jewellery, etc. . . . .	103,675	104,087	61,178	110,115	55,356
XVIII. Optical, surgical, and scientific instruments . . . . .	159,653	182,650	240,604	249,529	174,045
XIX. Drugs, chemicals, etc. . . . .	615,884	489,740	581,000	535,148	423,801
XX. Miscellaneous . . . . .	589,362	995,248	577,772	562,722	320,459
XXI. Gold and silver; and bronze specie . . . . .	12,303,031	3,738,905	3,892,352	2,748,839	12,817,079
<b>Total . . . . .</b>	<b>141,113,153</b>	<b>136,962,122</b>	<b>138,540,861</b>	<b>122,616,884</b>	<b>99,920,329</b>

(a) Recorded value. The estimated British currency value is £86,988,142.

EXPORTS FROM AUSTRALIA—CLASSES—*continued.*

Classes.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
<b>B. OTHER PRODUCE.—RE-EXPORTS.</b>					
	£	£	£	£	£
I. Animal foodstuffs, etc. ..	39,598	21,655	22,379	15,858	15,877
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	265,540	263,571	225,239	215,301	100,862
III. Alcoholic liquors, etc. ..	35,322	40,525	29,873	83,304	40,276
IV. Tobacco, etc. ..	83,657	103,393	108,099	97,191	80,459
V. Live animals ..	10,363	27,010	25,196	63,403	36,638
VI. Animal substances, etc. ..	33,618	38,627	40,878	34,665	10,759
VII. Vegetable substances, etc. ..	680,755	502,739	409,360	313,216	16,181
VIII. Apparel, textiles, etc. ..	381,919	368,666	358,381	334,686	298,373
IX. Oils, fats, and waxes ..	78,053	86,180	89,620	78,826	42,519
X. Paints and varnishes ..	8,623	8,418	10,530	7,981	6,129
XI. Stones and minerals, etc. ..	2,375	2,980	1,589	1,587	2,153
XII. Metals, metal manufactures, and machinery ..	622,751	718,443	742,469	636,016	677,535
XIII. Rubber and leather, etc. ..	66,136	67,857	61,404	78,645	65,120
XIV. Wood and wicker, etc. ..	44,640	57,129	61,677	57,316	39,233
XV. Earthenware, etc. ..	13,849	13,828	16,201	15,345	12,580
XVI. Paper and stationery ..	76,838	91,405	82,647	83,463	65,981
XVII. Jewellery, etc. ..	124,140	53,049	166,093	69,590	63,331
XVIII. Optical, surgical, and scientific instruments ..	110,636	91,405	106,092	108,785	166,334
XIX. Drugs, chemicals, etc. ..	46,848	47,986	65,962	47,468	40,351
XX. Miscellaneous ..	239,583	1,628,303	433,871	167,608	172,439
XXI. Gold and silver; and bronze specie ..	6,200	10,650	34,168	10	229,877
<b>Total .. .. .</b>	<b>2,971,444</b>	<b>4,243,819</b>	<b>3,091,728</b>	<b>2,510,264</b>	<b>2,183,007</b> (a)

(a) Recorded value. The estimated British currency value is £1,916,000.

**C. TOTAL EXPORTS.—AUSTRALIAN PRODUCE AND RE-EXPORTS.**

	£	£	£	£	£
I. Animal foodstuffs, etc. ..	11,679,597	13,107,830	15,498,330	14,665,424	15,075,743
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	32,382,910	27,450,523	33,769,024	22,730,369	25,670,750
III. Alcoholic liquors, etc. ..	910,358	1,144,435	574,411	684,957	595,989
IV. Tobacco, etc. ..	466,326	483,369	528,598	460,648	363,367
V. Live animals ..	256,711	262,594	304,385	304,166	173,297
VI. Animal substances, etc. ..	69,202,396	76,602,275	71,497,445	43,861,920	36,185,210
VII. Vegetable substances, etc. ..	1,078,947	1,056,145	1,003,694	650,305	228,838
VIII. Apparel, textiles, etc. ..	546,099	549,589	530,855	535,545	473,774
IX. Oils, fats, and waxes ..	1,667,394	1,360,553	1,714,432	1,149,452	732,258
X. Paints and varnishes ..	55,929	43,276	60,850	59,548	45,557
XI. Stones and minerals, etc. ..	2,176,920	2,588,844	1,636,003	1,945,607	1,293,882
XII. Metals, metal manufactures, and machinery ..	6,765,929	6,815,556	6,137,836	6,410,998	4,990,384
XIII. Rubber and leather, etc. ..	722,085	696,049	637,823	602,532	491,292
XIV. Wood and wicker, etc. ..	1,536,677	1,317,818	1,240,375	1,099,358	822,965
XV. Earthenware, etc. ..	103,275	134,773	93,881	104,605	72,129
XVI. Paper and stationery ..	234,032	250,289	245,555	261,900	224,829
XVII. Jewellery, etc. ..	227,815	157,136	227,271	179,705	118,687
XVIII. Optical, surgical, and scientific instruments ..	270,289	274,055	346,696	358,314	340,379
XIX. Drugs, chemicals, etc. ..	662,732	537,726	646,962	582,616	464,152
XX. Miscellaneous ..	828,945	2,623,551	1,011,643	730,330	692,898
XXI. Gold and silver; and bronze specie ..	12,309,231	3,749,555	3,926,520	27,748,849	13,046,956
<b>Total .. .. .</b>	<b>144,084,597</b>	<b>141,205,941</b>	<b>141,632,589</b>	<b>125,127,148</b>	<b>102,103,336</b> (a)

(a) Recorded value. The estimated British currency value is £88,904,142.

3. Imports of Principal Articles.—The next table shows the quantity, where available, and the value of the principal articles imported into Australia during the last five years. The articles are given in the order in which they appear in the detailed classification.

PRINCIPAL COMMODITIES IMPORTED.—AUSTRALIA.

Article.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Fish preserved in tins	lb. 30,067,887	23,496,685	28,266,411	28,039,277	13,126,217
	£ 1,418,103	1,141,493	1,265,510	1,342,016	501,080
Tea .. .. .	lb. 52,428,163	45,378,944	50,038,049	50,790,402	46,433,350
	£ 3,908,607	3,473,808	3,505,605	3,298,705	2,245,567
Whisky .. .. .	gal. 925,710	1,031,212	1,024,807	946,523	385,896
	£ 1,134,779	1,104,257	1,216,154	1,113,512	446,418
Tobacco and preparations thereof	£ 2,704,754	2,960,620	2,694,546	2,422,648	1,565,636
Copra .. .. .	cwt. 784,896	611,367	576,414	520,262	190,312
	£ 918,164	701,156	651,683	497,320	97,999
Socks and stockings .. .. .	£ 1,659,624	1,348,950	1,148,409	792,456	67,297
Gloves .. .. .	£ 559,582	505,512	520,121	487,869	220,492
Hats and caps .. .. .	£ 870,124	952,126	983,059	683,501	121,386
Trimnings and ornaments .. .. .	£ 1,245,534	917,323	860,714	721,257	454,962
Carpets and carpeting .. .. .	£ 1,464,201	1,428,745	1,389,022	1,343,932	468,461
Floorcloths and linoleums .. .. .	£ 1,308,612	1,202,198	1,046,787	796,865	243,601
Piece Goods—					
Canvas and duck .. .. .	£ 836,142	711,209	689,991	645,828	255,527
Cotton and linen .. .. .	£ 10,028,947	8,593,908	7,571,863	7,488,675	4,123,483
Silk or containing silk .. .. .	£ 6,866,738	5,963,339	6,532,742	5,500,268	3,017,936
Woolen or containing wool .. .. .	£ 2,450,573	2,525,179	1,490,957	1,201,018	185,235
Sewing silks, cottons, etc. .. .. .	£ 895,434	916,949	789,032	873,935	468,591
Bags and sacks .. .. .	£ 4,316,592	3,640,348	4,098,972	2,906,817	2,753,911
Yarns—					
Cotton .. .. .	£ 836,487	672,496	858,986	939,609	454,050
Woolen .. .. .	£ 568,843	315,157	283,890	301,829	44,736
Kerosene .. .. .	gal. 33,543,260	34,704,643	40,091,368	41,162,038	35,158,991
	£ 1,264,257	1,036,323	1,159,438	1,089,938	707,806
Lubricating (mineral) oil	gal. 13,818,490	12,232,088	16,861,428	13,532,413	10,957,159
	£ 1,153,357	936,253	1,319,081	1,139,580	738,310
Petroleum .. .. .	gal. 223,396,393	252,287,568	304,582,469	361,975,866	264,085,522
	£ 7,560,354	6,878,983	7,674,965	8,547,817	4,877,840
Electrical machinery and appliances .. .. .	£ 5,755,495	5,405,227	4,809,652	4,583,660	2,334,260
Electrical cable and wire, covered .. .. .	cwt. 317,919	331,348	283,484	306,163	127,568
	£ 1,679,972	1,721,688	1,317,115	1,517,817	507,669
Agricultural machinery .. .. .	£ 722,094	691,343	611,875	443,707	174,942
Metal-working machinery .. .. .	£ 599,252	509,574	398,684	407,190	110,344
Traction engines and road rollers .. .. .	£ 1,248,601	1,196,660	1,239,124	1,059,300	313,589
Iron and Steel—					
Pipes and tubes .. .. .	£ 1,691,954	1,554,577	1,805,565	1,390,469	461,715
Plate and sheet .. .. .	£ 4,723,733	4,703,837	3,954,003	3,713,883	1,339,715
Cutlery .. .. .	£ 984,835	819,994	812,659	673,658	364,289
Tools of trade .. .. .	£ 1,257,031	1,057,318	1,074,219	922,499	413,028
Motor cars, chassis, bodies, and parts .. .. .	£ 14,177,762	8,255,671	10,677,344	6,794,769	860,037
Rubber and rubber manufactures .. .. .	£ 5,085,980	3,721,194	2,497,423	1,684,621	682,755
Timber, undressed, including Logs (a) .. .. .	sp. ft. 367,820,251	431,852,496	323,068,698	338,462,347	116,452,047
	£ 3,455,414	3,754,288	3,054,597	2,915,619	629,673
Crockery .. .. .	£ 766,157	748,167	741,481	694,740	391,531
Glass and glassware .. .. .	£ 1,301,772	1,219,762	1,215,092	1,098,219	280,532
Paper, printing .. .. .	£ 3,232,956	3,086,023	3,046,868	3,129,705	1,651,410
Stationery and paper manufactures .. .. .	£ 2,781,311	2,926,753	2,800,175	2,738,781	1,805,769
Drugs, chemicals, and fertilizers .. .. .	£ 5,027,176	4,811,212	5,213,338	5,082,161	3,069,287
Musical instruments, pianos, etc. .. .. .	£ 1,450,828	961,052	646,638	343,242	66,873
Outside Packages .. .. .	£ .. .. .	£ .. .. .	£ .. .. .	£ 1,535,385	1,794,965
All other articles .. .. .	£ 54,804,463	52,874,298	49,970,502	46,216,500	19,616,926
Total Imports .. .. .	£ 164,716,594	147,944,970	143,647,881	131,081,320	60,959,633

(a) Exclusive of undressed timber not measured in super. feet.

4. Exports of Principal Articles of Australian Produce.—(a) Quantities. The following table shows the quantities of the principal articles of Australian produce exported during the last five years. The articles are given in the order in which they appear in the detailed classification.

PRINCIPAL COMMODITIES EXPORTED.—QUANTITIES, AUSTRALIA.

Article.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Butter .. .. .centil.	765,165	991,649	1,024,428	1,073,661	1,631,807
Cheese .. .. .centil.	36,438	69,267	83,310	30,894	85,947
Eggs in shell .. .. .doz.	3,151,965	1,104,005	2,916,338	3,570,219	5,970,696
Milk and cream .. .. .centil.	177,525	206,228	253,852	164,935	123,510
Fruits, dried .. .. .centil.	633,620	631,851	1,071,543	1,144,081	1,233,706
Fruits, fresh .. .. .centil.	757,598	1,865,851	826,523	1,959,418	1,680,254
Barley .. .. .centil.	1,010,740	625,722	639,507	323,771	1,664,324
Wheat .. .. .centil.	44,355,189	31,825,414	49,137,747	24,234,424	71,533,976
Flour .. .. .centil.	9,869,282	8,675,900	11,276,066	9,314,664	10,484,864
Sugar (cane) .. .. .cwt.	1,292,301	3,051,227	3,988,837	3,634,216	3,983,096
Wine .. .. .gal.	3,077,588	3,769,257	1,736,787	2,181,533	2,205,542
Tobacco, manufactured .. .. .centil.	14,101	13,656	16,780	13,727	10,309
Wool (in terms of greasy wool) .. .. .centil.	8,277,997	7,965,460	8,577,417	7,892,288	8,602,162
Pearlshell .. .. .cwt.	45,451	44,119	45,058	58,503	48,353
Sandalwood .. .. .cwt.	172,309	128,248	189,403	72,435	59,273
Tallow (unrefined) .. .. .cwt.	839,692	668,714	777,563	598,533	527,007
Coal .. .. .ton	807,148	555,617	346,658	294,503	387,851
Concentrates .. .. .cwt.	2,504,583	6,432,199	3,944,942	4,154,519	3,604,319
Copper .. .. .cwt.	83,045	146,473	131,991	219,582	243,570
Lead .. .. .cwt.	2,591,327	3,276,400	2,892,551	2,322,401	3,093,195
Zinc—bar, block, dust .. .. .cwt.	547,190	840,832	652,931	658,846	909,535
Tin—Ingots .. .. .cwt.	37,206	30,235	25,634	17,128	11,990
Timber, undressed, including Logs (a) .. .. .sup. ft.	123,669,022	97,964,091	91,190,142	81,348,857	62,396,283
Soap .. .. .centil.	165,533	174,307	168,393	159,822	137,699

(a) Exclusive of undressed timber not measured in super. feet.

(b) Values. The values of the principal articles of Australian produce exported during the same period as in the preceding table are given in the table hereunder.

PRINCIPAL COMMODITIES EXPORTED.—VALUES, AUSTRALIA.

Article.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Butter .. .. .	4,981,234	6,727,323	7,159,446	7,001,540	8,120,165
Cheese .. .. .	131,168	260,235	329,700	124,716	244,066
Eggs in shell .. .. .	233,670	85,844	218,929	255,571	321,627
Meats .. .. .	5,198,812	4,811,522	6,335,949	6,259,924	5,747,995
Milk and cream .. .. .	1,080,963	1,188,504	1,424,313	997,512	610,653
Fruits, dried .. .. .	1,647,172	1,600,093	2,299,330	2,169,832	2,248,791
Fruits, fresh .. .. .	805,260	1,818,624	941,880	1,861,428	1,588,027
Barley .. .. .	383,103	291,636	228,707	99,046	403,919
Wheat .. .. .	20,785,414	14,629,899	20,336,199	10,036,535	14,744,468
Flour .. .. .	6,254,316	5,229,463	5,998,600	4,948,927	3,513,573
Sugar (cane) .. .. .	1,107,608	2,161,916	2,390,810	2,216,468	1,805,777
Wine .. .. .	829,799	1,058,626	496,739	553,658	518,110
Tobacco, manufactured .. .. .	362,916	352,931	399,036	347,717	272,418
Hides and skins .. .. .	8,547,198	9,896,827	9,280,898	6,584,614	3,635,577
Wool .. .. .	60,053,358	66,095,901	61,612,995	36,596,600	32,001,760
Pearlshell .. .. .	352,626	337,469	339,016	450,615	354,992
Sandalwood .. .. .	252,491	193,222	278,238	89,427	72,969
Tallow (unrefined) .. .. .	1,415,888	1,080,308	1,384,191	991,592	643,405
Coal .. .. .	965,899	690,995	428,754	346,916	411,612
Concentrates .. .. .	979,928	1,689,520	994,821	1,388,905	744,098
Copper .. .. .	161,411	265,708	319,192	625,649	485,547
Lead .. .. .	3,852,792	3,516,236	3,233,390	3,431,939	2,418,974
Zinc—bar, block, dust .. .. .	932,491	1,231,752	913,191	810,457	723,894
Tin—Ingots .. .. .	549,559	389,388	282,636	167,863	81,660
Leather .. .. .	576,074	537,700	489,375	444,439	366,558
Timber, undressed, including Logs (a) .. .. .	1,422,933	1,164,801	1,100,325	965,647	712,501
Soap .. .. .	201,346	310,695	297,937	292,469	258,591
Gold .. .. .	11,367,771	2,804,249	2,958,137	26,868,534	11,382,446
Silver .. .. .	935,230	934,623	934,198	880,249	626,956
All other articles .. .. .	4,654,723	5,606,112	5,133,929	4,808,104	4,859,200
Total Exports (Australian Produce) .. .. .	141,113,153	136,962,122	138,540,861	122,616,884	99,920,329

(a) Exclusive of undressed timber not measured in super. feet.

(b) Recorded value. The

estimated British currency value is £86,988,142.

5. Imports of Merchandise, Specie and Bullion.—The table hereunder gives the value in British currency of imports into Australia during each of the last five years, grouped under the headings—Merchandise, and Specie and Bullion. The imports of merchandise are shown under the sub-headings of “free” and “dutiable” goods.

#### IMPORTS OF MERCHANDISE, SPECIE AND BULLION—AUSTRALIA.

Year.	Merchandise.			Specie and Bullion.	Total Imports.
	Free Goods.	Dutiable Goods.	Total Merchandise.		
	£	£	£	£	£
1926-27 ..	59,188,128	104,939,631	164,127,759	588,835	164,716,594
1927-28 ..	53,243,691	93,692,849	146,936,540	1,008,430	147,944,970
1928-29 ..	53,607,067	89,674,382	143,281,449	366,432	143,647,881
1929-30 ..	53,971,857	76,786,677	130,758,534	322,786	131,081,320
1930-31 ..	26,023,622	34,537,165	60,560,787	398,846	60,959,633

(a) The estimated Australian currency value was £68,808,000.

6. Exports of Merchandise, Specie and Bullion.—The next table shows the recorded value of exports from Australia during each of the last five years, grouped under the headings—Merchandise, and Specie and Bullion, giving the exports of Australian Produce and Other Produce separately.

#### EXPORTS OF MERCHANDISE, SPECIE AND BULLION.—AUSTRALIA.

Year.	Merchandise.			Specie and Bullion.			Total Exports. (a)
	Australian Produce.	Other Produce.	Total Merchandise.	Australian Produce.	Other Produce.	Total Specie and Bullion.	
	£	£	£	£	£	£	£
1926-27..	128,816,047	2,965,244	131,781,291	12,297,106	6,200	12,303,306	144,084,597
1927-28..	133,232,024	4,233,169	137,465,193	3,730,098	10,650	3,740,748	141,205,941
1928-29..	134,648,509	3,057,560	137,706,069	3,892,352	34,168	3,926,520	141,632,589
1929-30..	94,868,045	2,510,254	97,378,299	27,748,839	10	27,748,849	125,127,148
1930-31	(b) 87,103,256	1,953,124	89,056,380	12,817,079	229,877	13,046,956	102,103,336
	(c) 74,171,063	1,686,123	75,857,186	12,817,079	229,877	13,046,956	88,904,142

(a) Does not include the value of Ships' Stores. See later table. (b) Recorded values. (c) British currency values.

7. Imports in Tariff Divisions.—In the following table the imports into Australia during the last five years have been classified in accordance with the sixteen divisions of the Customs Tariff 1921-31.

## IMPORTS IN TARIFF DIVISIONS—AUSTRALIA.

Tariff Division.	Imports.				
	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
I. Ale, Spirits, and Beverages .. ..	2,105,189	2,043,132	2,157,814	1,823,775	619,909
II. Tobacco and preparations thereof .. ..	2,704,754	2,960,620	2,694,546	2,422,648	1,565,636
III. Sugar .. ..	47,436	56,446	44,080	49,282	16,752
IV. Agricultural Products and Groceries .. ..	12,884,727	11,401,193	10,732,856	10,156,619	6,824,198
V. Textiles, Felts and Furs, and Manufactures thereof, and Attire .. ..	38,935,456	35,243,751	33,291,416	28,935,639	14,332,883
VI. Metals and Machinery	33,997,641	32,154,389	29,278,935	27,311,871	10,946,912
VII. Oils, Paints, and Varnishes .. ..	11,878,797	10,694,945	11,939,811	12,330,568	7,233,924
VIII. Earthenware, Cement, China, Glass, and Stone .. ..	3,458,945	3,396,286	3,221,320	2,851,314	1,106,687
IX. Drugs and Chemicals	3,234,162	3,238,754	3,253,824	3,326,255	2,179,831
X. Wood, Wicker, and Cane .. ..	5,514,674	5,815,279	4,877,474	4,629,167	1,113,854
XI. Jewellery and Fancy Goods .. ..	3,821,279	3,187,725	3,282,764	2,773,249	1,515,943
XII. Hides, Leather, and Rubber .. ..	6,116,816	4,650,108	3,433,966	3,418,138	1,252,068
XIII. Paper and Stationery	7,952,349	7,852,230	7,767,229	8,224,459	4,777,302
XIV. Vehicles .. ..	17,572,619	10,762,597	13,830,380	9,121,772	1,485,644
XV. Musical Instruments	1,452,955	962,576	648,261	344,925	66,873
XVI. Miscellaneous	9,094,214	8,576,785	9,186,939	8,455,167	4,285,951
— Free Goods not specially mentioned in Tariff .. ..	3,355,746	3,939,724	3,640,734	4,583,686	1,236,420
Total Merchandise ..	164,127,759	146,936,540	143,281,449	130,758,534	60,560,787
Specie and Bullion ..	588,835	1,008,430	366,432	322,786	398,846
Grand Total .. ..	164,716,594	147,944,970	143,647,881	131,081,320	60,959,633

In 1930-31 the greatest percentage decrease in imports occurred in the Vehicles division, imports of which were only 16 per cent. of those in the previous year; wood and wicker, 24 per cent.; ales and spirits, 34 per cent.; leather, 37 per cent.; earthenware, 39 per cent.; machinery, 40 per cent.; and textiles, 50 per cent. Particulars concerning the net amount of Customs Revenue collected under each Tariff Division are given on page 177.

## § 8. Excise.

The accompanying information in regard to excise has been inserted here for purpose of convenience. The following table shows, in detail, the quantities of spirits, beer and tobacco on which excise duty was paid in Australia during each of the five years 1926-27 to 1930-31.

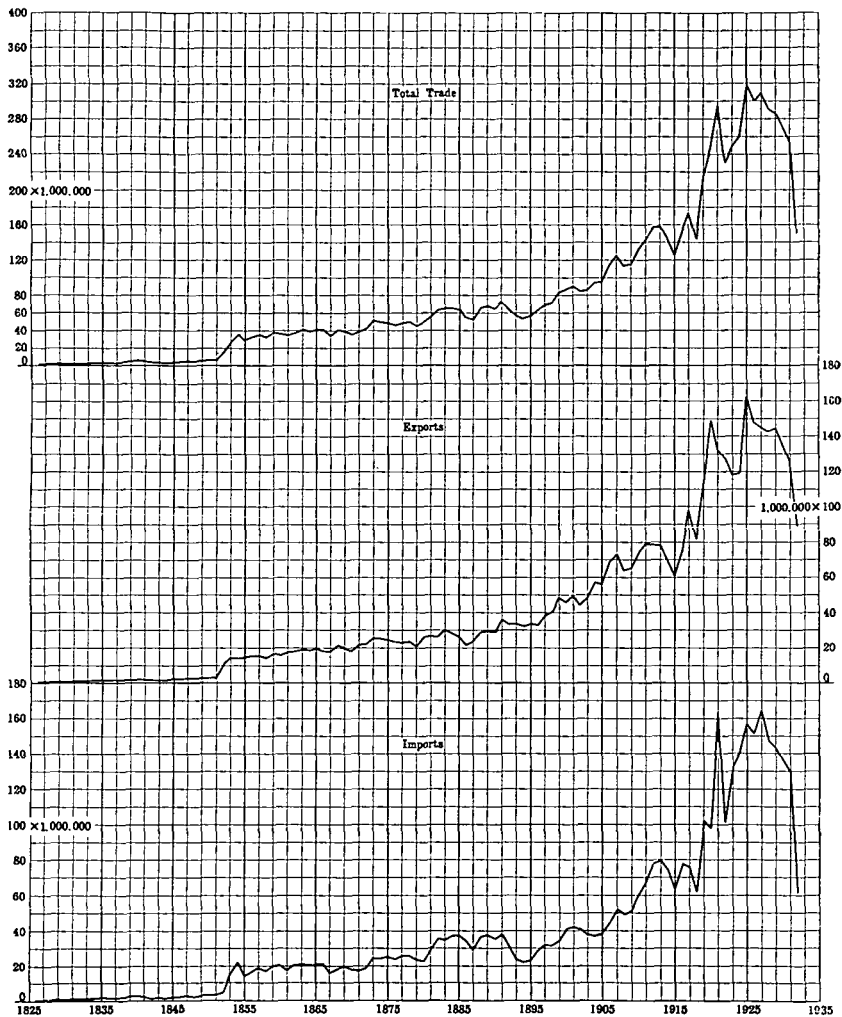
QUANTITIES OF SPIRITS, BEER, TOBACCO, ETC., ON WHICH EXCISE DUTY  
WAS PAID—AUSTRALIA.

Article.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	proof gal.	proof gal.	proof gal.	proof gal.	proof gal.
<b>Spirits—</b>					
Brandy (Pure Australian Standard Brandy) ..	233,269	230,817	226,756	210,309	139,378
Brandy (Blended Wine Brandy, etc.) ..	1,670	1,224	831	1,337	339
Gin (Distilled from Barley, Malt, Grain, or Grape Wine, etc.) ..	51,469	48,429	59,136	118,476	148,891
Whisky (Australian Standard Malt Whisky) ..	204,060	206,922	217,372	265,905	150,225
Whisky (Australian Blended Whisky) ..	..	..	152	278	5
Rum (Australian Standard Rum) ..	552,401	550,211	518,176	487,024	287,733
Liqueurs ..	1,041	163	358	852	838
Spirits, n.e.i. ..	2,144	1,759	923	172	44
Spirits for Industrial or Scientific Purposes ..	138,739	138,279	137,887	124,636	93,205
Spirits for Fortifying Wine (Distilled from Doradillo Grapes) ..	542,934	406,489	248,263	258,827	238,607
Spirits for Fortifying Wine	998,005	797,258	571,399	502,061	296,044
Spirits for making Vinegar	60,389	43,303	45,005	39,426	37,283
Spirits for Manufacture of Scents, etc. (a) ..	38,194	36,173	36,109	44,113	39,641
Amylic Alcohol and Fusel Oil ..	31	25	55	115	200
Concentrated Grape Must ..	..	..	..	..	22,224
<b>Total, Spirits ..</b>	<b>2,824,346</b>	<b>2,461,052</b>	<b>2,062,422</b>	<b>2,053,531</b>	<b>1,454,657</b>
	gal.	gal.	gal.	gal.	gal.
<b>Beer ..</b>	<b>70,105,029</b>	<b>70,755,600</b>	<b>71,160,596</b>	<b>65,095,178</b>	<b>52,459,070</b>
<b>Tobacco — Manufactured, n.e.i. ..</b>	<b>13,125,604</b>	<b>13,110,308</b>	<b>13,529,775</b>	<b>13,859,202</b>	<b>13,180,577</b>
<b>Tobacco—Hand-made ..</b>	<b>321,258</b>	<b>308,574</b>	<b>274,213</b>	<b>206,161</b>	<b>147,537</b>
<b>Tobacco—Fine-cut, suitable for Cigarettes ..</b>	<b>24,228</b>	<b>24,396</b>	<b>18,110</b>	<b>2,991</b>	<b>532</b>
<b>Total, Tobacco ..</b>	<b>13,471,090</b>	<b>13,443,278</b>	<b>13,822,098</b>	<b>14,068,354</b>	<b>13,328,646</b>
<b>Cigars—Machine-made ..</b>	<b>40,841</b>	<b>36,425</b>	<b>46,442</b>	<b>48,627</b>	<b>53,349</b>
<b>Cigars—Hand-made ..</b>	<b>390,990</b>	<b>348,002</b>	<b>291,842</b>	<b>287,618</b>	<b>257,019</b>
<b>Total, Cigars ..</b>	<b>431,831</b>	<b>384,427</b>	<b>338,284</b>	<b>336,245</b>	<b>310,368</b>
<b>Cigarettes—Machine-made ..</b>	<b>5,212,345</b>	<b>5,318,668</b>	<b>5,336,298</b>	<b>5,243,588</b>	<b>4,324,679</b>
<b>Cigarettes—Hand-made ..</b>	<b>19,046</b>	<b>6,939</b>	<b>4,807</b>	<b>463</b>	<b>403</b>
<b>Total Cigarettes ..</b>	<b>5,231,391</b>	<b>5,325,607</b>	<b>5,341,105</b>	<b>5,244,051</b>	<b>4,325,082</b>
<b>Petrol ..</b>	..	..	..	..	gal. 19,402,032
<b>Playing Cards ..</b>	..	..	..	..	doz. packs. 104,331

(a) Liquid gallons.



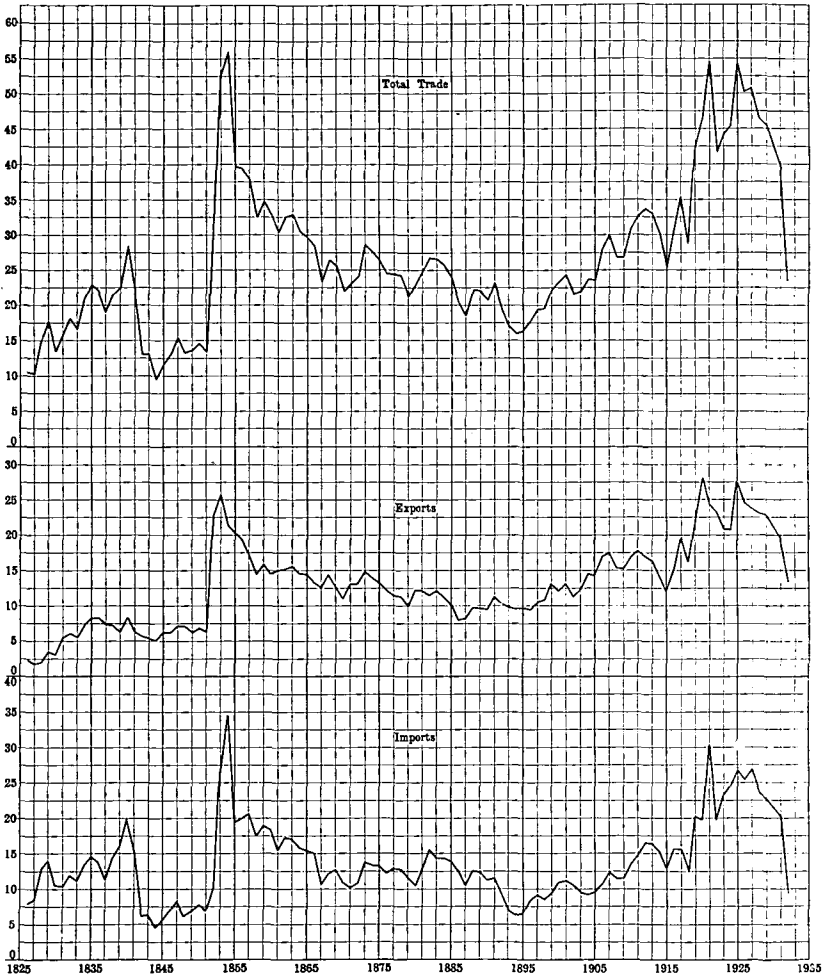
## VALUE OF TOTAL TRADE, EXPORTS, AND IMPORTS, AUSTRALIA, 1826 TO 1930-31.



(See page 147.)

EXPLANATION.—The base of each square represents an interval of two years, and the vertical height ten million pounds sterling for imports and exports, and twenty million pounds sterling for total trade.

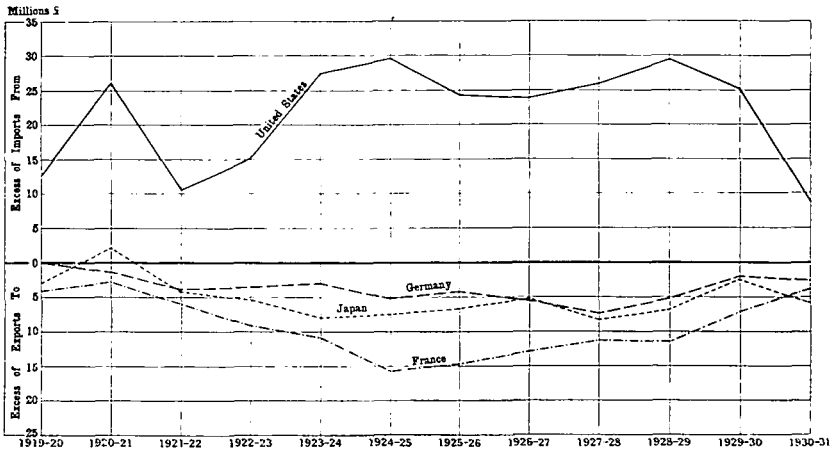
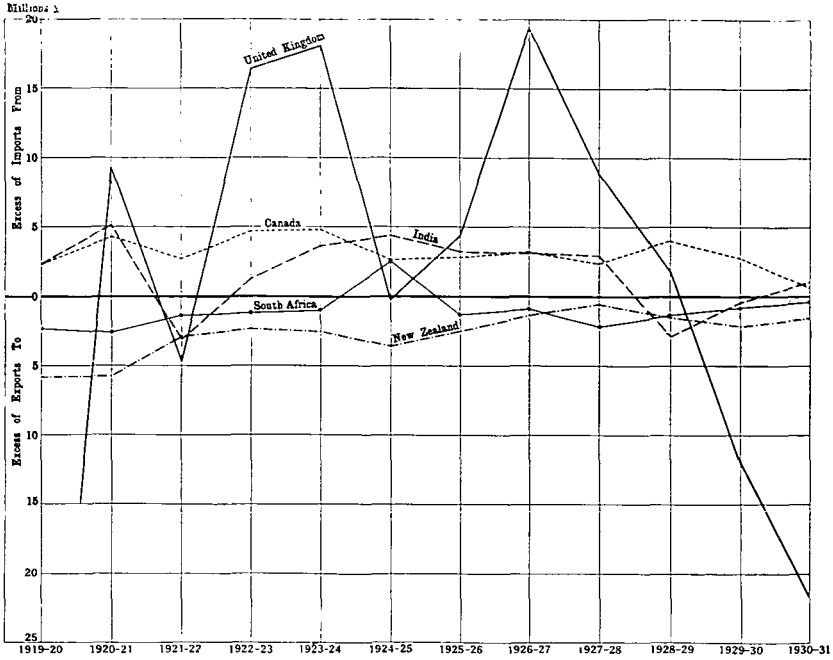
VALUES PER HEAD OF POPULATION OF TOTAL TRADE, EXPORTS AND IMPORTS  
—AUSTRALIA, 1826 TO 1930—31



(See page 147.)

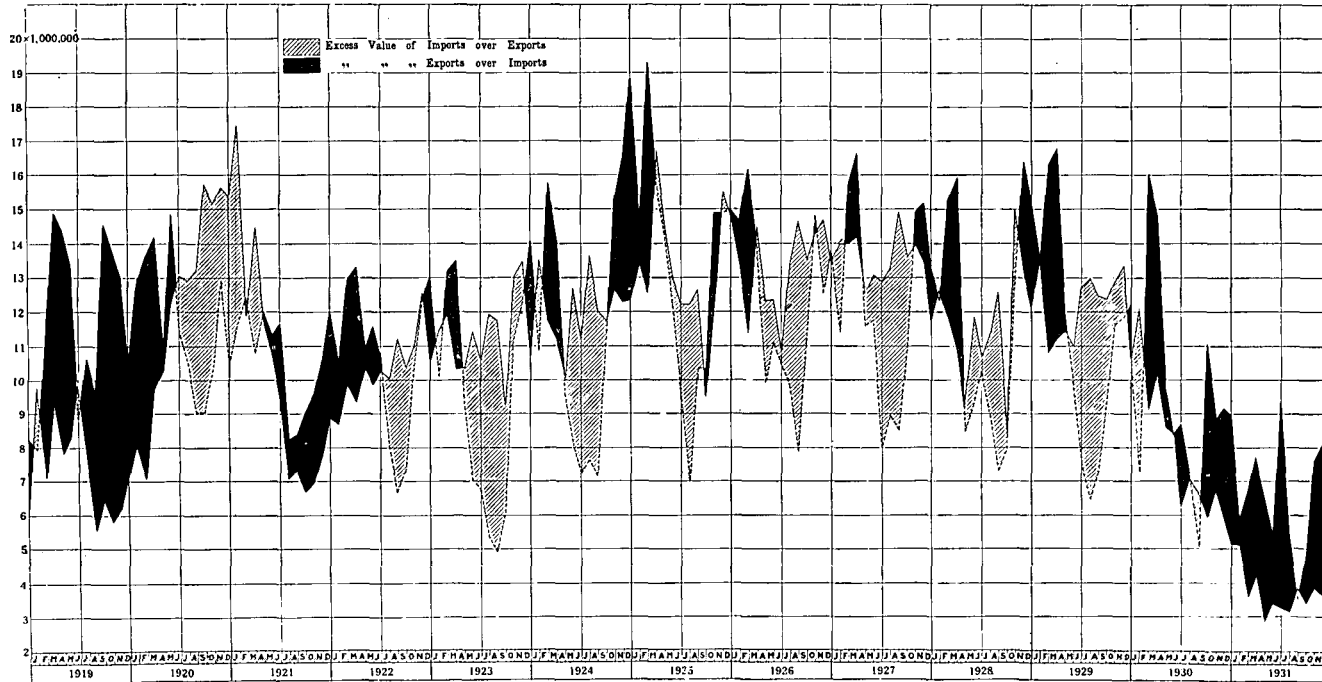
EXPLANATION.—The base of each square represents an interval of two years, and the vertical height £2 10s. od. per head of the population. ...

BALANCE OF AUSTRALIAN TRADE WITH OTHER COUNTRIES, 1919-20 TO 1930-31.



EXPLANATION:—The base of each square or rectangle represents one year, and the vertical height five million pounds sterling.

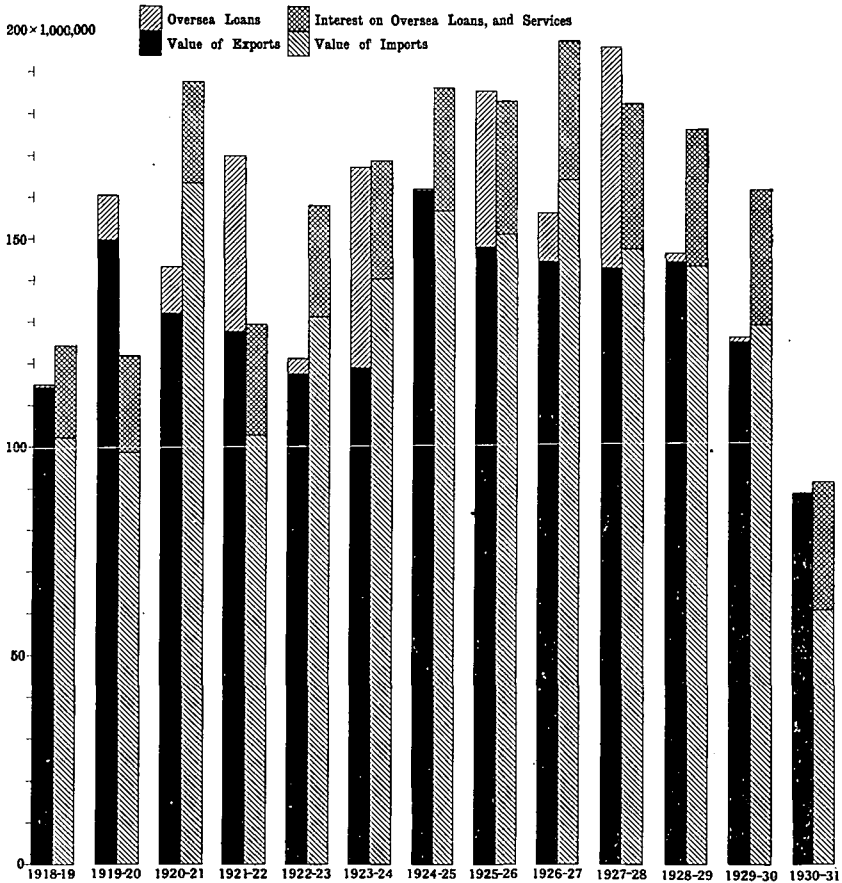
VALUE OF MONTHLY IMPORTS AND EXPORTS—AUSTRALIA, 1919 to 1931.



EXPLANATION.—The base of the graph has been divided into months, but the vertical lines are drawn for each six months only.

The vertical height represents £1,000,000 in the case of both Imports and Exports. The values of Imports and Exports are shown for each month, Imports being indicated by a continuous line and Exports by a dotted line. The areas in light shading represent an excess of Imports over Exports, and the dark shading an excess of Exports over Imports.

VALUE OF IMPORTS AND EXPORTS, AMOUNT OF LOANS RAISED OVERSEA, AND INTEREST PAYABLE OVERSEA—AUSTRALIA, 1918-19 TO 1930-31.

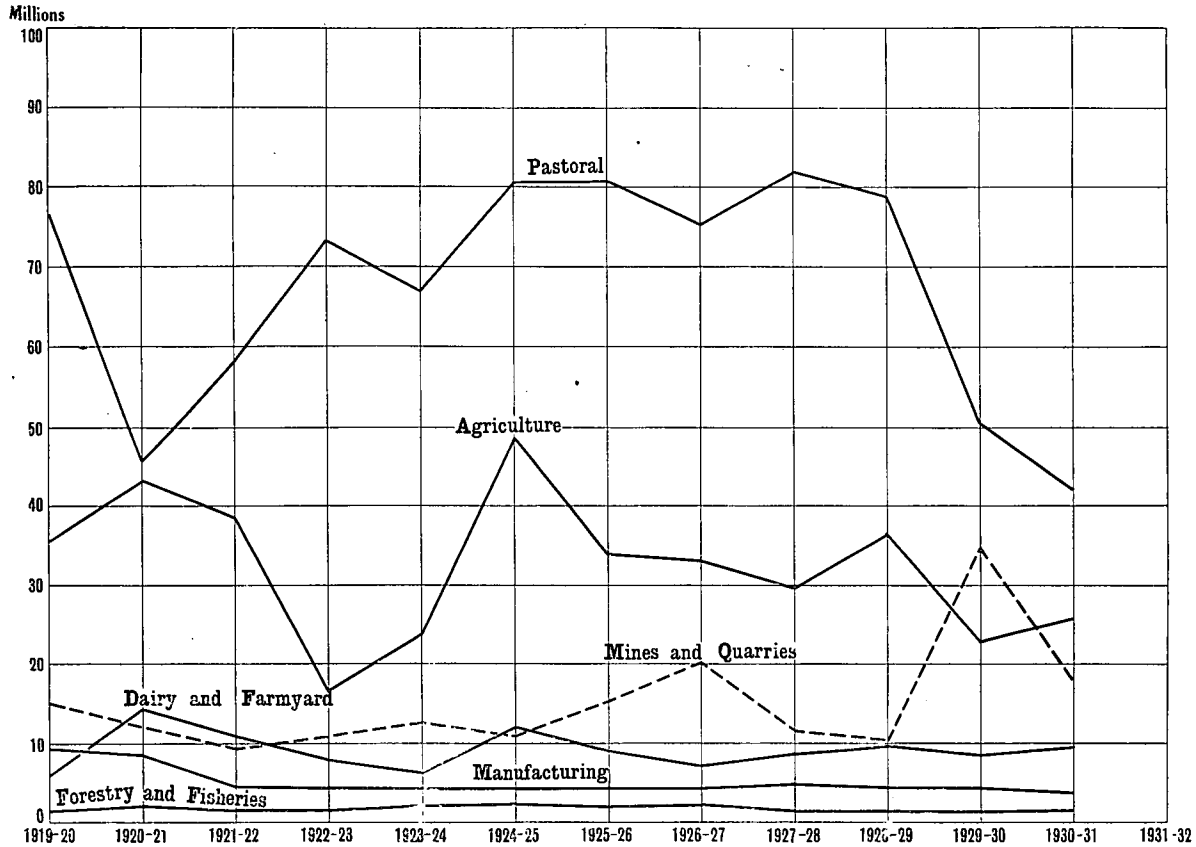


EXPLANATION.—Each vertical division of the scale represents £10,000,000. The key to the shading is given above on the graph.

Two columns are given for each year, one made up of the value of Exports and the amount of new loans raised oversea (i.e., the increase in net indebtedness); the other column consisting of the value of Imports, and the Interest on all oversea loans including services.

The first column represents items which make credit available abroad for the payments indicated in the second column.

EXPORTS OF AUSTRALIAN PRODUCE ACCORDING TO INDUSTRIES. 1919-20 TO 1930 31.



EXPLANATION.—The base of each rectangle represents one year, and the vertical height ten million pounds Australian currency. (The Mines and Quarries Group includes exports of Bullion and Specie.)

### § 9. Net Customs and Excise Revenue collected under the Divisions of the Tariff.

The following statement shows the net Customs and Excise revenue collected in Australia under each Division of the Customs Tariff 1921-31 during the last five years:—

#### NET CUSTOMS AND EXCISE REVENUE COLLECTIONS—AUSTRALIA.

Division.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
<b>CUSTOMS.</b>					
	£	£	£	£	£
1. Ale, Spirits, and Beverages .. ..	2,907,671	2,824,488	2,660,897	2,599,812	1,045,886
2. Tobacco, and Manufactures thereof .. ..	2,202,563	2,371,018	2,409,949	3,069,236	2,875,936
3. Sugar .. ..	20,098	16,823	11,553	10,102	684
4. Agricultural Products, and Groceries .. ..	1,547,448	1,402,145	1,272,314	1,277,057	1,000,419
5. Textiles, Felts, and Furs, etc. .. ..	6,237,294	5,805,203	5,361,904	5,165,448	2,069,663
6. Metals and Machinery .. ..	5,649,391	5,282,385	4,947,773	4,756,575	1,594,703
7. Oils, Paints, and Varnishes .. ..	2,172,342	2,593,612	3,091,281	4,141,316	3,946,157
8. Earthenware, Cement, China, etc. .. ..	734,704	704,112	710,100	712,518	360,904
9. Drugs and Chemicals .. ..	560,879	519,291	534,881	538,182	358,352
10. Wood, Wicker, and Cane .. ..	1,386,297	1,598,192	1,582,021	1,805,012	379,310
11. Jewellery and Fancy Goods .. ..	953,530	844,941	870,176	1,028,410	557,298
12. Leather and Rubber .. ..	1,574,832	1,125,936	746,899	525,709	256,463
13. Paper and Stationery .. ..	747,796	759,251	763,023	878,408	732,850
14. Vehicles .. ..	3,345,546	2,535,334	3,193,681	2,316,889	377,689
15. Musical Instruments .. ..	520,568	303,739	267,256	137,682	13,895
16. Miscellaneous .. ..	1,192,144	1,040,627	998,500	1,116,672	708,393
Primage .. ..	..	..	..	..	1,812,941
<b>TOTAL, CUSTOMS DUTIES</b>	<b>31,753,103</b>	<b>29,787,097</b>	<b>29,422,208</b>	<b>30,079,028</b>	<b>18,091,543</b>
<b>EXCISE.</b>					
Beer .. ..	6,104,384	6,155,381	6,191,276	6,104,070	5,200,607
Spirits .. ..	2,065,041	1,871,288	1,755,941	1,882,456	1,318,539
Starch .. ..	9,646	4,643	134	..	..
Tobacco .. ..	1,575,086	1,571,267	1,614,336	1,641,763	1,641,477
Cigars .. ..	59,617	51,859	46,404	29,526	23,062
Cigarettes .. ..	1,896,104	1,930,429	1,936,083	1,901,038	1,619,007
Petrol .. ..	..	..	..	45,686	315,582
Playing Cards .. ..	..	..	..	120	10,433
Concentrated Grape Must .. ..	..	..	..	..	766
<b>TOTAL, EXCISE DUTIES</b>	<b>11,709,878</b>	<b>11,584,867</b>	<b>11,544,174</b>	<b>11,604,659</b>	<b>10,129,473</b>
<b>TOTAL, CUSTOMS AND EXCISE DUTIES</b> .. ..	<b>43,462,981</b>	<b>41,371,964</b>	<b>40,966,382</b>	<b>41,683,687</b>	<b>28,221,016</b>
<b>Miscellaneous Receipts—</b>					
Customs .. ..	71,995	62,307	83,650	77,231	*133,154
Excise .. ..	11,669	12,322	10,944	11,574	11,562
<b>GRAND TOTAL</b> .. ..	<b>43,546,645</b>	<b>41,446,593</b>	<b>41,060,976</b>	<b>41,772,492</b>	<b>28,365,732</b>

\* Includes Duty on Ships' Stores £67,936, previously included under the several Customs Divisions.

The percentage of net Customs revenue collected on the total value of dutiable goods in each year was as follows:—1926-27, 19.4 per cent.; 1927-28, 20.2 per cent.; 1928-29, 20.4 per cent.; 1929-30, 22.4 per cent.; and 1930-31, 25.3 per cent. The corresponding percentages on the total value of merchandise only were—1926-27, 30.3 per cent.; 1927-28, 31.6 per cent.; 1928-29, 32.6 per cent.; 1929-30, 38.1 per cent.; and 1930-31, 44.4 per cent. Both calculations are based on sterling values and on the assumption that the value of clearances would approximate to the value of imports.

### § 10. Ships' Stores.

Prior to 1906 goods shipped in Australian ports on board oversea vessels as ships' stores were included in the general exports. From 1906, ships' stores have been specially recorded as such, and have been omitted from the export figures. The value of these stores shipped each year during the period 1906 to 1930-31, showing bunker coal separately, is given in the following table:—

VALUE OF STORES SHIPPED ON OVERSEA VESSELS—AUSTRALIA.

Period.	Bunker Coal.	All stores (including Coal.)	Period.	Bunker Coal.	All Stores (including Coal.)
	£	£		£	£
1906 .. ..	575,471	875,966	1918-19 ..	857,507	1,765,367
1907 .. ..	663,724	998,897	1919-20 ..	1,487,872	2,688,371
1908 .. ..	867,707	1,196,106	1920-21 ..	2,027,133	3,560,648
1909 .. ..	781,113	1,071,677	1921-22 ..	2,178,101	3,152,604
1910 .. ..	740,567	1,080,133	1922-23 ..	1,988,890	2,887,399
1911 .. ..	858,783	1,238,446	1923-24 ..	1,672,160	2,614,948
1912 .. ..	1,008,259	1,431,985	1924-25 ..	1,485,957	2,714,562
1913 .. ..	1,018,595	1,458,702	1925-26 ..	1,331,789	2,773,422
1914 (1st six mths.)	533,288	771,581	1926-27 ..	1,421,927	2,781,312
1914-15 .. ..	829,875	1,587,757	1927-28 ..	1,306,225	2,601,034
1915-16 .. ..	719,510	1,544,872	1928-29 ..	1,009,163	2,316,116
1916-17 .. ..	748,852	1,676,116	1929-30 ..	742,383	2,046,561
1917-18 .. ..	632,910	1,389,291	1930-31 ..	607,537	1,653,141

In addition to bunker coal, the principal items of ships' stores supplied to oversea vessels in 1930-31 were—Oils, £445,084; meats, £191,833; butter, £42,684; fish, £38,821; and vegetables, £20,297.

The Customs duty collected on ships' stores carried to Australia on oversea vessels and consumed in Australian ports amounted in 1930-31 to £67,936.

### § 11. Exports according to Industries.

1. **Classification.**—The following table gives an analysis of the exports of Australian produce according to the main classes of industry in which the goods were produced for the years 1929-30 and 1930-31 in comparison with those for the years 1913. The index-number based on the year 1913 shows the variations in the total recorded value only of exports in each industrial group, and has not been adjusted either for price-changes or in accordance with the variation of the Australian £ in relation to sterling.



EXPORTS OF AUSTRALIAN PRODUCE ACCORDING TO INDUSTRIAL ORIGIN.  
VALUE OF EXPORTS AS RECORDED.

Industrial Group.	1913. (a)		1929-30.		1930-31.	
	£	Index No.	£	Index No.	£	Index No.
Agriculture .. ..	10,677,734	100	22,869,702	214	25,889,696	242
Pastoral .. ..	42,057,346	100	50,648,170	120	42,102,801	100
Dairy and Farmyard .. ..	3,854,734	100	8,543,215	222	9,458,515	245
Mines and Quarries .. ..	21,926,310	100	9,815,643	45	8,063,470	36
Fisheries .. ..	424,849	100	501,802	118	406,984	96
Forestry .. ..	1,106,549	100	1,130,061	102	849,574	77
<b>Total Primary Produce</b>	<b>80,047,522</b>	<b>100</b>	<b>93,508,593</b>	<b>117</b>	<b>86,771,040</b>	<b>108</b>
<b>Manufacturing .. ..</b>	<b>2,304,693</b>	<b>100</b>	<b>4,111,935</b>	<b>178</b>	<b>3,419,893</b>	<b>148</b>
<b>Total .. ..</b>	<b>82,352,215</b>	<b>100</b>	<b>97,620,528</b>	<b>119</b>	<b>90,190,933</b>	<b>110</b>

(b)

(a) Base year. (b) Recorded value; the estimated British currency value is £76,837,000 and the corresponding index number 93.

2. Effect of Price Changes.—If the effect of price changes be eliminated from the above figures by the application of the export price index-numbers, the relative quantitative results will be approximately as follows:—

EXPORTS OF AUSTRALIAN PRODUCE.—ELIMINATION OF PRICE CHANGES.

Industrial Group.	1913. (a)	Quantity Index Numbers.	1929-30.	Quantity Index Numbers.	1930-31.	Quantity Index Numbers.
	£		£		£	
Agriculture .. ..	10,677,734	100	17,417,899	163	35,908,038	336
Pastoral .. ..	42,057,346	100	41,927,293	100	44,742,615	106
Dairy and Farmyard .. ..	3,854,734	100	6,141,780	159	8,906,323	231
Mines and Quarries .. ..	21,926,310	100	8,166,092	37	8,569,043	39
Fisheries .. ..	424,849	100	526,550	124	478,805	113
Forestry .. ..	1,106,549	100	701,901	63	534,660	48
<b>Total Primary Produce</b>	<b>80,047,522</b>	<b>100</b>	<b>74,881,515</b>	<b>94</b>	<b>99,139,484</b>	<b>124</b>
<b>Manufacturing .. ..</b>	<b>2,304,693</b>	<b>100</b>	<b>2,394,836</b>	<b>104</b>	<b>2,263,330</b>	<b>98</b>
<b>Total .. ..</b>	<b>82,352,215</b>	<b>100</b>	<b>77,276,351</b>	<b>94</b>	<b>101,402,814</b>	<b>123</b>

(a) Base year.

3. Relative Importance of Industrial Groups.—In the first of the two preceding tables the value of commodities in each industrial group of exports of Australian produce is that recorded at date of shipment from Australia, with the exception that the value of the production of gold in Australia in each year has been substituted in the Mines and Quarries group for actual shipments of gold in each year, while in the second table the effect of price changes during the period has been taken into account. In the table showing exports according to recorded value the pastoral group occupies the highest place and in 1913 the value of commodities included in this group represented 51.07 per cent. of the total exports, as compared with 51.88 per cent. in 1929-30, and 46.68 per cent. in 1930-31. Exports of pastoral produce were £8,545,369 less in total value in 1930-31 than in 1929-30. Wool constitutes the greater part of the exports in the pastoral group.

The value of agricultural produce exported in 1929-30 was thirteen million pounds in excess of mineral exports, but in 1930-31 exports of agricultural products were nearly eighteen million pounds in excess of mineral exports. The agricultural group, which was equivalent to 14.21 per cent. of the total exports during 1913, increased to 28.71 per cent. in 1930-31.

The value of exports of dairy and farmyard produce increased from 5.13 per cent. during 1913 to 10.49 per cent. in 1930-31, due to an increase in the exports of butter. Exports included in the fisheries and forestry groups have not varied to a marked extent and the manufacturing group exports, which were 3.07 per cent. in 1913, represented 3.79 per cent. in 1930-31.

The recorded value of exports for all industrial groups shows an increase of 19 per cent. during 1929-30 and 10 per cent. during 1930-31, as compared with the total value of exports during the year 1913. The effect of eliminating price changes during the period is shown in the second table. Higher prices of commodities inflated the value of exports in 1929-30 and lower prices in 1930-31 had the opposite effect, and on the basis of prices ruling in 1913 the exports of 1929-30 were 6 per cent. less, but the exports of 1930-31 were 24 per cent. greater than those of 1913. The effect of eliminating price changes is particularly noticeable in the figures for the individual groups. The fall in prices during 1930-31 for all industrial groups was particularly marked in the pastoral group. Owing to increased production, however, the total quantities exported in 1930-31 were greater than in 1929-30. Exports in the agricultural group show outstanding increases whilst in the pastoral group the fall in prices was more than balanced by the increased quantity exported. The decline shown in the mines and quarries group is due to the decrease in gold production.

Compared with the year 1913 the quantity of exports of agricultural produce in 1930-31 showed an increase amounting to 236 per cent.; dairy and farmyard produce, 131 per cent.; fisheries, 13 per cent.; and pastoral products, 6 per cent. On the other hand the gold production of 1930-31 was only 39 per cent. of that in 1913, whilst forestry products exported were only 48 per cent., and those of the manufacturing group declined 2 per cent.

4. Australian Production and Exports according to Industry.—The following table shows the total value of Australian Production and Australian Exports during the period of ten years, 1921-22 to 1930-31, classified according to industries; the proportion of each industrial group to total production and to total exports; and in the last column the percentage exported of the production of each industrial group:—

VALUE OF AUSTRALIAN PRODUCTION AND EXPORTS, ACCORDING TO INDUSTRY.

Industrial Group.	Value of Production during Ten Years.	Percentage on Total Production.	Value of Exports during Ten Years.	Percentage on Total Exports.	Percentage Exported of the Production in each Industrial Group.
	£1,000.	%	£1,000.	%	%
Agriculture .. ..	863,341	21.22	301,567	24.62	34.93
Pastoral .. ..	1,031,171	25.34	689,005	56.25	66.81
Dairy and Farmyard .. ..	463,962	11.41	89,057	7.27	19.19
Mining .. ..	211,695	5.20	84,208	6.87	39.78
Forestry and Fisheries .. ..	114,922	2.82	18,604	1.52	16.18
Total Primary Produce .. ..	2,685,091	65.99	1,182,441	96.53	44.03
Manufacturing .. ..	1,383,775	34.01	42,539	3.47	3.07
Total .. ..	4,068,866	100.00	1,224,980	100.00	30.11

The figures relating to value of production and value of exports are subject to the qualifications mentioned previously. A period of ten years is embraced, and the values of production and of exports therein give a very fair index of the relative importance of the several industrial groups. Of the total production 66.0 per cent. was classified as primary produce and 34.0 per cent. as manufactured articles. The main contributing groups in the primary produce section were pastoral with 25.3 per cent., and agriculture with 21.2 per cent. of the total production.

Exports of primary produce represented 96.5 per cent. of the total exports. The pastoral group, with 56.3 per cent. of the total, shows the highest percentage, followed by the agricultural and dairy groups with 24.6 per cent. and 7.3 per cent. respectively. Exports of goods classified in the manufacturing group represented only 3.5 per cent. of the total.

The figures in the last column of the table are of special interest, as they show the percentage exported of the production of each industrial group. Of the total primary production during the period, 44.0 per cent. was exported. Over one-third of the agricultural production and two-thirds of the pastoral production were sent abroad.

The total exports of bullion and specie are not included as part of the production of the mining industry, the actual production during the period being taken. Nineteen per cent. of the produce included in the dairy and farmyard group was exported.

The percentage of manufactured goods exported was comparatively small, only 3.1 per cent. of the production during the period being sent abroad.

## § 12. Export Prices and Volume of Exports.

[This subject is dealt with in the Appendix to the present volume.]

## § 13. Movement of Specie and Bullion.

1. Imports and Exports.—The following tables show the value of gold and silver, specie and bullion, and of bronze specie imported into and exported from Australia during the years 1926–27 to 1930–31:—

### IMPORTS AND EXPORTS, SPECIE AND BULLION—AUSTRALIA.

Items.	1926–27.	1927–28.	1928–29.	1929–30.	1930–31.
IMPORTS.					
Gold—Specie ..	£ 81,278	£ 539,532	£ 502	£ 17,372	£ 5,357
Bullion ..	487,242	432,566	346,948	273,451	368,378
Total ..	568,520	972,098	347,450	290,823	373,735
Silver—Specie ..	16,578	30,778	13,932	25,419	23,074
Bullion ..	3,667	5,298	4,923	6,480	1,947
Total ..	20,245	36,076	18,855	31,899	25,021
Bronze—Specie ..	70	256	127	64	90
GRAND TOTAL ..	588,835	1,008,430	366,432	322,786	(a) 398,846

(a) British currency values. The estimated Australian currency values are: Imports £468,000; Exports £15,298,000.

IMPORTS AND EXPORTS, SPECIE AND BULLION.—AUSTRALIA—*continued.*

Items.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
EXPORTS.					
Gold—Specie ..	£ 10,763,242	£ 2,197,297	£ 2,915,797	£ 26,866,824	£ 11,131,293
Bullion ..	609,167	610,861	68,358	1,715	1,142,269
Total ..	11,372,409	2,808,158	2,984,155	26,868,539	12,273,562
Silver—Specie ..	19,760	52,007	33,327	32,605	198,291
Bullion ..	911,107	880,550	908,971	847,635	556,367
Total ..	930,867	932,557	942,298	880,240	754,658
Bronze—Specie ..	30	33	67	70	18,736
Total— Australian Produce ..	12,297,106	3,730,098	3,892,352	27,748,839	12,817,079
Other Produce ..	6,200	10,650	34,168	10	229,877
GRAND TOTAL ..	12,303,306	3,740,748	3,926,520	27,748,849	13,046,956 (a)

(a) British currency values. The estimated Australian currency values are: Imports £468,000; Exports £15,298,000.

2. Imports and Exports by Countries.—The next table shows the imports and exports of specie and bullion from and to various countries during the year 1930-31.

## IMPORTS AND EXPORTS OF SPECIE AND BULLION BY COUNTRIES—AUSTRALIA, 1930-31.

Country.	Imports.			Exports.		
	Specie.	Bullion.	Total.	Specie.	Bullion.	Total.
	£	£	£	£	£	£
Australia (a) ..	15,926	..	15,926	..	..	..
United Kingdom ..	11,772	3,411	15,183	10,380,710	1,172,559	11,553,269
India and Ceylon ..	..	..	..	956,300	488,203	1,444,503
New Zealand ..	..	206,146	206,146	2,905	1,810	4,715
Pacific Islands—						
Fiji ..	..	..	..	..	136	136
Nauru ..	..	..	..	3,030	..	3,030
Papua ..	..	628	628	655	..	655
Solomon Islands ..	..	..	..	2,680	..	2,680
Territory of New Guinea ..	..	159,087	159,087	1,720	..	1,720
Total British Countries ..	27,698	369,272	396,970	11,348,000	1,662,708	13,010,708

(a) Australian produce re-imported.

IMPORTS AND EXPORTS OF SPECIE AND BULLION BY COUNTRIES—  
AUSTRALIA, 1930-31—*continued.*

Country.	Imports.			Exports.		
	Specie.	Bullion.	Total.	Specie.	Bullion.	Total.
China .. ..	209	..	209	..	32,940	32,940
France .. ..	146	..	146	..	..	..
Germany .. ..	..	..	..	80	1,877	1,957
Netherlands East Indies .. ..	..	..	..	100	..	100
Pacific Islands : New Hebrides .. ..	..	..	..	140	..	140
United States of America .. ..	468	1,053	1,521	..	1,111	1,111
<b>Total Foreign Countries ..</b>	<b>823</b>	<b>1,053</b>	<b>1,876</b>	<b>320</b>	<b>35,928</b>	<b>36,248</b>
<b>GRAND TOTAL ..</b>	<b>28,521</b>	<b>370,325</b>	<b>398,846</b> <i>(b)</i>	<b>11,348,320</b>	<b>1,698,636</b>	<b>13,046,956</b> <i>(b)</i>

(b) British currency values. The estimated Australian currency values are : Imports, £468,000 ; Exports, £15,298,000.

## § 14. External Trade of Australia and other Countries.

1. **Essentials of Comparisons.**—Direct comparisons of the external trade of any two countries are possible only when the general conditions prevailing therein, and the system of record, are more or less identical. For example, in regard to the mere matter of record, it may be observed that in one country the value of imports may be the value at the port of shipment, while in another the cost of freight, insurance, and charges may be added thereto. Again, the values of imports and exports in the one may be declared by merchants, whereas in the other they may be the official prices fixed from time to time by a commission constituted for the purpose. In later years, moreover, a very substantial difference in the value of imports would arise from the different methods of converting the moneys of foreign countries, *i.e.*, from the application of current rates of exchange or of the mint par. Lastly, the figures relating to the external trade of any country are also affected in varying degree by the extent to which they include transit or re-export trade. Including bullion and specie, the transit trade of Belgium, for example, represented, prior to the war, approximately 40 per cent. of the gross trade recorded ; of Switzerland, 45 per cent. ; of France, 20 per cent. ; and of the United Kingdom, 15 per cent. ; whereas in Australia the same element represents, normally, about 4 per cent., and in New Zealand even less.

2. **"Special Trade" of Various Countries.**—Special trade may be defined according to the interpretation of the British Board of Trade, as (a) imports entered for consumption in the country (as distinguished from imports for transshipment or re-export) and (b) exports of domestic products.

In the following table the figures relate as nearly as possible to imports entered for consumption in the various countries specified, and to exports of their domestic products. It is to be noted, however, that these figures do not invariably denote the same thing throughout, since, in the United Kingdom and other manufacturing countries, raw or partly manufactured materials are imported as for home consumption, and, after undergoing some process of manufacture or further modification, are re-exported as domestic production. Nevertheless, a comparison of this character reveals approximately

the extent of the external trade which otherwise would not be manifest. The figures relating to foreign countries have been extracted from the League of Nations Memorandum on International Trade and Balances of Payments.

**IMPORTS FOR HOME CONSUMPTION, AND EXPORTS OF DOMESTIC PRODUCTS  
(MERCHANDISE ONLY), VARIOUS COUNTRIES, 1930.**

Country.	Trade.			Trade per Inhabitant.*		
	Imports.	Exports.	Total.	Imports.	Exports.	Total.
	£1,000,000	£1,000,000	£1,000,000	£ s. d.	£ s. d.	£ s. d.
Australia (a) ..	58.6	74.2	132.8	9 0 11	11 9 2	20 10 1
United Kingdom ..	957.1	570.8	1527.9	20 15 10	12 8 0	33 3 10
Canada ..	207.5	182.3	389.8	20 17 8	18 7 0	39 4 8
India ..	141.0	189.5	330.5	0 11 5	0 15 4	1 6 9
New Zealand ..	41.9	43.6	85.5	28 2 3	29 5 1	57 7 4
Union of South Africa (b) ..	57.9	67.9	125.8	6 10 9	7 13 4	14 4 1
United States of America ..	616.2	777.1	1393.3	5 0 4	6 6 7	11 6 11
Argentine Republic ..	146.7	121.9	268.6	13 2 1	10 17 10	23 19 11
Belgium ..	176.6	149.9	326.5	21 18 2	18 11 10	40 10 0
China ..	123.8	84.6	208.4	0 5 8	0 3 10	0 9 6
Denmark ..	91.2	83.9	175.1	25 14 11	23 13 9	49 8 8
France ..	421.4	344.8	766.2	10 4 11	8 7 8	18 12 7
Germany ..	508.7	554.4	1063.1	8 1 0	8 15 6	16 16 6
Italy ..	187.3	131.1	318.4	4 10 3	3 3 2	7 13 5
Japan ..	154.3	146.6	300.9	2 7 10	2 5 6	4 13 4
Netherlands ..	199.7	142.0	341.7	25 9 10	18 2 7	43 12 5
Norway ..	58.2	37.2	95.4	20 2 9	12 17 5	33 0 2
Sweden ..	91.6	85.4	177.0	14 19 4	13 19 2	28 18 6
Switzerland ..	100.2	69.4	169.6	24 12 8	17 1 3	41 13 11

(a) Year ended 30th June, 1931, British currency values.

(b) Including bullion and specie.

**§ 15. Trade of the United Kingdom with Australia compared with that of Competing Countries.**

**Proportion of Trade from United Kingdom and Competing Countries.**—The failure of the United Kingdom to maintain the position formerly held in the import trade of Australia has been a matter of more than ordinary interest for some years. Since 1908 a permanent resident Commissioner appointed by the British Board of Trade has been located in Australia for the purpose of advising manufacturers and merchants in the United Kingdom with regard to Australian trade affairs. From the 8th August, 1907, the Commonwealth Customs Tariffs have provided preferential rates of Customs Duties on certain goods the produce or manufacture of the United Kingdom, with the object of assisting the British manufacturer to retain or improve his position in this market. The main provisions in these Acts relating to preference are dealt with on a previous page in this Chapter.

In an investigation into the relative position, as compared with other countries, occupied by the United Kingdom in the import trade of Australia, the comparison must, of course, be restricted to those classes of goods which are produced or manufactured in the United Kingdom. The imports to Australia include many commodities, such as tea, rice, raw coffee, unmanufactured tobacco, petroleum products, copra, timber, etc., which the United Kingdom could not supply. These items, in addition to others not available from that country, have, therefore, been omitted from the computation hereunder.

The imports into Australia have been classified under nine headings, and the trade of the United Kingdom therein is compared with that of France, Germany, Japan, and the United States. These countries have been selected as the principal competitors with the United Kingdom for the trade of Australia under the specified headings. Totals for the five years 1913 and 1927-28 to 1930-31 are shown in the table hereunder.

AUSTRALIAN IMPORTS OF PRODUCTS OF VARIOUS COUNTRIES.

Nature of Imports.	Year.	United Kingdom.	France.	Germany.	Japan.	U.S. of America.	All Countries.
		£	£	£	£	£	£
Foodstuffs of animal origin	1913 ..	301,025	3,093	12,071	6,988	289,229	947,697
	1927-28	543,121	5,551	2,602	63,836	419,528	2,866,708
	1928-29	563,780	4,670	2,619	101,843	488,882	2,367,393
	1929-30	497,727	3,776	1,752	136,663	399,159	2,182,397
	1930-31	259,365	870	325	69,058	131,767	911,076
Spirituous and alcoholic liquors	1913 ..	1,227,561	343,394	143,426	1,689	2,805	1,947,248
	1927-28	1,427,503	178,672	9,115	35	85	1,767,497
	1928-29	1,548,720	189,731	7,649	69	67	1,870,944
	1929-30	1,307,566	148,424	7,472	..	65	1,583,368
	1930-31	488,775	20,456	784	6	159	530,166
Apparel, textiles, and manufactured fibres	1913 ..	12,254,561	961,025	1,712,395	475,973	623,542	19,935,750
	1927-28	21,668,829	2,276,573	1,344,316	2,286,503	2,430,423	38,488,491
	1928-29	18,947,016	2,144,072	1,194,409	3,620,535	2,727,318	36,710,916
	1929-30	18,427,684	1,593,457	1,021,931	2,988,352	2,093,022	32,546,428
	1930-31	7,913,673	673,087	448,170	1,641,178	744,615	15,898,259
Metals, metal manufactures and machinery	1913 ..	13,905,483	217,148	2,380,152	7,657	3,817,705	21,670,212
	1927-28	23,580,677	252,298	1,301,313	19,932	15,235,404	42,801,886
	1928-29	20,593,894	151,183	1,418,883	26,218	16,472,338	42,987,433
	1929-30	19,279,528	136,187	1,417,616	23,205	12,591,938	36,323,308
	1930-31	7,167,899	57,010	629,340	21,602	2,967,405	12,338,793
Paper and stationery	1913 ..	1,789,577	21,930	266,483	10,656	493,679	3,134,750
	1927-28	4,735,665	203,949	225,769	17,220	679,462	7,778,529
	1928-29	4,689,952	156,192	221,447	20,457	744,437	7,778,529
	1929-30	4,824,866	171,983	238,806	19,687	793,526	7,912,167
	1930-31	2,838,433	181,026	138,365	14,343	384,099	4,565,813
Jewellery, time-pieces, and fancy goods	1913 ..	521,290	88,070	263,688	19,307	138,217	1,442,292
	1927-28	781,800	100,686	393,619	99,773	247,725	2,621,411
	1928-29	745,533	103,615	430,623	101,251	234,998	2,658,148
	1929-30	645,323	94,202	380,120	97,398	207,541	2,144,442
	1930-31	310,268	42,549	168,182	65,438	74,640	895,532
Earthenware, cements, glass, etc.	1913 ..	650,138	40,245	453,188	21,493	62,887	1,565,727
	1927-28	1,432,079	25,483	173,246	126,508	172,230	2,422,822
	1928-29	1,400,213	34,721	192,494	148,560	170,996	2,455,467
	1929-30	1,291,885	27,910	169,449	123,118	140,907	2,251,940
	1930-31	464,241	9,096	56,447	74,940	61,844	818,937
Drugs, chemicals, and fertilizers	1913 ..	1,020,647	245,426	304,179	139,178	210,758	2,721,902
	1927-28	2,004,417	268,284	236,200	44,795	940,899	4,811,212
	1928-29	1,888,485	327,529	281,381	55,452	933,344	5,213,338
	1929-30	1,835,367	273,687	355,118	46,264	1,053,804	5,082,167
	1930-31	1,094,371	320,574	247,625	24,823	452,695	3,069,287
Rubber and leather and manufactures thereof and substitutes therefor	1913 ..	485,216	68,686	347,045	688	433,837	1,717,035
	1927-28	707,437	151,734	89,391	3,569	938,476	4,157,292
	1928-29	558,855	124,684	98,736	1,835	633,750	2,943,661
	1929-30	509,313	67,006	91,271	968	408,702	2,070,294
	1930-31	225,955	5,696	37,229	897	121,190	769,959
Total above-mentioned imports	1913 ..	32,155,498	1,989,017	5,882,627	683,629	5,982,659	55,082,613
	1927-28	56,881,528	3,461,221	3,775,571	3,662,171	21,064,292	107,811,317
	1928-29	59,936,448	3,236,397	3,848,241	4,076,220	22,405,230	104,991,829
	1929-30	48,619,259	2,516,641	3,683,535	3,435,655	17,628,664	92,096,505
	1930-31	20,762,980	1,310,364	1,726,467	1,912,285	4,938,414	39,797,872
Total imports (less bullion and specie)	1913 ..	40,948,803	2,222,631	7,029,325	950,300	10,907,512	78,196,109
	1927-28	62,676,412	3,876,897	4,621,410	35,005,221	14,572,992	146,936,540
	1928-29	57,012,018	3,700,279	4,545,501	4,707,299	35,307,341	143,281,449
	1929-30	54,241,400	3,070,645	4,341,678	4,181,643	30,313,532	130,758,534
	1930-31	23,275,830	1,498,160	1,997,056	2,379,558	11,398,537	60,560,787

Stated as percentages the figures in the preceding table are shown below :—

**AUSTRALIAN IMPORTS OF PRODUCTS OF VARIOUS COUNTRIES—PERCENTAGES.**

Nature of Imports.	Year.	United Kingdom.	France.	Germany.	Japan.	U.S. of America.	All Countries.
Foodstuffs of animal origin	1913 ..	31.77	0.33	12.74	0.74	30.52	100
	1927-28	18.95	0.19	0.09	2.23	14.63	100
	1928-29	23.81	0.20	0.11	4.30	20.65	100
	1929-30	22.81	0.17	0.08	6.26	18.29	100
	1930-31	28.47	0.10	0.04	7.58	14.46	100
Spiritous and alcoholic liquors	1913 ..	63.04	17.64	7.37	0.09	0.14	100
	1927-28	80.76	10.11	0.52	..	..	100
	1928-29	82.51	10.11	0.40	..	..	100
	1929-30	82.58	9.37	0.47	..	..	100
	1930-31	92.19	3.86	0.15	..	0.03	100
Apparel, textiles, and manufactured fibres	1913 ..	61.48	4.82	8.59	2.39	3.13	100
	1927-28	56.30	5.91	3.49	8.54	6.31	100
	1928-29	51.61	5.84	3.25	9.86	7.43	100
	1929-30	56.61	4.90	3.14	9.18	6.43	100
	1930-31	49.78	4.23	2.82	10.32	4.68	100
Metals, metal manufactures, and machinery	1913 ..	64.17	1.00	10.98	0.04	17.62	100
	1927-28	55.09	0.59	3.04	0.05	35.60	100
	1928-29	47.90	0.35	3.30	0.06	38.32	100
	1929-30	53.08	0.37	3.90	0.06	34.66	100
	1930-31	58.09	0.46	5.10	0.18	24.04	100
Paper and Stationery	1913 ..	57.41	0.70	8.50	0.34	12.88	100
	1927-28	60.14	2.59	2.87	0.22	8.63	100
	1928-29	60.29	2.01	2.84	0.26	9.57	100
	1929-30	60.98	2.17	3.02	0.25	9.27	100
	1930-31	62.17	3.96	3.03	0.31	8.41	100
Jewellery, time-pieces, and fancy goods	1913 ..	36.14	6.11	18.28	1.34	9.58	100
	1927-28	29.82	3.84	15.02	3.81	9.45	100
	1928-29	28.05	3.90	16.20	3.80	8.84	100
	1929-30	30.01	4.39	17.73	4.54	9.67	100
	1930-31	34.64	4.75	18.78	7.31	8.33	100
Earthenware, cements, glass, etc.	1913 ..	41.52	2.57	28.94	1.37	4.02	100
	1927-28	59.11	1.05	7.15	5.22	7.11	100
	1928-29	57.02	1.41	7.84	6.05	6.93	100
	1929-30	57.36	1.24	7.52	5.47	6.26	100
	1930-31	56.68	1.11	6.89	9.15	7.55	100
Drugs, chemicals, and fertilizers	1913 ..	37.49	9.02	11.18	5.11	7.74	100
	1927-28	41.66	5.58	4.91	0.93	19.56	100
	1928-29	36.22	6.28	5.40	1.06	17.90	100
	1929-30	36.11	5.39	6.99	0.91	20.73	100
	1930-31	35.65	10.44	8.07	0.81	14.75	100
Rubber and leather and manufactures thereof, and substitutes therefor	1913 ..	28.26	4.00	20.21	0.04	25.27	100
	1927-28	17.02	3.65	2.15	0.09	22.57	100
	1928-29	18.98	4.24	3.35	0.06	21.53	100
	1929-30	24.60	3.24	4.41	0.04	19.74	100
	1930-31	29.34	0.74	4.83	0.12	15.73	100
Total above-mentioned articles	1913 ..	58.38	3.61	10.68	1.24	10.86	100
	1927-28	52.76	3.21	3.50	3.40	19.54	100
	1928-29	53.48	3.40	4.04	4.28	23.52	100
	1929-30	52.79	2.73	4.00	3.73	19.14	100
	1930-31	52.17	3.29	4.34	4.80	12.41	100
Total imports (less bullion and specie)	1913 ..	52.37	2.84	8.99	1.22	13.95	100
	1927-28	42.66	2.64	3.15	2.91	23.82	100
	1928-29	39.79	2.58	3.17	3.29	24.64	100
	1929-30	41.48	2.35	3.32	3.20	23.18	100
	1930-31	38.43	2.47	3.30	3.93	18.82	100

The total value of the commodities included in the competitive classes increased from £55,082,613 during 1913 to £122,631,560 during 1926-27, and thereafter declined each year to £39,797,872 in 1930-31. The principal classes of goods in the latter year were—(a) apparel, attire, and manufactured fibres, £15,898,259 and (b) metals, metal manufactures and machinery, £12,338,793. The value of goods included in these two



groups represented 71 per cent. of the total value of competitive commodities during 1930-31. In previous years imports of the latter group were greater than those in the apparel and textiles group, but in 1930-31 the position was reversed owing to the particularly heavy decline in imports of motor cars, electrical machinery, and iron and steel.

Of the total value of competitive goods, the United Kingdom supplied 52.17 per cent. during 1930-31, as against 58.38 per cent. during 1913, and 61.15 per cent. in 1922-23. In six of the nine competitive groups of imports, the proportion supplied by the United Kingdom increased during 1930-31 as compared with the previous year. The groups which showed reduced proportions were—apparel, textiles, etc.; earthenware, cements, etc.; and drugs, chemicals and fertilizers. The United Kingdom supplied Australia during 1930-31 with 92.19 per cent. of the total oversea purchases of spirituous and alcoholic liquors; 49.78 per cent. of apparel and attire; 62.17 per cent. of paper and stationery; 56.68 per cent. of earthenware, glassware, etc.; and 58.09 per cent. of metal manufactures and machinery.

The share of Japan in the competitive trade increased from 1.24 per cent. in 1913 to 4.80 per cent. in 1930-31. The most important classes of goods imported from Japan are as follows:—Silk piece goods, cotton and linen piece goods, raw silk, crockery, fish and fancy goods.

The position of the United States of America in this competitive trade improved from 10.86 per cent. in 1913 to 23.52 in 1928-29, but was not maintained in 1929-30 during which year a decrease to 19.14 per cent. was experienced, and further declined in 1930-31 to 12.41 per cent. In the latest pre-war year (1913) the value of goods from the United States in the "competitive" groups was £5,982,659, and in 1930-31 it was £4,938,414. The following are the principal groups of commodities in which United States sales to Australia during 1930-31 were greater than those of 1913:—Apparel and textiles; and drugs, chemicals, and fertilizers.

The position of France declined from 3.61 per cent. in 1913 to 2.73 per cent. in 1929-30 with an increase to 3.29 per cent. in 1930-31. Apparel, textiles, and drugs, chemicals and fertilizers are the most important imports from France.

The proportion of the imports supplied by Germany in 1913 was 10.68 per cent. as compared with 58.38 per cent. from the United Kingdom; 3.61 per cent. from France; 1.24 per cent. from Japan; and 10.86 per cent. from the United States. From 1914-15 to 1921-22 imports from Germany were on a very small scale, but have increased since the latter year. The percentage of the imports for 1930-31 was 4.34 per cent. as compared with 0.86 per cent. in 1923-24. The principal classes of imports from Germany were manufactured metals and machinery, apparel and textiles.

The percentages for the total value of competitive goods decreased in the year 1930-31 for the United Kingdom and the United States of America and increased for France, Germany and Japan. The largest decrease is shown in the percentage imported from the United States of America which fell from 19.14 per cent. in 1929-30 to 12.41 per cent. in 1930-31.

## § 16. Commonwealth Trade Representation in Overseas Countries.

The Commonwealth is represented in the United Kingdom by the Right Honourable S. M. Bruce, C.H., P.C., M.C., M.P., Minister without Portfolio, with headquarters at Australia House, London. Oversea trade matters affecting Australia come within the scope of the duties attaching to that office.

The Commonwealth has a Trade Representative in France, with headquarters at Paris. This official is attached to Australia House, London.

The first appointment of a Commissioner for Australia in the United States of America was made in 1918, and oversea trade matters come within the scope of the duties attaching to that office.

Early in 1921 a Commonwealth Trade Commissioner was appointed in China, with offices at Shanghai and Hong Kong. This office was terminated in 1923. In 1922, an Australian Trade Representative in the East was appointed, with headquarters at Singapore, but the appointment was terminated in March, 1925.

In April, 1929, a Commercial Representative for Australia was appointed in the Dominion of Canada. The functions of this officer are to develop the sales of Australian products to Canada and generally to represent Australia in a commercial capacity in that Dominion.

### § 17. Interstate Trade.

Arrangements for collecting and compiling complete statistics of interstate trade have been in operation in Western Australia and Tasmania for many years, and at the Conference of Statisticians held in January, 1928, it was resolved that efforts be made in the other States to collect data concerning the interstate movement of certain principal commodities. Since January, 1931, statistics have been compiled for Queensland showing the trade with individual States in the main classes of goods. Many difficulties are associated with the recording of interstate trade in Australia, as commodities are conveyed by sea, railway, road, river or air, and although efforts are being made in the other three States to extend the arrangements for collecting the required information, the returns so far are incomplete.

## CHAPTER VII.

### TRANSPORT AND COMMUNICATION.

#### A. SHIPPING.

##### § 1. System of Record.

So far as oversea vessels are concerned, the system of record treats Australia as a unit, and counts, therefore, only one entry and one clearance for each voyage, without regard to the number of States visited.

On the arrival at, or departure from, a port in Australia, whether from or for an oversea country or from another port in Australia, the master or agent must "enter" the vessel with the Customs authorities at the port, and supply certain prescribed information in regard to the ship, passengers, and cargo. At the end of each month the information so obtained is entered on forms which are forwarded to the Commonwealth Bureau of Census and Statistics. These forms, which collectively provide a complete record of the movements of every vessel in Australian waters, furnish the material for the compilation of the Shipping and Migration Returns. The arrangement referred to has been in operation since the 1st July, 1924.

From the 1st July, 1914, the statistical year for the record of Trade and Shipping of Australia was altered from the calendar year to the fiscal year ending 30th June.

In all instances the tonnage quoted is net tonnage.

##### § 2. Oversea Shipping.

1. **Total Movement.**—The following table gives the number and tonnage of oversea steam and sailing vessels entering Australian ports during the years 1921–22 to 1930–31 :—

#### TOTAL OVERSEA SHIPPING, ENTERED.—AUSTRALIA.

Year.	Steam.		Sailing.		Total.	
	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.
1921–22 .. ..	1,429	4,466,655	138	93,726	1,567	4,560,381
1922–23 .. ..	1,341	4,599,021	148	138,833	1,489	4,737,854
1923–24 .. ..	1,437	4,808,129	109	103,007	1,546	4,911,136
1924–25 .. ..	1,675	5,535,871	51	60,529	1,726	5,596,400
1925–26 .. ..	1,537	5,245,222	46	58,583	1,583	5,303,805
1926–27 .. ..	1,598	5,512,840	26	46,030	1,624	5,558,870
1927–28 .. ..	1,544	5,373,485	33	45,560	1,577	5,419,045
1928–29 .. ..	1,564	5,521,725	18	29,858	1,582	5,551,583
1929–30 .. ..	1,499	5,413,192	23	31,254	1,522	5,444,446
1930–31 .. ..	1,517	5,562,230	17	19,287	1,534	5,581,517

The average tonnage of vessels entered has risen from 2,910 tons per vessel in 1921–22 to 3,639 tons in 1930–31.

Particulars regarding the total oversea movement of shipping for each year from 1822 to 1920–21 will be found in Official Year Book No. 15, p. 507.

2. **Shipping Communication with various Countries.**—Records of the number and tonnage of vessels arriving from and departing to particular countries are misleading for the reason that the tonnage of a vessel can be recorded against one country only, notwithstanding that the same vessel on the same voyage may carry cargo or passengers to or from Australia for several countries. For instance, a mail steamer on a voyage from the United Kingdom to Australia, through the Suez Canal, may call at Marseilles, Genoa, Port Said, Aden and Colombo yet can be credited only to the United Kingdom, the country where the voyage commenced, to the exclusion of all of the others from the records. Also a number of vessels touch at New Zealand ports on their voyages to and from the United States of America and Canada, but their tonnages are not included in the records of Australian shipping trade with New Zealand. Similarly, the record of shipping engaged in trade between Australia and the United Kingdom via South African ports does not show tonnage to and from South Africa, the whole of it being included in the figures for United Kingdom. In view of this defect, statistics relating to the direction of the shipping to and from Australia are restricted to the following tables in which countries situated on the main trade routes are grouped together. This grouping into larger geographical divisions to some extent avoids the limitations referred to, except, as already pointed out, in the case of Africa and New Zealand.

### OVERSEA SHIPPING, AUSTRALIA—DIRECTION.

Countries.	Cargo and Ballast.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
<b>TONNAGE ENTERED.</b>						
United Kingdom and European Countries	Cargo	1,834,752	1,939,468	1,759,576	2,043,137	1,632,252
	Ballast	31,267	3,950	35,563	19,840	248,998
New Zealand .. .. .	Cargo	474,639	453,955	476,987	457,812	400,623
	Ballast	212,953	170,086	147,819	166,948	157,029
Asiatic Countries and Islands in the Pacific .. .. .	Cargo	1,217,572	1,187,969	1,372,717	1,329,505	1,196,313
	Ballast	288,287	190,883	353,350	121,907	765,805
Africa .. .. .	Cargo	16,540	34,325	57,453	42,304	34,543
	Ballast	91,582	55,595	75,807	52,103	261,442
North and Central America	Cargo	1,353,526	1,366,499	1,254,911	1,194,358	861,415
	Ballast	27,228	5,566	11,480	8,305	12,987
South America .. .. .	Cargo	1,840	10,739	5,920	8,227	2,821
	Ballast	8,684	..	..	..	7,289
	Cargo	4,898,869	4,992,965	4,927,564	5,075,343	4,127,967
	Ballast	660,001	426,080	624,019	369,103	1,453,550
<b>Total .. .. .</b>	<b>.. .. .</b>	<b>5,558,870</b>	<b>5,419,045</b>	<b>5,551,583</b>	<b>5,444,446</b>	<b>5,581,517</b>

<b>TONNAGE CLEARED.</b>						
United Kingdom and European Countries	Cargo	2,543,362	2,416,656	2,313,817	2,247,735	2,457,125
	Ballast	15,224	..	..	5,537	..
New Zealand .. .. .	Cargo	627,538	601,802	514,588	544,643	469,806
	Ballast	41,020	23,518	29,189	43,584	19,121
Asiatic Countries and Islands in the Pacific .. .. .	Cargo	1,181,485	1,104,361	1,390,401	1,061,434	1,651,536
	Ballast	298,862	453,271	444,169	594,732	311,894
Africa .. .. .	Cargo	155,300	159,238	122,065	45,114	(a)169,060
	Ballast	16,425	2,722	672	4,205	..
North and Central America	Cargo	445,835	474,279	536,134	633,692	450,702
	Ballast	199,209	238,166	164,290	306,629	120,786
South America .. .. .	Cargo	74,531	28,643	29,356	12,356	18,643
	Ballast	6,309	3,597	..	..	..
	Cargo	5,028,051	4,784,979	4,907,261	4,544,974	5,216,872
	Ballast	577,049	721,274	638,320	954,707	451,801
<b>Total .. .. .</b>	<b>.. .. .</b>	<b>5,605,100</b>	<b>5,506,253</b>	<b>5,545,581</b>	<b>5,499,681</b>	<b>5,668,673</b>

(a) Includes 23 vessels of 71,801 tons cleared to Las Palmas and 13 vessels of 40,966 tons cleared to Port Said for orders, all of which were subsequently diverted to ports in the United Kingdom and Europe.

3. Nationality of Oversea Shipping.—The greater part of the shipping visiting Australia is of British nationality, though in 1930-31 the proportion of British tonnage, 66.94 per cent., was the lowest yet recorded.

Particulars of the nationality of oversea shipping for the last five years are given in the following table :—

## OVERSEA SHIPPING, AUSTRALIA—NATIONALITY OF VESSELS ENTERED.

Nationality.	Tonnage.				
	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
<b>BRITISH—</b>					
Australian .. ..	405,968	395,680	206,188	211,890	227,550
United Kingdom .. ..	3,097,888	3,011,435	3,286,445	3,244,561	3,086,586
Canadian .. ..	86,701	72,079	77,907	57,282	38,683
New Zealand .. ..	458,716	403,176	415,517	399,209	320,822
Other British .. ..	102,201	94,863	120,580	84,928	62,398
Cargo .. ..	3,704,196	3,637,889	3,703,435	3,726,326	2,924,814
Ballast .. ..	447,278	339,344	403,202	271,544	811,225
Total British .. ..	4,151,474	3,977,233	4,106,637	3,997,870	3,736,039
Per cent. on total .. ..	74.68	73.39	73.97	73.43	66.94
<b>FOREIGN—</b>					
Danish .. ..	61,376	61,311	34,016	72,431	44,693
Dutch .. ..	115,363	130,500	147,843	154,036	147,425
French .. ..	99,832	97,596	118,842	106,939	102,641
German .. ..	140,810	157,381	137,766	105,435	114,922
Italian .. ..	61,583	76,921	54,716	63,840	68,220
Japanese .. ..	210,486	168,323	286,607	207,910	671,742
Norwegian .. ..	302,958	284,036	255,270	307,943	339,695
Swedish .. ..	111,920	106,159	92,397	86,540	114,244
United States .. ..	231,468	341,263	289,228	267,827	186,800
Other Foreign .. ..	71,600	18,322	28,261	73,675	55,096
Cargo .. ..	1,194,673	1,355,076	1,224,129	1,349,017	1,203,153
Ballast .. ..	212,723	86,736	220,817	97,559	642,325
Total Foreign .. ..	1,407,396	1,441,812	1,444,946	1,446,576	1,845,478
Per cent. on total .. ..	25.32	26.61	26.03	26.57	33.06
Cargo .. ..	4,898,869	4,992,965	4,927,564	5,075,343	4,127,967
Per cent. on total .. ..	88.13	92.14	89.76	93.22	73.96
Ballast .. ..	660,001	426,080	624,019	369,103	1,453,550
Per cent. on total .. ..	11.87	7.86	11.24	6.78	26.04
Grand Total .. ..	5,558,870	5,419,045	5,551,583	5,444,446	5,581,517

The Australian tonnage which entered Australia from overseas during the year 1930-31 represented 4.08 per cent. of the total tonnage entered. This figure was less

than the average for the quinquennium, which was 5.25 per cent., the decrease being due mainly to the disposal of Australian-owned vessels to foreign owners or to other Australian owners and transferred to the interstate trade, and the sale effected in April, 1928, of the five Bay liners and the freighters *Fordsdale* and *Ferndale* to the White Star Line.

### § 3. Shipping of Ports.

The total shipping tonnage—oversea, interstate, and coastwise—which entered the more important ports of Australia during the year 1930-31, together with similar information in regard to some of the ports of New Zealand for the year 1930 and of Great Britain for the year 1930, will be found in the next table:—

#### SHIPPING OF PORTS, AUSTRALIA, NEW ZEALAND, AND THE UNITED KINGDOM.

Port.	Tonnage Entered.	Port.	Tonnage Entered.
<b>AUSTRALIA—</b>		<b>ENGLAND AND WALES—</b>	
Sydney .. ..	8,468,282	London .. ..	29,232,914
Melbourne .. ..	6,310,549	Liverpool (including	
Adelaide .. ..	3,983,519	Birkenhead) .. ..	16,931,869
Brisbane .. ..	3,570,102	Southampton .. ..	12,921,062
Fremantle .. ..	3,464,655	Tyne Ports .. ..	10,813,360
Newcastle .. ..	3,383,198	Cardiff .. ..	8,626,324
Townsville .. ..	1,040,193	Plymouth .. ..	7,982,490
Hobart .. ..	767,592	Hull .. ..	6,226,642
Geelong .. ..	755,462	Manchester (including	
Pirie .. ..	669,127	Runcorn) .. ..	4,115,218
Cairns .. ..	584,244	Swansea .. ..	3,909,468
Kembla .. ..	536,650	Bristol .. ..	3,546,881
Albany .. ..	416,251	Newport .. ..	3,454,069
Launceston .. ..	383,442	Sunderland .. ..	3,170,768
Burnie .. ..	361,265	Middlesbrough .. ..	3,152,426
Mackay .. ..	333,209	Grimsby (including	
Thursday Island .. ..	309,611	Immingham) .. ..	2,579,884
Devonport .. ..	303,822	Dover .. ..	2,487,286
Rockhampton .. ..	293,587	Blyth .. ..	2,422,909
Bunbury .. ..	250,936	Falmouth .. ..	2,146,677
Whyalla .. ..	246,121	Beaumaris (including	
Bowen .. ..	213,884	Holyhead) .. ..	2,054,726
<b>NEW ZEALAND—</b>		<b>SCOTLAND—</b>	
Wellington .. ..	3,756,293	Glasgow .. ..	6,252,824
Auckland .. ..	2,476,051	Greenock .. ..	3,010,720
Lyttelton .. ..	2,041,897	Leith .. ..	2,120,933
Dunedin .. ..	1,074,514	<b>NORTHERN IRELAND—</b>	
		Belfast .. ..	6,869,267

### § 4. Vessels Built and Registered.

1. **Vessels Built.**—The following table shows the number and tonnage of vessels built in Australia during each of the calendar years 1927 to 1931, so far as such information can be ascertained from the Shipping Registers of the various States. The Merchant Shipping Act, under which vessels are registered in Australia, does not, however, make it compulsory to register vessels under 15 tons burthen if engaged in river or coastal trade. Larger vessels are also exempt from registration if not engaged in trade. Yachts and small trading vessels may be, and frequently are, registered at the request of the owners. As the Shipping Registers are the source of information, it follows that the figures given below will be subject to additions in the future, inasmuch as vessels already built may be added to the register at some future date.

VESSELS BUILT IN AUSTRALIA.

NUMBER.

Year.	Steamers built of—					Oil Motor Vessels.	Sailing.	Pontoons, Dredges, etc.	Total.
	Wood.	Iron.	Steel.	Com- posite.	Total.				
1927 ..	..	..	I	..	I	5	I	..	7
1928 ..	2	..	..	..	2	13	5	..	20
1929 ..	..	..	..	..	..	12	2	..	14
1930 ..	..	..	..	..	..	11	I	..	12
1931 ..	..	..	..	..	..	3	..	..	3

TONNAGE.

Year.	Steamers.		Oil Motor Vessels.		Sailing.		Pontoons, Dredges, etc.		Total.	
	Gross.	Net.	Gross.	Net.	Gross.	Net.	Gross.	Net.	Gross.	Net.
1927 ..	6	5	86	56	3	3	..	..	95	64
1928 ..	46	36	191	156	61	59	..	..	298	251
1929 ..	..	..	328	241	17	14	..	..	345	255
1930 ..	..	..	310	219	9	9	..	..	319	228
1931 ..	..	..	36	27	..	..	..	..	36	27

2. **Vessels Registered.**—The following table shows the number and net tonnage of steam, sailing, and other vessels on the registers of the States and of the Northern Territory on the 31st December, 1931 :—

VESSELS ON THE STATE REGISTERS, 31st DECEMBER, 1931.

States and Territory.	Steam.				Sailing.				Barges, Hulks, Dredges, etc., not Self-propelled.	Total.		
	Dredges and Tugs.		Other.		Fitted with Auxiliary Power.		Other.					
	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.				
New South Wales ..	48	1,239	393	80,159	258	3,427	224	9,432	51	14,156	974	108,413
Victoria ..	40	4,171	134	142,517	51	2,547	45	795	65	28,588	335	178,618
Queensland ..	19	2,920	39	4,847	57	917	95	1,383	31	4,432	241	14,499
South Australia ..	12	341	65	15,100	55	2,781	55	3,142	21	4,874	208	26,238
Western Australia ..	9	173	27	6,120	23	457	301	4,558	21	4,370	381	15,678
Tasmania ..	5	534	49	5,293	66	1,587	65	2,544	2	563	187	10,521
Northern Territory ..	..	..	..	..	3	44	17	163	..	..	20	207
<b>Total ..</b>	<b>133</b>	<b>9,378</b>	<b>707</b>	<b>254,036</b>	<b>513</b>	<b>11,760</b>	<b>802</b>	<b>22,017</b>	<b>191</b>	<b>56,983</b>	<b>2,346</b>	<b>354,174</b>

§ 5. Interstate Shipping.

1. **System of Record.**—*Interstate Shipping* comprises two elements, viz. :—(a) Vessels engaged solely in interstate trade; and (b) Vessels trading between Australia and oversea countries and in the course of their voyage proceeding from one State to another. (It should be mentioned that these vessels, except under special circumstances, do not now engage in interstate carrying.) No complexity enters into the record of those in category (a), but with regard to the method of recording the movements of the overseas vessels (b) some explanation is necessary. Each State desires that its

shipping statistics (which are prepared in the Commonwealth Bureau of Census and Statistics) shall show in full its shipping communication with oversea countries, but at the same time it is necessary to avoid any duplication in the statistics for Australia as a whole. In order to meet these dual requirements, a vessel arriving in any State from an oversea country—say United Kingdom—*via* another State, is recorded in the second State as from United Kingdom, *via States*, thus distinguishing the movement from a *direct* oversea entry. Continuing the voyage, the vessel is in the third State again recorded for the statistics of the State concerned as from United Kingdom *via* other States. As, however, this inward voyage will terminate at an Australian port it follows that the *clearance* from the second State to the third State is a *clearance* interstate, and is included with interstate tonnage in conformity with the pre-federation practice of the States, and to preserve the continuity of State statistics. Thus, movements of ships which are, from the standpoint of Australia as a whole, purely coastal movements, must for the individual States be recorded as “Oversea *via* other States” or “Interstate” according to the direction of the movement. The significance of the record of these movements will be more clearly seen from the following tabular presentation of the inward and outward voyages to and from Australia of a mail steamer which, it is presumed, reaches Fremantle (Western Australia) and then proceeds to the terminal port of the voyage—Sydney (New South Wales)—*via* the States of South Australia and Victoria. From the terminal port the vessel will commence the outward voyage, and retrace its inward track.

## ITINERARY OF AN OVERSEAS VESSEL ON AUSTRALIAN COAST.

Particulars.	Recorded as—	
	For the State and for Australia.	For the States.
<b>Inward Voyage—</b>		
Enters Fremantle from United Kingdom	Oversea direct	
Clears Fremantle for Adelaide . . . . .	.. ..	Interstate direct
Enters Adelaide from United Kingdom <i>via</i> Fremantle . . . . .	.. ..	Interstate direct Oversea <i>via</i> States
Clears Adelaide for Melbourne . . . . .	.. ..	Interstate direct
Enters Melbourne from United Kingdom <i>via</i> Adelaide . . . . .	.. ..	Interstate direct Oversea <i>via</i> States
Clears Melbourne for Sydney . . . . .	.. ..	Interstate direct
Enters Sydney from United Kingdom <i>via</i> Melbourne . . . . .	.. ..	Interstate direct Oversea <i>via</i> States
<b>Outward Voyage—</b>		
Clears Sydney for United Kingdom <i>via</i> Melbourne . . . . .	.. ..	Interstate direct Oversea <i>via</i> States
Enters Melbourne from Sydney . . . . .	.. ..	Interstate direct
Clears Melbourne for United Kingdom <i>via</i> Adelaide . . . . .	.. ..	Interstate direct Oversea <i>via</i> States
Enters Adelaide from Melbourne . . . . .	.. ..	Interstate direct
Clears Adelaide for Fremantle . . . . .	.. ..	Interstate direct Oversea <i>via</i> States
Enters Fremantle from Adelaide . . . . .	.. ..	Interstate direct
Clears Fremantle for United Kingdom . . . . .	Oversea direct	

From the method outlined above, the requirements for Australia and for the individual States are ascertained as follows:—(a) The aggregate of all ships recorded for each State as “Oversea *direct*” gives the oversea shipping for Australia as a whole. (b) The aggregate for all ships recorded in any State as “Oversea *direct*” plus those recorded as “Oversea *via States*” gives the total *oversea shipping* for that State. (c) From the example given in the table it may be noticed that for every entry “Oversea *via States*” there is a corresponding clearance “Interstate,” so that according to the purpose for which the figures are required, the movements of “oversea ships *via States*” can be added to the recorded interstate shipping, and thus furnish figures showing the total interstate *movement* of shipping, or a similar deduction may be made from the recorded interstate shipping to give the total movement of shipping engaged solely in interstate trade.



2. **Vessels and Tonnage Entered.**—(*Interstate direct.*) The following table gives the number and tonnage of vessels recorded as having entered each State from any other State during each of the years 1926-27 to 1930-31. The shipping of the Murray River, between the States of New South Wales, Victoria, and South Australia is not included :—

**INTERSTATE SHIPPING.—NUMBER AND TONNAGE OF VESSELS ENTERED.**

States and Territory.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
<b>NUMBER.</b>					
New South Wales ..	2,022	1,856	1,723	1,588	1,564
Victoria ..	1,870	1,815	1,704	1,739	1,534
Queensland ..	487	463	455	490	469
South Australia ..	949	852	730	753	606
Western Australia ..	366	382	339	387	305
Tasmania ..	1,014	1,052	950	1,022	941
Northern Territory ..	24	29	33	26	21
<b>Total ..</b>	<b>6,732</b>	<b>6,449</b>	<b>5,934</b>	<b>6,005</b>	<b>5,440</b>

<b>TONNAGE.</b>					
New South Wales ..	4,626,263	4,204,347	4,103,542	4,079,399	3,996,976
Victoria ..	3,787,217	3,511,614	3,416,924	3,552,904	3,274,609
Queensland ..	1,056,045	1,074,291	1,106,905	1,164,183	1,061,560
South Australia ..	2,725,309	2,462,588	2,238,706	2,504,065	2,143,692
Western Australia ..	1,778,919	1,879,446	1,603,818	1,915,695	1,653,953
Tasmania ..	1,171,857	1,242,260	853,982	1,207,640	1,134,113
Northern Territory ..	62,663	61,746	59,048	64,075	62,570
<b>Total ..</b>	<b>15,208,273</b>	<b>14,436,292</b>	<b>13,442,925</b>	<b>14,487,961</b>	<b>13,327,473</b>

3. **Oversea Vessels Moving Interstate.**—(*Oversea via States.*) To ascertain the aggregate movement of shipping between the States during the year 1930-31, including the total interstate movements of oversea vessels, the figures in the following table, which give the number and tonnage of vessels entered from or cleared for oversea countries via other Australian States, must be added to those in the table preceding :—

**SHIPPING ENTERED AND CLEARED FROM AND TO OVERSEA COUNTRIES VIA OTHER AUSTRALIAN STATES, 1930-31.**

States and Territory.	Entered.		Cleared.		Total.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
New South Wales ..	471	2,325,559	440	2,244,517	911	4,570,076
Victoria ..	422	2,131,629	385	2,021,967	807	4,153,596
Queensland ..	228	1,401,838	221	1,369,459	449	2,771,297
South Australia ..	273	1,504,199	237	1,377,369	510	2,881,568
Western Australia ..	49	169,423	14	56,101	63	225,524
Tasmania ..	31	123,690	89	497,020	120	620,710
Northern Territory ..	2	3,655	..	..	2	3,655
<b>Total ..</b>	<b>1,476</b>	<b>7,659,993</b>	<b>1,386</b>	<b>7,566,433</b>	<b>2,862</b>	<b>15,226,426</b>

Oversea vessels moving interstate are with few exceptions not engaged in the active interstate trade of Australia, but are merely proceeding to the several States in continuation of their oversea voyage.

4. **Vessels engaged Solely in Interstate Trade.**—Eliminating all interstate movements of oversea vessels, the number and tonnage of vessels engaged solely in the interstate trade for Australia as a whole during the years 1926-27 to 1930-31 were as follow :—

**VESSELS ENGAGED SOLELY IN INTERSTATE TRADE. NUMBER AND TONNAGE ENTERED AND CLEARED.—AUSTRALIA.**

Year.	Entered.		Cleared.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
1926-27 .. .. .	5,129	7,303,603	5,146	7,422,571
1927-28 .. .. .	4,824	6,316,106	4,865	6,447,495
1928-29 .. .. .	4,373	5,512,897	4,383	5,611,354
1929-30 .. .. .	4,396	6,218,634	4,373	6,091,994
1930-31 .. .. .	4,054	5,761,040	4,074	5,838,626

5. **Total Interstate Movement of Shipping.**—(i) *Australia.* The appended table shows the total interstate movement of shipping including oversea vessels moving interstate for each of the years 1926-27 to 1930-31 :—

**TOTAL INTERSTATE MOVEMENT OF SHIPPING.—AUSTRALIA.**

Year.	Entered.		Cleared.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
1926-27 .. .. .	8,599	24,081,520	8,616	24,200,488
1927-28 .. .. .	8,324	23,395,355	8,365	23,526,744
1928-29 .. .. .	7,823	22,648,956	7,833	22,747,413
1929-30 .. .. .	7,851	23,616,739	7,828	23,490,099
1930-31 .. .. .	6,916	20,987,466	6,936	21,065,052

(ii) *States.* The following table shows the number and tonnage of vessels which entered and cleared each State from and for other States during 1930-31, including the coastal movements of oversea vessels :—

**INTERSTATE SHIPPING OF EACH STATE, 1930-31.**

States and Territory.	Entered.		Cleared.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
New South Wales .. .. .	2,035	6,322,535	2,040	6,323,686
Victoria .. .. .	1,956	5,406,238	2,010	5,626,650
Queensland .. .. .	697	2,463,398	698	2,468,556
South Australia .. .. .	879	3,647,891	884	3,652,994
Western Australia .. .. .	354	1,823,376	299	1,640,753
Tasmania .. .. .	972	1,257,803	984	1,294,692
Northern Territory .. .. .	23	66,225	21	57,721
<b>Total, Australia .. .. .</b>	<b>6,916</b>	<b>20,987,466</b>	<b>6,936</b>	<b>21,065,052</b>

6. Interstate and Coastal Services.—The subjoined table gives particulars, so far as they are available, of all steamships engaged in regular interstate or coastal services at the end of each of the years 1927 to 1931 :—

INTERSTATE AND COASTAL STEAMSHIP SERVICES.—AUSTRALIA.

Particulars.	1927.	1928.	1929.	1930.	1931.
Number of companies making returns .. .. .	40	38	29	22	23
Number of steamships .. .. .	212	201	181	173	162
Tonnage { Gross .. .. .	398,894	371,142	360,459	349,163	319,756
{ Net .. .. .	214,703	208,083	202,749	196,342	178,549
Horse-power (Nominal) .. .. .	39,545	37,980	37,911	36,230	34,357
Number of 1st class passengers for which licensed .. .. .	7,909	7,686	7,983	7,686	7,278
{ 2nd class and steerage .. .. .	3,438	3,240	1,755	1,784	1,775
Complement of Crew { Masters and officers .. .. .	698	638	588	563	524
{ Engineers .. .. .	662	630	598	576	538
{ Crew .. .. .	5,176	4,922	4,710	4,630	4,232

§ 6. Tonnage of Cargo.

1. Oversea and Interstate Cargo.—The table hereunder shows the aggregate tonnage of oversea cargo discharged and shipped in Australian ports, and the tonnage of interstate cargo shipped in all ports for the years 1926-27 to 1930-31. Cargo which was stated in cubic feet has been converted to tons measurement on the basis of 40 cubic feet to the ton.

AUSTRALIAN SHIPPING.—CARGO MOVEMENT.

Year.	Oversea Cargo.				Interstate Cargo.	
	Discharged.		Shipped.		Shipped.	
	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.
1926-27 ..	3,097,467	2,857,745	4,313,286	932,855	5,764,631	1,031,525
1927-28 ..	3,346,604	2,542,523	3,739,525	946,781	5,090,116	1,134,972
1928-29 ..	3,596,936	2,470,493	4,529,232	759,813	4,381,692	1,168,601
1929-30 ..	4,348,396	2,298,101	3,954,893	643,373	3,460,428	1,111,355
1930-31 ..	2,375,412	1,037,889	5,802,593	639,032	3,295,051	805,314

2. Nationality.—The following table shows the total oversea cargo discharged and shipped according to the nationality of the vessels carrying during the years 1926-27 to 1930-31.

OVERSEA CARGO DISCHARGED AND SHIPPED.—TONS.(a)

Vessels Registered at Ports in—	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
British—					
Australia .. .. .	660,255	679,122	255,296	237,792	219,168
United Kingdom .. .. .	6,240,640	6,036,024	6,988,043	6,861,323	5,528,848
Canada .. .. .	183,020	151,582	190,273	135,154	86,775
New Zealand .. .. .	605,344	512,929	456,560	441,593	357,258
Other British .. .. .	196,486	142,629	222,787	163,949	98,492
<b>Total British .. .. .</b>	<b>7,885,745</b>	<b>7,522,286</b>	<b>8,112,959</b>	<b>7,839,811</b>	<b>6,290,541</b>
<b>Per cent. on Total .. .. .</b>	<b>70.40</b>	<b>71.13</b>	<b>71.44</b>	<b>69.72</b>	<b>63.83</b>

OVERSEA CARGO DISCHARGED AND SHIPPED.—TONS (a)—*continued.*

Vessels Registered at Ports in—	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
<b>Foreign—</b>					
Denmark .. .. .	257,924	176,568	117,499	227,779	133,777
France .. .. .	129,138	151,162	133,670	119,533	92,460
Germany .. .. .	364,224	377,599	385,692	269,783	241,868
Italy .. .. .	149,996	125,403	92,476	108,605	90,412
Japan .. .. .	389,859	303,353	532,174	436,747	1,146,557
Netherlands .. .. .	239,277	256,493	280,675	290,949	234,897
Norway .. .. .	866,729	722,677	687,509	876,701	868,346
Sweden .. .. .	424,649	354,084	330,290	355,621	360,373
United States of America	352,561	534,477	585,587	512,923	282,383
Other Foreign .. .. .	141,251	51,331	77,943	206,311	113,312
<b>Total Foreign .. .. .</b>	<b>3,315,608</b>	<b>3,953,147</b>	<b>3,243,515</b>	<b>3,404,952</b>	<b>3,564,385</b>
Per cent. on Total .. .. .	29.60	28.87	28.56	30.28	36.17
<b>Grand Total .. .. .</b>	<b>11,201,353</b>	<b>10,575,433</b>	<b>11,356,474</b>	<b>11,244,763</b>	<b>9,854,926</b>

(a) Tons weight and tons measurement combined.

The subject of cargo tonnage is considered further in connexion with the volume of trade in Chapter VI. § 12 in the Appendix to this issue.

## § 7. World's Shipping Tonnage.

The table hereunder shows the number and gross tonnage of steam and motor, and of sailing vessels owned by the most important maritime countries, together with the proportion of the grand total owned by each country :—

## WORLD'S SHIPPING TONNAGE, 1st JULY, 1931.

Nationality.	Steam and Motor.		Sailing.		Total.		Percentage on Total.	
	No.	Gross Tonnage.	No.	Gross Tonnage.	No.	Gross Tonnage.	No.	Gross Tonnage.
Great Britain and Nth. Ireland	7,781	20,193,677	376	109,228	8,157	20,302,905	25.80	30.22
Australia and New Zealand	593	677,463	9	3,746	602	681,209	1.90	1.01
Canada (a) ..	645	959,671	164	83,095	809	1,042,766	2.56	1.55
Other British ..	771	911,802	193	46,711	964	958,513	3.05	1.43
<b>Total, British Empire ..</b>	<b>9,790</b>	<b>22,742,613</b>	<b>742</b>	<b>242,780</b>	<b>10,532</b>	<b>22,985,393</b>	<b>33.31</b>	<b>34.21</b>
Belgium ..	234	542,432	4	5,038	238	547,470	0.75	0.82
Denmark ..	677	1,133,201	40	12,056	717	1,145,257	2.27	1.70
France ..	1,521	3,513,179	132	53,048	1,653	3,566,227	5.23	5.31
Germany ..	2,151	4,226,050	20	28,551	2,171	4,254,601	6.87	6.33
Greece ..	539	1,397,782	..	..	539	1,397,782	1.70	2.08
Holland ..	1,410	3,111,357	19	6,813	1,429	3,118,170	4.52	4.64
Italy ..	1,101	3,273,525	246	62,148	1,347	3,335,673	4.26	4.96
Japan ..	1,969	4,276,341	..	..	1,969	4,276,341	6.23	6.36
Norway ..	1,981	4,061,629	9	3,877	1,990	4,065,506	6.29	6.05
Spain ..	771	1,211,817	71	15,553	842	1,227,370	2.66	1.83
Sweden ..	1,339	1,678,776	89	25,893	1,428	1,704,669	4.52	2.54
United States of America (a) (b)	2,847	10,454,013	586	642,829	3,433	11,096,842	10.86	16.52
Other Foreign Countries ..	2,933	4,277,144	395	192,648	3,328	4,469,792	10.53	6.65
<b>Total, Foreign Countries ..</b>	<b>19,473</b>	<b>43,157,246</b>	<b>1,611</b>	<b>1,048,454</b>	<b>21,084</b>	<b>44,205,700</b>	<b>66.69</b>	<b>65.79</b>
<b>Grand Total ..</b>	<b>29,263</b>	<b>65,899,859</b>	<b>2,353</b>	<b>1,291,234</b>	<b>31,616</b>	<b>67,191,093</b>	<b>100.00</b>	<b>100.00</b>

(a) Sea-going.

(b) Including Philippine Islands.

The foregoing figures have been compiled from Lloyd's Register of Shipping, and vessels of 100 tons or upwards only have been included.

§ 8. Ferries.

1. **New South Wales.**—The ferry services in Port Jackson are under the control of three companies, which during the year 1931 had 57 vessels in commission, 55 of which were double-ended screw steamers, the remaining two being motor driven. It is claimed for the steamers that they are superior in size and equipment to boats employed on similar service in any other part of the world.

2. **Victoria.**—The Williamstown City Council owned one steamer which was engaged in the transport of passengers between Port Melbourne and Williamstown until 27th December, 1930, from which date the service was discontinued. There are several other steamers which are engaged during the summer season in the carriage of passengers and goods to the several seaside resorts. Particulars of these services, however, are not included in the table in sub-par. 6 following.

3. **Queensland.**—The Brisbane City Council and the Balmoral Shire Council control the ferry services in the Metropolitan area, but such ferries are really substitutes for bridges and have therefore not been included in the table hereunder.

4. **Western Australia.**—The ferries plying on the Swan River during 1931 were operated by a private company, and consisted of 8 petrol-driven vessels. At South Perth the Western Australian Government employed 3 vessels, 1 of which was a steamer.

5. **Tasmania.**—In and around Hobart there were in 1931, 4 ferry services, 2 being controlled by private companies which had 2 steamers in commission, 1 by the Public Works Department with 2 motor-propelled vessels, and 1 by the Railway Department with 1 steamer.

6. **Particulars of Working.**—The subjoined table shows for the year 1931, so far as returns are available, the most important items in connexion with the operation of the ferry services in the several States :—

FERRIES.—PARTICULARS OF WORKING, 1931.

Particulars.	New South Wales.	Victoria. (d)	Western Australia.	Tasmania.	Total.
<b>Boats in Service—</b>					
Steam .. No.	55	1	1	3	60
Other .. No.	2	..	10	2	14
Total .. No.	57	1	11	5	74
<b>Number of passengers which boats are licensed to carry .. No.</b>	44,066	342	1,622	1,629	47,659
<b>Revenue .. £</b>	697,388	393	13,609	22,413	733,803
<b>Working Expenses .. £</b>	556,701	1,488	15,082	24,521	597,792
<b>Passengers carried (b) No.</b>	46,215,111	16,644	1,216,455	1,136,880	48,585,090
<b>Mileage of Boats miles</b>	(a)	2,808	77,701	(b)96,500	(c)177,009
<b>Accidents—</b>					
Killed .. No.	1	..	..	..	1
Injured .. No.	72	..	..	12	84
<b>Employees—</b>					
Salaried Staff No.	78	..	2	8	88
Wages Staff No.	926	6	30	29	991

(a) Not available. (b) Approximate. (c) Incomplete. (d) Service discontinued as from 27th December, 1930.

7. **Other Services.**—In addition to the foregoing there are throughout the several States a number of row-boat ferry services, and on many of the principal inland rivers punts are in operation.

§ 9. Miscellaneous.

1. **Lighthouses.**—Transport and Communication Bulletin No. 14, published by this Bureau, contains a list of the principal lighthouses on the coast of Australia, giving details of the location, number, colour, character, period, candle-power, and visibility of each light so far as particulars were available.

2. **Distances by Sea.**—A statement giving the distances by sea between the ports of the capital cities of Australia and the most important ports in other countries which trade with Australia was also included in Transport and Communication Bulletin No. 14.

3. **Shipping Freight Rates.**—The Quarterly Summary of Australian Statistics gives a list of the ruling freight rates for general merchandise both in respect of oversea and interstate shipments. The latest figures available, which give the rates current at 30th June, 1932, show that the rate for general merchandise from Australia to United Kingdom and Continent was 63s. per ton weight or measurement, as compared with 55s. per ton in 1915.

4. **Depth of Water at Main Ports.**—A table compiled from information supplied by the Director of Navigation showing the depth of water at the main ports of Australia at 1st January, 1931, has been included in the Transport and Communication Bulletin No. 22, published by this Bureau.

5. **Shipping Casualties.**—Courts of Marine Inquiry are constituted by a Magistrate assisted by skilled assessors, and when necessary are held at the principal port in each State and at Launceston (Tasmania). Such courts have power to deal with the certificates of officers found to be at fault. Particulars of shipping casualties reported on or near the coast during the year 1929-30 are shown in the Transport and Communication Bulletin No. 22. This information has also been furnished by the Director of Navigation.

6. **Commonwealth Navigation and Shipping Legislation.**—(i) *General.* An account in some detail, of the Commonwealth Navigation and Shipping Legislation was published in Official Year Book No. 17 (pp. 1053-5).

(ii) *Amending Acts.* Under the provisions of the Navigation Act 1926 (March, 1926) permission may be granted by the Governor-General in Council in certain specified circumstances to unlicensed British ships to engage in passenger tourist traffic between any specified Commonwealth ports. Certain vessels were granted permission to engage in the carriage of passengers between the port of Hobart and the ports of Brisbane, Sydney, and Melbourne during the period 6th March, 1926, to 31st May, 1926, and between the 1st January, 1927, and 31st May, 1927. This permission may be renewed from time to time as occasion demands. The Navigation Act 1925 (July, 1925), conferred authority for the suspension, for any specified time, if in the opinion of the Governor-General in Council such is expedient in the public interest, of the operation of the provisions of that part of the principal Act relating to the engagement of ships in the coasting trade by exempting under certain circumstances any ship or class of ships from compliance with any specified provisions of the Act.

7. **Ports and Harbours.**—A report in two volumes on *Transport in Australia*, with special reference to Ports and Harbours facilities, was submitted to the Commonwealth Government by Sir George Buchanan, and published as two Parliamentary Papers (No. 86 printed 14th March, 1927, and No. 108 printed 9th May, 1927).

## B. RAILWAYS.

### § 1. General.

1. **Introduction.**—In the following pages statistics relating to State-owned lines are, in the main, dealt with separately from those under the control of the Commonwealth Government. The State railways are referred to throughout as "State" and the Commonwealth railways as "Federal" railways.

2. **Improvement of Railway Statistics.**—Earlier issues of the Year Book contain a condensation of the report issued in 1909 by the Commonwealth Statistician to the Minister for Home Affairs on the subject of *The Desirability of Improved Statistics of Government Railways in Australia* (see Year Book No. 7, page 598).

° Considerable improvement, both as regards the volume of information and the mode of presentation thereof in the statistical tables appearing in the reports of the several Railway Commissioners, has been made during recent years.

3. **Railway Communication in Australia.**—An account of the progress of railway construction in Australia since the opening of the first line in 1854 will be found in Year Book No. 6, p. 681. Further information regarding railway communication in Australia and proposals for unification of gauge in the various systems are given in Year Book No. 22, pp. 259 to 261.

4. **Grafton-South Brisbane (Uniform Gauge) Line.**—The line from Grafton (New South Wales) to Brisbane (Queensland) which was opened for traffic on 27th September, 1930, was constructed to overcome the break of gauge between Sydney and Brisbane, and is the first step towards uniform gauge railway communication between the capitals of the mainland States. It was constructed under agreement between the Commonwealth and the States of New South Wales and Queensland and is of 4ft. 8½in. gauge. The work consisted of regrading and relaying the existing New South Wales line between Grafton and Kyogle and the construction of a new line 94.82 miles in length from Kyogle (New South Wales) to South Brisbane (Queensland). Under the agreement, the Commonwealth in the first instance provided the cost of the work, of which one-fifth was deemed to have been on behalf of the Commonwealth, and four-fifths on behalf of the five mainland States of the Commonwealth collectively on a population basis. The agreement also provides that if in any financial year the earnings from the line exceed the working expenses, the excess shall be applied in paying to the Commonwealth the interest on the money provided by it on behalf of the States and the Commonwealth. The order in which such excess shall be applied is laid down in the agreement, and provides that the interest on the quotas of Victoria, South Australia, and Western Australia shall be paid first, then the interest on the quotas of Queensland and New South Wales, and lastly the interest on the quota of the Commonwealth. Any balance remaining after payment of interest will be returned to Queensland and New South Wales. The States of Victoria, South Australia and Western Australia did not enter into the agreement, and the quotas of these States were assumed by the Commonwealth. To 30th June, 1931, the total expenditure by the Commonwealth was £4,371,000, the interest charge for the year 1930-31 being £215,971. During the period 27th September, 1930, to 30th June, 1931, the working of the line, which is the responsibility of the New South Wales and Queensland Railways Commissioners, resulted in losses being shown on both sections as follows:—New South Wales £39,533, and Queensland £21,008. In addition, the following amounts were paid as interest:—New South Wales £70,269, and Queensland £26,311, the remainder, £119,391, being borne by the Commonwealth. Figures relating to the operation, etc., of the line are incorporated as far as possible with New South Wales and Queensland in the tables in Section 3, State Railways.

5. **Mileage Open for Traffic, all Lines.**—(i) *General.* In all the States the principle that the control, construction, and maintenance of the railways should be in the hands of the Government has long been adhered to, excepting in cases presenting unusual circumstances. In various parts of Australia, lines have been constructed and managed by private companies, but at the present time nearly the whole of the railway traffic is in the hands of the State or Commonwealth Governments. A large proportion of the private lines has been laid down for the purpose of opening up forest lands, mining districts, or sugar areas, and these lines are not generally used for the conveyance of passengers or the public conveyance of goods.

The subjoined table shows the route mileage of Federal, State, and private lines open for general traffic (exclusive of sidings and cross-overs) in each State for each of the years 1926-27 to 1930-31. The railway mileage given for each State includes both Federal, State, and private railways in that State:—

## RAILWAYS.—GOVERNMENT AND PRIVATE.—MILEAGE OPEN.

State or Territory.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	Miles.	Miles.	Miles.	Miles.	Miles.
New South Wales .. ..	5,892.07	6,008.99	6,082.25	6,089.93	6,159.70
Victoria .. ..	4,659.16	4,721.69	4,723.95	4,737.65	4,741.69
Queensland .. ..	6,603.59	6,619.14	6,720.91	6,726.03	6,794.54
South Australia .. ..	3,637.01	3,636.42	3,821.29	3,938.68	3,932.33
Western Australia .. ..	4,649.04	4,707.62	4,809.47	4,841.89	4,911.37
Tasmania .. ..	845.86	841.06	827.26	821.01	806.45
Federal Capital Territory .. ..	4.94	4.94	4.94	4.94	4.94
Northern Territory .. ..	198.68	198.68	264.84	316.50	316.50
Australia .. ..	26,490.35	26,738.54	27,254.91	27,476.63	27,667.52

In previous issues of the Year Book particulars were given for different periods from 1855 onwards. (See No. 15, p. 537.)

(ii) *Government and Private Lines Separately.* The next table shows for each State (a) the length of lines owned by the State Government, and by the Commonwealth Government in that State, all of which lines are open for general use by the public and (b) the length of private lines available for general use by the public. The mileages specified in the case of Government and private lines are to the 30th June, 1931 :—

## RAILWAYS.—GOVERNMENT AND PRIVATE.—MILEAGE CLASSIFIED, 1930-31.

State or Territory.	Government Lines—		Private Lines available for General Traffic.	Total Open for General Traffic.
	State.	Federal.		
	Miles.	Miles.	Miles.	Miles.
New South Wales .. ..	6,044.00	..	115.70	6,159.70
Victoria .. ..	4,716.75	..	24.94	4,741.69
Queensland .. ..	6,528.78	..	265.76	6,794.54
South Australia .. ..	2,529.26	1,369.27	33.80	3,932.33
Western Australia .. ..	4,180.38	453.99	277.00	4,911.37
Tasmania .. ..	664.89	..	141.56	806.45
Federal Capital Territory .. ..	..	4.94	..	4.94
Northern Territory .. ..	..	316.50	..	316.50
Australia .. ..	24,664.06	2,144.70	858.76	27,667.52

6. *Comparative Railway Facilities.*—The mileage of line open to the public for general traffic (including both Government and private lines) is shown in the subjoined statement in relation to population and area respectively at the 30th June, 1931 :—

## RAILWAYS.—GOVERNMENT AND PRIVATE.—COMPARISON OF FACILITIES, 1931.

Particulars.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	Fed. Cap. Ter.	Nor. Ter.	Aust.
Mileage of Railway— Per 1,000 of population .. ..	2.46	2.64	7.08	6.74	11.68	3.68	0.58	68.01	4.26
Per 1,000 sq. miles of Territory .. ..	19.91	53.95	10.13	10.35	5.03	30.76	5.26	0.60	9.30



7. Classification of Lines according to Gauge, 1930-31.—The next table gives a classification, according to gauge, of the total mileage, exclusive of sidings and crossovers of (i) Federal railways, given in the State or Territory in which situated; (ii) State railways; and (iii) Private railways open to the public for general traffic. Particulars of Government railways are up to the 30th June, 1931, and of private railways open for general traffic to the 31st December, 1931, as nearly as possible.

## RAILWAYS.—GOVERNMENT AND PRIVATE.—GAUGES, 1930-31.

State or Territory in which situated.	Route mileage having a gauge of—						Total.
	5 ft. 3 in.	4 ft. 8½ in.	3 ft. 6 in.	3 ft. 0 in.	2 ft. 6 in.	2 ft. 0 in.	

## FEDERAL RAILWAYS.

	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
South Australia .. ..	..	597.86	771.41	..	..	..	1,369.27
Western Australia .. ..	..	453.99	..	..	..	..	453.99
Federal Capital Territory .. ..	..	4.94	..	..	..	..	4.94
Northern Territory .. ..	..	..	316.50	..	..	..	316.50
<b>Total .. ..</b>	..	<b>1,056.79</b>	<b>1,087.91</b>	..	..	..	<b>2,144.70</b>

## STATE RAILWAYS.

New South Wales .. ..	..	6,004.49	39.51	..	..	..	6,044.00
Victoria .. ..	4,594.98	..	..	..	121.77	..	4,716.75
Queensland .. ..	..	68.82	6,429.70	..	..	30.26	6,528.78
South Australia .. ..	1,451.24	..	1,078.02	..	..	..	2,529.26
Western Australia .. ..	..	..	4,180.38	..	..	..	4,180.38
Tasmania .. ..	..	..	653.56	..	..	11.33	664.89
<b>Total .. ..</b>	<b>6,046.22</b>	<b>6,073.31</b>	<b>12,381.17</b>	..	<b>121.77</b>	<b>41.59</b>	<b>24,664.06</b>

## PRIVATE RAILWAYS OPEN FOR GENERAL TRAFFIC.

New South Wales .. ..	..	78.97	36.73	..	..	..	115.70
Victoria .. ..	13.94	..	..	11.00	..	..	24.94
Queensland .. ..	..	..	101.55	..	7.00	157.21	265.76
South Australia .. ..	..	..	33.80	..	..	..	33.80
Western Australia .. ..	..	..	277.00	..	..	..	277.00
Tasmania .. ..	..	..	125.07	..	..	16.49	141.56
<b>Total .. ..</b>	<b>13.94</b>	<b>78.97</b>	<b>574.15</b>	<b>11.00</b>	<b>7.00</b>	<b>173.70</b>	<b>858.76</b>

## ALL RAILWAYS OPEN FOR GENERAL TRAFFIC.

New South Wales .. ..	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Victoria .. ..	4,608.92	6,083.46	76.24	..	..	..	6,159.70
Queensland .. ..	..	..	..	11.00	121.77	..	4,741.69
South Australia .. ..	..	68.82	6,531.25	..	7.00	187.47	6,794.54
Western Australia .. ..	1,451.24	597.86	1,883.23	..	..	..	3,932.33
Tasmania .. ..	..	453.99	4,457.38	..	..	..	4,911.37
Federal Capital Territory .. ..	..	..	778.63	..	..	27.82	806.45
Northern Territory .. ..	..	4.94	..	..	..	..	4.94
.. ..	..	..	316.50	..	..	..	316.50
<b>GRAND TOTAL .. ..</b>	<b>6,060.16</b>	<b>7,209.07</b>	<b>14,043.23</b>	<b>11.00</b>	<b>128.77</b>	<b>215.29</b>	<b>27,667.52</b>

8. **Summary of Operations, 1930-31.**—In the following table a summary is given of the working of all railways open for general traffic in Australia during the year ended 30th June, 1931 :—

**RAILWAYS.—FEDERAL, STATE, AND PRIVATE.—SUMMARY 1930-31.**

Particulars.	Federal Railways.	State Railways.	Private Railways.	Total for Australia.
Mileage open (route) 30th June, 1931 .. .. Miles	2,144.70	24,664.06	858.76	27,667.52
Capital cost .. .. £	15,436,199	326,108,493	(a) 5,250,651	(a) 346,795,343
Cost per mile .. .. £	7,197	13,222	(a) 7,423	(a) 12,603
Gross revenue .. .. £	309,134	38,676,299	(b) 558,526	39,543,959
Gross revenue per train mile .. .. d.	113.92	144.80	150.06	144.56
Working Expenses .. .. £	458,621	31,269,354	(b) 374,169	32,102,144
Working Expenses per train mile .. .. d.	169.01	117.07	193.35	117.41
Net Revenue .. .. £	-149,487	7,406,945	(b) 184,357	7,441,815
Net Revenue per train mile .. .. d.	-55.09	27.73	46.61	27.15
Train miles run .. .. Miles	651,252	64,102,256	962,090	65,716,498
Passengers carried .. .. No.	84,948	312,469,012	920,924	313,474,884
Tons of goods, etc., carried .. .. Tons	64,564	26,482,572	1,578,746	28,125,882
Average number of employees .. .. No.	1,177	95,116	(c) 920	97,213
Average wage .. .. £	272	249	268	250

(a) Exclusive of the capital cost of 151.58 miles of private lines for which information is not available.  
 (b) Incomplete. (c) Employees at 30th June, 1931.

9. **Track Mileage—Government Railways.**—The following table gives the track mileages of all Government railways and sidings, exclusive of Tasmania, for the years ended 30th June, 1928 to 1931, classified according to gauge, together with the percentages on the total :—

**RAILWAYS, FEDERAL AND STATE.—TRACK MILEAGE(a), 1928 TO 1931.**

Gauge.	At 30th June—							
	1928.		1929.		1930.		1931.	
	Miles.	%	Miles.	%	Miles.	%	Miles.	%
5 ft. 3 in. ..	7,812.26	25.77	7,847.13	25.41	7,867.32	25.17	7,872.09	25.05
4 ft. 8½ in. ..	8,896.10	29.34	8,998.12	29.14	9,040.86	28.93	9,113.21	29.01
3 ft. 6 in. ..	13,445.80	44.35	13,865.95	44.91	14,176.91	45.37	14,268.41	45.41
2 ft. 6 in. ..	131.87	0.43	131.87	0.43	131.87	0.42	131.87	0.42
2 ft. 0 in. ..	33.00	0.11	33.00	0.11	33.00	0.11	33.00	0.11
Total ..	30,319.03	100.00	30,876.07	100.00	31,249.96	100.00	31,418.58	100.00

(a) Exclusive of Tasmania.

**§ 2. Federal Railways.**

1. **General.**—On the 1st January, 1911, the Commonwealth Government took over the Northern Territory from the South Australian Government, and at the same time the railways from Darwin to Pine Creek in the Northern Territory, and from Port Augusta to Oodnadatta in South Australia, came under its control. Subsequently the construction of a transcontinental line from Port Augusta in South Australia to Kalgoorlie in Western Australia was undertaken by the Commonwealth Government, while a line has been constructed in the Federal Capital Territory, connecting Canberra with the New South Wales railway system at Queanbeyan. In 1917 an Act was passed by which all the Federal railways were vested in a Commonwealth Railways Commissioner.

2. **North Australia Railway.**—(i) *Darwin to Birdum.* On the 1st January, 1911, the line from Darwin to Pine Creek came under the jurisdiction of the then Department of External Affairs, and was worked under the Administrator of the Northern Territory. As mentioned above, the management of this railway is now vested in the Commonwealth Railways Commissioner.

In the Northern Territory Acceptance Act the construction of a transcontinental line from South Australia is provided for. The extension of the line from Pine Creek to Katherine River was completed, and the first train ran through to Emungalan (Katherine River) on 13th May, 1917.

(ii) *Proposed Extension.* The recommendations of the Parliamentary Standing Committee on Public Works in connexion with the North-South line were indicated in a previous issue of this work. (See Year Book No. 18, p. 278.)

(iii) *Line Authorized for Construction.* The Northern Territory Railway Extension Act 1923 provides for the construction of a 3 ft. 6 in. gauge line from the present terminus at Emungalan to Daly Waters, a distance of approximately 160 miles. The estimated cost of this line is £1,545,000, including the cost of a bridge over the Katherine River which was completed in May, 1926, although the first train crossed on 21st January, 1926. The terminus of the line was moved to the new station at Katherine River on 14th December, 1926. Tenders were then called for the construction of the line from Katherine River to Daly Waters, but, as no satisfactory tender was received, it was decided to do the work by day labour. Under this system, construction proceeded rapidly until December, 1927, when, owing to a reduction in the amount of money to be made available for construction during the year 1927-28, a drastic curtailment of operations was made. The work then proceeded at a limited rate, and, on 1st July, 1928, a further section, to Mataranka (264 miles 67 chains from Darwin) was opened for public traffic. Owing to the need for the curtailment of loan expenditure, the Government then decided not to proceed with construction work beyond Birdum (316 miles 40 chains from Darwin), and on 4th September, 1929, this section was opened for traffic and further construction work ceased.

3. **Central Australia Railway.**—(i) *General.* This line was taken over by the South Australian Government until 31st December, 1913. From the 1st January, 1914, the line was worked under agreement by the South Australian Government for and on behalf of the Commonwealth, but from 1st January, 1926, the management devolved upon the Commonwealth Railways Commissioner.

(ii) *Extension Authorized.* The Railways (South Australia) Agreement Act 1926, assented to by the Commonwealth Parliament in February, 1926, ratified the agreement between the Commonwealth and South Australian Governments for the construction of a 3 ft. 6 in. gauge line between Port Augusta and Alice Springs. This involves the construction of an extension to Alice Springs of the existing 3 ft. 6 in. gauge line from Port Augusta to Oodnadatta. The estimated cost, exclusive of rolling stock, of the proposed extension, which comprises 292 miles, is £1,700,000. The first section 21½ miles from Oodnadatta was completed on the 29th August, 1927. The contract for the construction of the balance of 270¾ miles to Alice Springs was signed on the 11th August, 1927. The contract provided for the completion of the railway to Alice Springs by the 30th June, 1929, but it was not until 2nd August, 1929, that the completed line was taken over for public traffic.

4. **Federal Capital Territory Railway.**—**Queanbeyan-Canberra.**—This line was built by the Railway Construction Branch of the Public Works Department, New South Wales, and, when completed, was taken over by the Chief Commissioner of Railways for that State, who worked the line for and on behalf of the Commonwealth Government until 1st July, 1928, on which date the management was taken over by the Commonwealth Railways Commissioner. The line was opened for departmental goods traffic on 25th May, 1914. It connects with the New South Wales railway system at Queanbeyan, is 4.94 miles in length, and has sidings of an aggregate length of 2.00 miles.

5. **Trans-Australian Railway (Kalgoorlie to Port Augusta).**—In the issue of the Year Book for 1918 (No. 11, pp. 662 to 666 and p. 1213), a short history of the construction of the Trans-Australian line is given, also a description of the country through which the line passes between Kalgoorlie and Port Augusta.

On the 22nd October, 1917, the first through train left Port Augusta with an official party on board for Kalgoorlie. It should be mentioned that owing to deviations from the original route, the length of this line was reduced from 1,063.39 miles to 1,051.85 miles, a saving of 11.54 miles.

6. *Lines Open, Surveyed, etc.*—The following table shows the lines open for traffic under the control of the Commonwealth Government at 30th June, 1931, together with the lines which have been or are being surveyed :—

## RAILWAYS, FEDERAL, 30th JUNE, 1931.

Terminals.	Miles.
OPEN FOR TRAFFIC.	
Trans-Australian—Port Augusta (South Australia) to Kalgoorlie (Western Australia)	1,051.85
Central Australia Railway—Port Augusta (South Australia) to Alice Springs (Central Australia)	771.41
Queanbeyan to Canberra (Federal Capital Territory)	4.94
North Australia Railway—Darwin to Birdum	316.50
Total opened for traffic	2,144.70
SURVEYED OR BEING SURVEYED.	
Birdum to Daly Waters (Northern Territory)	43.50
Kingoonya to Boorthanna (South Australia)	176.44
Canberra to Jervis Bay (Federal Capital Territory)	140.22
Canberra (Federal Capital Territory) to Federal Capital Territory Border in the direction of Yass (New South Wales)	11.67
Daly Waters (Northern Territory) to Alice Springs (South Australia)	559.50
Port Augusta to Crystal Brook (South Australia)	69.25
Port Augusta—Red Hill—Adelaide	188.98
Total surveyed or being surveyed	1,189.56

In addition, the following trial surveys were undertaken on behalf of the North Australia Commission, viz. :—

(1) From the proposed deep water port at Rocky Island (Gulf of Carpentaria) to Borroloola; (2) From Borroloola to near Anthony's Lagoon; (3) From Daly Waters to a point on the Queensland Border about 44 miles south of Camooweal; and (3) From a point on the Daly Waters—Queensland Border survey 45 miles south of Daly Waters, and near Newcastle Waters to the border of Western Australia.

7. *Mileage open, worked, and Train miles run.*—The next table shows the length of the Federal railways open for traffic, average miles worked, and the train miles run in the years 1927 to 1931 :—

## RAILWAYS, FEDERAL.—MILEAGE OPEN, WORKED, AND TRAIN MILES.

## MILES OPEN FOR TRAFFIC.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory.	North Australia.	
	Miles.	Miles.	Miles.	Miles.	Miles.
1927 .. ..	1,051	478	5	199	1,733
1928 .. ..	1,051	478	5	199	1,733
1929 .. ..	1,052	648	5	265	1,970
1930 .. ..	1,052	771	5	317	2,145
1931 .. ..	1,052	771	5	317	2,145

RAILWAYS, FEDERAL.—MILEAGE OPEN, WORKED, AND TRAIN MILES  
—continued.

Year ended 30th June—	Railway.				Total.
	Trans- Australian.	Central Australia.	Federal Capital Territory.	North Australia.	

## AVERAGE MILES WORKED.

	Miles.	Miles.	Miles.	Miles.	Miles.
1927 .. ..	1,051	478	5	199	1,733
1928 .. ..	1,051	478	5	199	1,733
1929 .. ..	1,052	566	5	265	1,888
1930 .. ..	1,052	760	5	307	2,124
1931 .. ..	1,052	771	5	317	2,145

## TRAIN MILES RUN.(a)

1927 .. ..	487,160	263,227	12,402	69,872	832,661
1928 .. ..	485,848	359,160	15,632	105,042	965,682
1929 .. ..	500,402	408,970	12,915	82,861	1,005,148
1930 .. ..	453,151	239,303	9,865	43,594	745,913
1931 .. ..	403,615	200,051	6,900	40,686	651,252

(a) Traffic Train Mileage (exclusive of "Assistant" and "Light" mileages).

8. Cost of Construction and Equipment.—In the following table particulars are given of the cost of construction and equipment of the undermentioned railways for each of the years 1927 to 1931 :—

## RAILWAYS, FEDERAL.—CAPITAL COST.

Year ended 30th June—	Railway.				Total.
	Trans- Australian.	Central Australia.	Federal Capital Territory.(a)	North Australia.	

## TOTAL COST OF CONSTRUCTION AND EQUIPMENT OF LINES OPEN.

	£	£	£	£	£
1927 .. ..	7,614,277	2,854,801	82,945	1,750,772	12,302,795
1928 .. ..	7,682,126	2,908,644	87,369	1,760,756	12,438,895
1929 .. ..	7,736,355	3,882,006	83,888	2,431,964	14,134,213
1930 .. ..	7,805,945	4,730,364	84,253	2,749,807	15,370,369
1931 .. ..	7,840,504	4,760,548	84,429	2,750,718	15,436,199

## COST PER MILE OPEN.

1927 .. ..	7,242	5,973	13,964	8,812	7,099
1928 .. ..	7,306	6,086	17,686	8,863	7,178
1929 .. ..	7,355	5,991	16,981	9,183	7,176
1930 .. ..	7,421	6,132	17,064	8,688	7,167
1931 .. ..	7,454	6,171	17,091	8,691	7,197

(a) Exclusive of Rolling Stock the property of New South Wales Government Railways.

The sum of £1,528,821, of which £112,006 was for surveys, etc., has been provided from revenue for capital purposes to 30th June, 1930, and has been included in the total shown above.

9. **Gross Revenue.**—(i) *Total, per average mile worked, and per train mile run.* The following table shows the total revenue from all sources, the revenue per average mile worked, and the revenue per train mile run for each of the undermentioned railways for the financial years 1927 to 1931 inclusive :—

**RAILWAYS, FEDERAL.—GROSS REVENUE, TOTAL, ETC.**

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory.	North Australia.	
<b>TOTAL GROSS REVENUE.</b>					
	£	£	£	£	£
1927 .. ..	303,212	125,039	14,739	55,718	498,708
1928 .. ..	333,608	188,143	9,044	69,054	599,849
1929 .. ..	332,199	184,046	6,824	46,156	569,225
1930 .. ..	265,562	99,626	6,473	32,475	404,136
1931 .. ..	187,681	88,479	3,964	29,010	309,134
<b>GROSS REVENUE PER AVERAGE MILE WORKED.</b>					
1927 .. ..	288	262	2,984	280	288
1928 .. ..	317	394	1,831	348	346
1929 .. ..	316	325	1,381	174	302
1930 .. ..	252	131	1,311	106	190
1931 .. ..	179	115	802	92	144
<b>GROSS REVENUE PER TRAIN-MILE RUN.</b>					
	d.	d.	d.	d.	d.
1927 .. ..	149.36	114.00	285.22	191.38	143.73
1928 .. ..	164.80	125.72	138.85	157.77	149.08
1929 .. ..	159.32	108.00	126.81	133.69	135.92
1930 .. ..	140.65	99.92	157.48	178.79	130.03
1931 .. ..	111.60	106.15	137.88	171.13	113.92

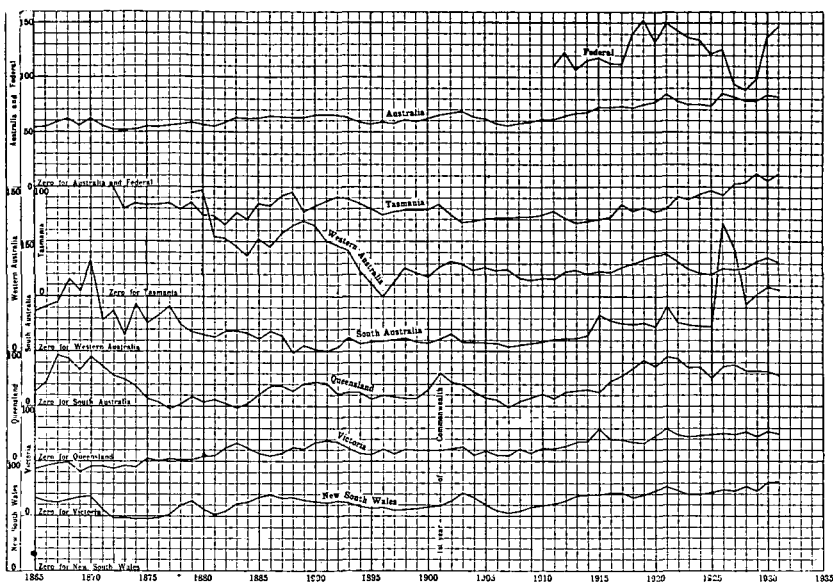
(ii) *Classification and Percentages.* During the year 1930-31 receipts from coaching traffic and goods and live stock represented 60 per cent. and 16 per cent. of the total gross revenue of the Trans-Australian line, similar percentages for the remaining lines being :—Central Australia line 16 per cent. and 78 per cent., Federal Capital Territory line 57 per cent. and 42 per cent., and North Australia line 14 per cent. and 31 per cent. coaching and goods and live stock revenue respectively.

The miscellaneous receipts for the year 1930-31 include an amount of £17,461, revenue from dining cars and refreshment services on the Trans-Australian and Central Australia Railways. A sum of £28,193 was received from this source during the previous year.

10. **Working Expenses.**—(i) *Total.* The following table shows the total working expenses, and the percentages on the corresponding gross revenues of each railway for each year from 1927 to 1931 :—

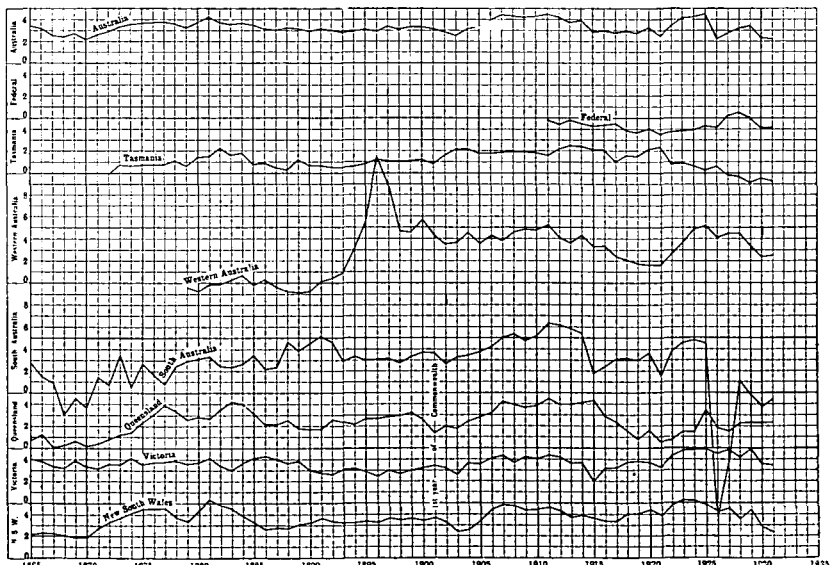
Details of the annual expenditure on (a) maintenance of ways, works and buildings, (b) locomotives, carriages and wagons repairs and renewals, (c) traffic expenses, and (d) compensation, general and miscellaneous charges, are given in (iii) following.

PERCENTAGES OF WORKING EXPENSES ON GROSS REVENUE OF GOVERNMENT RAILWAYS, 1865 TO 1931.



EXPLANATION.—The base of each small square represents throughout one year. The vertical side of a small square denotes throughout 10 per cent., the heavy zero lines being different for each State and Australia, with, however, the exceptions that the zero lines for Australia and Federal are identical.

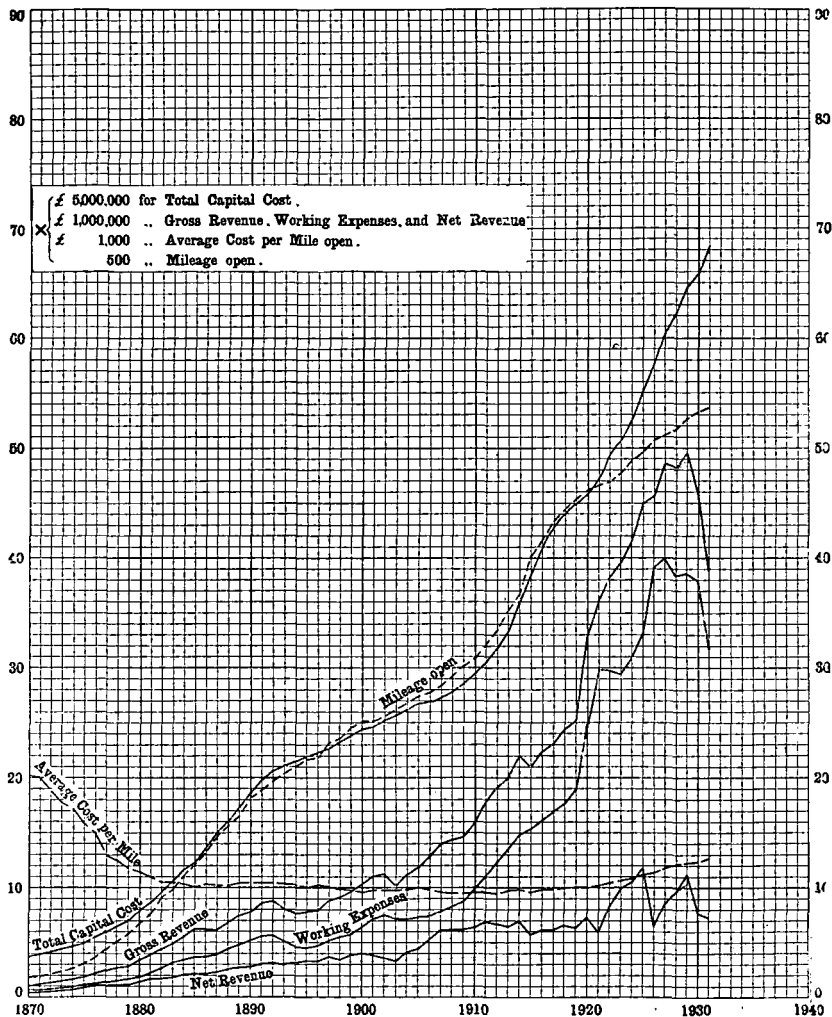
PERCENTAGES OF NET REVENUE ON CAPITAL COST OF GOVERNMENT RAILWAYS, 1865 TO 1931.



EXPLANATION.—The base of each small square represents throughout one year. The vertical side of a small square denotes 1 per cent., the thick zero lines, however, for each State and Australia being different.

Where the curve for any State falls below that State's zero line, loss is indicated, the working expenses having exceeded the gross revenue.

## FINANCIAL POSITION OF THE GOVERNMENT RAILWAYS OF AUSTRALIA, 1870 TO 1931.



EXPLANATION.—The base of each small square represents throughout one year. The significance of the vertical height of each square varies according to the nature of the several curves.

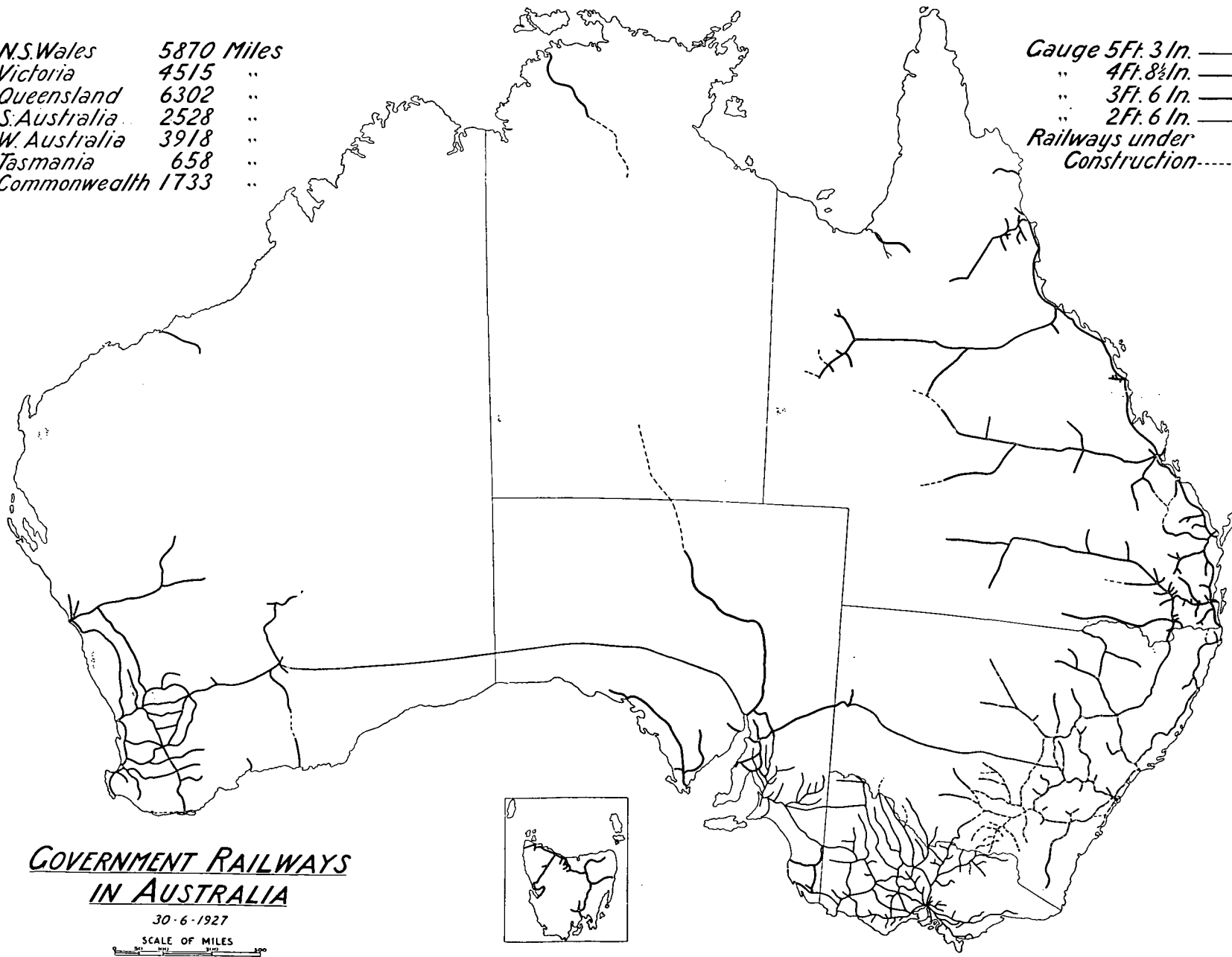
In the curve for the total capital cost, the vertical side of each square represents £5,000,000.

In the curves for (i) gross revenue, (ii) working expenses, and (iii) net revenue, the vertical side of each small square represents £1,000,000. For the curve of average cost per mile open, the vertical side of each small square represents £1,000. The mileage open is shown by a dotted curve, the vertical side of each small square representing 500 miles.



<i>N.S.Wales</i>	<i>5870 Miles</i>
<i>Victoria</i>	<i>4515 ..</i>
<i>Queensland</i>	<i>6302 ..</i>
<i>S. Australia</i>	<i>2528 ..</i>
<i>W. Australia</i>	<i>3918 ..</i>
<i>Tasmania</i>	<i>658 ..</i>
<i>Commonwealth</i>	<i>1733 ..</i>

*Gauge 5 Ft. 3 In.* ———  
 " *4 Ft. 8½ In.* ———  
 " *3 Ft. 6 In.* ———  
 " *2 Ft. 6 In.* ———  
*Railways under Construction* - - - - -



***GOVERNMENT RAILWAYS  
 IN AUSTRALIA***

30-6-1927

SCALE OF MILES  
 0 100 200 300

## RAILWAYS, FEDERAL.—WORKING EXPENSES, TOTAL, ETC.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory.	North Australia.	
<b>TOTAL WORKING EXPENSES.</b>					
	£	£	£	£	£
1927 .. ..	271,886	131,613	10,036	57,960	471,495
1928 .. ..	287,942	170,285	11,234	67,991	537,45
1929 .. ..	300,270	196,329	10,331	56,862	563,792
1930 .. ..	296,403	194,918	8,031	55,229	554,581
1931 .. ..	241,490	155,438	6,363	55,330	458,621
<b>PERCENTAGE OF WORKING EXPENSES ON REVENUE.</b>					
	%	%	%	%	%
1927 .. ..	89.67	105.25	68.09	104.02	94.53
1928 .. ..	86.30	90.50	124.21	98.46	89.59
1929 .. ..	90.39	106.67	151.39	123.20	99.05
1930 .. ..	111.61	195.65	124.07	170.07	137.23
1931 .. ..	128.67	175.68	160.52	190.73	148.36

Compared with results for the previous year, the percentage of working expenses on revenue shows increases for each railway except the Central Australia line. There was a decrease in earnings on each of the railways, due mainly to (a) trade depression generally; (b) aerial and other competition on the Trans-Australian railway; and (c) serious washaways involving suspension of traffic on each of the Trans-Australian, Central Australia and North Australia railways.

(ii) *Averages.* The next table gives the working expenses per average mile worked, and per train-mile run for each railway for the years 1927 to 1931 :—

## RAILWAYS, FEDERAL.—WORKING EXPENSES, AVERAGES.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory.	North Australia.	
<b>WORKING EXPENSES PER AVERAGE MILE WORKED.</b>					
	£	£	£	£	£
1927 .. ..	254	275	2,032	292	272
1928 .. ..	274	356	2,274	342	310
1929 .. ..	286	347	2,091	215	299
1930 .. ..	282	256	1,627	180	261
1931 .. ..	230	202	1,288	175	214
<b>WORKING EXPENSES PER TRAIN-MILE RUN.</b>					
	d.	d.	d.	d.	d.
1927 .. ..	133.95	120.00	194.21	199.08	135.90
1928 .. ..	142.24	113.79	172.47	155.34	133.57
1929 .. ..	144.01	115.21	191.98	164.70	134.62
1930 .. ..	156.98	195.49	195.38	304.05	178.44
1931 .. ..	143.60	186.48	221.32	326.38	169.01

(iii) *Classification and Percentages.* Of the total working expenses of the Federal Railways during the year 1930-31, maintenance expenses represented 40 per cent., locomotive, carriage and wagon charges 38 per cent., and traffic expenses 13 per cent. Details for each line were as follow:—Trans-Australian line 30 per cent., 45 per cent. and 13 per cent.; Central Australia line 53 per cent., 31 per cent., and 11 per cent.; Federal Capital Territory line 16 per cent., 38 per cent. and 40 per cent.; and North Australia line 50 per cent., 24 per cent. and 20 per cent. respectively.

11. *Passenger Journeys, and Tonnage of Goods and Live Stock.*—(i) *General.* In the next table particulars are given of the passenger journeys and tonnage of goods and live stock carried on the Federal railways during the years 1927 to 1931:—

## RAILWAYS, FEDERAL.—TRAFFIC.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory.	North Australia.	

## PASSENGER JOURNEYS.

	No.	No.	No.	No.	No.
1927 .. ..	34,779	55,284	125,605	5,716	221,384
1928 .. ..	36,212	60,410	53,255	5,899	155,776
1929 .. ..	36,030	57,993	47,470	5,135	146,628
1930 .. ..	29,163	45,235	45,457	3,238	123,093
1931 .. ..	19,209	31,107	31,248	3,384	84,948

## TONNAGE OF GOODS AND LIVE STOCK CARRIED.

	tons.	tons.	tons.	tons.	tons.
1927 .. ..	43,503	81,048	84,450	15,612	224,613
1928 .. ..	45,087	96,799	41,848	22,628	206,362
1929 .. ..	40,750	90,734	23,196	14,919	169,599
1930 .. ..	20,906	44,047	20,966	7,024	92,943
1931 .. ..	12,360	38,831	10,077	3,296	64,564

(ii) *Passenger-Mileage Summary.* The appended table gives particulars of "Passenger-Mileage" on each of the Federal railways for the year 1930-31:—

## RAILWAYS, FEDERAL.—PASSENGER-MILES SUMMARY, 1930-31.

Railway.	Passenger Train Mileage.	Number of Passenger Journeys.	Total "Passenger-Miles."	Amount Received from Passengers.	Average Number of Passengers carried per Train Mile.	Average Mileage per Passenger Journey.	Average Earnings per "Passenger-Mile."		Average Fare per Passenger Journey.	Density of Traffic per Average Mile Worked.
							£	s. d.		
Trans-Australian ..	311,615	19,209	,000 omitted. 16,811	74,221	54	875	1.06	3 17 3	15,982	
Central Australia ..	27,556	31,107	1,697	9,965	62	55	1.41	0 6 5	2,199	
Federal Capital Territory ..	6,024	31,248	155	1,326	26	5	2.05	0 0 10½	31,463	
North Australia ..	12,453	3,384	415	3,381	33	123	1.96	1 0 0	1,311	

(iii) *Ton-Mileage Summary.* Particulars of ton-mileage are shown hereunder in respect of each of the Federal railways for the year 1930-31 :—

## RAILWAYS, FEDERAL.—“TON-MILEAGE” SUMMARY, 1930-31.

Railway.	Goods Train Mileage.	Total Tons Carried.	Total “Ton-Miles.”	Goods Earnings.	Average Freight-paying Load per Train.	Average Haul per ton.	Earnings per “Ton-Mile.”	Density of Traffic per Average Mile Worked.
					Tons.	Miles.	d.	
			,000 omitted.	£				
Trans-Australian ..	92,000	12,360	4,263	30,826	(a) 46	335	1.74	4,053
Central Australia ..	172,495	38,831	9,033	68,624	(a) 52	233	1.82	11,709
Federal Capital Territory ..	876	10,077	50	1,678	52	5	7.64	10,193
North Australia ..	28,233	3,296	419	9,085	(a) 15	127	5.20	1,324

(a) Approximate.

12. *Rolling Stock, 1931.*—The following table shows the numbers of locomotives and rolling stock in use on the Federal railways, classified according to gauge :—

## RAILWAYS, FEDERAL.—LOCOMOTIVES AND ROLLING STOCK, 1931.

Railway.	Gauge.		Total.	Gauge.		Total.	Gauge.		Total.
	4 ft. 8½ in.	3 ft. 6 in.		4 ft. 8½ in.	3 ft. 6 in.		4 ft. 8½ in.	3 ft. 6 in.	
	LOCOMOTIVES.			COACHING STOCK.			STOCK OTHER THAN COACHING.		
Trans-Australian	68	..	68	54	..	54	728	..	728
Central Australia	..	24	24	..	20	20	..	313	313
North Australia	..	13	13	..	12	12	..	312	312
Total ..	68	37	105	54	32	86	728	625	1,353

The Federal Capital Territory Railway was worked by the New South Wales Government Railway Department, using its own rolling stock.

13. *Employees.*—(i) *General.* The following table shows the number of employees on the Federal railways at 30th June in each year from 1927 to 1931 inclusive, classified according to salaried and wages staffs :—

## RAILWAYS, FEDERAL.—EMPLOYEES, 1927 TO 1931.

Railway.	30th June—									
	1927.		1928.		1929.		1930.		1931.	
	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Trans-Australian	132	811	126	756	128	776	117	733	106	554
Central Australia	66	523	69	492	68	539	59	383	87	331
North Australia ..	29	648	24	320	22	178	15	93	13	100
Federal Capital Territory (a) ..	..	..	..	..	5	8	5	7	4	5
Total ..	227	1,982	219	1,568	223	1,501	196	1,216	180	990

(a) Worked by New South Wales Government Railways until 1st July, 1928.

(b) Includes 4 engaged on construction work.

(ii) *Average Employed throughout Year.* The average number of employees throughout the year 1930-31 was 188 salaried staff and 1,040 wages staff (51 of whom were on construction work).

14. *Accidents.*—(i) *Classification.* The table hereunder furnishes a classification of accidents on the Federal railways during the year 1930-31 :—

**RAILWAYS, FEDERAL.—ACCIDENTS, 1930-31.**

Classification.	Trans-Australian.		Central Australia.		Federal Capital Territory.		North Australia.		All Federal Railways.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Train Accidents—										
Passengers .. ..	..	..	..	..	..	..	..	..	..	..
Employees .. ..	..	..	..	..	..	..	..	..	..	..
Accidents on line (other than train accidents)—										
Passengers .. ..	..	..	..	..	..	..	..	..	..	..
Employees .. ..	..	1	..	2	..	..	..	..	..	3
Other Persons .. ..	..	..	..	..	..	..	..	..	..	..
Shunting Accidents—										
Passengers .. ..	..	..	..	..	..	..	..	..	..	..
Employees .. ..	..	1	..	..	..	..	..	..	..	1
Other Persons .. ..	..	..	..	..	..	..	..	..	..	..
Employees proceeding to or from duty within the Railway boundary .. ..	..	..	..	..	..	..	..	..	..	..
Persons killed or injured at crossings .. ..	..	..	..	..	..	..	..	..	..	..
Trespassers .. ..	..	..	..	..	..	..	..	..	..	..
Miscellaneous .. ..	..	..	..	..	..	..	..	..	..	..
<b>Total .. ..</b>	<b>..</b>	<b>2</b>	<b>..</b>	<b>2</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>4</b>

(ii) *Particulars for Quinquennium 1927-31.* The following table shows the number of accidents in each of the years 1927 to 1931 :—

**RAILWAYS, FEDERAL.—ACCIDENTS, 1927 TO 1931.**

Railway.	Number of Persons.									
	Killed.					Injured.				
	1927.	1928.	1929.	1930.	1931.	1927.	1928.	1929.	1930.	1931.
Trans-Australian ..	..	3	..	..	..	12	3	3	..	2
Central Australia ..	1	2	..	..	..	5	7	7	..	2
Federal Capital Territory ..	1	..	..	..	..	..	1	..	..	..
North Australia ..	..	2	..	..	..	5	9	4	..	..
<b>Total .. ..</b>	<b>2</b>	<b>7</b>	<b>..</b>	<b>1</b>	<b>..</b>	<b>22</b>	<b>20</b>	<b>14</b>	<b>..</b>	<b>4</b>

### § 3. State Railways.

1. *Administration and Control of State Railways.*—The policy of Government control of the railways has been adopted in each State, and earlier issues of the Year Book (see No. 6, p. 693) contain a description of the methods adopted by the various State Governments in the control and management of their railways.

2. **Mileage Open, 1927 to 1931.**—(i) *General.* The following table shows the length of State railways open for traffic on the 30th June in the years 1927 to 1931 :—

**RAILWAYS, STATE.—MILEAGE OPEN FOR TRAFFIC.**

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
1927 .. .. .	5,750	4,634	6,302	2,528	3,918	658	23,790
1928 .. .. .	5,867	4,697	6,345	2,527	3,977	658	24,071
1929 .. .. .	5,940	4,699	6,447	2,542	4,079	653	24,360
1930 .. .. .	5,974	4,713	6,447	2,536	4,111	679	24,460
1931 .. .. .	6,044	4,717	6,529	2,529	4,180	665	24,664

A graph indicating the mileage open in Australia at the end of each of the years 1870 to 1931 accompanies this chapter.

The appended statement shows the actual mileage opened for traffic in the year 1931, also the annual average increase in mileage opened since 1921 in each State :—

**RAILWAYS, STATE.—MILEAGE OPENED ANNUALLY.**

Mileage.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
Mileage opened during 1930-31 .. .. .	69.77	4.04	81.60	-6.35	69.48	-14.55	203.99
Average annual mileage increase for 10 years to 30th June, 1931 ..	92.79	39.99	72.95	17.20	64.22	2.81	289.96

(ii) *New South Wales.* During the year ended 30th June, 1931, the following new lines were opened for traffic, viz. :—Booyong to Ballina 12.83 miles, Kyogle to Queensland Border 26.00 miles, Casino to North Junction 0.90 miles and Hillston to Roto 29.99 miles. Minor adjustments increased the length of existing lines by 0.05 miles, the total increase for the year being therefore 69.77 miles.

(iii) *Victoria.* During the year ended 30th June, 1931, the following new line was opened for traffic, viz. :—Meringur to Morkalla 9.53 miles, while the line from Triholm to Strzelecki 5.49 miles was closed. The total increase for the year was 4.04 miles.

(iv) *Queensland.* The following new mileage was opened during the year :—Inglewood to Texas 34.03 miles, Kalpowar to Mungungo 17.81 miles and South Brisbane to Border Tunnel (4ft. 8½ in. gauge), 68.82 miles, a total of 120.66 miles. The Ravenswood Branch 23.98 miles and the Broadmount Branch 15.08 miles were closed, the total increase for the year being therefore 81.60 miles.

(v) *South Australia.* No new lines were opened during the year. The lines Moonta Bay to East Moonta 4.03 miles, Moonta to Hamley Flat 1.12 miles and Gawler Station to Gawler Town 1.20 miles, a total of 6.35 miles, were closed during the year.

(vi) *Western Australia.* The following new mileage was opened for traffic during the year :—Kulja to Bonnie Rock 68.08 miles and the Rocky Bay line 1.40 miles, the total increase for the year being 69.48 miles.

(vii) *Tasmania.* No new extensions were opened during the year. The line from Griffith Junction to Williamsford 13.50 miles was closed and adjustments to other lines further reduced the mileage by 1.05 miles, the total decrease for the year being 14.55 miles.

3. **Length and Gauge of Railway Systems in each State.**—In all the States the Government railways are grouped, for the convenience of administration and management, into several divisions or systems. A summary showing concisely the gauge and length of the main and branch lines included in each division or system in the different States for the year ended 30th June, 1930, is given in the Transport and Communication Bulletin No. 22 issued by this Bureau.

4. **Average Mileage Worked and Train-Miles Run.**—The total mileage open for traffic at the end of each financial year has been given previously, but, in considering the returns relating to revenue and expenditure and other matters, it is desirable to know the average number of miles actually worked during each year. The next table shows the average number of miles worked and the total number of train-miles run by the Government railways of each State during the years 1927 to 1931 inclusive:—

**RAILWAYS, STATE.—MILEAGE WORKED AND TRAIN-MILES RUN.**

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
AVERAGE MILEAGE WORKED.							
1927 ..	5,747	4,627	6,259	2,523	3,906	658	23,720
1928 ..	5,826	4,661	6,340	2,528	3,971	658	23,984
1929 ..	5,903	4,698	6,387	2,545	3,993	654	24,180
1930 ..	5,959	4,708	6,447	2,538	4,110	660	24,422
1931 ..	6,013	4,710	6,509	2,535	4,123	665	24,555

**TRAIN-MILES RUN. (a)**

1927 ..	26,325,847	18,030,749	11,905,663	6,959,734	5,273,894	1,303,023	69,798,910
1928 ..	26,896,580	17,694,928	11,655,122	6,503,474	5,729,735	1,416,741	69,896,580
1929 ..	27,382,124	17,979,219	11,893,147	5,765,366	5,829,465	1,405,929	70,255,250
1930 ..	26,713,951	17,670,565	11,858,713	5,551,082	5,729,796	1,504,487	69,028,594
1931 ..	25,628,405	15,945,315	10,883,045	4,991,695	5,402,694	1,251,102	64,102,256

(a) Traffic Train-Miles (exclusive of "Assistant" and "Light" mileages).

5. **Lines under Construction, and Lines Authorized, 1931.**—(i) *General.* The following statement gives particulars up to the 30th June, 1931, of the mileage of State railways (a) under construction, and (b) authorized for construction but not commenced:—

**RAILWAYS, STATE.—MILEAGE UNDER CONSTRUCTION AND AUTHORIZED,  
30th JUNE, 1931.**

Particulars.	N.S.W.	Vic. (a)	Q'land.	S.A.	W.A.	Tas.	All States.
Mileage under construction .. ..	251.97	111.25	(b) 14.00	..	197.42	..	574.64
Mileage authorized but not commenced .. ..	366.24	39.50	1,130.00	26.25	319.85	..	1,881.84

(a) See sub-section (b) below.

(b) Exclusive of 186 miles on which work has been suspended.

(ii) *Lines under Construction.* In spite of the great extensions of State railways since the year 1875, there are still, in some of the States, immense areas of country which are as yet practically undeveloped, and in which little in the nature of permanent settlement has been accomplished. The general policy of the States is to extend the existing lines inland in the form of light railways as settlement increases, and while it is true that lines which were not likely to be commercially successful in the immediate future have been constructed from time to time for the purpose of encouraging settlement, the general principle that the railways should be self-supporting is kept in view.

(a) *New South Wales.* The total mileage under construction was 251.97 miles, consisting of the following lines:—Moss Vale to Port Kembla (38.75 miles); Grafton to South Grafton (1.62 miles); Camurra to Boggabilla (74.11 miles); Tempe to East Hills (10.49 miles); Guyra to Dorrigo (89 miles); and Casino to Bonalbo (38 miles).

(b) *Victoria.* In this State 44 miles of 5 ft. 3 in. gauge lines are being constructed, viz.:—Wodonga to Tallangatta (deviation) (8.50 miles); and Nowingi to Millewa South (35.50 miles). Under the provisions of the Border Railways Act 1922 (Vic. 3194) the following lines are under construction in New South Wales territory, viz.:—Euston to Letta (30.25 miles); and Yarrawonga to Oaklands (37 miles). On completion, these lines, which are of 5 ft. 3 in. gauge, will be taken over and operated by the Victorian Railways Commissioners.

(c) *Queensland.* In previous issues of the Year Book details were given of the scheme of railway construction under the provisions of the North Coast Railway Act 1910 (see Year Book No. 15, p. 551). On the 30th June, 1931, the following line was under construction:—Southern Division—3 ft. 6 in. gauge—Meandarra towards Surat (14 miles). The following lines are partially constructed, but work thereon is temporarily suspended:—Goondoon to Kalliwa Creek (18 miles); Yarakka to Powell's Creek (27 miles); Dajarra to Moonah Creek (41 miles); Rannes to Monto (63 miles); and Winton to 37-Mile (37 miles); a total of 186 miles.

(d) *South Australia.* At 30th June, 1931, no railway construction work was in progress.

(e) *Western Australia.* The following lines were in course of construction by the Railways Department on the 30th June, 1931:—Meekatharra to Wiluna (111.33 miles); Pemberton to Westcliffe (27.90 miles); and Lake Grace to Karlgarin (58.19 miles); a total of 197.42 miles.

(f) *Tasmania.* At 30th June, 1931, no railway construction work was in progress.

(iii) *Lines Authorized for Construction.* (a) *New South Wales.* At the 30th June, 1931, the following lines had been authorized for construction but not commenced:—Gilgandra to Collic (21.54 miles); Jerilderie towards Deniliquin (25.00 miles); Rand to Bull Plain (27.55 miles); Canowindra to Gregra (33.87 miles); St. Leonards to Eastwood (9.07 miles); Sandy Hollow via Gulgong to Maryvale (146.48 miles); Inverell to Ashford (32 miles); Bungendore to Captain's Flat (21.18 miles); Gwabegar to Burren Junction (36.25 miles); Eastern Suburbs to Bondi (7.75 miles); and Western Suburbs to Western Road (5.55 miles); a total distance of 366.24 miles.

(b) *Victoria.* The following lines were authorized, but construction had not been commenced up to the end of June, 1931:—5 ft. 3 in. gauge: La La Siding to Big Pat's Creek (2.50 miles); Casterton to Nangeela (9 miles); and Orbost to Brodribb (6 miles). Under the Border Railways Act 1922, the following line has been authorized for construction in New South Wales Territory:—Mildura to Gol Gol (22 miles); an aggregate distance of 39.50 miles.

(c) *Queensland.* In addition to the new lines upon which work has been commenced, Parliament has authorized the construction of the following parts of the Great Western Railway—Section A, from Quilpie to Fromanga (120 miles); Section B, from Powell's Creek (224 miles); Section C, from 37-Mile to Springvale (324 miles); and Section D.



from Moonah Creek (216 miles). The following lines were also authorized for construction :—Texas to Silverspur (9 miles); Mount Edwards to Maryvale (28 miles); Lanefield to Rosevale (17 miles); Gatton to Mount Sylvia (11 miles); Wandoo to Taroom (42 miles); Dirranbandi extension (52 miles); Yarraman to Nanango (16 miles); Brooloo to Kenilworth (10 miles); Dobbyn to Myally Creek (50 miles); and Pearamon towards Boongee (11 miles); a total of 1,130 miles.

(d) *South Australia.* Parliament has authorized the construction of a line on the 3 ft. 6 in. gauge from Keilpa to Mangalo Hall (26.25 miles).

(e) *Western Australia.* The following lines were authorized for construction up to the 30th June, 1931 :—Yarramony eastwards (85 miles); Brookton to Dale River (28 miles); Boyup Brook to Cranbrook (95.23 miles); Manjimup to Mount Barker (107 miles); Leighton to Robb's Jetty (4.62 miles); a total distance of 319.85 miles.

(f) *Tasmania.* There were no new railways authorized on which work had not been commenced at 30th June, 1931.

6. **Cost of Construction and Equipment.**—(i) *General.* The total cost of construction and equipment of the State railways as distinct from those owned by the Commonwealth Government at the 30th June, 1931, amounted to £326,108,493, representing an average cost of £50.27 per head of population. If the cost of railways owned by the Commonwealth Government is included, the total capital cost (£341,544,692) is equivalent to an amount of £52.54 per head of the population of the Commonwealth, while the total mileage open (26,808.76 miles) per 1,000 of population is 4.12. Particulars of the capital expenditure incurred on lines open for traffic are given in the following table :—

#### RAILWAYS, STATE.—MILEAGE AND COST TO 30th JUNE, 1931.

State.	Length of Line Open (Route).	Total Cost of Construction and Equipment.	Average Cost per Mile Open.	Cost per Head of Population.	Mileage per 1,000 of Population at 30th June, 1931.
	Miles.	£	£	£	Miles.
New South Wales(a) ..	b 6,044.00	d 130,802,362	(d) 21,735	d 52.17	(c) 2.41
Victoria ..	4,716.75	74,302,935	15,753	41.34	2.62
Queensland ..	b 6,528.78	d 59,497,495	(d) 9,210	d 62.00	(c) 6.80
South Australia (a) ..	2,529.26	27,255,643	10,776	46.70	4.33
Western Australia (a) ..	4,180.38	23,329,093	5,581	55.46	9.94
Tasmania ..	664.90	6,549,965	9,851	29.89	3.03
All States ..	24,644.07	c 326,108,493	(c) 13,222	(c) 50.27	(c) 3.80

(a) Exclusive of Federal railways. (b) Includes portion of Grafton-South Brisbane uniform gauge line—New South Wales 26 miles, Queensland 68.82 miles (see para. 4, page 201). (c) Includes Grafton-South Brisbane line. (d) Exclusive of Grafton-South Brisbane line.

The lowest average cost (£5,581) per mile open is in Western Australia, and the highest (£21,735) in New South Wales, as compared with an average of £13,222 for all States. There were few costly engineering difficulties in Western Australia, and the fact that contractors were permitted to carry traffic during the term of their contracts considerably reduced expenditure, particularly in respect of all gold field contracts.

In the table above, the figures relating to cost of construction and equipment do not include stores advance accounts and the discounts and flotation charges on loans allocated to the railways. This will explain the differences between the amounts shown therein for the various States and those shown in the several Railway Reports.

(ii) *Capital Cost, All Lines. (a) Total.* The increase in the total capital cost of construction and equipment of Government railways for each year from 1927 to 1931 is shown in the following table :—

## RAILWAYS, STATE.—CAPITAL COST OF LINES OPEN.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
<b>TOTAL COST OF LINES OPEN.</b>							
	£	£	£	£	£	£	£
1927 ..	111,226,149	70,298,673	54,496,012	28,120,046	20,855,604	6,486,100	291,482,593
1928 ..	116,221,374	72,282,201	56,281,445	26,021,454	21,403,256	6,483,281	298,693,011
1929 ..	122,566,422	73,061,522	58,251,561	26,835,717	22,427,112	6,494,003	309,636,337
1930 ..	124,555,236	74,193,518	58,727,528	27,272,316	22,846,871	6,534,186	314,129,655
1931 ..	130,802,362a	74,302,935	59,497,495a	27,255,643	23,329,093	6,549,965	b326,108,493

## COST PER MILE OPEN.

1927 ..	19,344	15,169	8,648	11,124	5,322	9,854	12,252
1928 ..	19,809	15,390	8,871	10,297	5,382	9,849	12,409
1929 ..	20,633	15,548	9,035	10,558	5,498	9,945	12,711
1930 ..	20,849	15,743	9,109	10,756	5,558	9,617	12,843
1931 ..	a 21,735	15,753	a 9,210	10,776	5,581	9,851	b 13,222

(a) Exclusive of Grafton-South Brisbane line.

(b) Includes Grafton-South Brisbane line.

(b) *From Consolidated Revenue.* The following table shows the amounts provided from Consolidated Revenue for construction and equipment to 30th June, 1931 :—

## RAILWAYS, STATE.—EXPENDITURE FROM CONSOLIDATED REVENUE FOR CONSTRUCTION AND EQUIPMENT TO 30th JUNE, 1931.

To 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
1931 ..	659,930	4,320,604	..	..	640,908	16,935	5,638,377

(iii) *Loan Expenditure.* The subjoined table shows the total loan expenditure on Government railways (including lines both open and unopen) in each State, except Tasmania, and on Government railways and tramways in the latter State for the years 1927 to 1931 :—

## RAILWAYS, STATE.—LOAN EXPENDITURE.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	All States.
	£	£	£	£	£	£	£
1927 ..	6,229,347	1,821,005	2,470,083	2,460,555	642,225	29,824	13,653,039
1928 ..	8,172,114	1,651,884	1,646,982	555,798	806,895	37,196	12,870,869
1929 ..	6,356,971	1,249,409	1,212,131	706,144	835,051	Cr. 11,684	10,348,022
1930 ..	5,034,505	953,432	739,548	405,153	849,662	Cr. 69,940	7,912,360
1931 ..	2,312,557	455,293	434,350	Cr. 55,407	454,395	44,725	3,645,853

(a) Including tramways.

The following statement shows the total loan expenditure on railways to the 30th June, 1931 :—

**RAILWAYS, STATE.—TOTAL LOAN EXPENDITURE TO 30th JUNE, 1931.**

State.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.(a)	All States.
Expenditure	£ 137,359,159	£ 73,765,858	£ 61,630,689	£ 32,169,667	£ 23,723,485	£ 7,044,239	£ 335,693,097

(a) Including tramways.

7. **Gross Revenue.**—(i) *General.* The total revenue from all sources, the revenue per average mile worked, and the revenue per train-mile run during each financial year from 1927 to 1931 inclusive were as follow :—

**RAILWAYS, STATE.—GROSS REVENUE.**

Year ended 30th June—	N.S.W.	Victoria. (b)	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
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**TOTAL GROSS REVENUE.**

	£	£	£	£	£	£	£
1927 .. ..	18,906,543	13,652,434	7,325,677	4,062,133	3,607,989	539,352	48,094,128
1928 .. ..	19,029,512	12,821,059	7,381,532	3,941,276	3,858,051	554,743	47,586,173
1929 .. ..	220,415,616	13,162,973	7,568,647	3,593,646	3,799,764	503,855	49,044,501
1930 .. ..	218,626,692	12,001,806	7,302,281	3,276,945	3,659,203	507,374	45,374,301
1931 .. ..	216,005,741	10,008,358	6,476,979	2,586,132	3,198,913	400,176	38,676,299

**GROSS REVENUE PER AVERAGE MILE WORKED.**

	£	£	£	£	£	£	£
1927 .. ..	3,290	2,951	1,170	1,610	924	819	2,028
1928 .. ..	3,266	2,751	1,164	1,559	972	843	1,984
1929 .. ..	3,458	2,802	1,185	1,412	951	771	2,028
1930 .. ..	3,126	2,549	1,133	1,291	890	769	1,858
1931 .. ..	2,662	2,124	995	1,020	776	602	1,575

**GROSS REVENUE PER TRAIN-MILE RUN.**

	d.	d.	d.	d.	d.	d.	d.
1927 .. ..	172.36	181.72	147.67	140.08	164.19	99.34	165.37
1928 .. ..	169.80	173.89	152.00	145.44	161.60	93.98	163.39
1929 .. ..	178.04	175.71	152.73	149.60	156.43	86.01	167.54
1930 .. ..	167.34	163.01	147.79	141.68	153.27	80.94	157.76
1931 .. ..	149.89	150.64	142.83	124.34	142.10	76.77	144.80

(a) Includes £800,000, contributions from consolidated revenue towards losses on working of country developmental lines. (b) Includes contributions from consolidated revenue in respect of losses on non-paying lines, 1930-31, £158,508.

The amounts of revenue earned per average mile worked and per train-mile run in respect of (a) coaching and (b) goods and live stock traffic, separately, are given later.

(ii) *Coaching, Goods, and Miscellaneous Receipts.* (a) *Totals.* The gross revenue is composed of (a) receipts from coaching traffic, including the carriage of mails, horses, parcels, etc., by passenger trains; (b) receipts from the carriage of goods and live stock; and (c) rents and miscellaneous items. The subjoined table shows the gross revenue for 1927 to 1931, classified according to the three chief sources of receipts. The total of the three items specified has already been given in the preceding paragraph.

## RAILWAYS, STATE.—COACHING, GOODS, ETC., RECEIPTS.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
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## COACHING TRAFFIC RECEIPTS.

	£	£	£	£	£	£	£
1927 ..	7,473,545	6,304,382	2,516,476	1,221,106	980,762	201,048	18,697,319
1928 ..	7,851,512	6,015,383	2,410,293	1,120,094	1,028,656	199,865	18,625,803
1929 ..	8,124,716	5,871,037	2,444,697	1,013,296	979,999	180,295	18,614,040
1930 ..	7,440,016	5,428,350	2,377,798	807,090	928,435	177,799	17,159,488
1931 ..	5,870,676	4,378,162	2,021,666	635,490	724,989	144,526	13,775,509

## GOODS AND LIVE STOCK TRAFFIC RECEIPTS.

1927 ..	10,490,593	6,344,096	4,629,103	2,662,866	2,413,852	319,276	26,859,786
1928 ..	10,228,586	5,763,701	4,824,885	2,616,503	2,619,816	335,431	26,388,922
1929 ..	10,379,192	6,251,682	4,949,614	2,358,579	2,610,193	305,287	26,854,547
1930 ..	9,353,867	5,599,182	4,780,114	2,249,895	2,523,302	311,609	24,818,029
1931 ..	7,841,406	4,817,808	4,191,161	1,787,747	2,289,638	241,458	21,169,218

## MISCELLANEOUS RECEIPTS.

		<i>b</i>					
1927 ..	942,405	1,003,956	180,098	178,161	213,375	19,028	2,537,023
1928 ..	949,414	1,041,975	146,354	204,679	209,579	19,447	2,571,448
1929 ..	1,911,708	1,040,254	174,336	221,771	209,572	18,273	3,575,914
1930 ..	1,832,809	974,274	144,369	219,960	207,466	17,906	3,396,784
1931 ..	2,293,659	812,388	264,152	162,895	184,286	14,192	3,731,572

(a) Includes £800,000, contributions from consolidated revenue towards losses on working of country developmental lines. (b) Includes contributions from consolidated revenue in respect of losses on non-paying lines, 1930-31, £158,508.

(b) *Percentages.* The following table shows for the two years 1929-30 and 1930-31 the percentage which each class of receipts bears to the total gross revenue :—

## RAILWAYS, STATE.—PERCENTAGES OF RECEIPTS.

State.	1930.			1931.		
	Coaching.	Goods and Live Stock.	Miscel- laneous.	Coaching.	Goods and Live Stock.	Miscel- laneous.
	%	%	%	%	%	%
New South Wales ..	39.94	50.22	9.84	36.68	48.99	14.33
Victoria ..	45.23	46.65	8.12	43.74	48.14	8.12
Queensland ..	32.56	65.46	1.98	31.21	64.71	4.08
South Australia ..	24.63	68.66	6.71	24.57	69.13	6.30
Western Australia ..	25.37	68.96	5.67	22.66	71.58	5.76
Tasmania ..	35.04	61.43	3.53	36.12	60.34	3.54
All States ..	37.82	54.70	7.48	35.62	54.73	9.65

(c) *Averages for Coaching Traffic Receipts.* The subjoined table shows the receipts from coaching traffic per average mile of line worked and per passenger-train-mile in each State for the year ended the 30th June, 1931. Further particulars of passenger-mileage will be found in sub-paragraph 14 hereinafter.

**RAILWAYS, STATE.—COACHING TRAFFIC RECEIPTS, AVERAGES, 1931.**

State.	Number of Passenger-Train-Miles.	Coaching Traffic Receipts.		
		Gross.	Per Average Mile Worked.	Per Passenger-Train-Mile.
		£	£	d.
New South Wales .. ..	No. 16,496,249	5,172,359	860	75.25
Victoria .. ..	11,065,966	3,890,604	826	84.38
Queensland (b) .. ..	4,410,624	1,510,412	234	82.19
South Australia .. ..	3,192,522	499,745	197	37.57
Western Australia .. ..	(a) 2,062,321	551,347	134	64.16
Tasmania .. ..	(a) 590,208	117,339	176	47.71
All States (b) .. ..	37,817,890	11,741,806	479	74.52

(a) Includes "Assistant" and "Light" mileage. (b) Exclusive of Queensland section of Grafton—South Brisbane line.

(d) *Averages for Goods and Live Stock Traffic.* The gross receipts from goods and live stock traffic per average mile worked, per goods-train-mile, and per ton carried, for the year ended the 30th June, 1931, are given below. Particulars of ton-mileage will be found in sub-paragraph 14 (ii) hereinafter.

**RAILWAYS, STATE.—GOODS AND LIVE-STOCK TRAFFIC RECEIPTS, AVERAGES, 1931.**

State.	Number of Goods-Train-Miles.	Goods and Live-Stock Tonnage.	Goods and Live-Stock Traffic Receipts.			
			Gross.	Per Average Mile Worked.	Per Goods-Train-Mile.	Per Ton Carried.
			£	£	d.	d.
New South Wales .. ..	No. 8,997,391	Tons. 10,615,900	7,841,406	1,304	209.16	177.28
Victoria .. ..	4,879,349	6,099,310	4,817,808	1,023	236.97	189.57
Queensland (b) .. ..	6,406,188	3,838,420	4,148,845	643	155.43	259.41
South Australia .. ..	1,799,173	2,162,709	1,787,747	705	238.48	198.39
Western Australia .. ..	(a) 3,486,769	3,153,525	2,289,638	555	157.60	174.25
Tasmania .. ..	(a) 666,854	466,153	241,458	303	86.90	124.32
All States (b) .. ..	26,235,724	26,336,017	21,126,902	862	193.27	192.53

(a) Includes "Assistant" and "Light" mileage. (b) Exclusive of Queensland section of Grafton—South Brisbane line.

8. *Working Expenses.*—(i) *General.* In order to make an adequate comparison of the working expenses, allowance should be made for the variation of gauges and of physical and traffic conditions, not only on the railways of the different States, but also on different portions of the same systems. When traffic is light, the percentage of working expenses is naturally greater than where traffic is heavy; and this is especially true in Australia, where ton-mile rates are in many cases based on a tapering principle—i.e., a lower rate per ton-mile is charged upon merchandise from remote interior districts—and where on many of the lines there is but little back loading.

The following table shows the total annual expenditure and the percentage thereof on gross revenue in each State for the years 1927 to 1931 :—

## RAILWAYS, STATE.—WORKING EXPENSES.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
<b>TOTAL WORKING EXPENSES.</b>							
	£	£	£	£	£	£	£
1927 .. ..	13,795,853	10,193,581	6,495,322	5,797,751	2,685,693	551,192	39,519,392
1928 .. ..	14,756,327	9,812,749	6,106,140	3,660,740	2,910,811	573,885	37,820,652
1929 .. ..	14,978,050	9,532,798	6,202,801	3,622,567	3,055,446	563,652	37,955,314
1930 .. ..	14,962,423	9,311,548	5,946,163	3,573,121	3,112,895	535,414	37,441,564
1931 .. ..	12,899,646	7,499,934	5,075,478	2,734,619	2,610,839	448,838	31,269,354

(a) See (ii) below.

## PERCENTAGE OF WORKING EXPENSES ON GROSS REVENUE.

	%	%	%	%	%	%	%
1927 .. ..	72.97	74.66	88.67	142.73	74.44	102.20	82.17
1928 .. ..	77.54	76.54	82.72	93.20	75.45	103.45	79.48
1929 .. ..	73.37	72.42	81.95	100.80	80.41	111.86	77.39
1930 .. ..	80.33	77.58	81.43	109.04	85.07	105.53	82.52
1931 .. ..	80.59	74.94	78.36	105.74	81.62	112.16	80.85

The variation in the percentage of working expenses on the gross revenue in each State for the years 1865 to 1931 is illustrated in the graph which accompanies this chapter.

(ii) *Special Expenditure.* The large increase in the working expenses in South Australia during the year 1926-27 is due to an amount of £1,962,079 on account of accumulated and deferred charges being debited against the revenue for that year. This expenditure has been shown in this way in deference to the wishes of the South Australian railway authorities. Eliminating this amount, the percentage of working expenses on gross revenue for South Australia during 1926-27 would have been 94.43 per cent., and for all States 78.09 per cent.

(iii) *Averages.* The next table shows the working expenses per average mile worked and per train-mile run in each State for the years 1927 to 1931 :—

## RAILWAYS, STATE.—WORKING EXPENSES, AVERAGES.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
<b>WORKING EXPENSES PER AVERAGE MILE WORKED.</b>							
	£	£	£	£	£	£	£
1927 .. ..	2,401	2,203	1,038	2,208	688	837	1,666
1928 .. ..	2,533	2,105	963	1,448	733	872	1,577
1929 .. ..	2,537	2,029	971	1,423	765	862	1,570
1930 .. ..	2,511	1,978	922	1,408	758	811	1,533
1931 .. ..	2,145	1,592	780	1,079	633	675	1,273

## WORKING EXPENSES PER TRAIN-MILE RUN.

	d.	d.	d.	d.	d.	d.	d.
1927 .. ..	125.77	135.68	130.93	199.93	122.22	101.52	135.89
1928 .. ..	131.67	133.09	125.74	135.09	121.92	97.22	129.86
1929 .. ..	131.28	127.25	125.17	150.80	125.79	96.22	129.66
1930 .. ..	134.42	126.47	120.34	154.48	130.39	85.41	130.18
1931 .. ..	120.80	112.88	111.93	131.48	115.98	86.10	117.07

(a) See sub-section (ii) above.

(iv) *Distribution.* The subjoined table shows the distribution of working expenses under four chief heads of expenditure for the years 1927 to 1931 :—

**RAILWAYS, STATE.—DISTRIBUTION OF WORKING EXPENSES.**

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
<b>MAINTENANCE.</b>							
	£	£	£	£	£	£	£
1927 .. ..	2,154,931	2,276,601	1,576,325	2,027,057	636,466	134,291	7,805,671
1928 .. ..	2,596,755	2,109,404	1,589,177	584,350	731,860	140,989	7,752,535
1929 .. ..	2,538,581	1,926,157	1,608,978	658,941	748,123	158,302	7,639,482
1930 .. ..	2,583,896	1,749,068	1,529,521	678,976	800,784	133,459	7,475,704
1931 .. ..	2,199,347	1,394,185	1,401,338	438,462	576,723	117,319	6,127,374
<b>LOCOMOTIVE, CARRIAGE, AND WAGON CHARGES.</b>							
1927 .. ..	6,823,914	3,746,921	2,924,903	23,653,050	1,244,941	222,477	18,616,206
1928 .. ..	7,158,605	3,659,881	2,657,596	2,002,377	1,306,504	233,670	17,018,633
1929 .. ..	7,003,464	3,579,620	2,719,211	1,899,717	1,381,160	235,641	16,818,813
1930 .. ..	6,926,296	3,587,086	2,630,642	1,796,616	1,368,160	236,855	16,545,655
1931 .. ..	5,642,719	2,840,181	2,068,942	1,382,409	1,218,580	192,911	13,345,742
<b>TRAFFIC EXPENSES.</b>							
1927 .. ..	3,733,225	2,822,524	1,844,066	2,898,459	728,466	118,987	10,145,727
1928 .. ..	3,877,254	2,673,518	1,709,518	823,189	773,806	124,845	9,982,130
1929 .. ..	3,848,525	2,605,790	1,721,355	764,203	803,016	130,068	9,872,957
1930 .. ..	3,703,106	2,536,635	1,629,238	735,022	819,671	132,233	9,555,905
1931 .. ..	3,212,276	2,026,918	1,321,254	564,025	698,463	110,037	7,932,973
<b>OTHER CHARGES.</b>							
1927 .. ..	1,083,783	1,347,535	150,028	2,219,185	75,820	75,437	2,951,788
1928 .. ..	1,123,713	1,369,946	149,849	250,824	98,641	74,381	3,067,354
1929 .. ..	1,587,080	1,421,231	153,257	299,706	123,147	39,641	3,624,062
1930 .. ..	1,749,125	1,438,759	156,762	362,507	124,280	32,867	3,864,300
1931 .. ..	1,845,304	1,238,650	283,944	349,723	117,073	28,571	3,863,265

(a) See sub-section (ii) 8.

9. *Salaries and Wages.*—The following table shows the total amount paid in salaries and wages, also the amount per average mile worked and per train-mile run in each State during the years 1927 to 1931 :—

**RAILWAYS, STATE.—SALARIES AND WAGES PAID AND AVERAGES.**

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
<b>TOTAL SALARIES AND WAGES PAID.</b>							
	£	£	£	£	£	£	£
1927 .. ..	12,509,021	7,792,554	5,062,347	3,596,092	2,279,878	336,287	31,576,179
1928 .. ..	12,693,706	7,725,188	4,751,885	2,915,912	2,442,997	345,803	30,875,491
1929 .. ..	12,422,298	7,436,531	4,805,836	2,499,872	2,551,056	374,107	30,089,700
1930 .. ..	11,656,142	7,097,012	4,649,032	2,437,783	2,587,456	364,636	28,792,061
1931 .. ..	10,167,293	5,587,539	3,851,295	1,743,574	2,099,947	314,590	23,764,238
<b>SALARIES AND WAGES PER AVERAGE MILE WORKED.</b>							
	£	£	£	£	£	£	£
1927 .. ..	2,177	1,684	809	1,425	584	511	1,331
1928 .. ..	2,179	1,657	750	1,154	615	525	1,287
1929 .. ..	2,104	1,583	752	982	639	572	1,244
1930 .. ..	1,956	1,507	721	960	630	553	1,179
1931 .. ..	1,691	1,186	592	688	509	473	968
<b>SALARIES AND WAGES PER TRAIN-MILE RUN.</b>							
	d.	d.	d.	d.	d.	d.	d.
1927 .. ..	114.03	103.72	102.04	124.00	103.75	61.93	108.57
1928 .. ..	113.26	104.77	97.84	107.60	102.32	58.58	106.01
1929 .. ..	108.88	99.27	96.98	104.06	105.03	63.86	102.79
1930 .. ..	104.72	96.39	94.09	105.40	108.38	58.17	100.10
1931 .. ..	95.21	84.10	84.93	83.83	93.28	60.35	88.97

10. Net Revenue.—(i) *Net Revenue and Percentage on Capital Cost.* The following table shows the net sums available to meet interest charges, also the percentage of such sums upon the capital cost of construction and equipment of lines open for traffic in each State for the years 1927 to 1931 :—

RAILWAYS, STATE.—NET REVENUE AND PERCENTAGE THEREOF ON CAPITAL COST OF LINES OPEN.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
NET REVENUE.							
	£	£	£	£	£	£	£
1927 .. ..	5,110,690	3,458,853	830,355	a-1,735,618	922,296	-11,840	8,574,736
1928 .. ..	4,273,185	3,008,310	1,275,392	280,536	947,240	-19,142	9,765,521
1929 .. ..	5,437,566	3,630,175	1,365,846	-28,921	744,318	-59,797	11,089,187
1930 .. ..	3,664,269	2,690,258	1,356,118	-296,176	546,308	-28,040	7,932,737
1931 .. ..	3,106,095	2,508,424	1,401,501	-148,487	588,074	-48,662	7,406,945

PERCENTAGE OF NET REVENUE ON CAPITAL EXPENDITURE.

	%	%	%	%	%	%	%
1927 .. ..	4.59	4.92	1.52	a-6.17	4.42	-0.18	2.94
1928 .. ..	3.68	4.16	2.27	1.08	4.43	-0.29	3.27
1929 .. ..	4.44	4.97	2.34	0.11	3.32	-0.92	3.58
1930 .. ..	2.94	3.63	2.31	-1.09	2.39	-0.43	2.53
1931 .. ..	(b) 2.40	3.38	(b) 2.38	-0.54	2.52	-0.74	(c) 2.27

(a) See sub-paragraph 8 (ii) *ante*. (b) Exclusive of Grafton-South Brisbane line. (c) Includes Grafton-South Brisbane line.

These figures are also represented in the graphs which accompany this Chapter.

(ii) *Net Revenue, Averages.* Tables showing the gross earnings and the working expenses per average mile worked and per train-mile run have been given previously. The net earnings, *i.e.*, the excess of gross earnings over working expenses per average mile worked and per train-mile run are shown in the following table :—

RAILWAYS, STATE.—NET REVENUE, AVERAGES.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
NET REVENUE PER AVERAGE MILE WORKED.							
	£	£	£	£	£	£	£
1927 .. ..	889	748	133	a-688	236	-18	361
1928 .. ..	733	645	201	111	239	-29	407
1929 .. ..	921	773	214	-11	186	-91	458
1930 .. ..	615	571	211	-117	132	-42	325
1931 .. ..	517	532	215	-59	143	-73	302

NET REVENUE PER TRAIN-MILE RUN.

	d.	d.	d.	d.	d.	d.	d.
1927 .. ..	46.59	46.04	16.74	a-59.85	41.97	-2.18	29.48
1928 .. ..	38.13	40.80	26.26	10.35	39.68	-3.24	33.53
1929 .. ..	46.76	48.46	27.56	-1.20	30.64	-10.21	37.88
1930 .. ..	32.92	36.54	27.45	-12.80	22.88	-4.47	27.58
1931 .. ..	29.09	37.76	30.90	-7.14	26.12	-9.33	27.73

(a) See sub-paragraph 8 (ii) *ante*.



11. **Interest.** The amount of interest payable on expenditure from loans on the construction and equipment of the railways, the amount of interest per average mile worked and per train-mile run in each State during the years ended 30th June, 1927 to 1931, were as follows:—

**RAILWAYS, STATE.—INTEREST ON RAILWAY LOAN EXPENDITURE.**

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
<b>AMOUNT OF INTEREST PAYABLE.</b>							
	£	£	£	£	£	£	£
1927 .. ..	5,562,308	3,271,374	2,720,717	1,332,515	887,740	285,255	14,059,909
1928 .. ..	5,882,452	3,321,727	2,827,223	1,271,686	920,560	284,076	14,507,733
1929 .. ..	6,150,000	3,473,575	2,902,710	1,366,807	923,017	283,554	15,099,663
1930 .. ..	6,420,643	3,508,657	2,953,211	1,399,053	950,707	284,379	15,516,740
1931 .. ..	6,790,082	3,596,758	3,018,355	1,426,741	968,066	285,881	16,205,274
<b>INTEREST PER AVERAGE MILE WORKED.</b>							
	£	£	£	£	£	£	£
1927 .. ..	968	707	435	528	227	433	593
1928 .. ..	1,010	713	446	503	232	432	605
1929 .. ..	1,042	739	454	537	231	434	624
1930 .. ..	1,078	745	458	551	231	431	635
1931 .. ..	1,129	764	464	563	235	430	660
<b>INTEREST PER TRAIN-MILE RUN.</b>							
	d.	d.	d.	d.	d.	d.	d.
1927 .. ..	50.70	43.54	54.84	45.95	40.39	52.53	48.34
1928 .. ..	52.48	45.05	58.21	46.92	38.55	48.12	49.81
1929 .. ..	53.86	46.37	58.58	56.90	38.00	48.40	51.58
1930 .. ..	57.68	47.65	59.77	60.49	39.83	45.37	53.95
1931 .. ..	63.59	54.14	66.56	68.60	43.00	54.84	60.67

(a) Interest charges on the Grafton—South Brisbane line for the year 1930–31 amounted to £215,971, of which New South Wales contributed £70,269 and Queensland £26,311, the remainder, £119,391, being borne by the Commonwealth. See B. § 1, *ante*.

Exchange on interest payments in London during the year 1930–31, New South Wales £737,633, and Victoria £183,863, are not included in the amounts shown above for those States. The interest payable on the cost of construction and equipment, exclusive of expenditure from consolidated revenue (£5,638,377) for that purpose, was at the rate of 5.06 per cent., in 1930–31.

12. **Profit or Loss.**—The following table shows the actual profit or loss after deducting working expenses and interest and all other charges from the gross revenue, and the percentage of such profit or loss on the total capital cost of construction and equipment for the last five years:—

**RAILWAYS, STATE.—PROFIT OR LOSS.**

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
<b>PROFIT OR LOSS AFTER PAYMENT OF WORKING EXPENSES, INTEREST, AND OTHER CHARGES.</b>							
	£	£	£	£	£	£	£
1927 .. ..	- 451,618	+ 187,479	- 1,890,362	a- 3,068,133	+ 34,556	- 297,095	- 5,485,173
1928 .. ..	- 1,609,267	+ 315,960	- 1,551,831	- 991,150	+ 26,671	- 303,218	- 4,744,755
1929 .. ..	- 712,434	+ 156,600	- 1,536,864	- 1,395,728	- 178,699	- 343,351	- 4,010,476
1930 .. ..	- 2,756,374	+ 818,399	- 1,597,093	- 1,695,229	- 404,489	- 312,419	- 7,584,003
1931 .. ..	b- 3,683,987	+ 1,088,334	- 1,616,854	- 1,575,228	- 379,992	- 334,543	b- 8,798,329
<b>PERCENTAGE OF PROFIT OR LOSS ON CAPITAL COST OF CONSTRUCTION AND EQUIPMENT.</b>							
	%	%	%	%	%	%	%
1927 .. ..	-0.41	+0.27	-3.47	a-10.91	+0.17	-4.58	-1.88
1928 .. ..	-1.38	-0.44	-2.76	-3.81	+0.12	-4.68	-1.59
1929 .. ..	-0.58	+0.21	-2.64	-5.20	-0.80	-5.29	-1.30
1930 .. ..	-2.21	-1.10	-2.72	-6.22	-1.77	-4.78	-2.41
1931 .. ..	c-2.73	-1.46	c-2.64	-5.78	-1.63	-5.11	d-2.70

(a) See sub-section (ii), 8.

(b) See Note (a) paragraph 11 above.

(c) Exclusive of

(d) Includes Grafton—South Brisbane line.

If the abnormal charges to working expenses in South Australia be eliminated, the loss in that State for 1926-27 would be 3.93 per cent., and for all States, 1.21 per cent.

13. **Traffic.**—(i) *General.* Reference has already been made to the difference in the traffic conditions on many of the lines. These conditions differ not only in the several States, but also on different lines in the same States, and apply to both passenger and goods traffic. By far the greater part of the population of Australia is confined to a fringe of country near the coast, more especially in the eastern and southern districts. A large proportion of the railway traffic between the chief centres of population is therefore carried over lines in the neighbourhood of the coast, and is thus, in some cases, open to seaborne competition. On most of the lines extending into the interior traffic is light, as the density of population diminishes rapidly as the coastal regions are left behind, with a consequent diminution in the volume of traffic, while, in comparison with other more settled countries, there is but little back loading.

The following table gives particulars for the years 1927 to 1931 :—

### RAILWAYS, STATE.—TRAFFIC.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
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#### NUMBER OF PASSENGER JOURNEYS.

1927 ..	141,615,806	160,237,648	26,812,993	23,366,760	15,737,570	2,328,970	379,099,747
1928 ..	148,046,881	164,574,870	24,800,934	19,539,347	16,032,536	2,322,410	375,316,978
1929 ..	151,116,086	161,002,267	24,738,327	17,829,946	14,904,917	2,212,817	371,804,360
1930 ..	147,892,548	157,119,071	24,440,946	17,829,098	14,175,175	2,243,265	363,700,103
1931 ..	126,811,993	134,655,220	22,009,473	15,437,440	11,702,741	1,852,145	312,469,012

#### PER 100 OF MEAN POPULATION.

1927 ..	6.036	9.887	3.032	4.131	4.149	1.107	6.217
1928 ..	6.171	9.453	2.754	3.399	4.088	1.102	6.035
1929 ..	6.178	9.146	2.697	3.081	3.674	1.041	5.882
1930 ..	5.972	8.839	2.621	3.075	3.408	1.043	5.685
1931 ..	5.075	7.518	2.319	2.652	2.786	849	4.837

#### PER AVERAGE MILE OF LINE WORKED.

1927 ..	24,642	36,579	4,284	9,262	4,029	3,538	15,982
1928 ..	25,412	35,307	3,912	7,730	4,037	3,528	15,649
1929 ..	25,598	34,272	3,873	7,007	3,732	3,384	15,377
1930 ..	24,821	33,370	3,791	7,024	3,449	3,399	14,892
1931 ..	21,089	28,588	3,382	6,091	2,838	2,786	12,725

#### TONNAGE OF GOODS AND LIVE STOCK CARRIED.

1927 ..	17,224,894	9,234,923	4,315,513	3,671,686	3,438,587	730,273	38,615,876
1928 ..	15,433,083	8,117,961	4,670,447	3,401,901	3,697,648	715,387	36,036,427
1929 ..	14,516,643	8,187,088	4,558,099	2,748,423	3,670,147	660,523	34,340,923
1930 ..	12,150,964	7,513,606	4,528,201	2,652,753	3,530,188	632,052	31,007,764
1931 ..	10,743,109	6,099,310	3,857,766	2,162,709	3,153,525	466,153	26,182,572

#### PER 100 OF MEAN POPULATION.

1927 ..	734	540	488	649	907	347	633
1928 ..	643	466	519	592	943	339	570
1929 ..	593	465	497	475	995	311	543
1930 ..	491	423	486	457	849	294	485
1931 ..	430	341	406	372	751	214	410

RAILWAYS, STATE.—TRAFFIC—*continued.*

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
PER AVERAGE MILE OF LINE WORKED.							
1927 ..	2,997	1,996	689	1,455	880	1,109	1,628
1928 ..	2,649	1,741	737	1,346	931	1,087	1,500
1929 ..	2,459	1,743	714	1,080	919	1,010	1,423
1930 ..	2,039	1,596	702	1,045	859	958	1,270
1931 ..	1,787	1,295	593	853	765	701	1,079

(ii) *Metropolitan and Country Passenger Traffic and Revenue.* A further indication of the difference in passenger traffic conditions is obtained from a comparison of the volume of metropolitan and suburban and country traffic in each State. This is shown below for the year 1930-31 :—

## RAILWAYS, STATE.—METROPOLITAN AND SUBURBAN, AND COUNTRY PASSENGER TRAFFIC AND RECEIPTS, 1930-31.

Particulars.	Passenger Journeys.			Revenue.		
	Metropolitan and Suburban.	Country.	Total.	Metropolitan and Suburban.	Country.	Total.
	No.	No.	No.	£	£	£
N.S.W. ..	<i>a</i> 119,015,878	7,796,115	126,811,993	2,439,627	2,732,732	5,172,359
Victoria ..	<i>b</i> 128,748,927	5,906,293	134,655,220	2,310,814	1,579,790	3,890,604
Queensland ..	17,118,222	4,891,251	22,009,473	296,948	1,237,482	1,534,430
S. Australia ..	<i>c</i> 14,333,179	1,104,261	15,437,440	208,019	291,726	499,745
W. Australia ..	10,254,626	1,448,115	11,702,741	154,530	396,817	551,347
Tasmania ..	( <i>d</i> )	( <i>d</i> )	1,852,145	( <i>d</i> )	( <i>d</i> )	117,339
Total ..	( <i>e</i> )	( <i>e</i> )	312,469,012	( <i>e</i> )	( <i>e</i> )	11,765,824

(*a*) Within 34 miles of Sydney and Newcastle, including the Richmond line. of Melbourne.

(*c*) Within 25 miles of Adelaide.

(*d*) Not available.

(*b*) Within 20 miles of Melbourne.

(*e*) Incomplete.

Although the number of passenger journeys recorded in the metropolitan area in Victoria is considerably greater than in New South Wales, it must be borne in mind that in the latter State other transport facilities, viz., tramways, motor-omnibuses, and ferries, are more extensively used.

(iii) *Electrification of Suburban and Country Railways.* Reference to the electrification of the Melbourne and Sydney suburban railways will be found in Year Book No. 22, p. 285.

(iv) *Goods Traffic.* (*a*) *Classification.* The differing conditions of the traffic in each State might also, to some extent, be analysed by an examination of the tonnage of various classes of commodities carried, and of the revenue derived therefrom. Comparative particulars regarding the quantities of some of the leading classes of commodities

carried are available for all the States, and the following table shows the number of tons of various representative commodities carried, with the percentage of each class on the total for the financial year 1930-31 :-

## RAILWAYS, STATE.—CLASSIFICATION OF COMMODITIES CARRIED.

State.	Coal, Coke, and Shale.	Other Minerals.	Grain and Flour.	Hay, Straw, and Chaff.	Wool.	Live Stock.	All other Commodities.	Total.
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## TONS CARRIED.

	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
New South Wales	4,564,964	1,180,854	2,128,431	179,867	162,031	639,043	1,887,919	10,743,109
Victoria ..	280,533	418,763	1,450,147	205,682	79,119	542,134	3,122,932	6,099,310
Queensland ..	539,595	292,850	1,673,384 <sup>a</sup>	(b)	86,989	382,657	882,291	3,857,766
South Australia	131,937	511,102	723,380	24,421	24,299	92,488	655,082	2,162,709
Western Australia	204,395	264,450	1,474,094	51,955	23,615	88,690	1,046,326	3,153,525
Tasmania ..	197,694	(c)	59,902	20,081	3,554	22,245	162,677	466,153
All States ..	5,919,118	2,668,019	7,509,338	482,006	379,607	1,767,257	7,757,227	26,482,572

## PERCENTAGE OF TOTAL TONNAGE CARRIED.

	%	%	%	%	%	%	%	%
New South Wales	42.49	10.99	19.81	1.68	1.51	5.95	17.57	100.00
Victoria ..	4.60	6.86	23.78	3.37	1.30	8.89	51.20	100.00
Queensland ..	13.99	7.59	243.38	(b)	2.25	9.92	22.87	100.00
South Australia	6.10	23.63	33.45	1.13	1.12	4.28	30.29	100.00
Western Australia	6.48	8.39	46.74	1.65	0.75	2.81	33.18	100.00
Tasmania ..	42.41	(c)	12.85	4.31	0.76	4.77	34.90	100.00
All States ..	22.35	10.08	28.36	1.82	1.43	6.67	29.29	100.00

(a) Agricultural produce. (b) Included with "All other commodities." (c) Included with coal, coke, and shale.

(b) Revenue. The following table shows the revenue derived from goods and live stock traffic during 1930-31 according to a classification which has been adopted by all States :-

## RAILWAYS, STATE.—GOODS, ETC., TRAFFIC—REVENUE, 1930-31.

Class.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Total.
	£	£	£	£	£	£	£
General merchandise	4,546,155	3,007,472	2,570,371	823,996	1,059,792	164,183	12,171,969
Wheat ..	(a)	826,289	(a)	369,363	852,702	(a)	d 2,048,354
Wool ..	739,586	210,107	570,292	46,868	79,476	4,723	1,651,052
Live stock	1,200,983	572,658	683,746	155,930	122,100	19,095	2,754,512
Minerals—							
Coal, coke, and shale ..	1,037,877	90,185	208,070	63,263	111,225	(b) 38,659	1,549,279
Others ..	316,805	111,097	158,682	328,327	64,343	(c) 14,798	994,052
Total ..	7,841,406	4,817,808	4,191,161	1,787,747	2,289,638	241,458	21,169,218

(a) Included with General Merchandise. (b) Native coal. (c) Minerals other than native coal. (d) Incomplete.

In New South Wales and Victoria, electric motor coaches are used for the transfer of parcels from the central stations to suburban stations, and in Victoria to convey luggage and parcels between the two main terminal stations.

14. **Passenger-Mileage and Ton-Mileage.**—(i) *Passenger-Miles.* The subjoined table gives particulars of passenger-mileage in respect of the States of New South Wales, Victoria, South Australia, and Tasmania for the years 1926-27 to 1930-31.

**RAILWAYS, STATE.—SUMMARY OF "PASSENGER-MILES."**

Year ended 30th June—	Passenger Train-Mileage.	Number of Passenger Journeys.	Total Passenger-Miles.	Amount Received from Passengers.	Average Number of Passengers carried per Train-Mile.		Average Mileage per Passenger Journey.	Average Earnings per Passenger-Mile.	Average Fare per Passenger Journey.	Density of Traffic per Average Mile Worked.
	Miles. (000 omitted.)	No. (000 omitted.)	No. (000 omitted.)	£	No.	Miles.	d.	d.	No.	
<b>NEW SOUTH WALES.</b>										
1927	15,044	141,616	1,765,378	6,643,337	117	12.47	0.90	11.26	307,184	
1928	16,036	148,047	1,809,307	6,998,147	113	12.22	0.93	11.34	310,569	
1929	16,738	151,116	1,820,701	7,238,329	108	12.05	0.95	11.50	308,409	
1930	16,952	147,893	1,731,073	6,610,951	102	11.70	0.92	10.73	290,519	
1931	16,496	126,812	1,414,061	5,172,359	85	11.15	0.88	9.79	235,161	
<b>VICTORIA.</b>										
1927	11,846	169,238	1,476,307	5,641,032	125	8.72	0.92	8.00	319,064	
1928	11,915	164,575	1,416,970	5,358,775	119	8.61	0.91	7.81	303,985	
1929	12,104	161,002	1,420,570	5,222,244	117	8.82	0.88	7.78	302,392	
1930	12,188	157,119	1,352,954	4,829,898	111	8.61	0.86	7.38	287,349	
1931	11,066	134,655	1,134,376	3,890,604	103	8.42	0.82	6.93	240,830	
<b>SOUTH AUSTRALIA.</b>										
1927	4,002	23,367	280,082	1,005,624	70	11.99	0.86	10.33	111,022	
1928	3,729	19,539	242,308	927,520	65	12.40	0.92	11.39	95,861	
1929	3,563	17,830	219,857	815,323	62	12.33	0.89	10.98	86,403	
1930	3,342	17,829	208,634	628,474	62	11.70	0.72	8.46	82,193	
1931	3,193	15,437	167,738	499,745	53	10.87	0.72	7.77	66,179	
<b>TASMANIA.</b>										
1927	575	2,329	41,432	168,837	72	17.79	0.97	17.40	62,943	
1928	615	2,322	37,971	167,234	62	16.35	1.05	17.28	57,685	
1929	627	2,213	35,751	149,792	57	16.15	1.05	16.25	54,674	
1930	670	2,243	35,257	147,487	53	15.71	1.00	15.77	53,428	
1931	590	1,852	28,646	117,339	49	15.46	0.98	15.20	43,083	

(ii) *Ton-Miles.* Particulars regarding total "ton-miles" are given in the following table for each of the years 1926-27 to 1930-31 :—

## RAILWAYS, STATE.—SUMMARY OF "TON-MILES."

Year ended the 30th June—	Goods-Train-Mileage.	Total Tons Carried.	Total "Ton-miles."	Earnings.	Average Freight-paying Load Carried per "Train."	Average Haul per Ton.	Earnings per "Ton-mile."	Density of Traffic per Average Mile Worked.
	No. (,000 omitted.)	No. (,000 omitted.)	No. (,000 omitted.)	£	Tons.	Miles.	d.	Tons.
NEW SOUTH WALES.								
1927	11,282	16,864	1,654,815	10,490,593	165	98.13	1.50	287,994
1928	10,861	15,223	1,550,375	10,228,586	158	101.84	1.56	266,408
1929	10,645	14,307	1,690,560	10,379,192	183	118.16	1.45	286,376
1930	9,762	11,861	1,498,723	9,353,867	177	126.35	1.48	251,778
1931	8,997	10,616	1,425,184	7,841,406	184	134.25	1.30	237,260
VICTORIA.								
1927	6,184	9,235	882,918	6,344,096	173	95.61	1.72	190,819
1928	5,780	8,118	737,856	5,763,701	164	90.89	1.87	158,304
1929	5,876	8,187	834,605	6,251,682	173	101.94	1.80	177,651
1930	5,483	7,514	737,623	5,599,182	166	98.17	1.82	156,674
1931	4,879	6,099	713,022	4,817,808	174	116.90	1.62	151,385
QUEENSLAND.(b)								
1928	7,734	4,670	552,442	4,824,885	d71	120.67	2.09	89,872
1929	7,751	4,558	553,816	4,949,614	d71	124.03	2.14	88,572
1930	7,546	4,528	554,171	4,780,114	d73	125.20	2.06	88,628
1931(c)	6,406	3,838	495,912	4,148,845	d77	133.20	2.00	79,149
SOUTH AUSTRALIA.								
1927	2,957	3,672	389,443	2,662,866	141	105.66	1.65	154,451
1928	2,774	3,402	395,919	2,616,593	147	116.38	1.57	156,731
1929	2,202	2,748	337,639	2,358,579	156	122.91	1.66	132,694
1930	2,209	2,653	350,325	2,249,895	164	131.29	1.55	138,044
1931	1,799	2,163	285,639	1,787,747	165	132.07	1.50	112,711
WESTERN AUSTRALIA.								
1927	33,359	3,439	317,845	2,413,852	110	92.43	1.82	81,373
1928	33,723	3,698	357,966	2,619,816	111	96.81	1.76	90,145
1929	33,773	3,670	367,932	2,610,193	113	100.00	1.71	91,919
1930	33,654	3,530	361,935	2,523,302	115	102.53	1.67	88,083
1931	33,487	3,154	373,405	2,289,638	121	118.41	1.47	90,566
TASMANIA.								
1927	a742	707	31,564	296,354	d43	44.63	2.25	47,955
1928	a814	690	34,180	310,348	d42	49.54	2.17	51,926
1929	a787	636	31,140	281,577	d40	48.99	2.17	47,623
1930	a857	607	33,715	288,373	d39	55.58	2.05	51,091
1931	a667	444	27,253	220,545	d41	61.39	1.94	40,988

(a) Includes "Assistant" and "Light" mileage. (b) Particulars for years prior to 1927-28 are not available. (c) Exclusive of Queensland portion of Grafton-South Brisbane (uniform gauge) line. (d) Approximate.

In New South Wales the tonnage carried is exclusive of coal on which shunting and haulage charges only have been collected, and terminal charges have also been disregarded, but in the cases of South Australia and Tasmania such charges are included. Particulars for the latter State do not include live stock.

15. **Passenger Fares and Goods Rates.**—Fares and rates are changed from time to time to suit the varying necessities of the railways, and when drought conditions prevail special concessions are made in the rates for the carriage of fodder and water and for the transfer of stock to other areas.

An earlier issue of this work (No. 18, pp. 305-6) gives detailed information as at 30th June, 1924, in regard to the following rates :—(a) Ordinary Passenger Mileage rates ; (b) Highest and Lowest Class Freight rates ; (c) Rates for agricultural produce.

16. **Rolling Stock, 1931.**—The following table shows the rolling stock in use at the 30th June, 1931, classified according to gauge :—

**RAILWAYS, STATE.—ROLLING STOCK, 1931.**

State.	Gauge.					Total.				
	5 ft. 3 in.	4 ft. 8½ in.	3 ft. 6 in.	2 ft. 6 in.	2 ft. 0 in.					
<b>LOCOMOTIVES.</b>										
New South Wales	..	1,432	..	..	..	1,432				
Victoria ..	640	..	..	17	..	657				
Queensland ..	..	..	775	..	10	785				
South Australia	252	..	188	..	..	440				
Western Australia	..	..	420	..	..	420				
Tasmania ..	..	..	88	..	6	94				
All States ..	892	1,432	1,471	17	16	3,828				
<b>COACHING STOCK.</b>										
	Ordinary.	With Motors.	Ordinary.	With Motors.	Ordinary.	With Motors.	Ordinary.	Ordinary.	Ordinary.	With Motors.
New South Wales	..	..	2,720	37	..	..	..	..	2,720	37
Victoria ..	2,184	451	..	..	..	..	55	..	2,239	451
Queensland ..	..	..	..	..	1,257	47	..	11	1,268	47
South Australia	434	43	..	..	192	5	..	..	626	48
Western Australia	..	..	..	..	490	3	..	..	490	3
Tasmania ..	..	..	..	..	207	11	..	6	213	11
All States ..	2,618	494	2,720	37	2,146	66	55	17	7,556	597
<b>STOCK OTHER THAN COACHING.</b>										
New South Wales	..	..	23,996	..	..	..	..	..	23,996	..
Victoria ..	20,754	..	..	..	..	243	..	..	20,997	..
Queensland ..	..	..	..	..	19,045	..	168	..	19,213	..
South Australia	3,653	..	..	..	5,682	..	..	..	9,335	..
Western Australia	..	..	..	..	11,244	..	..	..	11,244	..
Tasmania ..	..	..	..	..	1,940	..	77	..	2,017	..
All States ..	24,407	..	23,996	..	37,911	243	245	..	86,802	..

Prior to the issue of Year Book No. 16 (1921-22) the particulars of rolling stock were classified under the headings of "Locomotives," "Passenger Vehicles," and "Vehicles other than Passenger." The present classification has now been adopted by all States.

17. **Employees.**—(i) *At 30th June.* The following table gives the number of railway employees in each year from 1927 to 1931 inclusive, classified according to (a) salaried staff, and (b) wages staff :—

## RAILWAYS, STATE.—EMPLOYEES. (a)

State.	At 30th June—									
	1927.		1928.		1929.		1930.		1931.	
	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.
New South Wales	6,004	39,488	6,052	38,053	5,995	37,535	5,754	34,243	5,947	34,517
Victoria	4,245	25,072	4,363	23,618	4,295	23,025	4,249	20,361	4,051	17,985
Queensland	3,565	16,105	3,478	16,146	3,403	15,467	3,219	14,542	3,030	12,970
South Australia	1,438	8,998	1,295	7,353	1,312	7,401	1,293	6,794	1,158	5,586
Western Australia	1,362	7,471	1,412	7,565	1,418	7,770	1,424	7,587	1,287	5,900
Tasmania	187	1,232	212	1,369	219	1,376	217	1,352	191	1,234
All States	16,801	98,366	16,812	94,104	16,642	92,574	16,156	84,879	15,664	78,192

(a) Exclusive of construction staff.

In the period under review the totals of salaried and wages staffs decreased from 115,167 in 1927 to 93,856 in 1931, a decline of 18.5 per cent.

(ii) *Average staff employed, 1930-31.* The number of employees at one point of time does not afford the best index of employment in railway work. It is considered that the following statement of the average number employed throughout the year indicates more accurately the labour requirements of the railways :—

## AVERAGE STAFF EMPLOYED, 1930-31.

State.	Operating Staff.		Construction Staff.		All Employees—Staff.	
	Salaried.	Wages.	Salaried.	Wages.	Salaried.	Wages.
New South Wales	5,954	34,666	118	2,614	6,072	37,280
Victoria	4,142	18,813	..	..	4,142	18,813
Queensland	3,044	11,652	34	330	3,078	11,982
South Australia	1,206	5,996	1	40	1,207	6,036
Western Australia	1,339	6,753	16	322	1,355	7,075
Tasmania	191	1,234	..	..	191	1,234
All States	15,876	79,114	169	3,306	16,045	82,420

In the States of Victoria and Tasmania, railway construction work is not under the control of the Railways Commissioners.



18. **Accidents.**—(j) *Classification.* The following classification of accidents which occurred through the movement of rolling-stock was adopted by each State in 1924-25.

Particulars for 1930-31 are as under :—

**RAILWAYS, STATE.—ACCIDENTS, 1931.**

Particulars.	N.S.W.		Vic.		Q'land.		S. Aust.		W. Aust.		Tas.		All States.		
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	
<b>Train accidents—</b>															
Passengers .. ..	..	38	..	..	..	5	..	..	..	..	..	..	1	..	44
Employees .. ..	..	7	..	..	..	2	..	..	..	8	..	..	4	..	21
<b>Accidents on line (other than train accidents)—</b>															
Passengers .. ..	2	134	11	78	1	8	1	29	..	11	..	..	15	260	
Employees .. ..	10	75	2	33	1	21	..	27	1	93	..	..	28	14	277
Other persons .. ..	5	44	1	..	2	1	..	..	..	..	..	..	..	8	45
<b>Shunting accidents—</b>															
Passengers .. ..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	2
Employees .. ..	1	79	4	8	2	67	..	20	..	55	1	..	5	8	234
Other persons .. ..	..	1	1	6	..	1	..	2	..	..	..	..	..	1	10
<b>Employees proceeding to or from their duty within railway boundaries</b>	1	..	2	..	..	..	..	..	..	..	..	..	..	3	..
<b>Persons killed or injured at crossings</b>	..	21	12	18	2	19	10	17	8	13	..	..	4	39	92
<b>Trespassers</b>	..	18	9	24	7	13	2	3	4	5	1	..	..	56	37
<b>Miscellaneous</b>	..	..	..	..	..	..	..	..	..	10	..	..	..	..	10
<b>Total</b> .. ..	44	409	57	150	15	138	13	98	13	195	2	42	144	1,032	

(ii) *Particulars for Quinquennium.* The subjoined table gives particulars of the number of persons killed and injured through train accidents and the movement of rolling stock on the Government railways in each State for each of the years 1927 to 1931 inclusive :—

**RAILWAYS, STATE.—ACCIDENTS.**

State.	In year ended 30th June—									
	1927.		1928.		1929.		1930.		1931.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
New South Wales	123	687	77	629	61	565	64	571	44	409
Victoria .. ..	53	292	60	238	46	281	57	197	57	150
Queensland .. ..	26	167	20	163	19	125	26	133	15	138
South Australia	22	263	23	255	20	156	9	196	13	98
Western Australia	17	365	16	351	15	354	18	330	13	195
Tasmania .. ..	..	44	1	18	2	71	6	84	2	42
<b>All States</b> ..	241	1,818	197	1,654	163	1,552	180	1,511	144	1,032

19. Consumption of Oil and Fuel.—The appended table shows the quantity and value of oil and fuel consumed by the various Government Railway Departments during the year 1930-31 :—

GOVERNMENT RAILWAYS.—CONSUMPTION AND VALUE OF OIL AND FUEL,  
1930-31.

Government Railways.	Oil.						Coal.					
	Lubricating.			Fuel.			Tons.	Value.	Average Cost per Ton.			
	Gallons.	Value.	Average Cost per Gallon.	Gallons.	Value.	Average Cost per Gallon.						
	£	s.	d.		£	d.	£	£	s.	d.		
New South Wales <sup>d</sup>	423,675	46,303	2	2.23	1,077,395	47,545	10.59	1,336,981	1,130,660	0	16	10.96
Victoria ..	167,000	17,700	2	1.44	1,122,098	49,868	10.66	584,780	627,330	1	1	5.46
Queensland ..	166,457	18,332	2	2.43	130,570	8,769	16.12	361,459	328,434	0	18	2.07
South Australia <sup>a</sup>	80,560	9,059	2	2.99	(b)	(b)	(b)	143,756	239,786	1	13	4.32
Western Australia	53,916	5,781	2	1.73	299,813	15,439	12.36	291,914	275,542	0	18	10.54
Tasmania ..	29,642	3,346	2	3.09	14,019	740	12.67	46,573	55,133	1	3	8.11
Total States ..	921,250	100,521	2	2.19	2,643,895	122,361	11.11	2,765,463	2,656,885	0	19	2.58
Federal ..	16,914	1,688	1	11.95	60,136	5,144	20.53	19,448	37,887	1	18	11.54
Total, Australia..	938,164	102,209	2	2.15	2,704,031	127,505	11.32	2,784,911	2,694,772	0	19	4.23

(a) Lubricating oil used on loco. cars and wagons only.  
South Australia.

(d) Railways and Tramways.

(b) Not available.

(c) Exclusive of

The range in the average cost per ton of coal from 16s. 11d. in New South Wales to £1 19s. per ton for coal used on the Federal Railways is attributable to the comparatively low haulage expenses incurred in the coal-producing States. The average cost of coal during 1930-31 showed a considerable decrease on that of 1929-30.

#### § 4. Private Railways.

1. Total Mileage Open, 1930-31.—The bulk of the private railways in Australia have been laid down for the purpose of hauling timber, firewood, sugar-cane, coal, or other minerals, and they are not generally used for the conveyance of passengers or for public traffic. In many cases the lines are practically unballasted and easily removable.

The railways referred to in this section include only lines open to the public for general passenger and goods traffic. Complete particulars of lines used for special purposes only for the year 1930-31 are not available.

2. **Lines Open for General Traffic.**—The following statement gives a summary of the operations of private railways open for general traffic for the year 1930-31 :—

**RAILWAYS, PRIVATE.—SUMMARY, 1930-31.**

State.	Companies from which returns were received.	Miles Open (Route).	Capital Cost.	Gross Revenue.	Working Expenses.	Train-Miles.	Passenger Journeys.	Tonnage of Goods, etc.	No. of Employees.	Rolling Stock.		
										Locos.	Coaches.	Other Vehicles.
	No.	Miles.	£	£	£	Miles.	No.	Tons.	No.	No.	No.	
New South Wales	8	115.70	1,482,065	267,040	193,395	450,647	825,430	680,074	418	46	9	735
Victoria	3	24.94	92,904	8,928	5,279	18,556	13,155	21,050	13	5	4	36
Queensland	15	265.76	534,040	32,049	26,106	73,351	12,467	161,849	63	19	18	357
South Australia	1	33.80	(a)	(a)	(a)	40,898	519	517,309	17	8	1	196
Western Australia	1	277.00	2,229,974	176,728	91,357	266,039	34,549	139,688	236	23	23	490
Tasmania	4	141.56	911,668	72,881	58,032	113,499	34,804	58,776	173	22	21	299
All States (b)	31	858.76	5,250,651	558,526	374,169	962,990	920,924	1,578,746	920	123	76	2,113

(a) Not available.

(b) Incomplete.

The particulars given in the table are incomplete in respect of the States of New South Wales, Queensland, South Australia, and Tasmania. In New South Wales and Queensland several of these lines, although owned by private companies, are operated by the Government Railway Departments, and Government rolling stock is used thereon.

**C. TRAMWAYS.**

1. **Systems in Operation.**—(i) *General.* Tramway systems are in operation in all the States, and in recent years considerable extension has been made in the use of electrical traction, the benefit of which is now enjoyed by a number of the larger towns.

In many parts of Australia private lines used for special purposes in connexion with the timber, mining, sugar, or other industries are often called tramways, but they are more properly railways, and the traffic on them has nothing in common with that of the street tramways for the conveyance of passengers, which are dealt with in the present paragraph.

(ii) *Total Mileage Open and Classification of Lines.* The following tables show the total mileage of tramway lines open for general passenger traffic for the year 1930-31, also in Australia as a whole for the years 1926-27 to 1930-31, classified (a) according to the nature of the authority by which the lines are controlled; (b) according to the motive power utilized, and (c) according to gauge :—

**TRAMWAYS.—ROUTE MILEAGE OPEN, 1930-31.**

Nature of Motive Power, and Gauge.	N.S. Wales.	Victoria.	Q'land.	South Australia.	Western Australia.	Tasmania.	Total. Australia.
<b>GOVERNMENT.</b>							
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Electric .. ..	186.63	135.31	..	..	41.10	..	363.04
Steam .. ..	12.96	..	..	..	6.26	..	19.22
Cable .. ..	..	24.29	..	..	..	..	24.29
Horse .. ..	..	..	..	..	1.50	..	1.50
Total .. ..	199.59	159.60	..	..	48.86	..	408.05

TRAMWAYS.—ROUTE MILEAGE OPEN, 1930-31—*continued.*

Nature of Motive Power, and Gauge.	N.S. Wales.	Victoria.	Q'land.	South Australia.	Western Australia.	Tasmania.	Total Australia.
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## MUNICIPAL.

Electric .. ..	..	..	56.69	82.84	8.61	30.53	178.67
Steam .. ..	..	..	6.65	..	..	..	6.65
<b>Total .. ..</b>	<b>..</b>	<b>..</b>	<b>63.34</b>	<b>82.84</b>	<b>8.61</b>	<b>30.53</b>	<b>185.32</b>

## PRIVATE.

Electric .. ..	..	21.25	..	..	11.56	..	32.81
Steam .. ..	3.50	..	..	..	..	..	3.50
<b>Total .. ..</b>	<b>3.50</b>	<b>21.25</b>	<b>..</b>	<b>..</b>	<b>11.56</b>	<b>..</b>	<b>36.31</b>

## ALL CONTROLLING AUTHORITIES.

Electric .. ..	186.63	156.56	56.69	82.84	61.27	30.53	574.52
Steam .. ..	16.46	..	6.65	..	6.26	..	29.37
Cable .. ..	..	24.29	..	..	..	..	24.29
Horse .. ..	..	..	..	..	1.50	..	1.50
<b>Total .. ..</b>	<b>203.09</b>	<b>180.85</b>	<b>63.34</b>	<b>82.84</b>	<b>69.03</b>	<b>30.53</b>	<b>629.68</b>

## ACCORDING TO GAUGE.

Gauge—							
5 ft. 3 in. ..	..	5.18	..	..	..	..	5.18
4 ft. 8½ in. ..	203.09	175.67	56.69	82.84	..	..	518.29
3 ft. 6 in. ..	..	..	6.65	..	69.03	30.53	106.21
<b>Total .. ..</b>	<b>203.09</b>	<b>180.85</b>	<b>63.34</b>	<b>82.84</b>	<b>69.03</b>	<b>30.53</b>	<b>629.68</b>

## TRAMWAYS.—ROUTE MILEAGE OPEN, AUSTRALIA.

Nature of Motive Power, Controlling Authority, and Gauge.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
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## ACCORDING TO MOTIVE POWER.

Electric .. ..	Miles. 538.42	Miles. 555.33	Miles. 557.99	Miles. 571.85	Miles. 574.52
Steam .. ..	70.55	39.18	40.19	41.62	29.37
Cable .. ..	33.68	30.60	30.60	26.44	24.29
Horse .. ..	2.51	2.51	1.50	1.50	1.50
<b>Total .. ..</b>	<b>645.16</b>	<b>627.08</b>	<b>630.28</b>	<b>641.41</b>	<b>629.68</b>

TRAMWAYS.—ROUTE MILEAGE OPEN, AUSTRALIA—*continued.*

Nature of Motive Power, Controlling Authority, and Gauge.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
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## ACCORDING TO CONTROLLING AUTHORITY.

Government .. ..	431.05	405.21	407.16	409.43	408.05
Municipal .. ..	168.70	173.60	177.01	185.20	185.32
Private .. ..	45.41	48.27	46.11	46.78	36.31
<b>Total .. ..</b>	<b>645.16</b>	<b>627.08</b>	<b>630.28</b>	<b>641.41</b>	<b>629.68</b>

## ACCORDING TO GAUGE.

Gauge—					
5 ft. 3 in. .. ..	5.18	5.18	5.18	5.18	5.18
4 ft. 8½ in. .. ..	526.61	516.80	520.46	530.03	518.29
3 ft. 6 in. .. ..	100.87	105.10	104.64	106.20	106.21
2 ft. 9 in. .. ..	12.50	..	..	..	..
<b>Total .. ..</b>	<b>645.16</b>	<b>627.08</b>	<b>630.28</b>	<b>641.41</b>	<b>629.68</b>

The mileage of electric tramways has steadily increased during the period dealt with above, due principally to the gradual conversion of the Newcastle steam tramways and of the Melbourne cable systems to electrical traction.

(iii) *Cost of Construction and Equipment.* The table hereunder shows the total cost of construction and equipment of all tramways to the 30th June, 1931, classified according to the nature of the motive power and the controlling authority.

## TRAMWAYS.—COST OF CONSTRUCTION AND EQUIPMENT, 1930-31.

Nature of Motive Power.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
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## GOVERNMENT.

	£	£	£	£	£	£	£
Electric .. ..	a8,049,850	7,147,828	..	..	1,103,707	..	16,301,385
Steam .. ..	a 100,742	..	..	..	60,634	..	161,376
Cable .. ..	..	1,319,266	..	..	..	..	1,319,266
Horse .. ..	..	..	..	..	10,104	..	10,104
<b>Total .. ..</b>	<b>8,150,592</b>	<b>8,467,094</b>	<b>..</b>	<b>..</b>	<b>1,174,445</b>	<b>..</b>	<b>17,792,131</b>

## MUNICIPAL.

Electric .. ..	..	..	2,219,874	3,870,769	165,557	612,632	6,868,832
Steam .. ..	..	..	53,235	..	..	..	53,235
<b>Total .. ..</b>	<b>..</b>	<b>..</b>	<b>2,273,109</b>	<b>3,870,769</b>	<b>165,557</b>	<b>612,632</b>	<b>6,922,067</b>

TRAMWAYS.—COST OF CONSTRUCTION AND EQUIPMENT, 1930-31—*continued.*

Nature of Motive Power.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
PRIVATE.							
Electric	£ ..	£ 223,061	£ ..	£ ..	£ 453,339	£ ..	£ 676,400
Steam ..	(b) 20,000	..	..	..	..	..	20,000
Total ..	(b) 20,000	223,061	..	..	453,339	..	696,400
ALL CONTROLLING AUTHORITIES.							
Electric	8,049,850	7,370,889	2,219,874	3,870,769	1,722,603	612,632	23,846,617
Steam ..	120,742	..	53,235	..	60,634	..	234,611
Cable ..	..	1,319,266	..	..	..	..	1,319,266
Horse ..	..	..	..	..	10,104	..	10,104
Total ..	8,170,592	8,690,155	2,273,109	3,870,769	1,793,341	612,632	25,410,598

(a) Exclusive of Stores Advance Account and cost of power stations now charged to Railways Department.  
 (b) Estimated.

2. New South Wales.—(i) *General.* With the exception of a steam tramway 3½ miles in length from Parramatta to Duck River, which is operated by Sydney Ferries Ltd., the tramways of New South Wales are the property of the Government, and are under the control of the Metropolitan Transport Trust. In Sydney and suburbs the Government tramways are divided into seven distinct systems, five of which are operated by electricity and two by steam. The conversion of the Newcastle system from steam to electric traction has been undertaken, and at 30th June, 1931, 23.74 miles (route) were completed and opened for traffic.

(ii) *Particulars of Working.* (a) *Electric Tramways.* The subjoined statement gives particulars of the working of the electric tramways in New South Wales for the years 1927 to 1931:—

## ELECTRIC TRAMWAYS.—NEW SOUTH WALES.—SUMMARY.

Year ended 30th June—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment. (a)	Gross Revenue.	Working Expenses.	Net Earnings.	Interest.	Percentage of Working Expenses on Gross Revenue.	Percentage of Net Earnings on Capital Cost.	Passengers carried.	Persons employed.
	Miles.	£	£	£	£	£	%	%	No. ,000	No.
1927 ..	185.85	10,779,696	3,733,907	3,284,594	449,313	545,702	87.97	4.17	341,003	11,512
1928 ..	185.80	10,894,890	4,495,093	3,840,549	654,544	554,887	85.44	6.01	341,365	10,911
1929 ..	186.65	11,029,890	4,402,045	3,751,930	650,115	592,807	85.23	5.89	328,820	10,968
1930 ..	186.63	11,046,461	3,856,892	3,543,645	311,247	622,538	91.93	2.82	303,864	10,024
1931 ..	186.63	8,049,850	3,024,704	3,058,953	-34,249	470,046	101.13	-0.43	263,699	8,183

(a) Includes £47,455 paid from the Consolidated Revenue on which no interest is payable.  
 (b) Exclusive of the cost of power houses now charged to the Railways Department.

The cost of construction and equipment is exclusive of the amount of the Stores Advance Account (£287,000).

(b) *Electric and Steam Tramways.* The following table gives a summary of the operations of all tramways for the years 1927 to 1931 :—

**ELECTRIC AND STEAM TRAMWAYS.—NEW SOUTH WALES.—SUMMARY.**

Year ended 30th June—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment. (a)	Gross Revenue.	Working Expenses.	Net Earnings.	In-ter-est.	Per-centage of Working Expenses on Gross Revenue.	Per-centage of Net Earnings on Capital Cost.	Passen-gers carried.	Persons em-ployed.
	Miles.	£	£	£	£	£	%	%	No. ,000	No.
1927 ..	232.00	11,319,050	3,808,260	3,491,615	316,645	573,453	91.69	2.80	347,366	11,707
1928 ..	214.08	11,342,078	4,558,546	3,940,913	617,633	576,702	86.45	5.45	346,128	11,039
1929 ..	213.93	11,476,189	4,460,063	3,837,213	622,850	615,997	86.03	5.43	333,615	11,090
1930 ..	213.91	11,497,978	3,905,205	3,628,554	276,651	646,892	92.92	2.41	307,874	10,147
1931 ..	203.09	8,170,592	3,059,897	3,124,366	-64,469	475,571	102.11	-0.79	266,393	8,191

(a) Includes £47,455 paid from the Consolidated Revenue on which no interest is payable.  
 (b) Exclusive of the cost of power houses now charged to the Railway Department.

As pointed out in connexion with the preceding table the cost of construction and equipment is exclusive also of the amount of the Stores Advance Account.

3. *Victoria.*—(i) *General.* In Melbourne, electric and cable tramway systems with route mileages of 114.54 miles and 24.29 miles respectively are worked by the Melbourne and Metropolitan Tramways Board, while two electric tramways, (a) St. Kilda to Brighton 5.18 miles and (b) Sandringham to Beaumaris 4.61 miles, belong to and are operated by the Railways Commissioners. The State Electricity Commission operates 10.47 miles of electric tramways at Geelong, and there are also systems of electric tramways 21.25 miles in length at Ballarat and Bendigo constructed and worked by a private company.

A short account of the formation of the Melbourne Tramway and Omnibus Company and of the Tramways Board will be found in earlier issues of this work (see Year Books No. 7 page 652, No. 9 page 679 and No. 15 page 593).

With the exception of the St. Kilda-Brighton line which is of 5 ft. 3 in. gauge, all the tramways of the State are of 4 ft. 8½ in. gauge.

(ii) *Particulars of Working.*—(a) *Electric Tramways.* The following table gives particulars of the working of all electric tramways in Victoria for each year from 1927 to 1931 inclusive :—

**ELECTRIC TRAMWAYS.—VICTORIA.—SUMMARY.**

Year ended 30th June—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Earnings.	In-ter-est.	Per-centage of Working Expenses on Gross Revenue.	Per-centage of Net Earnings on Capital Cost.	Passen-gers carried.	Persons em-ployed.
	Miles.	£	£	£	£	£	%	%	No. ,000	No.
1927 ..	139.53	5,389,654	1,583,838	1,108,664	475,174	267,757	70.00	8.82	135,153	4,087
1928 ..	149.26	6,016,926	1,762,079	1,209,175	552,904	306,528	68.62	9.19	149,372	4,018
1929 ..	149.59	6,382,594	1,793,541	1,249,582	543,959	313,455	69.67	8.52	150,378	3,942
1930 ..	154.02	7,223,329	1,865,955	1,282,447	583,508	314,134	68.73	8.08	155,739	3,795
1931 ..	151.38	7,370,889	1,737,410	1,124,867	612,543	347,147	64.74	8.31	144,466	3,617

(b) *Electric and Cable Tramways.* The following table gives particulars for all tramways in Victoria during each of the years 1927 to 1931 inclusive :—

## ELECTRIC AND CABLE TRAMWAYS.—VICTORIA.—SUMMARY.

Year ended 30th June—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Earnings.	In-terest.	Per-centage of Work-ing Expen-ses on Gross Revenue.	Per-centage of Net Earnings on Capital Cost.	Passen-gers carried.	Persons em-ployed.
	Miles.	£	£	£	£	£	%	%	No. ,000	No.
1927 ..	173.21	7,119,052	2,596,784	1,811,413	785,371	268,156	69.76	11.03	235,132	6,101
1928 ..	179.32	7,585,691	2,605,379	1,817,236	788,643	306,927	69.74	10.40	232,377	5,890
1929 ..	180.19	7,943,382	2,586,663	1,846,454	740,209	313,854	71.38	9.32	228,308	5,713
1930 ..	180.46	8,623,910	2,470,482	1,775.726	694,756	314,433	71.88	8.06	214,431	5,162
1931 ..	175.67	8,690,155	2,191,009	1,524,033	666,976	347,546	69.56	7.68	188,452	4,785

4. *Queensland.*—(i) *Electric Tramways.* The electric tramways in the city and suburbs of Brisbane were controlled by a private company, with head office in London, until the 31st December, 1922, on which date they were purchased by the Queensland Government which, under the provisions of the *Brisbane Tramway Trust Act 1922*, appointed a Trust to control and operate the system until 1st December, 1925, on which date the control passed to the Brisbane City Council. Under the provisions of the *Brisbane City Council Act 1925*, the Council took over the liabilities of the Tramway Trust to the extent of £2,000,000 which had been incurred in London, and assumed complete control of the system. The total length of the Brisbane tramways was 56.69 route miles at 31st December, 1931. These tramways are run on the overhead trolley system, the voltage of the line current being 550. Cost of construction and equipment to the end of the year 1931 was £2,219,874, the gauge of line being 4 ft. 8½ in. The following table gives a summary for the calendar years 1927 to 1931 :—

## ELECTRIC TRAMWAYS.—BRISBANE.—SUMMARY.

Year ended 31st December—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Earnings.	In-terest.	Per-centage of Work-ing Expen-ses on Gross Revenue.	Per-centage of Net Earnings on Capital Cost.	Passen-gers carried.	Persons em-ployed.
	Miles.	£	£	£	£	£	%	%	No. ,000	No.
1927 ..	53.53	2,050,155	814,312	613,285	201,027	105,000	75.31	9.81	78,058	1,659
1928 ..	55.41	2,195,340	810,954	607,711	203,243	111,883	74.94	9.26	77,703	1,611
1929 ..	55.73	2,214,637	794,470	584,390	210,080	112,872	73.56	9.49	76,117	1,552
1930 ..	56.58	2,241,385	766,271	552,661	213,610	110,421	72.12	9.53	73,617	1,479
1931 ..	56.69	2,219,874	703,558	504,463	199,095	106,735	71.70	8.97	69,413	1,364

(ii) *Electric and Steam Tramways.* In addition to the electric tramways for which particulars are given above, a steam tramway operated by the City Council is in operation at Rockhampton. The length of line is 6.65 route miles and the gauge 3 ft. 6 in.



The capital cost to 31st December, 1931, was £53,235. The following table gives particulars of the working of electric and steam tramways in Queensland for each year from 1927 to 1931 :—

## ELECTRIC AND STEAM TRAMWAYS.—QUEENSLAND.—SUMMARY.

Year ended 31st December—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Earnings.	In-terest.	Percentage of Working Expenses on Gross Revenue.	Percentage of Net Earnings on Capital Cost.	Passengers carried.	Persons employed.
	Miles.	£	£	£	£	£	%	%	No. '000	No.
1927 ..	60.18	2,103,284	831,203	631,208	199,995	108,318	75.94	9.51	79,845	1,703
1928 ..	62.06	2,248,469	827,357	623,869	203,488	114,494	75.41	9.05	79,456	1,653
1929 ..	62.38	2,267,872	810,148	600,567	209,581	115,483	74.13	9.24	77,791	1,594
1930 ..	63.23	2,294,620	780,844	568,241	212,603	113,032	72.77	9.27	75,128	1,520
1931 ..	63.34	2,273,109	716,605	519,738	196,867	109,346	72.53	8.66	70,761	1,404

5. *South Australia.*—(i) *Electric Tramways.* The tramways in Adelaide and suburbs are controlled by a Municipal Tramways Trust created in 1907. Prior to this year, the system was run with horse-traction by several private companies. Electric traction was inaugurated in 1909, and at the 31st July, 1931, the Tramways Trust operated a total route mileage of 82.84 miles of 4-ft. 8½-in. gauge. A summary for the years 1927 to 1931 is given in the subjoined table :—

## ELECTRIC TRAMWAYS.—ADELAIDE.—SUMMARY.

Year ended 31st July—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Earnings.	In-terest.	Percentage of Working Expenses on Gross Revenue.	Percentage of Net Earnings on Capital Cost.	Passengers carried.	Persons employed.
	Miles.	£	£	£	£	£	%	%	No. '000	No.
1927..	73.05	3,073,359	674,884	483,939	190,945	131,791	71.71	6.21	67,570	1,690
1928..	74.17	3,176,738	695,649	496,194	199,455	210,676	71.33	6.28	68,546	1,781
1929..	75.79	3,527,710	677,513	501,362	176,151	231,737	74.00	4.99	66,578	1,982
1930..	82.83	3,834,302	756,560	521,839	234,721	258,697	68.98	6.12	59,853	1,736
1931..	82.84	4,036,396	722,104	445,260	276,844	287,534	61.66	6.86	52,756	1,840

(a) Includes motor omnibuses. Separate particulars are not available.

(ii) *Horse Tramways.* There are also 13.51 miles of Government horse-tramways in country districts, worked in connexion with the railway system, of which 11.01 miles are used for passenger service, and 2.50 miles for special purposes.

6. *Western Australia.*—(i) *Electric Tramways.* The Perth electric tramways were opened for traffic by a private company on the 24th September, 1899, and the system was subsequently extended to many of the suburbs. Control was taken over by the Government on the 1st July, 1913, and the tramways are now worked in conjunction with the Government railways. The length of line open at 30th June, 1931, was 41.10 route miles. Electric tramways with a route mileage at 31st August, 1931, of 8.61 miles and controlled by the municipal authorities, are in operation in Fremantle. In Kalgoorlie and Boulder a private company controls the electric tramways, of which,

at the end of 1931, the length of line was 11.56 route miles. All the electric tramways of the State are of 3-ft. 6-in. gauge. The subjoined table gives a summary for all the electric tramway systems for the years 1927 to 1931 :—

**ELECTRIC TRAMWAYS.—WESTERN AUSTRALIA.—SUMMARY.**

Year.	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Earnings.	Interest. (a)	Percentage of Working Expenses on Gross Revenue.	Percentage of Net Earnings on Capital Cost.	Passengers carried.	Persons employed.
	Miles.	£	£	£	£	£	%	%	No. '000	No.
1927 ..	59.60	1,599,105	376,578	310,967	65,611	51,127	82.58	4.10	38,924	891
1928 ..	61.93	1,669,242	493,845	330,705	73,140	53,668	81.89	4.38	41,041	897
1929 ..	60.00	1,680,151	423,368	333,224	70,144	54,651	83.43	4.17	43,199	816
1930 ..	61.26	1,710,370	426,646	303,648	62,998	54,418	85.23	3.68	43,359	877
1931 ..	61.27	1,722,603	376,252	324,628	51,624	56,088	86.28	3.00	38,285	782

(a) Exclusive of Kalgoorlie and Boulder tramways operated by a private company.

(ii) *All Tramways.* In addition to the electric tramways, there are several Government tramways, with a total length of 7.76 miles of 3-ft. 6-in. gauge. The lines are under the control of the Department of Works and Labour, and the total mileage of 7.76 miles is made up of several short lengths worked by steam or horses in connexion with the jetties at certain ports and providing communication between the jetties and the goods sheds or warehouses. The capital cost of the tramways to 30th June, 1931, was £70,738, the gross revenue for 1930-31 being £2,988 and the working expenses £2,162. These items are in some instances inclusive of revenue from jetty charges and of working expenses in connexion with such services. The following table gives a summary for all tramways in the State for the years 1927 to 1931 :—

**ELECTRIC, STEAM AND HORSE TRAMWAYS.—WESTERN AUSTRALIA.—SUMMARY.**

Year.	Mileage Open for Traffic (Route)	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Earnings.	Interest. (b)	Percentage of Working Expenses on Gross Revenue.	Percentage of Net Earnings on Capital Cost.	Passengers carried.	Persons employed.
	Miles.	£	£	£	£	£	%	%	No. '000	No.
1927 ..	79.86	1,695,228	380,053	313,298	66,755	51,127	82.44	3.94	38,933	897
1928 ..	69.69	1,739,579	423,474	341,569	81,905	53,668	80.66	4.71	41,048	912
1929 ..	67.76	1,753,499	427,224	364,960	72,264	54,651	83.09	4.12	43,206	822
1930 ..	69.02	1,783,798	429,067	365,087	63,980	55,857	83.09	3.59	43,358	882
1931 ..	69.03	1,793,341	379,240	326,790	52,450	57,432	86.17	2.92	38,292	794

(a) Electric tramways only operated by a private company.

(b) Exclusive of Kalgoorlie and Boulder electric tramways

7. *Tasmania.*—(i) *Electric Tramways.* In Hobart there is a system of electric tramways consisting of 18.80 route miles of 3-ft. 6-in. gauge controlled by the Hobart Municipal Council. The Launceston City Council operates tramways in Launceston having a length of 11.73 miles of 3-ft. 6-in. gauge.

The following table gives a summary of the working of the two systems for the years 1927 to 1931 :—

## ELECTRIC TRAMWAYS.—TASMANIA.—SUMMARY.

Year.	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Earnings.	Interest.	Percentage of Working Expenses on Gross Revenue.	Percentage of Net Earnings on Capital Cost.	Passengers carried.	Persons employed.
	Miles.	£	£	£	£	£	%	%	No. ,000	No.
1927 ..	26.86	561,857	181,445	140,386	41,059	35,781	77.37	7.31	17,009	367
1928 ..	28.76	558,323	182,769	132,813	49,956	36,872	72.67	8.95	17,206	377
1929 ..	30.23	567,841	171,664	138,808	32,856	32,549	80.86	5.79	17,334	387
1930 ..	30.53	581,395	172,187	141,801	30,386	35,614	82.35	5.23	17,356	392
1931 ..	30.53	612,632	159,136	127,854	31,282	37,308	80.34	5.11	16,360	388

(ii) *Other Tramways.* There are several lines of privately-owned steam tramways, which have been included with private railways, as they do not come within the category of street tramways for the conveyance of passengers.

8. *Australia.*—(i) *Electric Tramways-Summary 1927 to 1931.* The subjoined table gives details regarding all electric tramways in Australia. The returns for tramways in Ballarat and Bendigo, in Brisbane, in Kalgoorlie, and in Hobart are for the calendar years; for other tramways they refer generally to the financial years.

## ELECTRIC TRAMWAYS.—AUSTRALIA.—SUMMARY.

Particulars.	1927.	1928.	1929.	1930.	1931.
Mileage open for traffic .. .. Miles	538.42	555.33	557.99	571.85	574.52
Cost of Construction and Equipment .. £	23,453,826	24,511,459	25,402,823	26,637,242	23,846,617 <sup>a</sup>
Cost per mile .. .. £	43,560	44,139	45,526	46,581	(a) 41,507
Gross revenue .. .. £	7,364,964	8,350,389	8,262,601	7,844,511	6,723,164
Working expenses .. .. £	5,941,835	6,603,562	6,579,296	6,408,041	5,586,025
Net earnings .. .. £	1,423,129	1,746,827	1,683,305	1,436,470	1,137,139
Interest .. .. £	1,137,158	1,274,514	1,338,071	1,395,822	1,304,858
Percentage of Working Expenses on Gross Revenue .. .. %	80.68	79.08	79.63	81.69	83.09
Percentage of Net Earnings on Capital Cost .. .. %	6.07	7.13	6.63	5.39	4.77
Tram miles run .. .. ,000 miles	68,726	71,449	71,763	71,817	71,043
Gross revenue per tram mile .. .. d.	25.72	28.05	27.63	26.22	22.71
Working expenses per tram mile .. .. d.	20.75	22.18	22.00	21.42	18.87
Net earnings per tram mile .. .. d.	4.97	5.87	5.63	4.80	3.84
Passengers carried .. .. ,000	677,717	695,234	682,425	653,778	584,979
Passengers carried per tram mile .. No.	9.86	9.73	9.51	9.19	8.23
Average revenue per passenger's journey .. d.	2.61	2.88	2.91	2.88	2.76
Persons employed at end of year .. No.	20,206	19,595	19,647	18,303	16,174

(a) Exclusive of cost of power houses for New South Wales tramways which are now charged to Railways.

(ii) *All Tramways—Summary 1927 to 1931.* The following table gives a summary of the working of all tramway systems in Australia for the years 1927 to 1931 :—

## ALL TRAMWAYS—AUSTRALIA—SUMMARY.

Particulars.	1927.	1928.	1929.	1930.	1931.
Mileage open for traffic .. Miles	645.16	628.08	630.28	639.98	624.50
Cost of Construction and Equip- ment .. .. £	25,871,830	26,650,878	27,536,493	28,616,003	25,576,225
Cost per mile .. .. £	40,101	42,432	43,689	44,714	40,955
Gross Revenue .. .. £	8,472,629	9,293,674	9,133,275	8,514,345	7,227,991
Working Expenses .. .. £	6,871,859	7,352,594	7,279,364	7,001,248	6,068,041
Net Earnings .. .. £	1,600,770	1,941,080	1,853,911	1,513,097	1,159,950
Interest .. .. £	1,168,626	1,299,339	1,364,271	1,424,525	1,314,737
Percentage of Working Expenses on Gross Revenue .. .. %	81.11	79.11	79.70	82.23	83.95
Percentage of Net Earnings on Capital Cost .. .. %	6.19	7.28	6.73	5.29	4.54
Tram-miles run .. .. ,000 miles	79,371	80,506	80,566	79,010	77,308
Gross revenue per tram mile .. d.	25.62	27.71	27.21	25.86	22.44
Working expenses per tram mile .. d.	20.78	21.92	21.69	21.27	18.84
Net earnings per tram mile .. d.	4.84	5.79	5.52	4.59	3.60
Passengers carried .. .. ,000	785,855	784,761	766,832	718,000	633,014
Passengers carried per tram mile No.	9.90	9.75	9.52	9.09	8.19
Average revenue per passenger journey .. .. d.	2.59	2.84	2.86	2.85	2.74
Persons employed at end of year No.	22,465	21,652	21,588	19,839	17,402

(a) Exclusive of cost of power houses for New South Wales electric tramways which are now charged to Railways.

## D. AIRCRAFT.

1. *Historical.*—A short review of the progress of civil aviation in Australia up to the date of foundation of the Department of Civil Aviation was given in Official Year Book No. 16, pp. 334-5.

2. *Foundation of Civil Aviation Department.*—(i) *Creation.* A brief account of the foundation and the objects of this Department will be found in Official Year Book No. 19, p. 299.

(ii) *Accidents Investigation Committee.* Under powers conferred by the Air Navigation Act 1920, a committee consisting of engineering and aircraft experts was appointed early in 1927 to inquire into and report upon accidents which occur to service and civil aircraft, and on 13th October, 1927, the Air Navigation (Investigation of Accidents) Regulations were promulgated.

3. *Activities of Civil Aviation Department.*—(i) *Aerodromes and Landing Grounds.* Amongst the various activities have been the acquisition and preparation of civil aviation landing grounds, which have now been established over the following approved routes :— (a) Perth to Derby (1,467 miles); (b) Derby to Wyndham (600 miles); (c) Perth to Adelaide (1,453 miles); (d) Adelaide to Sydney (790 miles); (e) Sydney to Brisbane (550 miles); (f) Brisbane to Charleville (444 miles); (g) Charleville to Camooweal (825 miles); (h) Camooweal to Daly Waters (475 miles); (i) Daly Waters to Birdum Creek (50 miles); (j) Cloncurry to Normanton (215 miles); (k) Melbourne to Hay (233 miles); (l) Mildura to Broken Hill (189 miles); (m) Melbourne to Charleville via Cootamundra (900 miles); and (n) Melbourne to Hobart via Wilson's Promontory and Launceston (380 miles).

Preliminary surveys of various additional routes also have been made, but no expenditure has yet been incurred in the preparation of landing grounds in connexion therewith.

Up to 30th June, 1932, 184 landing grounds had been acquired or leased by the Government and prepared for civil aviation purposes. There were also 98 public aerodrome licences in force.

(ii) *Aerial Services.* (a) *General.* In addition to providing a regular and speedy transport service over fixed routes, it was considered that the granting of contracts for subsidized aerial services would give an impetus to the development of civil aviation in Australia, while the trained flying and ground personnel would provide a technical reserve for air defence in case of war.

At 30th June, 1932, three subsidized contractors were operating under contracts which provided that such space as is required on each trip must be reserved for mails, the letters for transmission being surcharged 3d. per  $\frac{1}{2}$  ounce. The total route mileage of these services is 5,479 miles.

The various regular air services over prepared routes have completed 7,969,231 passenger-miles, and carried 41,019 paying passengers over various stages. Over 132,130 lb. of letters have also been carried.

All pilots and mechanics employed on these services must join the Air Force Reserve when the Reserve is constituted.

(b) *Aerial Mail Services at 30th June, 1932.* The following aerial mail services were in operation at 30th June, 1932 :—

(1) *Subsidized Services.* West Australian Airways Ltd.—Perth to Derby (W.A.), 1,467 miles; Derby to Wyndham (W.A.), 600 miles, and Perth (W.A.) to Adelaide (S.A.), 1,453 miles. Queensland and Northern Territory Aerial Services Ltd.—Brisbane to Camooweal (Q.), 1,269 miles, Cloncurry to Normanton (Q.), 215 miles, and Daly Waters to Birdum (N.A.), 50 miles. Larkin Aircraft Supply Co. Ltd.—Camooweal (Q.) to Daly Waters (N.A.), 475 miles. All these services are operated once weekly in each direction over the routes mentioned. The Derby to Wyndham service is not operated in the “wet” season, which is usually December to March. The Daly Waters to Birdum service is operated during the “wet” season only, when surface transport between these two centres is impracticable except per medium of pack-horses.

(2) *Unsubsidized Services.* The following services were in operation at 30th June, 1932, without the assistance of Government subsidies :—Brisbane (Q.) to Sydney (N.S.W.), 500 miles, operated by New England Airways; and Launceston (T.) to Flinders Island, 120 miles operated by L. McK. Johnson. Surcharged air mail is carried by these two services under arrangements with the Postmaster-General's Department.

(c) *Aerial Ambulance Service.* Following an agreement made between the Queensland and Northern Territory Aerial Services Ltd. and the Australian Inland Mission, an aerial ambulance service to provide medical service where required in Western and Northern Queensland and operating from a base at Cloncurry was inaugurated on the 17th May, 1928. The aircraft company agreed to provide the aircraft and pilot and the mission authorities the doctor. The scheme has proved most successful and many instances are recorded of lives being saved by the services thus made available.

(d) *Reliability.* During 1931 over 556,966 miles were flown by the three subsidized companies operating regular air services without a fatal accident. The total mileage flown by all civil aircraft during the same period was over 3,354,000 miles, and twelve fatal accidents occurred, an average of one fatal accident for every 279,500 miles flown.

4. *Aircraft Construction.*—With the increase in the number of aircraft used in Australia attention is being given to the question of local production. Aircraft have been manufactured in Australia for a number of years, and locally built aircraft are in use on certain subsidized routes, but development has not yet reached a completely organized stage.

During 1930, however, a notable advance beyond the experimental stage was made by "The General Aircraft Co. Ltd.," of Sydney, which proceeded to the production stage with a land plane of local design. The "Genairco" is a three-seater biplane of orthodox type, with accommodation for two passengers and a pilot, and is of standard all wood construction with fabric-covered lifting and control surfaces, and folding wings. There are now nine (9) aircraft of this type on the Commonwealth Register, the machines being used for instructional purposes and for general taxi and private hire work.

Reference was made in Official Year Book No. 22 (1929) to the aircraft construction activities of the Larkin Aircraft Supply Co. Ltd. This company has since successfully completed its contract for the manufacture of 32 "Moth" Aircraft for the Commonwealth Government, and has also produced two larger passenger aircraft of local design. One of these (the "Lascoter") is a single-engined, four passenger aircraft, and the other (the "Lasconder") is a three-engined six passenger machine.

The Aircraft Branch of the Cockatoo Island Dockyard, Sydney, is now investigating the practicability of undertaking the production of locally designed aircraft.

5. **Training of Air Pilots.**—(i) *The Associated Aero Clubs.* The Associated Australian Aero Clubs provide facilities in the capital cities of all States for flying instruction and practice. Training operations commenced in Tasmania, on 24th November, 1930, at Launceston, and later at Hobart. At the end of June, 1932, 854 pupils had passed through the various flying training organizations and had qualified for private "A" pilots' licences, whilst many graduates had completed advanced courses of training, gained their commercial "B" licences and now own aircraft.

The Commonwealth Government renders these six clubs assistance by providing D.H. 60 "Moth" aeroplanes and spare engines, hangar accommodation, the free use of aerodromes, suitable club houses which are leased to the clubs, and bonuses for practice flying carried out and for each pupil trained to a standard that will enable him to obtain a private ("A") pilot's licence. In lieu of the bonus for practice flying the Sydney and Melbourne Clubs are paid a subsidy in respect of each member who qualifies for the renewal of his pilot's licence.

Aviation pageants are held from time to time by the various sections of the Australian Aero Club and are increasing in popularity.

(ii) *Other Aero Clubs.* During 1931 several D.H. 60 "Moth" aeroplanes were made available for loan to the following clubs operating in country districts:—Bendigo and Ballarat (V.); Central Queensland Aero Club, Rockhampton (Q.); and Lismore (N.S.W.). No assistance other than the loan of a machine is given to these organizations.

(iii) *Other Organizations.* Flying training is also carried out more or less intermittently by companies, clubs, or private owners at various centres throughout the Commonwealth. These do not receive any form of Government subsidy.

6. **Notable Flights.**—Since the end of the European war many notable long distance flights have been carried out by Australian pilots. Shorts accounts of those prior to the year under review are contained in previous issues of the Year Book. During the period, 1st April, 1931, to 30th June, 1932, there were three solo flights from Australia to England, viz.—C. W. A. Scott (10 days 23 hours), J. A. Mollison (8 days 21 hours), and Sir C. E. Kingsford-Smith (14 days). Scott's flight created a record which was broken two months later by Mollison. Flights from England to Australia during the same period were accomplished by C. A. Butler (9 days 2 hours) and C. W. A. Scott (8 days 20 hours 44 minutes) who each in turn broke the record. Other flights of interest were those of Fraulein E. Beinhorn who flew solo from Berlin to Darwin; a party of three French airmen who flew from Paris via Darwin and Brisbane to Noumea (New Caledonia); three R.A.F. "Southampton" flying boats from Singapore to Darwin; and the flights from England to Australia of J. H. Jeffery, accompanied by E. H. Jenkins, and R. T. Richards, accompanied to India by Lady Chaytor, whence Richards flew solo to Australia.

7. **Experimental Air Mail Flights.**—The period under review was remarkable for the number of experimental air mail flights undertaken between England and Australia. Two were conducted by Imperial Airways from London to Darwin and return, leaving London on 4th and 25th April, 1931, and returning from Darwin on 27th April, and 20th May, respectively. The first All Australian Overseas Airmail departed from Darwin on 23rd November, 1931, carrying 1,340 lbs. of mail for London. The return flight from London with 664 lbs. of mail was commenced on 7th January, 1932, and completed in under 12 days.

8. **Statistical Summary.**—The collection and compilation of aircraft statistics were undertaken by the Commonwealth Bureau of Census and Statistics on the 1st July, 1922. The subjoined table gives a summary of operations for the years ended 30th June, 1927 to 1931 :—

**CIVIL AIRCRAFT.—AUSTRALIA.—SUMMARY.**

Particulars.	Year ended 30th June—					
	1927.	1928.	1929.	1930.	1931.	
Registered Aircraft Owners						
(a) .. No.	29	37	72	122	129	
Registered Aircraft (a) No.	85	90	175	220	225	
Licensed Pilots—(a)						
Private .. No.	48	127	209	344	407	
Commercial .. No.	47	76	122	181	209	
Licensed Ground Engineers						
(a) .. No.	148	163	198	257	293	
Aerodromes—(a)						
Government .. No.	45	46	56	58	57	
Public .. No.	11	13	19	39	66	
Government Emergency						
Grounds .. No.	91	94	108	114	121	
Flights carried out						
.. No.	17,284	56,216	92,000	128,916	113,340	
.. h. m.						
Hours flown .. ..	10,447 24	15,783 30	27,268 20	42,963 7	44,506 49	
Approx. Mileage .. Miles	772,643	1,153,572	1,992,070	3,234,307	3,596,930	
Passengers carried—						
Paying .. No.	13,984	36,397	56,363	91,415	80,651	
Non-paying .. No.	3,222	5,629	10,037	12,801	13,699	
<b>Total .. No.</b>	<b>17,206</b>	<b>42,026</b>	<b>66,400</b>	<b>104,216</b>	<b>94,350</b>	
Goods, weight carried	lb.	125,924	116,373	160,424	196,795	204,445
Mails, letters carried	No.	290,746	301,677	316,338	383,942	(b) 48,503
Accidents—						
Persons killed	No.	4	2	7	18	29
Persons injured	No.	3	5	10	20	20

(a) At 30th June.

(b) Weight in lb. all contractors.

In earlier issues of the Year Book, particulars of flying carried out in the various States have been shown, but, owing to the extension of interstate flying both by the subsidized companies and private pilots, it has been found impracticable to obtain complete details for the several States separately. The figures shown in the above table are therefore for the Commonwealth as a whole.

9. **New Guinea Activities.**—The discovery of gold in New Guinea resulted in considerable aviation activity in the vicinity of the gold-fields, which, by ground route, are situated about 70 miles inland from Salamaua, on the north-east coast of the mainland of New Guinea. The value of aircraft as a means of transporting food and stores to the field and of bringing the gold to the seaboard is shown by the fact that, whereas aircraft cover the distance in approximately one hour, the nature of the intervening country is such that a journey by other means occupies more than a week. Several air transport companies are operating successfully without any direct assistance in the form of Government subsidies. The principal company (Guinea Airways Ltd.) is now operating three specially constructed freight machines for the transportation of several thousand tons of hydro-electric power plant and dredging machinery to the Bulolo fields. This work is being successfully accomplished, and constitutes one of the most notable feats of transport in the history of aviation. The subjoined table gives a summary of operations for the years ended 30th June, 1928 to 1931.

**CIVIL AIRCRAFT.—TERRITORY OF NEW GUINEA.—SUMMARY.**

Particulars.	Year ended 30th June—			
	1928.	1929.	1930.	1931.
Registered Aircraft Owners (a) No.	5	7	7	5
Registered Aircraft (a) .. No.	12	15	13	15
Licensed Pilots—(a)				
Private .. .. . No.	..	..	1	4
Commercial .. .. . No.	9	10	11	13
Licensed Ground Engineers (a) No.	8	10	11	18
Aerodromes—(a)				
Government .. .. . No.	2	2	2	2
Emergency Landing Grounds No.	4	4	4	3
Flights carried out .. .. . No.	821	1,532	2,882	2,672
	h. m.	h. m.	h. m.	h. m.
Hours flown .. .. .	1,533 53	2,626 12	3,618 50	3,969 5
Approximate mileage .. .. . Miles	107,208	187,705	272,976	325,807
Passengers carried—				
Paying .. .. . No.	814	1,293	2,490	2,992
Non-paying .. .. . No.	94	65	649	87
<b>Total .. .. . No.</b>	<b>908</b>	<b>1,358</b>	<b>3,139</b>	<b>3,079</b>
Goods, weight carried .. .. . lb.	518,831	1,385,510	3,062,430	3,107,616
Mails, weight carried .. .. . lb.	6,171	13,876	23,257	24,604
Accidents—				
Persons killed .. .. . No.	..	..	..	1
Persons injured .. .. . No.	..	..	..	1

(a) At 30th June.

**E. MOTOR VEHICLES.**

1. **The Motor Car and Motor Industry.**—(i) *Evolution of the Motor Car.* In the issue of the Year Book for 1927 (No. 20, p. 319) a short history of the evolution of the motor car is given.

(ii) *Motor Industry.* Although motor cars are not entirely manufactured in Australia, the capital invested in assembling and body building plants is considerable. The importance of the industry is shown by the figures relating to local manufacture of motor bodies and imports of motor cars and fuel which are given in the following table for the years 1926-27 to 1930-31 :—



**MOTOR BODIES BUILT, AND BODIES, CHASSIS AND FUELS IMPORTED—  
AUSTRALIA.**

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Motor bodies built in Australia .. No.	88,876	58,955	72,193	46,409	10,417
Value £	4,830,000	3,436,674	4,357,841	3,118,987	864,209
Motor bodies imported .. No.	12,843	9,583	14,546	6,556	137
Value £	1,413,203	1,115,303	1,471,878	697,862	14,007
Chassis imported .. No.	118,954	67,875	99,500	61,981	9,367
Value £	12,292,749	6,758,255	8,830,362	5,807,024	721,893
Fuels imported—					
Crude petroleum .. Million gallons	78	74	105	122	93
Value £	911,787	791,766	858,678	1,118,332	823,575
Petroleum spirit, etc. .. Million gallons	146	178	200	240	171
Value £	6,648,567	6,087,217	6,816,287	7,429,485	4,054,265

The value of the tyres both locally produced and imported, for which figures are not, however, available, must also be taken into consideration, particularly as the prevailing practice is for distributors to retail cars on a five-tyre basis. Spares, batteries, accessories, etc., are additional items for which there is a wide market in Australia.

At the 30th June, 1931, the number of motor cars per 1,000 of population was 81.09.

2. **Registration.**—The arrangements for the registration of motor vehicles and the licensing of drivers and riders thereof are not uniform throughout Australia. Methods of registration, licence fees payable, etc., in each State were referred to in Official Year Book No. 16, pp. 337-340, and later issues.

3. **Public Vehicles.**—In all the capital cities of the States and in many of the most important provincial centres taxi-cabs and other vehicles ply for hire under licence granted either by the Commissioner of Police or the Local Government authority concerned. As most of these vehicles are independently controlled by individuals or small companies, it has not been possible to obtain complete data in respect of their operations.

4. **Motor Omnibuses.**—Motor omnibus traffic, both in urban and provincial centres, has assumed considerable proportions during recent years, and prior to the constitution of Boards empowered to allocate routes over which omnibuses may operate, had a very marked effect on railway and tramway services. By regulating the licensing of motor omnibuses, the economic waste arising from duplication of routes and services parallel with or contiguous to existing railway and tramway systems is avoided. The general principle governing the allocation of routes is that omnibus services should act as feeders to existing transport utilities. Revenue from licence fees is devoted principally to the maintenance or construction of roadways to enable them to withstand the wear and tear caused by the heavy traffic. Complete statistics regarding motor omnibus operations are, however, not available, but some indication of the effect unrestricted motor omnibus services would have on the railways and tramways may be obtained from the operations of some services conducted by railway and tramway systems as adjuncts to their main services during the year 1930-31. Such services are conducted in Victoria by the Victorian Railways Commissioners and by the Melbourne and Metropolitan Tramways Board, and in South Australia by the South Australian Railways Commissioners, the number of passengers carried by these services during the year 1930-31 being 646,251, 1,224,949 and 15,206 respectively. The Municipal Tramways Trust, Adelaide, also employs omnibuses extensively in conjunction with the tramway system, but separate particulars for the year 1930-31 are not available.

The services operated by the Melbourne and Metropolitan Tramways Board were necessary to provide transport facilities during the conversion of certain cable tram lines to electrical traction, but it is not the intention of the Board to institute omnibus services in a general way. In other instances the omnibus service has been provided to meet the competition of private enterprise and to endeavour to protect the existing transport utilities provided by public bodies.

5. Motor Vehicles Registered, etc.—(i) Year 1930–31. Particulars of the registration of motor vehicles, etc., for the year 1930–31 are contained in the subjoined table :—

MOTOR VEHICLES.—SUMMARY, 1930–31.

States and Territories.	Motor Vehicles Registered.					Drivers' and Riders' Licences Issued.	Revenue derived from—		
	Motor Cars.	Motor Cycles.	Commercial Vehicles.	Total.	Per 1,000 of population.		Vehicle Registrations and Motor Tax.	Drivers' and Riders' Licences.	Total.
	No.	No.	No.	No.	No.		£	£	£
New South Wales	154,096	25,453	43,454	223,003	88.95	329,676	1,439,387	166,113	1,605,500
Victoria ..	116,568	23,635	28,028	168,231	93.59	228,051	1,048,995	57,016	1,106,011
Queensland ..	680,185	8,544	(a)2,102	90,831	94.66	63,227	476,946	25,537	502,483
South Australia ..	37,541	8,152	10,532	56,225	96.34	106,053	419,488	49,797	469,285
Western Australia	27,393	6,777	11,228	45,398	107.93	55,752	270,046	16,094	286,140
Tasmania ..	12,020	4,289	2,169	18,478	84.32	20,465	85,670	9,090	94,760
Central Australia	68	1	47	116	116.89	140	115	70	185
North Australia ..	239	31	158	428	164.91	586	412	279	691
Federal Capital Territory	1,096	84	215	1,395	164.91	1,676	6,667	911	7,578
Australia ..	429,206	76,966	97,933	604,105	92.93	805,626	3,747,726	324,907	4,072,633

(a) Solid tyred vehicles. (b) Pneumatic tyred vehicles. (c) Gross Revenue.

(ii) *Quinquennium* 1927–1931. The following table shows the number of vehicles registered, licences issued, and revenue received therefrom during each of the years 1926–27 to 1930–31 :—

MOTOR VEHICLES.—REGISTRATIONS, ETC., AUSTRALIA.

Year.	Motor Vehicles Registered.					Drivers' and Riders' Licences Issued.	Revenue derived from—		
	Motor Cars.	Motor Cycles.	Commercial Vehicles.	Total.	Per 1,000 of Population.		Vehicle Registration and Motor Tax.	Drivers' and Riders' Licences.	Total.
							£	£	£
1926–27	364,384	80,242	(a)50,914	495,540	80.3	608,585	2,636,506	208,857	2,845,363
1927–28	419,131	84,017	(a)62,006	565,154	89.9	681,237	3,364,861	249,964	3,614,825
1928–29	474,359	88,049	(a)71,851	634,259	99.5	767,328	3,877,734	289,300	4,167,034
1929–30	466,930	84,897	104,487	656,314	101.9	823,452	4,194,910	329,988	4,524,898
1930–31	429,206	76,966	97,933	604,105	92.9	805,626	3,747,726	324,907	4,072,633

(a) Incomplete, partly included with Motor Cars.

(iii) *Relation to Population.* The table hereunder gives the number of vehicles (exclusive of motor cycles) registered per 1,000 of population in each State for each of the years 1921 and 1927 to 1931 :—

MOTOR VEHICLES (EXCLUSIVE OF MOTOR CYCLES) REGISTERED PER 1,000 OF POPULATION.

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	North and Central Australia.	Federal Capital Territory.	Australia.
31st Dec., 1921	15	16	8	24	12	13	(a)	(a)	15
30th June, 1927	63	64	68	101	67	46	50	110	67
" 1928	74	72	74	110	81	54	86	143	77
" 1929	84	81	82	119	90	62	94	149	86
" 1930	87	87	88	100	101	68	106	154	89
" 1931	79	80	86	82	92	65	110	155	81.

(a) Not available.

(iv) *Revenue per Motor Vehicle.* The following table gives the approximate average revenue per vehicle (exclusive of motor cycles) received in respect of registration and motor tax in the several States for each year from 1926–27 to 1930–31. In some States the revenue from motor tax on cycles is not separately recorded. In these cases the flat rate provided for cycles in the registration acts has been applied, and the average amounts shown must therefore be regarded as approximate only.

**AVERAGE REVENUE PER VEHICLE FROM REGISTRATION FEES AND MOTOR TAX (EXCLUSIVE OF MOTOR CYCLES).**

State, etc.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
New South Wales .. .. .	7 3 8	7 3 5	7 4 5	7 5 8	7 2 6
Victoria .. .. .	6 14 11	6 16 6	6 19 2	7 0 10	7 0 2
Queensland .. .. .	4 1 9	5 7 2	5 14 5	5 13 8	5 12 3
South Australia .. .. .	4 7 3	7 10 5	7 6 10	9 7 11	8 5 9
Western Australia .. .. .	5 19 5	6 1 9	6 10 0	6 16 1	6 15 8
Tasmania .. .. .	5 0 4	5 1 11	5 0 11	5 1 6	5 11 1
North and Central Australia .. .. .	0 7 9	0 5 7	0 7 5	0 3 6	1 0 0
Federal Capital Territory .. .. .	5 3 6	6 7 1	6 0 11	6 2 2	4 19 9
<b>Australia .. .. .</b>	<b>6 1 9</b>	<b>6 14 10</b>	<b>6 17 0</b>	<b>7 2 0</b>	<b>6 17 8</b>

6. *Comparative Motor Vehicle Statistics, 1932.*—The result of the 1932 World Motor Census, conducted by the "American Automobile" magazine, from which the following particulars have been extracted, shows that there were over 35,400,000 motor cars, trucks, and buses registered in various countries of the world at 1st January, 1932.

**COMPARATIVE MOTOR VEHICLE STATISTICS, 1st JANUARY, 1932.**

Country.	Motor Cars, Trucks, and Buses.	Motor Cycles.
Australia .. .. .	525,846	78,210
Argentine .. .. .	345,856	3,500
Belgium .. .. .	150,980	44,325
Brazil .. .. .	163,200	1,800
Canada .. .. .	1,188,237	9,604
Cuba .. .. .	39,000	..
Denmark .. .. .	120,338	27,850
France .. .. .	1,695,000	400,000
Germany .. .. .	688,136	792,075
Great Britain .. .. .	1,557,130	626,649
India .. .. .	180,191	24,964
Irish Free State .. .. .	50,162	6,399
Italy .. .. .	285,042	93,098
Japanese Empire .. .. .	103,900	25,000
Mexico .. .. .	72,000	..
Netherlands .. .. .	136,000	33,400
Netherlands East Indies .. .. .	84,081	10,595
New Zealand .. .. .	192,576	35,331
Union of South Africa .. .. .	159,000	40,000
Spain .. .. .	177,900	15,300
Sweden .. .. .	152,000	57,500
Switzerland .. .. .	86,300	49,550
United States of America .. .. .	26,132,116	110,915

The foregoing figures are in some cases approximations based on estimates furnished by Trade Commissioners or representative motor trade organizations in the several countries. The figures for Australia are estimated at 31st December, 1931, and differ from those stated in para. 5, which are actual registrations at 30th June, 1931.

As regards numbers of motor cars, Australia ranks sixth among the countries of the world, having been displaced by Germany from fifth position during 1928.

## POSTS, TELEGRAPHS AND TELEPHONES.

## § 1. General.

1. **The Commonwealth Postal Department.**—In previous issues of the Year Book some account was given of the procedure in connexion with the transfer to the Federal Government of the postal, telegraphic, and telephonic facilities of the separate States. (See Year Book No. 15, p. 601.)

Under the provisions of the Commonwealth Post and Telegraph Act, 1901, the Commonwealth Postal Department was placed under the control of a Postmaster-General, being a responsible Minister with Cabinet rank, and a Secretary having chief control of the Department under the Postmaster-General, whilst a principal officer in each State was provided for under the style of Deputy Postmaster-General.

2. **Postal Facilities.**—(i) *Relation to Area and Population.* The subjoined statement shows the number of post offices, the area in square miles and the number of inhabitants to each post office (including non-official offices) in each State and in Australia at the 30th June, 1931. In order to judge clearly the relative postal facilities provided in each State, the area of country to each office, as well as the number of inhabitants per office, should be taken into account. The returns given for South Australia in this and all succeeding tables include those for the Northern Territory, while the returns for the Federal Capital Territory are included in those for New South Wales.

POSTAL FACILITIES.—RELATION TO AREA AND POPULATION,  
AT 30th JUNE, 1931.

State.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia.
Number of post offices (a) ..	2,542	2,559	1,199	766	556	515	8,137
Number of square miles of territory to each office in State ..	122	34	559	1,180	1,755	51	366
Number of inhabitants to each office	990	702	800	768	766	426	799
Number of inhabitants per 100 square miles .. ..	810	2,045	143	65	43	836	219

(a) Includes "Official," "Semi-Official," and "Non-Official" Offices.

The foregoing table does not include "telephone" offices at which telegraph and telephone business only is transacted.

(ii) *Number of Offices.* The following table shows the number of post offices in each State from 1901 to 1930-31 :—

## POST OFFICES—NUMBER.

State.	At 31st December—				At 30th June—					
	1901.		1911.		1921.		1930.		1931.	
	Official and Semi-Official Post Offices.	Non-Official Post Offices. (a)	Official and Semi-Official Post Offices.	Non-Official Post Offices. (a)	Official and Semi-Official Post Offices.	Non-Official Post Offices. (a)	Official and Semi-Official Post Offices.	Non-Official Post Offices. (a)	Official and Semi-Official Post Offices.	Non-Official Post Offices. (a)
New South Wales	438	1,770	491	1,999	462	2,147	445	2,231	439	2,103
Victoria ..	181	2,076	292	2,252	269	2,307	282	2,450	279	2,280
Queensland ..	137	1,165	206	1,156	205	1,057	207	1,046	199	1,000
South Australia ..	180	523	164	582	138	659	147	658	146	620
Western Australia	181	34	155	324	128	499	126	497	124	432
Tasmania ..	57	315	56	377	47	451	43	475	43	472
Australia ..	1,174	5,883	1,364	6,690	1,249	7,120	1,250	7,357	1,230	6,907

(a) Includes offices previously designated as "Allowance" and "Receiving" Offices.

(iii) *Employees and Mail Contractors.* The number of employees and mail contractors in the Central Office and in each of the States at specified dates is given in the appended table :—

POSTAL EMPLOYEES AND MAIL CONTRACTORS.

State.	At 31st December—				At 30th June—					
	1901.		1911.		1921.		1930.		1931.	
	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.
Central Office ..	(a)	..	(a)	..	139	..	205	..	174	..
New South Wales ..	5,636	984	9,255	1,589	11,669	2,046	14,383	1,952	12,336	1,884
Victoria ..	3,962	890	7,503	1,030	8,117	1,091	10,709	1,175	9,574	1,129
Queensland ..	2,616	(b)	3,708	747	4,728	750	5,179	814	4,865	908
South Australia ..	1,945	(b)	1,939	359	2,826	439	3,954	414	3,340	359
Western Australia ..	1,303	140	2,367	254	2,111	302	2,902	398	2,548	323
Tasmania ..	865	(b)	981	197	1,220	223	1,517	270	1,354	257
<b>Australia ..</b>	<b>16,327</b>	<b>2,014</b>	<b>25,753</b>	<b>4,176</b>	<b>30,810</b>	<b>4,851</b>	<b>38,849</b>	<b>5,023</b>	<b>34,191</b>	<b>4,860</b>

(a) Included in Victorian Staff. (b) Included in "employees." Separate particulars are not available.

3. *Gross Revenue, Postmaster-General's Department.*—(i) *States, 1930-31.* The following table shows the gross revenue classified according to source in each State for the year 1930-31. The figures are supplied by the Treasury, and represent the actual collections for the year.

GROSS REVENUE, POSTMASTER-GENERAL'S DEPT.—DETAILS, 1930-31.

Particulars.	N.S.W.	Victoria. (a)	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
Postage .. ..	2,104,533	1,482,526	787,092	401,254	342,934	158,324	5,276,663
Money order commission ..	92,032	54,774	32,489	13,931	16,443	6,976	216,645
Poundage on postal notes .. ..							
Private boxes and bags .. ..	23,066	12,783	14,157	7,556	4,871	2,526	64,959
Miscellaneous ..	135,705	92,834	41,967	17,924	30,372	9,089	327,891
<b>Total, Postal ..</b>	<b>2,355,336</b>	<b>1,642,917</b>	<b>875,705</b>	<b>440,665</b>	<b>394,620</b>	<b>176,915</b>	<b>5,886,158</b>
Telegraphs (ordinary)	404,479	261,355	195,767	141,202	111,118	38,997	1,152,918
Telegraphs (radio)	54,691	63,690	12,789	16,821	4,006	3,675	155,672
<b>Total, Telegraphs</b>	<b>459,170</b>	<b>325,045</b>	<b>208,556</b>	<b>158,023</b>	<b>115,124</b>	<b>42,672</b>	<b>1,308,590</b>
<b>Telephones ..</b>	<b>2,199,466</b>	<b>1,598,415</b>	<b>814,794</b>	<b>565,982</b>	<b>326,252</b>	<b>139,447</b>	<b>5,644,356</b>
<b>Grand Total ..</b>	<b>5,013,972</b>	<b>3,566,377</b>	<b>1,899,055</b>	<b>1,164,670</b>	<b>835,996</b>	<b>359,034</b>	<b>12,839,104</b>
<b>Revenue per head of mean population</b>	<b>2.00</b>	<b>1.99</b>	<b>2.00</b>	<b>1.99</b>	<b>1.99</b>	<b>1.65</b>	<b>1.98</b>

(a) Includes "Central Office" collections.

(ii) *Branches, 1927 to 1931.* The gross revenue collected in respect of each branch of the Department during each of the past five years is shown in the table hereunder:—

**GROSS REVENUE, POSTMASTER-GENERAL'S DEPARTMENT.—BRANCHES.**

Branch and Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
<b>Postal Branch—</b>	£	£	£	£	£	£	£
1926-7 .. .. .	2,192,216	1,551,632	783,328	461,249	350,485	167,075	5,505,985
1927-8 .. .. .	2,340,390	1,628,140	814,355	468,877	380,661	170,459	5,802,882
1928-9 .. .. .	2,380,622	1,656,326	827,737	461,723	387,675	170,321	5,884,404
1929-30 .. .. .	2,392,882	1,642,658	849,828	454,131	419,644	172,399	6,131,542
1930-31 .. .. .	2,355,336	1,642,917	875,705	440,665	394,620	176,915	5,886,158
<b>Telegraph Branch (a)—</b>							
1926-7 .. .. .	518,017	345,896	253,613	225,960	133,025	46,560	1,523,971
1927-8 .. .. .	527,405	344,525	231,203	185,318	130,217	48,541	1,467,209
1928-9 .. .. .	532,292	334,168	237,042	182,017	137,360	46,554	1,469,433
1929-30 .. .. .	556,561	396,383	240,612	177,115	138,964	47,224	1,556,859
1930-31 .. .. .	459,170	325,045	208,556	158,023	115,124	42,672	1,308,590
<b>Telephone Branch—</b>							
1926-7 .. .. .	1,753,635	1,310,880	622,129	513,031	256,708	120,480	4,576,863
1927-8 .. .. .	1,932,584	1,412,763	707,484	561,279	288,153	131,788	5,034,051
1928-9 .. .. .	2,106,433	1,529,634	762,098	599,035	320,603	140,856	5,459,559
1929-30 .. .. .	2,305,453	1,633,790	818,170	607,130	350,385	147,758	5,862,686
1930-31 .. .. .	2,199,466	1,598,415	814,794	565,982	326,252	139,447	5,644,356
<b>All Branches—</b>							
1926-7 .. .. .	4,464,768	3,208,408	1,659,070	1,200,240	740,218	334,115	11,606,819
1927-8 .. .. .	4,800,379	3,385,428	1,753,042	1,215,474	799,031	350,788	12,304,142
1928-9 .. .. .	5,019,347	3,520,128	1,827,777	1,242,775	845,638	357,731	12,813,396
1929-30 .. .. .	5,254,896	3,872,831	1,908,610	1,238,376	908,993	367,381	13,551,087
1930-31 .. .. .	5,013,972	3,566,377	1,899,055	1,164,670	835,996	359,034	12,839,104
<b>Total Revenue per head of mean population—</b>							
1926-7 .. .. .	1.90	1.87	1.88	2.11	1.95	1.59	1.90
1927-8 .. .. .	1.99	1.94	1.95	2.10	2.04	1.66	1.97
1928-9 .. .. .	2.05	2.00	1.99	2.13	2.08	1.68	2.02
1929-30 .. .. .	2.11	2.18	2.05	2.12	2.19	1.71	2.11
1930-31 .. .. .	2.00	1.99	2.00	1.99	1.99	1.65	1.98

(a) Includes radio receipts.

As compared with the corresponding figures for the previous year, a decrease of 5.3 per cent. is shown, the decreases in the several branches being as follows:—Postal 4.0 per cent., Telegraph 15.9 per cent., and Telephone 3.7 per cent.

4. **Expenditure, Postmaster-General's Department.**—(i) *Distribution.* The following table shows, as far as possible, the distribution of expenditure on various items in each State during the year ended 30th June, 1931. The table must not be regarded as a statement of the working expenses of the Department, since items relating to new works, interest, etc., are included therein.

**EXPENDITURE, POSTMASTER-GENERAL'S DEPT.—DISTRIBUTION, 1930-31.**

Particulars.	Central Office.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
<b>Salaries and contingencies—</b>	£	£	£	£	£	£	£	£
Salaries .. .. .	89,104	2,408,771	1,717,591	854,827	642,686	441,144	216,822	6,370,945
Conveyance of mails .. .. .	..	501,962	272,074	236,505	91,703	101,678	41,172	1,245,094
Contingencies .. .. .	4,741	630,766	490,623	225,376	173,493	120,360	83,959	1,729,318
Ocean mails .. .. .	130,000	..	..	..	..	..	..	130,000
Miscellaneous .. .. .	1,340	35,950	26,070	9,337	7,572	8,240	3,254	91,763
Pensions and retiring allowances .. .. .	..	41,750	46,995	..	..	21,735	..	110,480
Rent, repairs, maintenance .. .. .	887	31,259	14,740	9,904	5,584	4,594	2,021	68,989
Supervision of works .. .. .	..	..	..	..	..	..	329	329
Proportion of Adult Office expenses .. .. .	..	5,010	3,576	1,893	1,171	840	440	12,930
<b>New works—</b>								
Telegraph and telephone .. .. .	3,683	577,031	274,818	157,993	111,414	90,164	34,821	1,249,924
New buildings, etc. .. .. .	..	19,660	5,571	5,439	5,059	2,298	163	38,190
Interest on transferred properties .. .. .	..	114,328	61,362	45,575	37,523	21,869	9,924	290,581
Other .. .. .	2,944,441	..	..	..	..	..	..	2,944,441
(a)								
<b>Total</b> .. .. .	3,174,196	4,366,487	2,913,420	1,546,849	1,076,205	812,922	392,905	14,282,984
(b)								

(a) Particulars of apportionment to each State not available.

(b) Including expenditure not apportioned to States.

(ii) *Total, 1927 to 1931.* The next table gives the actual payments made, as shown by records kept for Treasury purposes in respect of the Postal Department for each of the years ended 30th June, 1927 to 1931 inclusive.

**EXPENDITURE, POSTMASTER-GENERAL'S DEPARTMENT, 1927 TO 1931.**

Expenditure.	Year ended 30th June—				
	1927.	1928.	1929.	1930.	1931.
Total .. ..	£ 15,281,686	£ 16,098,777	£ 15,693,070	£ 15,797,072	£ 14,282,984

The total expenditure for 1930-31 decreased by 6.6 per cent. compared with the amount for 1926-27.

5. *Profit or Loss, Postmaster-General's Department.*—(i) *States 1930-31.* The foregoing statements of gross revenue and expenditure which represent actual collections and payments, made and include capital and interest payments, cannot be taken to represent the actual results of the working of the Department for the year. The net results for each branch in the several States after providing for working expenses, depreciation, and interest charges during the year, were as follow :—

**PROFIT OR LOSS, POSTMASTER-GENERAL'S DEPARTMENT, 1930-31.**

Branch.	Profit or Loss.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
Postal ..	£	£ 241,529	£ 271,094	£ 156,507	£ 39,645	£ 29,667	£ ..	£ 721,282
	Loss	..	..	..	..	..	£ 17,160	..
Telegraph (a)	Profit	..	..	..	..	..	..	..
	Loss	£ 126,836	£ 27,023	£ 69,770	£ 50,586	£ 61,095	£ 20,056	£ 355,366
Telephone ..	Profit	..	..	..	..	..	..	..
	Loss	£ 59,770	£ 82,312	£ 7,111	£ 145,808	£ 58,571	£ 79,348	£ 432,920
All Branches	Profit	£ 54,923	£ 161,759	£ 79,626	..	..	..	..
	Loss	..	..	..	£ 156,749	£ 89,999	£ 116,564	£ 67,004

(a) Including Wireless Branch.

After providing for depreciation, pensions and retiring allowances and interest on capital, the year 1930-31 closed with a deficit of £67,004. For the preceding year a profit of £197,883 was shown.

(ii) *Branches, 1927 to 1931.* The following statement gives particulars of the operating results of each branch for the period 1927 to 1931 :—

**PROFIT OR LOSS, POSTMASTER-GENERAL'S DEPARTMENT—BRANCHES.**

Year Ended 30th June—	Branch.							
	Postal.		Telegraph.		Telephone.		All Branches.	
	Profit.	Loss.	Profit.	Loss.	Profit.	Loss.	Profit.	Loss.
1927 ..	£ 445,929	..	..	£ 278,720	..	£ 339,270	..	£ 172,061
1928 ..	£ 403,850	..	..	£ 312,075	..	£ 322,438	..	£ 230,663
1929 ..	£ 531,870	..	..	£ 228,134	..	£ 247,212	£ 56,524	..
1930 ..	£ 557,105	..	..	£ 232,188	..	£ 127,034	£ 197,883	..
1931 ..	£ 721,282	..	..	£ 355,366	..	£ 432,920	..	£ 67,004

6. *Capital Account.*—The appended statement shows particulars of the fixed assets of the Postmaster-General's Department at 30th June, 1931.

**FIXED ASSETS, POSTMASTER-GENERAL'S DEPARTMENT, 30th JUNE, 1931.**

Particulars.	Net Value, 1st July, 1930. (b)	Capital Expenditure, 1930-31.	Gross Value, 30th June, 1931.	Less Deprecia- tion, &c. 1930-31. (a)	Net Value, 30th June, 1931.
	£	£	£	£	£
Telephone Lines and equipment	30,374,225	922,668	31,796,893	557,476	31,239,417
Telegraph Lines and Trunk Line equipment .. .. .	9,984,893	241,860	10,226,753	90,796	10,135,957
Telegraph equipment .. .. .	563,640	40,557	604,197	11,151	593,046
Postal equipment .. .. .	377,955	15,255	393,210	618	392,592
Sites, Buildings, Furniture, and Office equipment .. .. .	9,245,711	31,362	9,277,073	15,546	9,261,527
Miscellaneous .. .. .	621,973	22,177	644,150	44,351	599,799
Wireless equipment and Buildings	80,463	48,087	128,550	..	128,550
<b>Total .. .. .</b>	<b>51,748,860</b>	<b>1,321,966</b>	<b>53,070,826</b>	<b>719,938</b>	<b>52,350,888</b>

(a) Includes dismantled assets, depreciation written off, and assets transferred. (b) The variations between the figures shown in this column and those shown on page 226 of Year-Book No. 24 are due to a re-arrangement of the asset accounts from 1st July, 1930.

During the past quinquennium the value of the fixed assets has increased by 35 per cent., the net value at 30th June, 1926, being £38,782,821.

**§ 2. Posts.**

1. Postal Matter Dealt With.—(i) *Australia.* The following table gives a summary of the postal matter dealt with in Australia during the five years 1927 to 1931. Although mail matter posted in Australia for delivery therein is necessarily handled at least twice, only the numbers dispatched are included in the following table, which consequently gives the number of distinct articles handled :—

**POSTAL MATTER DEALT WITH—AUSTRALIA.**

Year ended 30th June—	Letters, Postcards and Packets.		Newspapers.		Parcels.		Registered Articles.	
	Number (,000 omitted).	Per 1,000 of Popula- tion.	Number (,000 omitted).	Per 1,000 of Popula- tion.	Number (,000 omitted).	Per 1,000 of Popula- tion.	Number (,000 omitted).	Per 1,000 of Popula- tion.

**POSTED WITHIN AUSTRALIA FOR DELIVERY THEREIN.**

1927 .. .. .	817,438	133,828	161,150	26,383	12,166	1,992	7,315	1,197
1928 .. .. .	821,324	131,819	152,666	24,502	14,028	2,252	7,024	1,127
1929 .. .. .	797,743	125,959	151,698	23,952	14,873	2,348	7,376	1,164
1930 .. .. .	791,241	123,433	150,812	23,527	13,889	2,166	7,267	1,134
1931 .. .. .	701,694	108,409	127,959	19,769	9,769	1,509	6,447	996

**OVERSEA DISPATCHED.**

1927 .. .. .	53,892	8,823	9,844	1,611	228	37	466	76
1928 .. .. .	58,185	9,339	11,257	1,807	209	33	473	76
1929 .. .. .	53,174	8,396	11,898	1,879	224	35	480	76
1930 .. .. .	39,024	6,088	8,695	1,356	231	36	439	68
1931 .. .. .	32,195	4,974	8,225	1,271	168	26	346	53



## POSTAL MATTER DEALT WITH—AUSTRALIA—continued.

Year ended 30th June--	Letters, Postcards and Packets.		Newspapers.		Parcels.		Registered Articles.	
	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.

## OVERSEA RECEIVED.

1927 .. .. .	57,544	9,421	17,731	2,903	509	83	566	93
1928 .. .. .	41,640	6,683	19,591	3,144	467	75	577	93
1929 .. .. .	39,882	5,824	17,016	2,687	474	75	557	88
1930 .. .. .	35,147	5,483	18,511	2,888	466	73	562	88
1931 .. .. .	27,619	4,267	16,142	2,494	272	42	451	70

## TOTAL POSTAL MATTER DEALT WITH.

1927 .. .. .	928,874	152,072	188,725	30,897	12,903	2,112	8,347	1,366
1928 .. .. .	921,149	147,841	183,514	29,453	14,704	2,360	8,074	1,296
1929 .. .. .	887,799	140,179	180,612	28,518	15,571	2,458	8,413	1,328
1930 .. .. .	865,412	135,004	178,018	27,771	14,586	2,275	8,268	1,290
1931 .. .. .	761,508	117,650	152,326	23,534	10,209	1,577	7,244	1,119

(ii) *States.* The next table shows separately for each State the postal matter dealt with in 1930-31.

## POSTAL MATTER DEALT WITH—STATES, 1930-31. (a)

State.	Letters, Postcards and Packets.		Newspapers.		Parcels.		Registered Articles.	
	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.

## POSTED FOR DELIVERY WITHIN AUSTRALIA.

New South Wales	274,840	109,607	58,405	23,292	4,220	1,683	2,485	991
Victoria .. .. .	211,610	118,151	29,161	16,282	1,787	998	1,772	989
Queensland .. .. .	92,315	97,247	22,040	23,217	2,090	2,202	948	998
South Australia	48,715	83,031	7,624	12,995	808	1,377	502	856
Western Australia	47,387	112,823	5,568	13,257	690	1,644	494	1,176
Tasmania .. .. .	26,827	122,964	5,161	23,654	174	796	246	1,130
Australia .. .. .	701,694	108,409	127,959	19,769	9,769	1,509	6,447	996

(a) See explanation in paragraph (i).

## POSTAL MATTER DEALT WITH—STATES, 1930-31(a)—continued.

State.	Letters, Postcards and Packets.		Newspapers.		Parcels.		Registered Articles.	
	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.
<b>OVERSEA DISPATCHED.</b>								
New South Wales	14,655	5,845	2,413	962	89	35	158	63
Victoria ..	8,795	4,911	4,303	2,402	46	26	79	44
Queensland ..	2,454	2,585	701	739	14	15	34	36
South Australia	2,066	3,521	238	405	8	13	35	60
Western Australia	2,531	6,026	379	903	9	21	38	90
Tasmania ..	1,694	7,766	191	877	2	9	2	9
Australia ..	32,195	4,974	8,225	1,271	168	26	346	54

## OVERSEA RECEIVED.

New South Wales	10,422	4,156	5,031	2,007	113	45	207	83
Victoria ..	7,807	4,359	5,391	3,010	81	45	139	77
Queensland ..	2,961	3,119	2,311	2,434	28	29	39	41
South Australia	1,888	3,218	1,195	2,036	17	29	25	42
Western Australia	3,517	8,372	1,829	4,353	27	64	38	91
Tasmania ..	1,024	4,693	385	1,767	6	28	3	13
Australia ..	27,619	4,267	16,142	2,494	272	42	451	70

(a) See explanation in par. 1.

2. Value-Payable Parcel and Letter Post.—(i) *General.* The Postal Department undertakes to deliver registered articles sent by parcel post within Australia, or between Papua or Nauru and Australia, to recover from the addressee on delivery a specified sum of money fixed by the sender, and to remit the sum to the sender by money order, for which the usual commission is charged. The object of the system is to meet the requirements of persons who wish to pay at the time of receipt for articles sent to them, also to meet the requirements of traders and others who do not wish their goods to be delivered except on payment.

(ii) *Summary of Business.* The next statement gives particulars regarding the value-payable post in each State for the years 1927 to 1931 :—

## VALUE-PAYABLE PARCELS POST.—SUMMARY.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
<b>NUMBER OF PARCELS POSTED.</b>							
	No.	No.	No.	No.	No.	No.	No.
1927 .. ..	252,300	11,801	216,418	8,132	71,473	446	560,570
1928 .. ..	296,391	20,005	236,040	11,789	79,761	505	644,491
1929 .. ..	313,654	24,426	248,210	14,564	79,699	430	680,983
1930 .. ..	299,930	26,145	232,968	16,653	82,148	420	658,264
1931 .. ..	248,316	27,786	179,564	18,413	75,977	568	550,624

VALUE-PAYABLE PARCELS POST.—SUMMARY—*continued.*

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
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## VALUE COLLECTED.

	£	£	£	£	£	£	£
1927 .. ..	402,186	21,617	334,619	10,939	112,276	1,075	882,712
1928 .. ..	462,794	35,699	350,712	17,095	114,035	1,040	981,375
1929 .. ..	462,964	41,878	364,156	19,964	103,683	859	993,504
1930 .. ..	436,025	42,457	334,491	24,755	101,716	716	940,160
1931 .. ..	342,786	38,596	242,756	21,108	86,103	764	732,113

## REVENUE, INCLUDING POSTAGE, COMMISSION ON VALUE, REGISTRATION AND MONEY ORDER COMMISSION.

	£	£	£	£	£	£	£
1927 .. ..	32,450	1,569	28,108	864	8,720	58	71,769
1928 .. ..	36,318	2,547	30,700	1,264	8,939	62	79,830
1929 .. ..	38,968	3,116	33,048	1,669	8,914	53	85,768
1930 .. ..	38,518	3,465	30,449	2,044	9,354	52	83,882
1931 .. ..	32,791	3,684	23,430	2,294	8,944	68	71,211

The number and value of parcels forwarded in New South Wales and Queensland are much higher than in any of the other States, although the system has found favour for several years in Western Australia. These three States have the largest areas, and consequently more people at long distances from business centres who avail themselves of the value-payable system. Although South Australia also has a large area, the population of that State is, comparatively, not widely spread.

3. *Sea-borne Mail Services.*—(i) *General.* In earlier issues of this work particulars of sea-borne mail services were included, but owing to the restrictions of space the insertion of this information terminated with Year Book No. 22.

(ii) *Amount of Subsidies Paid.* The following table shows the amounts of subsidies paid by the Commonwealth Postal Department for ocean and coastal mail services during the year ended 30th June, 1931 :—

## MAIL SUBSIDIES.—OCEAN AND COASTAL SERVICES, 1930-31.

Service.	Orient S.N. Co.	Queensland Ports.	South Australian Ports.	Western Australian Ports.	Tasmanian Ports.
	£	£	£	£	£
Annual subsidy .. ..	130,000	1,701	5,000	5,634	37,000

4. *Total Cost of Carriage of Mails.*—During the year 1930-31 the amount paid for conveyance of mails at poundage rates by non-contract vessels was £32,424 ; by road services, £671,202 ; and by railway services, £492,462. The total expenditure during the financial year 1930-31 on the carriage of mails, as disclosed by the Profit and Loss Account, amounted to £1,361,816.

5. **Transactions of the Dead Letter Offices.**—The table hereunder shows the number of letters, postcards and letter-cards, and packets and circulars, including Inland, Interstate, and International, dealt with by the Dead Letter Offices in 1930-31, and the methods adopted in the disposal thereof:—

**DEAD LETTER OFFICES.—SUMMARY, 1930-31.**

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
<b>LETTERS, POSTCARDS, AND LETTER-CARDS.</b>							
Returned direct to writers or delivered .. .. .	960,516	271,890	165,856	100,987	123,457	76,110	1,698,816
Destroyed in accordance with Act .. .. .	68,105	36,702	33,778	12,365	7,588	2,004	160,542
Returned to other States or Countries as unclaimed .. .. .	45,254	26,754	14,081	5,830	12,932	1,044	105,895
<b>Total .. .. .</b>	<b>1,073,875</b>	<b>335,346</b>	<b>213,715</b>	<b>119,182</b>	<b>143,977</b>	<b>79,158</b>	<b>1,965,253</b>
<b>PACKETS AND CIRCULARS.</b>							
Returned direct to writers or delivered .. .. .	683,434	135,479	152,377	13,226	80,384	40,182	1,105,082
Destroyed in accordance with Act .. .. .	104,831	55,578	54,205	73,907	1,754	174	290,449
Returned to other States or Countries as unclaimed .. .. .	1,396	24,126	5,700	4,525	837	2,616	39,200
<b>Total .. .. .</b>	<b>789,661</b>	<b>215,183</b>	<b>212,282</b>	<b>91,658</b>	<b>82,975</b>	<b>42,972</b>	<b>1,434,731</b>
<b>Grand Total (letters, packets, etc.) .. .. .</b>	<b>1,863,536</b>	<b>550,529</b>	<b>425,997</b>	<b>210,840</b>	<b>226,952</b>	<b>122,130</b>	<b>3,399,984</b>

During the year 1930-31 money and valuables to the amount of £76,358 were found in undelivered postal articles, while 36,559 postal articles were posted without address, including 581 which contained money and valuables to the extent of £1,975.

6. **Money Orders and Postal Notes.**—(i) *General.* The issue of money orders and postal notes is regulated by sections 74 to 79 of the Post and Telegraph Act, 1901. A money order may be issued for payment of sums up to £20 within Australia, and not exceeding £40 (in some cases £20, and in Mauritius £10) in places abroad. A postal note which is payable only within Australia and in Papua, cannot be issued for a larger sum than twenty shillings.

(ii) *States, 1930-31.* Particulars regarding the business transacted in each State for the year 1930-31 are given hereunder:—

**MONEY ORDERS AND POSTAL NOTES.—SUMMARY, 1930-31.**

State.	Value of Money Orders Issued.	Value of Money Orders Paid.	Net Money Order Commission Received.	Value of Postal Notes Sold.	Poundage Received on Postal Notes.
	£	£	£	£	£
New South Wales ..	7,493,307	7,472,225	41,101	2,277,180	51,104
Victoria ..	3,105,571	3,195,032	20,973	1,600,160	36,498
Queensland ..	2,515,514	2,260,877	18,034	629,795	13,922
South Australia ..	887,291	857,134	5,815	353,482	8,165
Western Australia ..	1,302,896	1,172,032	9,117	331,161	7,172
Tasmania ..	485,283	423,400	3,487	151,108	3,452
<b>Australia ..</b>	<b>15,789,862</b>	<b>15,380,700</b>	<b>98,527</b>	<b>5,342,886</b>	<b>120,313</b>

The figures in the foregoing table show a substantial decrease compared with the corresponding particulars for the previous year.

(iii) *Australia, 1927 to 1931.* The next table shows the total number and value of money orders and postal notes issued and paid in Australia from 1926-27 to 1930-31 :—

**MONEY ORDERS AND POSTAL NOTES.—SUMMARY, AUSTRALIA.**

Year ended 30th June—	Money Orders.				Postal Notes.			
	Issued.		Paid.		Issued.		Paid.	
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
	No. (,000).	£ (,000).	No. (,000).	£ (,000).	No. (,000).	£ (,000).	No. (,000).	£ (,000).
1927 ..	3,225	16,500	3,043	15,925	14,502	5,300	14,360	5,270
1928 ..	3,349	17,011	3,188	16,411	15,402	5,579	15,357	5,568
1929 ..	3,416	17,094	3,233	16,503	15,626	5,741	15,591	5,737
1930 ..	3,415	17,447	3,224	16,811	15,879	5,843	15,924	5,968
1931 ..	3,055	15,790	2,989	15,381	14,691	5,343	14,731	5,348

In both cases the figures for 1931 for money orders and postal notes show a heavy decline as compared with the returns for 1930.

(iv) *Classification of Money Orders Issued and Paid.* (a) *Orders Issued.* The next table shows the number and value of money orders issued in each State during the year 1930-31, classified according to the country where payable :—

**MONEY ORDERS ISSUED.—COUNTRY WHERE PAYABLE, 1930-31.**

State in which issued.	Where Payable.				Total.
	In Australia.	In New Zealand.	In Great Britain and Ireland.	In Other Countries.	
NUMBER.					
New South Wales ..	1,288,238	9,699	63,345	21,334	1,382,616
Victoria ..	559,306	4,988	42,321	15,621	622,236
Queensland ..	468,307	1,663	19,168	11,216	500,354
South Australia ..	168,217	893	11,390	6,732	187,232
Western Australia ..	225,245	928	17,837	6,655	250,665
Tasmania ..	105,817	962	3,427	1,206	111,412
Australia ..	2,815,130	19,133	157,488	62,764	3,054,515
VALUE.					
	£	£	£	£	£
New South Wales ..	7,098,621	45,964	235,108	113,614	7,493,307
Victoria ..	2,843,503	19,782	163,409	78,817	3,105,571
Queensland ..	2,389,730	6,120	61,437	58,227	2,515,514
South Australia ..	811,356	3,665	40,339	31,931	887,291
Western Australia ..	1,188,646	4,188	67,577	42,485	1,302,896
Tasmania ..	468,136	4,974	9,219	2,954	485,283
Australia ..	14,800,052	84,693	577,089	328,028	15,789,862

(b) *Orders Paid.* The number and value of money orders paid in each State during the year 1930-31, classified according to the country where issued, are given hereunder :—

## MONEY ORDERS PAID.—COUNTRY OF ISSUE, 1930-31.

State in which Paid.	Where Issued.				Total.
	In Australia.	In New Zealand.	In Great Britain and Ireland.	In Other Countries.	
NUMBER.					
New South Wales ..	1,311,702	37,819	25,793	15,588	1,390,902
Victoria ..	608,295	16,460	14,739	5,341	644,835
Queensland ..	433,395	4,637	5,653	4,622	448,307
South Australia ..	171,093	1,338	4,307	1,254	177,992
Western Australia ..	218,735	1,353	7,557	1,310	228,955
Tasmania ..	92,134	2,374	1,529	1,964	98,001
<b>Australia ..</b>	<b>2,835,354</b>	<b>63,981</b>	<b>59,578</b>	<b>30,079</b>	<b>2,988,992</b>
VALUE.					
New South Wales ..	£ 7,184,392	£ 115,152	£ 111,676	£ 61,005	£ 7,472,225
Victoria ..	3,069,616	45,022	62,782	17,612	3,195,032
Queensland ..	2,213,962	9,253	26,024	11,638	2,260,877
South Australia ..	830,361	4,830	17,451	4,402	850,134
Western Australia ..	1,126,834	5,087	34,188	5,923	1,172,032
Tasmania ..	409,751	5,924	4,415	3,310	423,400
<b>Australia ..</b>	<b>14,834,916</b>	<b>185,268</b>	<b>256,536</b>	<b>103,980</b>	<b>15,380,700</b>

In the tables above, money orders payable or issued in foreign countries which have been sent from or to Australia through the General Post Office at London are included in those payable or issued in Great Britain and Ireland.

(v) *Classification of Postal Notes Paid.* The subjoined table shows the number and value of postal notes paid during the year 1930-31, classified according to the State in which they were issued.

Particulars regarding the total number and value of postal notes issued and paid in each of the last five years have been given previously.

## POSTAL NOTES PAID.—STATE OF ISSUE, 1930-31.

Particulars.	Postal Notes Paid in—						
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
NUMBER.							
Issued in same State	4,389,826	3,053,663	1,403,909	661,315	764,402	335,285	10,608,400
Issued in other States	505,260	403,930	1,143,691	73,599	28,101	1,968,161	4,122,742
<b>Total ..</b>	<b>4,895,086</b>	<b>3,457,593</b>	<b>2,547,600</b>	<b>734,914</b>	<b>792,503</b>	<b>2,303,446</b>	<b>14,731,142</b>
VALUE.							
Issue in same State	£ 1,710,193	£ 1,121,683	£ 512,527	£ 232,972	£ 284,856	£ 113,912	£ 3,976,143
Issued in other States	182,298	156,852	328,439	30,937	11,273	662,465	1,372,264
<b>Total ..</b>	<b>1,892,491</b>	<b>1,278,535</b>	<b>840,966</b>	<b>263,909</b>	<b>296,129</b>	<b>776,377</b>	<b>5,348,407</b>

The number and value of postal notes paid in Australia during the year showed a decrease of 7.5 per cent. and 10.4 per cent. respectively compared with the corresponding figures for the year 1929-30.

### § 3. Telegraphs.

**I. General.**—(i) *Development of System.* A review of the development of the Telegraph Services in Australia was given in a previous issue of this work (see Year Book No. 15), but limitations of space preclude the repetition of this information in the present issue. During the past few years substantial improvements in both the speed and grade of telegraph service throughout Australia have been effected, the entire system being subjected to intensive re-organization.

(ii) *External Circulation or Routing of Traffic.* The external circulation system of the Australian telegraph service has been considerably modified, direct communication having been established between cities and towns which formerly were served through intermediate repeating centres. The re-organization has eliminated the loss of time in transit, improved the grade of service, and led to economy as regards the labour formerly required in manual re-transmission. As a result of the re-organization there are now only nine repeating centres, fourteen centres having been abolished.

(iii) *Carrier Wave System.* This system which permits a number of messages to be transmitted simultaneously over the one line is now in operation between Perth and Adelaide, Adelaide and Melbourne, Melbourne and Sydney, and Sydney and Brisbane. There are now 43,848 miles of uni-directional telegraph carrier channels in operation.

(iv) *Direct Telegraph Communication over Great Distances.* The telegraph system in Australia provides direct communication between many places separated by great distances as indicated in the following examples:—Sydney-Perth, 2,695 miles; Perth-Wyndham, 1,933 miles; Melbourne-Brisbane, 1,246 miles; Brisbane-Cairns, 1,056 miles; Adelaide-Perth, 1,627 miles; Melbourne-Perth, 2,104 miles; Adelaide-Darwin, 1,940 miles; and Sydney-Adelaide, 1,068 miles. These direct channels provide a speedy service between the centres named, the average time involved in the transmission of a telegram being ten minutes.

(v) *Machine Telegraphy.* In order to speed up transmission, machine printing telegraph systems have been introduced between capital cities and between important country centres. Murray multiplex machine apparatus is in operation between Sydney and Melbourne, Sydney and Brisbane, Sydney and Adelaide, Sydney and Perth, Melbourne and Brisbane, Melbourne and Adelaide, Melbourne and Perth, Adelaide and Perth, Brisbane and Rockhampton, and Brisbane and Townsville, providing telegraph outlets which permit the carriage of very heavy loads with a minimum transit time. The operation of the apparatus has been steadily improved, and now is worked so that each channel has an output up to 50 words per minute. Between Sydney and Bathurst, Sydney and West Maitland, Melbourne and Bendigo, Melbourne and Mildura, Brisbane and Toowoomba, Brisbane and Charleville, Perth and Fremantle, and Perth and Kalgoorlie, start-stop telegraph printing systems are in operation.

(vi) *Phonogram Service.* Telephone subscribers may now telephone telegrams for onward transmission, or have messages telephoned to them. The fee for the service is small, and the innovation means, in effect, that the telegraph system is brought into the home of every telephone subscriber. The number of telegrams lodged by telephone during the twelve months ended 30th September, 1931, was 1,530,606 or 9.6 per cent. of the total lodgments, and the popularity of this facility is growing.

(vii) *Radiograms within the Commonwealth.* On 1st May, 1929, the rates for radiograms between Flinders Island, King Island, Maria Island, Wave Hill, Brunette Downs and other places within the Commonwealth were reduced to 1½d. per word with a minimum charge of two shillings. Communication at these rates was extended to Lord Howe Island in August, 1929.

(viii) *Picturegram Service.* During the year ended 30th June, 1931, 202 picturegrams were transmitted between Sydney and Melbourne, the revenue being £493. Any kind of picture or document may be accepted for transmission, the charges varying from 30s. to 67s. 6d. according to the size of the picture or document and the grade of transmission desired.

2. **Telegraph Offices, Length of Lines and Wire.**—(i) *Summary for Australia.* The following table shows the number of telegraph offices and the length of telegraph lines and of telegraph wire available for use in Australia in each year from 1927 to 1931 :—

## TELEGRAPHS, AUSTRALIA.—SUMMARY.

Particulars for Year ended 30th June.	1927.	1928.	1929.	1930.	1931.
Number of offices .. .. .	9,111	9,136	9,252	9,317	9,189
Length of wire (miles)—					
Telegraph purposes only .. .. .	70,563	73,303	72,642	71,629	62,009
Telegraph and telephone purposes .. .. .	158,470	87,376	87,303	88,785	98,140
Length of line (miles)—					
Conductors in Morse cable .. .. .	3,280	3,441	3,500	3,735	3,789
Conductors in submarine cable .. .. .	4,251	4,505	4,676	4,524	4,859
Pole routes (miles) .. .. .	93,237	97,110	96,467	98,450	100,596

(ii) *States.* The following table gives corresponding particulars for each State for the year 1930-31 :—

## TELEGRAPHS.—STATES, SUMMARY, 30th JUNE, 1931.

Particulars.	N.S.W.	Victoria.	Q'land.	S.Aust.	W.Aust.	Tas.	Aus- tralia.
Number of offices .. .. .	3,055	2,428	1,435	799	929	543	9,189
Length of wire (miles)—							
Telegraph purposes only .. .. .	20,944	8,401	13,372	8,735	9,823	734	62,009
Telegraph and telephone purposes .. .. .	34,804	14,154	27,565	14,226	5,718	1,673	98,140
Length of line (miles)—							
Conductors in Morse cable .. .. .	1,721	1,434	468	..	142	24	3,789
Conductors in submarine cable (statute miles) .. .. .	3,567	282	335	251	..	424	4,859
Pole routes (miles) .. .. .	34,788	19,404	15,914	15,162	11,812	3,516	100,596

A total length of 160,149 miles of wire is available for telegraph purposes, of which 98,140 miles are also used for telephone purposes. Compared with those for the previous year the figures show a decrease of 265 miles (0.17 per cent.) in the total length and an increase of 9,355 miles (10.5 per cent.) in the length of line used for both telegraph and telephone purposes. The decrease in the mileage of wire available for telegraph purposes only is due to the extension of the practice of superimposing telegraph facilities over telephone wires.

3. **Number of Telegrams Dispatched.**—(i) *Australia.* The number of telegrams dispatched to destinations within Australia in each of the last five years is given hereunder :—

## TELEGRAMS DISPATCHED.—AUSTRALIA.

Telegrams.	Year ended 30th June—				
	1927.	1928.	1929.	1930.	1931.
Number (a) .. .. .	17,274,289	16,608,226	16,345,152	15,724,246	12,985,298

(a) Including interstate cablegrams.

(ii) *States.* The appended table shows the total number of telegrams dispatched in each State in 1930-31 according to the class of message transmitted :—



## TELEGRAMS DISPATCHED.—STATES, 1930-31.

Class of Message Transmitted within the Commonwealth.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
<b>Paid and Collect—</b>							
Ordinary ..	3,606,388	2,476,917	1,973,123	769,966	1,212,853	242,897	10,282,144
Urgent ..	322,174	122,887	85,613	33,354	48,843	9,632	622,503
Press ..	232,804	150,826	98,573	42,273	34,086	32,406	590,968
Lettergram ..	73,623	64,863	63,886	32,528	67,448	27,011	329,359
Radiogram ..	15,243	4,819	4,602	4,544	2,944	6,494	38,646
<b>Total ..</b>	<b>4,250,232</b>	<b>2,820,312</b>	<b>2,225,797</b>	<b>882,665</b>	<b>1,366,174</b>	<b>318,440</b>	<b>11,863,620</b>
<b>Unpaid—</b>							
Service ..	117,987	50,508	45,425	42,531	55,530	19,024	331,005
Shipping ..	62,104	118,164	20,721	20,721	13,567	5,087	224,777
Meteorological ..	179,528	81,120	74,572	74,572	114,189	26,158	565,896
<b>Total ..</b>	<b>359,619</b>	<b>249,792</b>	<b>140,718</b>	<b>137,994</b>	<b>183,286</b>	<b>50,269</b>	<b>1,121,678</b>
<b>Grand Total</b>	<b>4,609,851</b>	<b>3,070,104</b>	<b>2,366,515</b>	<b>1,020,659</b>	<b>1,549,460</b>	<b>368,709</b>	<b>12,985,298</b>

The figures in the foregoing table show a decrease in the total volume of telegraph business of 2,738,948 messages as compared with the previous year.

4. **Letter-telegrams.**—Letter-telegrams are accepted at any hour at telegraph offices, which are open for business after 7 p.m., subject to the condition that delivery is effected by posting at the letter-telegram office of destination.

5. **Revenue and Expenditure.**—Particulars of the revenue and expenditure of the telegraph systems for the years 1926-27 to 1930-31 are given in earlier pages.

6. **Telegraph Density.**—Analysis of the latest world statistics available discloses a high telegraph density in Australia; the ratio of telegrams to population being the highest for any country in the world except New Zealand. The following table gives the figures for the more important countries:—

## TELEGRAPH DENSITY STATISTICS—CHIEF COUNTRIES.

Country.	Percentage of Telegraph to Total Wire Communication.	Telegraph Communication per Head of Population.
Australia .. .. .	3.5	2.6
Austria .. .. .	0.5	0.4
Belgium .. .. .	2.5	0.7
Canada .. .. .	0.5	1.4
Czechoslovakia .. .. .	1.9	0.4
Denmark .. .. .	0.4	0.6
France .. .. .	4.0	0.8
Germany .. .. .	1.0	0.4
Great Britain .. .. .	3.2	1.1
Hungary .. .. .	2.0	0.4
Japan .. .. .	1.6	0.8
Netherlands .. .. .	0.9	0.6
New Zealand .. .. .	1.9	4.1
Norway .. .. .	1.4	1.2
Poland .. .. .	0.7	0.2
Spain .. .. .	3.5	1.0
Sweden .. .. .	0.5	0.7
Switzerland .. .. .	1.2	0.7
Union of South Africa .. .. .	2.6	0.7
United States of America .. .. .	0.8	1.8

### § 4. Overseas Cable and Radio Communication.

1. **First Cable Communication with the Old World.**—In earlier issues of the Year Book will be found a detailed account of the connexion of Australia with the old world by means of submarine cables. (See No. 6, p. 770.)

2. **General Cable Services.**—Descriptions of the various cable services between Australia and other countries are given in Year Book No. 22, pp. 335 and 336.

3. **Merging of Cable and Wireless Interests.**—Following upon the recommendations of the Imperial Wireless and Cable Conference in London in 1928 to examine the situation which had arisen as the result of the competition of the Beam Wireless with the Cable services, the Imperial and International Communications Limited was formed and took over the operations of the Pacific Cable Board and the control of the Eastern Extension Cable Company and the Marconi Wireless Company.

4. **Overseas Cable and Radio Business.**—(i) *Australia.* The subjoined table shows the number of cablegrams and radiograms received and dispatched in Australia from 1928-29 to 1930-31 :—

#### CABLEGRAMS AND RADIOGRAMS.—AUSTRALIA, 1928-29 TO 1930-31.

Messages.	Number Received.			Number Dispatched.			Total Number Received and Dispatched.		
	1928-29.	1929-30.	1930-31.	1928-29.	1929-30.	1930-31.	1928-29.	1929-30.	1930-31.
Number	727,256	718,339	572,423	808,812	781,982	647,655	1,536,068	1,500,321	1,220,078

(ii) *States.* The number of cablegrams received and dispatched in each State during the year 1930-31 is given hereunder :—

#### CABLEGRAMS AND RADIOGRAMS.—STATES, 1930-31.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	Australia.
Number received ..	282,253	196,951	26,894	27,071	30,761	8,493	572,423
Number dispatched	326,857	209,356	33,499	30,645	37,212	10,086	647,655
Total ..	609,110	406,307	60,393	57,716	67,973	18,579	1,220,078

(a) Exclusive of interstate cablegrams, which are included with interstate telegrams.

5. **Cable and Radio (Beam) Rates.**—(i) *Ordinary Messages.* From 1st February, 1927, the cable rates (per word) between Australia and Great Britain were reduced as follows :—Ordinary, 2s. 6d. to 2s. ; deferred ordinary, 1s. 3d. to 1s. ; and Government, 1s. 4d. to 1s. 0½d., and substantial reductions were also made on the Canadian service (via Pacific) as from the same date. The following are the rates at present operating in regard to traffic with the principal countries :—

## CABLEGRAM AND RADIOGRAM RATES, JUNE, 1931.

To—	Rate per Word and Route.		
	Via Pacific.	Via Eastern.	Via Beam.
European Countries ..	2s. 6d. to 2s. 7d.	2s. 6d. to 2s. 7d.	1s. 11½d. to 2s. 5½d.
Asiatic Countries ..	5s. 3d. to 6s. 3d.	2s. 5d. to 4s. 7d.	..
Africa ..	..	1s. 8d. to 5s. 4d.	2s. 2½d. to 2s. 11d.
North America ..	1s. 7d. to 3s. 5d.	2s. 4d. to 4s. 4d.	1s. 5½d. to 3s. 7d.
Central America ..	3s. 10d. to 4s. 4d.	5s. to 6s. 1d.	3s. 5½d. to 4s. 10d.
West Indies ..	3s. to 5s. 3d.	4s. to 5s. 8d.	..
South America ..	4s. 1d. to 6s. 8d.	4s. 1d. to 7s. 5d.	3s. 9d. to 6s.

(ii) *Deferred Telegrams (via Cable or Radio)*. Under this system a reduction of 50 per cent. in the ordinary cable or radio charges is made under certain conditions. Any such messages which have not reached their destination within 24 hours may be transmitted in turn with full-rate messages. This service, together with "Daily Letter" and "Week-end" services, has affected the ordinary business to a considerable extent. "Deferred Press" telegrams, subject to a delay of 18 hours, may be exchanged between Australia and (a) Great Britain at the rate of 4½d. per word by cable and 3d. per word via radio; (b) Canada, at 2½ per word by cable and 2½d. per word via radio; and (c) United States of America, at 3d. to 4d. per word by cable and 3½d. to 4d. per word via radio.

(iii) *Daily Letter Telegrams*. The "Daily Letter" telegram service was inaugurated in September, 1923, between Australia and Great Britain and Canada. It has since been extended to most countries in the British Empire and in Europe, to the United States, and to certain others. The messages are accepted subject to a minimum transit delay of 48 hours and a minimum charge for 20 words except in two cases where the minimum charge is for 25 words. The rates per word for messages to the following countries are:—Great Britain, by cable 9d., by radio 6d.; Austria, Belgium, Denmark, Germany, Greece, Holland, Luxemburg and Sweden, 9d. by cable or radio; France, Latvia, Lithuania, Norway and Switzerland, 9½d. by cable or radio; Russia, 10d. by cable or radio; South Africa, 6d.; United States of America, 7d. to 9d. by cable and 6½d. to 8½d. by radio; Canada, 7d. by cable, 6½d. by radio; China, 10d. to 1s. 0d.; and Japan, 1s. 2d.

(iv) *Week-end Letter Telegrams*. Week-end letter telegrams may be exchanged with certain countries. Messages—which may be lodged at any post office—are forwarded to reach the transmitting station by midnight on Saturdays and are deliverable to the addresses on Tuesday mornings, or if practicable on Mondays. The rates per word for messages (20 word minimum) to the following countries are:—Great Britain, by cable 7½d., by radio 5d.; Czechoslovakia, Italy, Algeria and Tunis, 9d.; Canada, 5½d. and 5½d.; Newfoundland, 7½d. and 7d.; Fanning Island, 6d.; France, Austria, Norway and Switzerland, 8d.; and Sweden, Denmark, Germany, Greece, Holland, Belgium, and Luxemburg, 7½d. A week-end letter telegram service between the Commonwealth and Papua and New Guinea was opened in December, 1929, the rate being 4½d. per word with a minimum charge of 7s. 6d. for 20 words.

(v) *Press Telegrams*. The rate per word on press messages exchanged with Great Britain is 6d. via cable and 4d. via radio.

(vi) *Night Letter Telegrams*. A night letter service for traffic between Australia and New Zealand was introduced on 1st May, 1924. The rate is fixed at 3s. per message of 20 words, and 2d. per word in excess of 20. On 1st December, 1924, the service was extended to take in traffic to and from Fiji at the rate of 5s. 10d. per message of 20 words, and excess words at the rate of 3½d. per word. Night letter telegrams are accepted at any time and are delivered by first post on the morning following receipt.

### § 5. Telephones.

1. Telephone Services.—(i) *Mileage, etc., Australia.* The following table shows the mileage of lines, etc., for telephone purposes, giving trunk lines separately, on 30th June, 1929 to 1931 :—

#### TELEPHONE LINES.—AUSTRALIA, 30th JUNE, 1929 TO 1931.

Particulars.	1929.	1930.	1931.
<b>Ordinary Lines—</b>			
Conduits .. .. duct miles	5,507	5,844	6,047
" .. .. route miles	3,083	3,310	3,416
Conductors in aerial cables .. loop mileage	6,055	5,461	5,213
Conductors in underground cables .. "	691,170	761,723	789,736
Conductors in cables for junction circuits .. "	98,065	101,040	105,047
Open conductors .. single wire mileage	408,559	424,007	422,737
<b>Trunk Lines—</b>			
Telephone trunk lines only .. .. miles	224,150	232,909	233,543
Telegraph and telephone purposes .. .. "	87,303	88,785	98,140

(ii) *Comparison with Other Countries.* Despite the general depression in business Australia has maintained its position in the list of countries showing the most rapid advance in the use of the telephone, and it still occupies sixth place, with 76.6 telephones per 1,000 of population. This position may be considered highly satisfactory in view of the area and distribution of population in Australia and the average length of wire required to provide a subscriber's service. The average length of wire per telephone in Australia is 5.1 miles, as compared with 4.1 miles in the United States of America and 3.5 miles in Canada and New Zealand.

(iii) *Trunk Line System.* The trunk line system of Australia aims at making the telephone service in Australia nation-wide and at improving long distance communication so that each subscriber may communicate with every other subscriber. Notwithstanding the great distances separating the capital cities of the various States, commercial speech is now provided between practically all the cities and towns on the mainland. On the 18th December, 1930, a service was established between Perth and Adelaide, a circuit distance of 1,676 miles, thus establishing commercial communication between Western Australia and South Australia, Victoria and New South Wales. In May, 1931, the service was extended to Queensland, and telephonic speech is now practicable between Geraldton (W.A.) and Cairns (Q.), a circuit distance of 4,762 miles, which probably constitutes a record in land line telephony.

The practicability of linking Tasmania telephonically with the mainland has been investigated by the Parliamentary Standing Committee on Public Works which has recommended that when funds can be made available a submarine telephone cable be laid from Lorne (V.) via King Island to Stanley (T.). When this service is provided, telephonic communication will be available between all the States. Substantial progress has been made with the introduction of the carrier system of telephony whereby several additional channels of communication may be obtained over one pair of wires, thus obviating the costly expenditure involved in erecting additional wire along important routes where the business justifies extra channels. At the 30th June, 1932, there were forty-five carrier telephone systems in operation in Australia, giving a total of eighty-one channels with an aggregate channel mileage of approximately 22,500 miles.

(iv) *Automatic Exchanges.* At 30th June, 1931, there were 67 automatic or semi-automatic exchanges in operation providing facilities for 145,074 subscribers' lines, 142,049 of which were in the metropolitan areas. Trials are being made with a specially constructed automatic unit to provide an economical day and night service at country exchanges, and it is hoped that the introduction of small automatic units will enable the benefits of continuous service to be more widely extended. Progress in this direction has, however, been retarded by lack of funds.

(v) *Summary for States.* Particulars relating to the telephone service in each State for the years ended 30th June, 1929 to 1931, will be found in the following table:—

TELEPHONE SERVICES.—SUMMARY.

Particulars.	Year (30th June).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
No. of Exchanges ..	1929	1,890	1,620	891	537	626	347	5,911
	1930	1,951	1,656	924	551	652	360	6,094
	1931	1,946	1,652	934	553	646	355	6,086
No. of Telephone Offices (Including Exchanges)	1929	2,892	2,340	1,415	776	958	526	8,907
	1930	3,008	2,358	1,417	786	970	520	9,059
	1931	2,993	2,353	1,424	787	934	516	9,007
No. of lines connected ..	1929	146,492	114,603	48,065	42,186	21,562	11,450	384,358
	1930	150,606	118,074	49,737	42,868	22,558	11,969	395,812
	1931	141,445	113,282	48,979	39,552	21,258	11,727	376,243
No. of instruments connected	1929	193,718	155,841	60,447	53,814	27,686	14,048	505,554
	1930	199,007	160,381	62,607	54,550	29,082	14,542	520,169
	1931	188,345	154,647	62,375	50,656	27,734	14,298	498,055
(a) No. of subscribers' instruments	1929	189,154	152,657	58,332	52,512	26,460	13,288	492,403
	1930	194,253	157,325	60,451	53,189	27,829	13,747	506,794
	1931	183,507	151,190	60,065	49,237	26,505	13,499	484,003
(b) No. of public tele-phones	1929	2,779	2,256	1,482	770	935	521	8,743
	1930	2,879	2,295	1,522	785	957	528	8,966
	1931	2,944	2,213	1,527	788	900	525	8,897
(c) No. of other local instruments	1929	1,785	928	633	532	291	239	4,408
	1930	1,875	761	634	576	296	267	4,409
	1931	1,894	1,244	783	631	329	274	5,155
Instruments per 100 of population	1929	7.84	8.82	6.52	9.22	6.73	6.61	7.93
	1930	7.98	8.99	6.64	9.32	6.95	6.75	8.08
	1931	7.49	8.60	6.50	8.61	6.59	6.52	7.66
Earnings .. ..		£	£	£	£	£	£	£
	1929	2,138,369	1,567,241	779,105	606,329	330,567	143,381	5,564,992
	1930	2,361,924	1,685,377	839,531	632,367	363,327	150,507	6,033,033
1931	2,246,395	1,628,164	819,395	568,925	328,833	139,636	5,731,348	
Working expenses ..	1929	1,668,407	1,218,232	567,787	561,992	252,047	159,353	4,427,818
	1930	1,660,982	1,230,603	678,680	563,847	271,644	187,676	4,593,432
	1931	1,643,800	1,219,722	558,500	496,097	272,543	167,225	4,358,487
Percentage of working expenses on earnings		%	%	%	%	%	%	%
	1929	78.02	77.73	72.88	92.69	76.25	111.14	79.56
	1930	70.32	73.02	80.84	89.16	74.77	124.70	76.14
1931	73.18	74.91	68.16	87.30	82.88	119.76	76.05	

The number of instruments per 100 of population declined from 8.08 in 1929-30 to 7.66 in 1930-31. The actual number of instruments decreased from 520,169 to 498,055, a decrease of 4.25 per cent. Of the 498,055 instruments connected at 30th June, 1931, 220,556, or 44.3 per cent., were served by exchanges situated beyond the limits of the telephone networks of the six State capital cities. The metropolitan networks are limited to a radius of 15 miles from the General Post Office in Sydney and Melbourne, and 10 miles in the other State capital cities.

(vi) *Systems in Use.* The following table shows the percentage of automatic, common battery, and magneto telephone lines at 30th June, 1929 to 1931:—

PERCENTAGE OF AUTOMATIC, COMMON BATTERY, AND MAGNETO LINES.

System.	30th June.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Automatic .. ..	1929	42.5	34.9	19.1	33.1	33.6	..	34.5
	1930	42.5	39.2	34.3	38.9	41.3	28.7	39.5
	1931	41.8	37.3	34.1	37.9	40.9	28.7	38.5
Common Battery ..	1929	3.1	19.2	14.3	15.7	6.5	45.7	12.2
	1930	3.0	18.6	..	13.7	6.3	16.6	9.1
	1931	2.9	18.6	..	13.4	6.1	16.8	9.0
Magneto .. ..	1929	54.4	45.9	66.6	51.2	59.9	54.3	53.3
	1930	54.5	42.2	65.7	47.4	52.4	54.7	51.4
	1931	55.3	44.1	65.9	48.7	53.0	54.5	52.5

(vii) *Subscribers' Lines and Calling Rates.* The next table gives the number of subscribers' lines and the daily calling rate at central, suburban, and country telephone exchanges in the several States for the year 1930-31 :—

## TELEPHONES.—SUBSCRIBERS' LINES AND DAILY CALLING RATE, 1930-31.

State.	Central Exchanges.		Suburban Exchanges.		Country Exchanges.		Total.	
	Subscribers' Lines.	Average Outward Calls Daily per line.	Subscribers' Lines.	Average Outward Calls Daily per line.	Subscribers' Lines.	Average Outward Calls Daily per line.	Subscribers' Lines.	Average Outward Calls Daily per line.
New South Wales	14,754	11.26	68,200	3.97	62,431	2.15	145,385	3.93
Victoria ..	7,562	10.41	59,517	3.83	48,568	1.68	115,647	3.36
Queensland ..	6,468	8.96	12,390	3.15	30,128	2.38	48,986	3.44
South Australia ..	5,432	8.59	16,610	3.31	19,177	1.56	41,219	3.19
Western Australia	7,264	5.94	4,099	3.72	10,403	1.59	21,765	3.44
Tasmania ..	2,768	4.10	1,029	2.15	7,828	1.97	11,625	2.49
Australia ..	44,248	9.13	161,845	3.77	178,534	1.96	384,627	3.55

A comparison of the daily calling rates for each class of exchange shows that New South Wales registered the greatest number per line at central and suburban exchanges, and Queensland at country exchanges. For Australia as a whole, the average number of calls per line at central exchanges was nearly two and a half times the number registered at suburban exchanges, while the average for suburban exchanges was slightly less than double the number shown for country exchanges.

(viii) *Trunk Line Calls and Revenue.* In the following table the number of telephone trunk line calls recorded, the amount of revenue received, and the average revenue per call are shown for each of the States for the years 1928-29 to 1930-31 :—

## TELEPHONES.—TRUNK LINE CALLS AND REVENUE.

Particulars.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
Total Calls for Year—	No.	No.	No.	No.	No.	No.	No.
1928-29 ..	11,985,196	9,222,655	5,960,612	3,964,987	2,062,621	1,545,600	34,741,671
1929-30 ..	12,250,856	9,380,862	6,190,891	3,966,504	2,075,417	1,524,185	35,388,715
1930-31 ..	10,384,188	8,100,657	5,549,423	3,099,105	1,736,945	1,293,759	30,164,077
Total Revenue for Year—	£	£	£	£	£	£	£
1928-29 ..	472,858	338,837	298,190	162,494	100,678	46,405	1,419,462
1929-30 ..	549,585	382,055	331,305	174,119	110,955	49,048	1,597,067
1930-31 ..	512,403	358,833	318,748	142,557	90,085	43,494	1,466,120
Average Revenue per Call—	Pence.	Pence.	Pence.	Pence.	Pence.	Pence.	Pence.
1928-29 ..	9.47	8.82	12.01	9.84	11.71	7.20	9.80
1929-30 ..	10.76	9.77	12.84	10.54	12.83	7.72	10.83
1930-31 ..	11.84	10.63	13.78	11.04	12.45	8.07	11.66

The number of trunk line calls recorded during 1930-31 decreased by over five millions compared with the figures for the previous year, and the average revenue per call increased by 0.83d.

2. *Revenue from Telephones.*—Particulars regarding the revenue from telephone services are included in tables in § 1.

### § 6. Radio Telegraphy and Telephony.

1. Radio Telegraphy and Telephony.—(i) *General.* A statement in regard to the initial steps taken to establish radio telegraphy in Australia was given in Official Year Book No. 18, p. 343.

Under the Wireless Telegraphy Act and Regulations, no wireless station can be installed or operated without a licence from the Postmaster-General. Licences are issued for the following:—(a) Coast Stations, which are operated at various points around the coast and in Papua and New Guinea by Amalgamated Wireless (Australasia) Ltd., under agreement with the Commonwealth; (b) Ship Stations. Regulations under the Navigation Act require that all ships registered in Australia of 1,600 tons or more registered tonnage or carrying more than twelve passengers, shall be fitted with an efficient radio telegraph installation; (c) Land Stations to be operated where no telegraph of telephone facilities exist; (d) Broadcasting Stations, other than those of the National Broadcasting Service; (e) Broadcast Listeners' Receiving Sets; (f) Portable Stations, for transportable sets on motor cars, &c.; (g) Aircraft Stations; (h) Experimental Stations; and (i) Special Stations, for services other than those named above.

The following table shows the number of each class of licence issued in each State, etc., during the years 1930-31 and 1931-32:—

#### WIRELESS LICENCES, 1930-31.

Station Licence.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Aust.	Papua	Grand Total.
Coast .. ..	2	1	6	1	5	3	1	19	2	21
Ship .. ..	9	50	13	19	5	1	..	97	..	97
Land (b) .. ..	7	6	3	1	3	..	3	23	..	23
Broadcasting (a) ..	16	10	6	3	2	2	..	39	..	39
Broadcast listeners'	122,470	137,005	24,062	30,217	9,075	8,232	21	331,082	46	331,128
Experimental .. ..	278	260	106	94	69	31	1	839	2	841
Portable .. ..	7	1	11	..	1	..	..	20	..	20
Aircraft .. ..	..	..	..	..	..	..	..	..	..	..
Special .. ..	3	10	..	..	4	..	..	17	..	17
<b>Total Licences Issued</b>	<b>122,792</b>	<b>137,343</b>	<b>24,207</b>	<b>30,335</b>	<b>9,164</b>	<b>8,269</b>	<b>26</b>	<b>332,136</b>	<b>50</b>	<b>332,186</b>

(a) In addition there are nine stations operated by the National Broadcasting Service. (b) In addition to the licensed stations two are operated by the Postmaster-General's Department, viz.:—Wave Hill (N.T.) and Camooweal (Q.).

#### WIRELESS LICENCES, 1931-32.

Station Licence.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Aust.	Papua and New Guinea	Grand Total.
Coast .. ..	2	1	6	1	5	3	1	19	9	28
Ship .. ..	100	54	12	20	6	1	..	103	..	103
Land (b) .. ..	8	3	3	1	2	3	3	23	3	26
Broadcasting (a) ..	16	13	8	6	4	3	..	50	..	50
Broadcast listeners'	141,450	139,323	28,938	37,120	12,679	9,540	22	369,072	20	369,092
Experimental .. ..	295	269	160	93	67	27	..	851	6	857
Portable .. ..	9	1	7	..	1	..	5	23	..	23
Aircraft .. ..	..	..	..	..	..	..	..	..	..	..
Special .. ..	28	12	..	1	6	..	..	47	..	47
<b>Total Licences issued</b>	<b>141,818</b>	<b>139,676</b>	<b>29,074</b>	<b>37,242</b>	<b>12,770</b>	<b>9,577</b>	<b>31</b>	<b>370,188</b>	<b>38</b>	<b>370,226</b>

(a) In addition there are twelve stations operated by the National Broadcasting Service. (b) In addition to the licensed stations, two are operated by the Postmaster-General's Department, viz.:—Wave Hill (N.T.) and Camooweal (Q.).

(ii) *Broadcasting.* The National Broadcasting Service which is controlled by the Postmaster-General's Department now operates two stations in Sydney and Melbourne, and one each in the other capital cities. The licence fees paid by listeners provide the revenue of the National Service, the fee for each licence being 24s. per annum. The programmes, which during the previous three years were provided under contract by the Australian Broadcasting Company, have been supplied since 1st July, 1932, by the Australian Broadcasting Commission. This body which was constituted under the provisions of the Australian Broadcasting Commission Act, 1932, is composed of five members appointed by the Commonwealth Government. The Commission receives 12s. from each listener's licence fee, from which revenue it provides all programmes for the national stations.

A relay station commenced broadcasting at Newcastle (N.S.W.) on the 19th December, 1930. This was the first of a series of stations to be erected and operated in country districts by the National Broadcasting Service to ensure satisfactory broadcast reception in all the thickly populated parts of the Commonwealth. Additional stations have since commenced operations as follows:—4R.K. Rockhampton (Q.), 29th July, 1931; 2C.O. Corowa (N.S.W.), 16th December, 1931; and 5C.K. Crystal Brook (S.A.), 15th March, 1932.

The services of other broadcasting stations are conducted by private enterprise under licence from the Postmaster-General. Licences are granted on conditions which ensure satisfactory alternative programmes for listeners. The fee for a broadcasting station licence is £25 and the maximum period of a licence is three years. The licensees of these stations do not share in the listeners' licence fees, but rely for their income on revenue received from the broadcasting of advertisements and other publicity.

Simultaneous broadcasting in the various States has been a regular feature for some years. By means of telephone trunk lines and amplifying apparatus, items of national interest and programmes of special merit are distributed to the various stations of the National Broadcasting Service. In some cases they are relayed overseas by means of short wave stations or the Anglo-Australian radiotelephone service. Frequently, the licensed stations also are linked by telephone trunk lines for simultaneous broadcasts.

(iii) *Beam Wireless.* The Beam wireless stations provided for under the agreement between the Commonwealth Government and Amalgamated Wireless (Australasia) Ltd. were completed early in 1927, and a direct beam wireless service to England was established on 8th April, 1927. A similar service to Canada, United States, and Mexico was opened on 16th June, 1928. Satisfactory communication is maintained daily over a period of hours, and the services are being well patronized by the public. A comparison of the rates charged for "Beam" and Cable messages is given in § 4, Overseas Cable and Wireless Communication. Particulars of international traffic via "Beam" are given in para. (vi) (a) hereunder.

(iv) *International Wireless Telephone Service.* A wireless telephone service between England and Australia was opened on 30th April, 1930. The service is now available to most of the ordinary telephone subscribers of Europe and Australia. The fee for a conversation between Australia and England is £6 for a minimum of three minutes and £2 for each additional minute. The fee is slightly more for conversations to continental countries. Additional services have since been opened to the United States of America, New Zealand, Java, South America and to certain trans-atlantic liners whilst at sea, the fees per minute for conversations being £3, £1, £2, £3 and £2 8s. respectively. The rates to the United States of America and South America increase slightly for calls made to the western portions of these countries. The Australian telephone subscriber now has access to approximately 32,500,000 telephones, or 92 per cent. of the world's total. Since the first radio-telephone service was established in 1930, 2,383 calls have been completed satisfactorily, of which 1,714 were between Great Britain and Australia and 360 between Australia and New Zealand. During the year ended 30th June, 1932, 858 calls were completed, 541 originating in Australia and 317 in other countries. Of the total calls, 587 were between Great Britain and Australia and 146 between Australia and New Zealand. All of the remaining calls, with the exception of one from Java, were to and from European and American countries.



(v) *Radio Stations (Pacific Ocean).* Radio-telegraphic stations have been erected at Suva, Ocean Island, Tulagi, and Vila under the control of the High Commissioner of the Pacific, while the New Zealand Government has erected high-power stations at Awanui (Auckland), Awarua (Bluff), and Apia (Samoa), and low-power stations at Auckland, Chatham Islands, Raratonga (Cook Islands) and Wellington.

(vi) *Radiotelegraphic Traffic. (a) International.* The following statement shows particulars of international traffic "via Beam" to and from United Kingdom and other places during the year ended 30th June, 1931 :—

**RADIO TRAFFIC.—INTERNATIONAL, YEAR ENDED 30th JUNE, 1931.**

Class of Traffic.	Number of Words Transmitted.			Number of Words Received.		
	United Kingdom.	Other Places.	Total.	United Kingdom.	Other Places.	Total.
Ordinary .. ..	757,346	369,704	1,127,050	507,619	124,467	632,086
Deferred .. ..	495,409	229,123	724,532	376,909	84,106	461,015
Government ..	67,199	13,209	80,408	60,580	6,560	67,140
Press (including deferred press) ..	306,337	17,114	323,451	830,829	13,394	844,223
Daily letter and week-end telegrams (a) ..	3,167,949	796,775	3,964,724	2,004,202	248,571	2,252,773
<b>Total .. ..</b>	<b>4,794,240</b>	<b>1,425,925</b>	<b>6,220,165</b>	<b>3,780,139</b>	<b>477,098</b>	<b>4,257,237</b>

(a) Includes Christmas and New Year Greeting telegrams.

(b) *Coast Stations.* Particulars of the traffic handled by the several coast stations during the year 1930-31 are as follows :—

**RADIO TRAFFIC.—COAST STATIONS, 1930-31.**

State or Territory.	Particulars.				
	Total, Paying Words.	Messages.			
		Paying.	Service.	Weather.	Total.
	No.	No.	No.	No.	No.
New South Wales .. ..	1,050,518	59,005	570	4,492	64,067
Victoria .. ..	108,953	9,319	30	1,077	10,426
Queensland .. ..	304,109	20,247	1,258	5,481	26,986
South Australia .. ..	53,428	4,597	204	807	5,608
Western Australia .. ..	380,288	13,287	237	2,878	16,402
Tasmania .. ..	147,760	9,452	848	1,161	11,461
Northern Territory ..	38,907	1,912	431	2,015	4,358
<b>Australia .. ..</b>	<b>2,083,963</b>	<b>117,819</b>	<b>3,578</b>	<b>17,911</b>	<b>139,308</b>
<b>Papua .. ..</b>	<b>202,510</b>	<b>12,113</b>	<b>731</b>	<b>1,157</b>	<b>14,001</b>
<b>Grand Total .. .</b>	<b>2,286,473</b>	<b>129,932</b>	<b>4,309</b>	<b>19,068</b>	<b>153,309</b>

(c) *Island Stations.* Particulars of the island radio traffic dealt with during the year 1930-31 are given hereunder:—

## RADIO TRAFFIC.—ISLAND STATIONS, 1930-31.

Particulars.	To Australia.	From Australia.	Inter- Island.	Ship.	Service.	Total.
Messages .. ..	15,067	10,076	18,376	1,767	..	45,286
Words .. ..	274,564	165,807	242,396	22,613	..	705,380

(vii) *Proficiency Certificates.* Proficiency certificates for commercial wireless operators are issued by the Minister to individuals who pass the specified tests. Limited certificates in radiotelegraphy and radiotelephony, amateur operators' certificates and watchers' certificates are, in addition, issued to successful candidates at the prescribed examinations.

Every station, in respect of which a licence is issued, must be operated by a person holding a certificate of proficiency.

Certificates issued under the International Radiotelegraph Convention of London (1912) ceased to be valid on 31st December, 1929, after which date it became necessary for certificate holders to exchange their certificates for equivalent certificates issued under the provisions of the Washington Convention (1927). To 30th June, 1932, 291 first class and 408 second class certificates had been issued under the new conditions.

At 30th June, 1932, 4 limited certificates in radiotelegraphy, 70 limited certificates in radiotelephony, and 930 amateur proficiency certificates, in addition to 114 watchers' certificates, had been issued.

## CHAPTER VIII.

### PUBLIC FINANCE.

#### A. GENERAL.

In previous issues of the Official Year Book the plan was adopted of including in a single Chapter under the general heading of "Finance" the more important particulars available in connexion therewith. A departure has been made in this volume by dividing the subject into separate Chapters with the two broad headings of "Public Finance" and "Private Finance". While the financial transactions of Local Government Bodies and certain statutory Governmental Bodies to a certain extent come within the category of Public Finance, for the purpose of convenience these have been included in a separate Chapter.

The following subdivision has been adopted in the present Chapter :—

- Commonwealth Finance, including currency and coinage ;
- State Finance ; and
- Commonwealth and State Finance.

The last-mentioned subdivision is necessary owing to the close inter-relation between the financial activities of the Commonwealth and the States. This has become increasingly important during recent years, particularly since the passing of the *Financial Agreement Act 1928*.

Certain banking activities are conducted by both Commonwealth and State Governments, but as the services provided are essentially connected with the banking system of the Commonwealth they have been included in the section of the Private Finance Chapter relating to Banking. An exception has been made in the case of the Commonwealth Bank Note Issue Department, information concerning which is given in sub-section "Currency and Coinage" of the present Chapter.

#### B. COMMONWEALTH FINANCE.

##### § 1. General.

1. *Financial Provisions of the Constitution.*—The main provisions of the Constitution relating to the initiation and development of the financial system of the Commonwealth are contained in Chapter IV., "Finance and Trade," being sections 81 to 105 of the Constitution Act. Two other sections which have a most important bearing on questions of Commonwealth finance are sections 69 and 51.

Section 69 provides for the transfer to the Commonwealth from the States of certain specified departments, while section 51, in outlining the powers of the Federal Parliament, implies the transfer or creation of various other departments. Section 87 deals with the financial relations between the Commonwealth and the States. These matters have been treated in some detail in previous issues of the Official Year Book up to and including No. 12, and further reference to them will not be made here.

The Commonwealth Treasury issues annually a document entitled "The Treasurer's Statement of Receipts and Expenditure during the year ended 30th June," with which is incorporated the report of the Commonwealth Auditor-General for the year. This series of annual statements is the principal authority for the majority of the tables given herein.

2. Accounts of Commonwealth Government.—(i) *General.* The Commonwealth Government, like the State Governments, bases its accounts mainly upon three funds, the Consolidated Revenue Fund, the Trust Fund, and the Loan Fund. The last mentioned fund came into existence in the financial year 1911-12, but on the outbreak of war it became so important that it was treated in two parts—a General Loan Fund mainly for purposes of Public Works, and a War Loan Fund for purely military purposes. From the year 1923-24 inclusive, the loan expenditure on War Service Homes was debited against works loan expenditure. Previously such expenditure had been a charge on War Loans. Since the year mentioned, the transactions of the War Loan Fund consisted mainly of credits arising from repayments of expenditure during previous years.

(ii) *Revenue.* The following table shows particulars of Commonwealth Consolidated Revenue for the years 1926-27 to 1930-31 :—

## COMMONWEALTH REVENUE, CONSOLIDATED REVENUE FUND.

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
<b>PART I.—DEPARTMENTS AND SERVICES OTHER THAN BUSINESS UNDERTAKINGS—</b>	£	£	£	£	£
Taxation .. .. .	58,994,809	56,637,858	56,303,489	58,187,775	50,420,106
Other .. .. .	4,373,404	4,194,603	5,116,281	4,860,200	5,754,585
Total, Part I. .. .	63,368,213	60,832,461	61,419,770	63,047,975	56,174,691
<b>PART II.—BUSINESS UNDERTAKINGS—</b>					
Postmaster-General's Department (a) .. .	11,648,638	12,349,422	12,848,400	13,590,607	12,875,800
Railways .. .. .	477,734	603,162	591,016	418,037	309,237
Total, Part II. .. .	12,126,372	12,952,584	13,439,416	14,008,644	13,185,037
<b>PART III.—TERRITORIES</b> .. .	47,175	23,182	35,613	86,771	207,191
<b>PART IV.—PAYMENTS TO OR FOR STATES—(b)</b>					
Interest adjustment on States Loans (paid to General Revenue) .. .	2,622	..	..	..	..
<b>Total (b) .. .. .</b>	<b>75,544,382</b>	<b>73,808,227</b>	<b>74,894,799</b>	<b>77,143,390</b>	<b>69,566,919</b>

(a) Includes certain pension contributions and repayments, and differs on that account from the figures given on page 288.

(b) Excludes Interest on States Debts (payable by the States).

(iii) *Expenditure.* Particulars of Commonwealth expenditure from Consolidated Revenue Fund for the past five years are given in the subjoined table. Details of the expenditure from Loan Fund are given in a separate section later.

## COMMONWEALTH EXPENDITURE, CONSOLIDATED REVENUE FUND.

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
<b>PART I.—DEPARTMENTS AND SERVICES OTHER THAN BUSINESS UNDERTAKINGS—</b>	£	£	£	£	£
War and Repatriation .. .. .	29,309,083	29,006,212	30,097,751	30,099,806	29,506,218
Other .. .. .	20,836,865	25,243,459	21,801,326	22,205,028	22,742,784
<b>Total, Part I.</b> .. .. .	<b>50,145,948</b>	<b>54,249,671</b>	<b>51,899,077</b>	<b>52,304,834</b>	<b>52,249,002</b>
<b>PART II.—BUSINESS UNDERTAKINGS—</b>					
Postmaster-General's Department (a) .. .. .	11,285,899	12,393,850	12,690,072	13,025,358	12,994,870
Railways .. .. .	902,806	996,768	1,087,560	1,109,405	1,056,806
<b>Total, Part II.</b> .. .. .	<b>12,188,705</b>	<b>13,390,618</b>	<b>13,777,632</b>	<b>14,134,763</b>	<b>14,051,676</b>
<b>PART III.—TERRITORIES</b> .. .. .	<b>411,220</b>	<b>532,386</b>	<b>540,427</b>	<b>685,452</b>	<b>911,244</b>
<b>PART IV.—PAYMENTS TO OR FOR STATES—(b)</b>					
Interest adjustment on States Loans (paid from General Revenue) .. .. .	..	..	..	..	I
Other than Interest on States Debts .. .. .	10,262,912	11,085,789	11,036,638	11,489,344	(c)13,112,615
<b>Total (b)</b> .. .. .	<b>73,008,785</b>	<b>79,258,464</b>	<b>77,253,774</b>	<b>78,614,393</b>	<b>(c)80,324,538</b>

(a) Includes New Works and differs in some cases on that account from the figures given on page 294.  
 (b) Excludes Interest on States Debts recoverable from States. (c) Excludes Interest, etc., paid on behalf of New South Wales, and not recovered at 30th June, 1931.

The receipts and expenditure on account of the Balance of "Interest on States' Debts" payable by the States to the Commonwealth under the "Financial Agreement Act" have been excluded from the foregoing and subsequent tables.

(iv) *Surplus Revenue.* Until the end of 1906-7, the balance of the Consolidated Revenue Fund was paid to the States. From 1907-8, until the abolition of the book-keeping provisions of the Constitution, the States received only three-fourths of the net Customs and Excise Revenue, and the balance of the Consolidated Revenue Fund was transferred to the Invalid and Old-age Pensions Trust Account and the Naval Defence Trust Account to provide for expenditure in subsequent years. A statement of surpluses and deficiencies for the past five years is appended hereto.

## COMMONWEALTH SURPLUS REVENUE.

Year.	Surplus.	Deficiency.	Accumulated Surplus at end of Year.	Accumulated Deficit at end of Year.
	£	£.	£	£
1926-27 .. .. .	2,535,597	..	2,821,494	..
1927-28 .. .. .	..	5,450,237	..	2,628,743
1928-29 .. .. .	..	2,358,975	..	4,987,718
1929-30 .. .. .	..	1,471,003	..	6,458,721
1930-31 .. .. .	..	(a) 10,757,619	..	17,216,340

(a) Excludes Interest, etc., paid on behalf of New South Wales and not recovered at 30th June, 1931.

The following payments amounting to £2,820,000 were made out of the surplus of £2,821,494 available at 30th June, 1927, and brought to account as expenditure during 1927-28:—Naval Construction and Defence Reserve, £2,250,000; Science and Industry Investigation, £250,000; Civil Aviation, £200,000; Purchase of Radium, £100,000; and Geophysical Survey of Australia, £20,000. The result of the ordinary transactions of the year 1927-28, omitting these special appropriations, was therefore a deficit of £2,630,237.

## § 2. Consolidated Revenue Fund.

### Division I.—Nature of Fund.

The provisions made for the formation of a Commonwealth Consolidated Revenue Fund, and the means to be adopted for operating on the fund, are contained in sections 81, 82, and 83 of the Constitution.

### Division II.—Revenue.

1. **General.**—The following table furnishes details of the revenue from each source and the amount per head of population under each of the three main headings during the years 1926–27 to 1930–31:—

#### COMMONWEALTH CONSOLIDATED REVENUE—SOURCES.

Source.	1926–27.	1927–28.	1928–29.	1929–30.	1930–31.
	£	£	£	£	£
Taxation (a) .. .. .	58,994,809	56,637,858	56,303,489	58,187,775	50,420,106
Per head of population (d) ..	£9 13 2	£9 1 10	£8 17 10	£9 1 6	£7 15 10
Business Undertakings (a) .. .	12,084,553	12,907,304	13,404,412	13,969,124	13,148,341
Per head of population (d) ..	£1 19 7	£2 1 5	£2 2 4	£2 3 7	£2 0 7
Other Revenue—					
Interest, Discount, etc. (c) ..	2,450,842	2,490,978	3,516,051	3,456,614	3,055,630
Coinage .. .. .	373,071	203,252	92,898	41,070	141,846
Defence .. .. .	152,494	132,877	117,614	103,351	79,005
Quarantine .. .. .	40,451	31,547	26,284	28,360	20,814
Territories (b) .. .. .	34,385	23,182	35,613	86,771	207,191
Patents, Trade Marks, etc. ..	41,594	44,258	44,917	58,300	54,429
Marine .. .. .	216,781	212,490	210,162	201,210	196,501
Pension Contributions .. .. .	51,575	55,439	44,291	48,924	43,932
Net Profit on Australian Note Issue	852,357	846,274	694,642	703,669	449,506
Bankruptcy .. .. .	..	..	15,695	32,086	44,395
Ex-enemy properties .. .. .	..	..	..	..	1,500,000
Export charges .. .. .	51,902	51,953	68,959	74,034	80,785
Miscellaneous .. .. .	199,568	170,815	319,772	152,102	124,438
Total .. .. .	4,465,020	4,263,065	5,186,898	4,986,491	5,998,472
Per head of population (d) ..	£0 14 7	£0 13 8	£0 16 4	£0 15 7	£0 18 6
Grand Total (c) .. .. .	75,544,382	73,808,227	74,894,799	77,143,390	69,566,919
Per head of population (d) ..	£12 7 4	£11 16 11	£11 16 6	£12 0 8	£10 14 11

(a) For details, see succeeding pages. (b) Exclusive of Railways and other items which appear elsewhere under their appropriate headings. (c) Excludes Interest on States' Debts payable by States. (d) Based on mean population of each financial year.

2. **Taxation.**—(i) *Total Collections.* (a) *Amount.* Collections under each heading for the years 1926–27 to 1930–31 are given below.

#### TAXATION—TOTAL COLLECTIONS.

Heading of Taxation.	1926–27.	1927–28.	1928–29.	1929–30.	1930–31.
	£	£	£	£	£
Customs .. .. .	31,832,600	29,848,379	29,502,755	30,157,040	18,224,227
Excise .. .. .	11,719,878	11,598,351	11,555,816	11,617,351	10,070,846
Sales Tax .. .. .	..	..	..	..	3,472,854
Land Tax .. .. .	2,615,900	3,027,206	2,988,885	2,840,078	2,758,598
Income Tax .. .. .	11,126,278	10,165,175	9,841,496	11,120,029	13,604,374
Income Tax, Federal Officers' Salaries	..	..	..	..	34,475
Estate Duties .. .. .	1,362,351	1,752,118	2,080,149	2,122,478	2,068,865
Entertainments Tax .. .. .	366,159	358,865	358,697	316,121	186,661
War Time Profits Tax .. .. .	Dr. 28,357	Dr. 112,236	Dr. 24,309	14,678	Dr. 794
Total Taxation .. .. .	58,994,809	56,637,858	56,303,489	58,187,775	50,420,106
Percentage on Total Revenue ..	78.1	76.7	75.2	75.4	72.5

(b) *Percentages of Total Collections.* The following table shows the percentage of the collections under each class of taxation on the total collections for the last five years :—

**TAXATION—PERCENTAGES ON TOTAL COLLECTIONS.**

Heading of Taxation.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	%	%	%	%	%
Customs .. .. .	53.9	52.7	52.4	51.8	36.1
Excise .. .. .	19.9	20.5	20.5	20.0	20.0
Sales Tax .. .. .	..	..	..	..	6.9
Land Tax .. .. .	4.4	5.3	5.3	4.9	5.5
Income Tax .. .. .	18.9	18.0	17.5	19.1	27.0
Income Tax, Federal Officers' Salaries .. .. .	..	..	..	..	0.7
Estate Duties .. .. .	2.3	3.1	3.7	3.7	4.1
Entertainments Tax .. .. .	0.6	0.6	0.6	0.5	0.4
War Time Profits Tax .. .. .	..	0.2	..	..	..
Total .. .. .	100.0	100.0	100.0	100.0	100.0

(ii) *Customs Revenue. (a) Classified.* Particulars for the five years 1926-27 to 1930-31 are furnished in the following table :—

**COMMONWEALTH CUSTOMS REVENUE.—CLASSIFICATION.**

Classes.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Stimulants .. .. .	2,908,982	2,820,547	2,658,071	2,598,593	1,045,601
Narcotics .. .. .	2,201,550	2,374,659	2,412,859	3,069,426	2,875,840
Sugar .. .. .	20,112	16,797	11,654	11,029	674
Agricultural products	1,547,711	1,403,054	1,262,065	1,291,643	1,000,437
Apparel and textiles ..	6,233,206	5,802,848	5,362,694	5,154,257	2,069,610
Metals and machinery	5,654,629	5,284,993	4,949,249	4,758,415	1,594,769
Oils, paints, etc. .. .	2,173,367	2,594,879	3,092,522	4,137,016	3,945,960
Earthenware, etc. .. .	735,699	704,207	710,052	713,599	360,889
Drugs and chemicals ..	561,530	520,424	545,958	539,275	358,334
Wood, wicker and cane	1,384,469	1,594,825	1,583,145	1,802,580	379,328
Jewellery, etc. .. .	951,691	845,099	870,130	1,028,151	557,262
Leather, etc. .. .	1,577,765	1,124,091	743,948	526,056	256,498
Paper and stationery	751,254	760,448	762,357	878,800	732,888
Vehicles .. .. .	3,340,556	2,534,738	3,193,211	2,315,739	377,688
Musical instruments ..	520,482	364,326	267,824	138,329	13,855
Miscellaneous articles	1,192,059	1,040,080	998,785	1,116,340	704,833
Primage .. .. .	..	..	..	..	1,812,624
Other receipts .. .. .	77,538	62,364	78,231	77,792	137,137
Total Customs ..	31,832,600	29,848,379	29,502,755	30,157,040	18,224,227
Percentage on total value of imports of merchandise ..	19.4	20.3	20.6	23.1	30.1 (a)

(a) Based on the Sterling Value of Imports. The corresponding percentage on the Australian Currency Value of Imports was 26.5 per cent.

(b) *States.* The following table shows the Customs Duties collected in each State during the past five years :—

## COMMONWEALTH CUSTOMS DUTIES—COLLECTIONS, EACH STATE.

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
New South Wales (a)	14,145,207	14,050,717	13,735,305	14,028,700	8,747,066
Victoria .. ..	9,920,970	8,664,279	8,776,892	8,877,033	5,554,343
Queensland ..	2,788,486	2,508,553	2,581,591	2,816,474	1,669,839
South Australia (b) ..	3,021,030	2,629,059	2,228,540	2,182,794	1,060,942
Western Australia ..	1,650,989	1,705,063	1,867,569	1,892,050	1,019,024
Tasmania .. ..	305,918	290,708	312,858	359,989	173,013
<b>Total .. ..</b>	<b>31,832,600</b>	<b>29,848,379</b>	<b>29,502,755</b>	<b>30,157,040</b>	<b>18,224,227</b>

(a) Includes Federal Capital Territory.

(b) Includes Northern Territory.

(iii) *Excise Revenue.* (a) *Classified.* Particulars concerning the amount of excise collected under each head during each of the years ending 30th June, 1927 to 1931, are given hereunder :—

## COMMONWEALTH EXCISE REVENUE.—CLASSIFICATION.

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Beer .. ..	6,103,004	6,155,661	6,190,725	6,105,443	5,200,361
Spirits .. ..	2,061,573	1,881,040	1,756,957	1,856,951	1,248,700
Concentrated Grape Must .. ..	..	..	..	..	766
Tobacco .. ..	3,533,984	3,544,602	3,597,061	3,573,198	3,283,545
Petrol .. ..	..	..	..	70,065	315,582
Starch .. ..	9,647	4,737	134	..	..
Licences .. ..	11,670	12,311	10,939	11,574	11,460
Playing Cards ..	..	..	..	120	10,432
<b>Total Excise ..</b>	<b>11,719,878</b>	<b>11,598,351</b>	<b>11,555,816</b>	<b>11,617,351</b>	<b>10,070,846</b>

(b) *States.* Excise collections in each State for the past five years were as follow :—

## COMMONWEALTH EXCISE REVENUE.—COLLECTIONS, EACH STATE.

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
New South Wales ..	5,700,472	5,784,633	5,887,511	5,775,428	4,753,246
Victoria .. ..	3,024,945	2,936,982	2,907,806	3,051,581	2,986,267
Queensland .. ..	1,097,215	1,064,242	1,088,231	1,080,622	989,918
South Australia ..	1,136,809	989,022	843,303	819,269	569,938
Western Australia ..	665,978	713,542	715,205	763,365	651,668
Tasmania .. ..	94,459	109,930	113,760	127,086	119,809
<b>Total .. ..</b>	<b>11,719,878</b>	<b>11,598,351</b>	<b>11,555,816</b>	<b>11,617,351</b>	<b>10,070,846</b>



(iv) *Other Taxation.* (a) *Collections paid to Revenue.* The Commonwealth Government imposes other taxes as follows:—Land Tax, Estate Duty, Income Tax, War Time Profits Tax, Entertainments Tax and Sales Tax. The following statement shows particulars of the collections on account of each of the above taxes during the last ten years. Owing to certain accounting technicalities the figures herein differ slightly from those shown in subsequent sub-sections, wherein further particulars of the several taxes are given.

## OTHER TAXATION COLLECTIONS, AUSTRALIA.

Year.	Land Tax.	Estate Duty.	Income Tax.	War-time Profits Tax.	Entertainments Tax.	Sales Tax.
	£	£	£	£	£	£
1921-22 ..	2,284,040	991,378	16,790,682	1,306,708	675,675	..
1922-23 ..	2,018,876	1,172,935	12,904,518	286,757	629,802	..
1923-24 ..	2,030,127	1,320,911	11,057,555	70,646	622,460	..
1924-25 ..	2,519,711	1,381,051	11,136,344	Dr. 74,783	680,586	..
1925-26 ..	2,521,910	1,411,336	10,858,046	Dr. 77,491	460,326	..
1926-27 ..	2,615,900	1,362,351	11,126,278	Dr. 28,357	366,159	..
1927-28 ..	3,027,206	1,752,118	10,165,175	Dr. 112,236	358,865	..
1928-29 ..	2,988,885	2,080,149	9,841,496	Dr. 24,309	358,697	..
1929-30 ..	2,840,078	2,122,478	11,120,029	14,678	316,121	..
1930-31 ..	2,758,598	2,068,865	13,604,374	Dr. 794	186,661	3,472,854

“Other Taxation” is assessed and collected in general by the Commissioner of Taxation. The organization comprises an office in each State, assessing tax-payers who are concerned with that State only, and a Central office assessing tax-payers whose interests are in more than one State. Taxes, however, may be paid to any office, so that the sums actually received by any office do not correspond to the assessments made by that office and frequently differ by very large amounts. Consequently the actual receipts by any State office, e.g., of income tax by the Queensland office, may include Central Office or New South Wales assessments, and, therefore, may not be a proper measure of income tax paid on account of income derived from Queensland.

The actual receipts by the various offices are the figures of necessity used by the Treasury for accounting purposes, and may be called the “Treasury” figures. These figures have been used in previous issues of the Year Book. In order to give a more significant picture of the taxation in States, these figures have been discarded, and in their place are given figures supplied by the Commissioner of Taxation, which refer strictly to the assessments made on account of the State specified. The totals of these figures do not quite agree with the total Treasury figures owing to certain technicalities of accounting, but the difference is small. The Taxation Office figures give a fair comparison between States, e.g., in taxation paid per head, but do not give the absolute measure of taxation, because of the Central Office collections, which include taxation on account of all States. These Central Office collections have not been analysed and allocated to the States. In the absence of precise information, it may be assumed as a fair rough approximation that Central Office collections may be divided among States in proportion to State office collections. It is probable, however, that a somewhat larger share is derived from the more populous States, New South Wales and Victoria.

(b) *Land Tax.* Commonwealth Land Tax was first imposed in 1910-11, when the rate of tax was 1 1-30,000d. on the first £1 increasing by 1-30,000d. for every additional £1 up to £75,000 where the increment of tax was 6d. and the average rate 3½d. The increment of tax of 6d. operated only on the excess of £75,000. The rate for an absentee is always 1d. more than for a resident, and the first £5,000 of value for an absentee bore a flat rate of 1d. per £1. In 1914-15, the rate of tax was amended by making the tax on £1, 1 1-18,750d. increasing by 1-18,750d. for each additional £1 reaching an increment of tax of 9d. at £75,000 with an average over the whole of such

field of 5d. per £1. The increment of tax applied to the excess over £75,000. Absentees correspondingly paid 1d. per £1 more than for a resident. A 20 per cent. increase which was imposed in 1918-19 was withdrawn in 1922-23 and a further reduction of 10 per cent. was granted in 1927-28. No further alteration has been made in the rates up to 1930-31.

Land Tax receipts in each State and Central Office for the years 1926-27 to 1930-31 were as follows. The particulars shown differ slightly from those in a preceding sub-section :—

## LAND TAX RECEIPTS.

State, etc.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Central Office .. ..	778,824	1,008,913	995,745	983,380	942,467
New South Wales .. ..	880,111	1,001,973	1,004,751	940,107	919,494
Victoria .. ..	581,536	601,989	600,309	585,720	564,235
Queensland .. ..	60,881	64,757	64,113	46,079	62,380
South Australia .. ..	195,176	221,745	179,623	163,982	137,510
Western Australia .. ..	67,286	70,136	92,377	81,510	76,278
Tasmania .. ..	41,086	36,910	36,379	37,254	33,111
<b>Total .. ..</b>	<b>2,604,900</b>	<b>3,006,423</b>	<b>2,973,297</b>	<b>2,838,032</b>	<b>2,735,475</b>

(c) *Estate Duty.* The Commonwealth Estate Duty Act, 1914, and Estate Duty Assessment Acts impose a duty on the estates of deceased persons where the net value of the estate exceeds £1,000. The rate of tax where the value of the estate for duty does not exceed £2,000 is £1, increasing by one-fifth of £1 for each £1,000 or part thereof in excess of £2,000, the percentage being limited to £15. Where the estate passes to a widow, children or grand-children the duty is payable at two-thirds of the ordinary rate.

Particulars of the collections in each State and Central Office for the past five years are appended. Owing to certain accounting technicalities, these figures differ slightly from the Treasury returns given in a previous sub-section.

## ESTATE DUTY RECEIPTS.

State, etc.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Central Office .. ..	642,089	838,296	1,234,477	1,067,046	1,227,784
New South Wales .. ..	262,308	352,148	351,676	451,528	383,212
Victoria .. ..	296,120	310,459	295,448	395,502	270,632
Queensland .. ..	58,157	58,462	66,967	86,484	81,181
South Australia .. ..	69,535	114,902	69,850	69,023	45,455
Western Australia .. ..	12,574	52,513	43,927	35,325	30,031
Tasmania .. ..	22,144	19,998	17,275	9,432	16,465
Northern Territory .. ..	..	60	..	63	18
<b>Total .. ..</b>	<b>1,362,927</b>	<b>1,746,838</b>	<b>2,079,620</b>	<b>2,114,403</b>	<b>2,054,778</b>

The average dutiable value of estates, and the average amount of duty paid in 1930-31, were £6,209 and £282 respectively.

(d) *Income Tax.* The first Commonwealth Income Tax was levied during the year 1915-16. The legislation on the subject comprises the Income Tax Assessment Act No. 34 of 1915 and subsequent amending Acts. Full details as to the original Acts are given in Official Year Book No. 9. The following statement gives an index of the rate of tax up to and including the year 1930-31. The table gives an index of the rate of tax on the taxable amount of income, and does not take into account the variations in assessment due to changes in exemption and abatements and in the methods of assessment.

## INCOME TAX—INDEX OF RATE.

Years in which Rates were Amended.	Index of Rate of Tax.	Years in which Rates were Amended.	Index of Rate of Tax.
1915-16 .. ..	1,000	1924-25 .. ..	1,380
1916-17 .. ..	1,250	1925-26 .. ..	1,200
1918-19 .. ..	1,625	1927-28 .. ..	1,080
1920-21 .. ..	1,706	1929-30 .. ..	1,215 (a)
1922-23 .. ..	1,535	1930-31 .. ..	1,352 (a) (b)

(a) Estimated. (b) In addition, a super tax of 1s. 6d. in the £1 was imposed on all taxable income from property.

For the years 1929-30 and 1930-31 the rates of tax were graduated according to the amount of taxable income. In 1929-30 for example, no increase was made on taxable incomes up to £200, while increases of 10 per cent., 15 per cent., and 20 per cent. were imposed on higher taxable income groups.

A consolidated scale was struck for the revenue year 1931-32, designed to incorporate all existing rates to 1930-31, and increase the previous rates by 5 per cent. At the same time the super tax on property income was increased to 2s. in the £1.

The following table shows the receipts from Income Tax in each State and Central Office for the past five years. As previously mentioned, the totals differ from figures given in an earlier sub-section of this Chapter.

## INCOME TAX RECEIPTS.

State, etc.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Central Office .. ..	3,126,830	3,089,694	3,195,204	3,729,150	5,535,521
New South Wales .. ..	3,751,117	2,995,952	2,961,925	3,155,593	3,169,627
Victoria .. ..	2,285,643	2,406,399	1,924,543	2,225,040	2,656,205
Queensland .. ..	898,199	676,530	688,178	820,123	928,142
South Australia .. ..	646,561	517,912	588,127	512,076	607,411
Western Australia .. ..	345,354	306,109	317,445	466,016	467,223
Tasmania .. ..	105,926	111,996	121,969	136,818	189,588
Northern Territory .. ..	1,643	1,649	1,554	2,191	3,206
Total .. ..	11,161,273	10,106,241	9,798,945	11,046,917	13,556,923

In the above table differences in the rapidity of assessment and collection will affect the comparison from year to year. With this proviso, the State collections (excluding Central Office collections) relative to population at the beginning of the year specified may be given.

## INCOME TAX RECEIPTS PER HEAD OF POPULATION.

(EXCLUDING CENTRAL OFFICE COLLECTIONS.)

State, etc.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	s. d.	s. d.	s. d.	s. d.	s. d.
New South Wales .. ..	32 5	25 3	24 5	25 8	25 6
Victoria .. ..	27 0	27 11	22 0	25 2	29 10
Queensland .. ..	20 5	15 2	15 1	17 8	19 8
South Australia .. ..	23 2	18 2	20 4	17 8	20 11
Western Australia .. ..	18 5	15 11	15 11	22 8	22 4
Tasmania .. ..	10 1	10 9	11 7	12 11	17 7
Six States .. ..	26 8	22 10	21 4	23 0	25 0

Agreements made in 1923, between the Commonwealth and all the States except Western Australia, provide that the Commonwealth tax and the State tax shall be collected by an officer acting for the Commonwealth and State, the Commonwealth appointing the State Commissioner as Deputy Commissioner for the State under the Income Tax Assessment Act of the Commonwealth. Provisions are included relating to the transfer of officers, the accounting of receipts, and the division of expenses. A joint form of income tax return is to be used in cases where the income is derived in one State only. The respective agreements are to remain in operation for a period of five years, and thereafter until the expiration of not less than six calendar months, upon notice in writing by either party to the agreement.

In Western Australia an arrangement was made previously by which the Commonwealth undertakes the collection of the State income tax.

(e) *Entertainments Tax.* The tax on admission to entertainments operated from 1st January, 1917, when the rate imposed was 1d. for admissions exceeding 6d. but not exceeding 1s. For admissions exceeding 1s. the rate was 1d. for the first 6d. and  $\frac{1}{2}$ d. for each 6d. or part in excess of 1s. On 1st December, 1919, the rate of tax was amended to  $\frac{1}{2}$ d. on admissions of 6d., and 1d. where admission exceeded 6d. but did not exceed 1s.; otherwise the original rate operated. A further amendment, operative from 2nd October, 1922, provided for the payment of 1d. for admissions of 1s., but did not affect the rate on admissions exceeding 1s. The rates at present in operation, which became effective on 15th October, 1925, provide for the payment of a tax of 2 $\frac{1}{2}$ d. on admissions of 2s. 6d. with an additional  $\frac{1}{2}$ d. for each 6d. or part of 6d. by which the payments exceed 2s. 6d.

The amount of Entertainments Tax received in each State for the past five years is given below.

## ENTERTAINMENTS TAX RECEIPTS.

State, etc.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
New South Wales (a) ..	159,197	157,105	159,288	132,392	76,597
Victoria .. .. .	123,985	114,401	119,311	100,951	63,541
Queensland .. ..	34,480	32,690	32,711	35,598	23,887
South Australia (b) ..	25,760	22,708	16,295	12,231	4,991
Western Australia ..	16,993	21,755	24,935	25,550	15,068
Tasmania .. .. .	3,531	4,582	3,304	4,093	1,810
Total .. .. .	363,946	353,241	355,844	310,815	185,894

(a) Includes Federal Capital Territory.

(b) Includes Northern Territory.

(f) *War Time Profits Tax.* This tax which came into force in September, 1917, provides for a tax on the amount by which the profits made in war time exceed the pre-war standard of profits. Further details regarding its application are given in Official Year Book No. 22, 1929. The net collections, after allowing for refunds, for the five years ended 30th June, 1931, are shown hereunder:—

## WAR TIME PROFITS TAX RECEIPTS.

State, etc.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Central Office .. ..	Dr. 35,029	Dr. 42,413	5,650	1,566	Dr. 12,659
New South Wales ..	53,432	Dr. 54,355	Dr. 28,464	3,707	16,043
Victoria .. .. .	17,877	10,033	Dr. 1,304	5,255	75
Queensland .. .. .	Dr. 34,927	Dr. 8,090	12,677	5,905	Dr. 1,077
South Australia ..	Dr. 10,617	Dr. 19,805	Dr. 17,446	Dr. 2,069	Dr. 3,331
Western Australia ..	Dr. 16,721	Dr. 2,327	..	183	..
Tasmania .. .. .	Dr. 6,955	Dr. 3,593	Dr. 320	Dr. 1,099	..
Total .. .. .	Dr. 32,940	Dr. 120,550	Dr. 29,207	13,448	Dr. 949

(g) *Sales Tax.* The Sales Tax was imposed in August, 1930, as part of the Budget proposals for the year 1930-31. The rate of tax, which was fixed at 2½ per cent., was expected to yield £6.5 millions (£5 millions for the ten remaining months of the financial year) on an estimated taxable field of sales amounting to £260 millions for the year. The actual field for ten months proved to be £138 millions—equivalent to £157 millions for a full year—and realized net collections of £3,471,837. The low total of taxable sales largely resulted from the volume of sales of exempted goods. The operation of the tax is controlled chiefly by a system of registration of taxpayers. All manufacturers and wholesale merchants who are the taxpayers under the Act in respect of goods sold in Australia must be registered with the Department.

The rate of tax was increased to 6 per cent. on taxable sales to operate during the year 1931-32.

Particulars of the net collections of Sales Tax and certain other details for each State for the ten months of 1930-31 are included in the statement following:—

**SALES TAX AND AMOUNT OF SALES, 1930-31.(a)**

State or Territory.	Gross Wholesale Sales.	Gross Taxable Sales.	Sales of Exempt Goods by Registered Persons.	Net Sales on which Tax was Payable.	Tax Collected.
	£'000.	£'000.	£'000.	£'000.	£
New South Wales .. ..	112,530	54,913	57,617	53,891	1,314,150
Victoria .. ..	104,120	48,044	56,076	45,116	1,131,305
Queensland .. ..	50,060	20,201	29,859	18,525	471,824
South Australia .. ..	24,214	11,253	12,961	10,696	265,539
Western Australia .. ..	18,690	8,377	10,313	7,765	216,266
Tasmania .. ..	6,566	2,998	3,568	2,744	71,804
Northern Territory .. ..	59	19	40	19	649
<b>Total .. ..</b>	<b>316,239</b>	<b>145,805</b>	<b>170,434</b>	<b>138,756</b>	<b>3,471,837</b>

(a) Ten months.

Of the total tax collections, £292,844 was collected by the Customs Department in respect of imported goods.

3. *Business Undertakings.*—(i) *Postal Revenue.* Particulars concerning this branch of revenue for each of the financial years from 1926-27 to 1930-31 are contained in the following table:—

**COMMONWEALTH POSTAL REVENUE.**

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Private boxes and bags ..	59,184	61,346	79,101	69,185	64,959
Commission—					
Money orders and postal notes .. ..	229,453	240,392	244,976	259,609	216,645
Telegraphs .. ..	1,488,156	1,422,179	1,447,256	1,390,012	1,152,918
Telephones .. ..	4,576,863	5,034,051	5,459,559	5,862,686	5,644,356
Postage .. ..	4,847,317	5,006,019	5,177,177	5,179,082	5,276,663
Radio receipts .. ..	35,815	45,030	22,177	166,847	155,672
Miscellaneous .. ..	370,031	495,125	383,150	623,666	327,891
<b>Total .. ..</b>	<b>11,606,819</b>	<b>12,304,142</b>	<b>12,813,396</b>	<b>13,551,087</b>	<b>12,839,104</b>

Further particulars of Postal Revenue are given in Chapter VII., Transport and Communication.

(ii) *Railway Revenue.* The Commonwealth Government is responsible for four lines—the Trans-Australian, the Central Australian, the North Australian and the Federal Capital Territory lines. The appended table shows the amounts paid into the credit of the Consolidated Revenue Fund on account of each of these railways for the past five years.

## COMMONWEALTH RAILWAY REVENUE.

Railway.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Trans-Australian ..	299,295	333,000	344,948	274,816	190,028
Central Australian ..	105,988	191,115	185,811	104,724	86,360
North Australian ..	62,202	68,844	50,259	31,291	28,986
Federal Capital Territory ..	10,249	10,203	9,998	7,206	3,863
Total .. ..	477,734	603,162	591,016	418,037	309,237

Further particulars are given in Chapter VII., part B, Railways.

4. **Other Sources of Revenue.**—The most important investments of the Commonwealth Government from which interest is derived are—Loans to States, General Trust Funds, Loans placed in London, Fixed Deposits with the Commonwealth and other Banks, and certain advances. In 1930-31 the total included interest on Loans to States for Soldier Land Settlement and for advances for Development and Migration and for miscellaneous purposes, payable by States; Interest on General Trust Fund Investments; Interest, Nauru Island Agreement and Interest from British Government on Development and Migration. As previously mentioned, the "Balance of Interest on States' Debts" payable by States under the Financial Agreement Act has not been included in the detailed statement.

## Division III.—Expenditure.

1. **Nature of Commonwealth Expenditure.**—The disbursements by the Commonwealth Government of the revenue collected by it fell naturally, under the "book-keeping" system, into three classes, viz. :—

- (a) Expenditure on transferred services.
- (b) Expenditure on new services.
- (c) Payment to States of surplus revenue.

Of these three, only the first two were actual expenditure, the last being merely a transfer, the actual expenditure being incurred by the States. In accordance with the provisions of the Constitution, the expenditure on transferred services was, under the "book-keeping" system, debited to the several States in respect of which such expenditure was incurred, while the expenditure on new services was distributed *per capita*. Surplus Commonwealth revenue was paid to the States monthly. Until the end of the year 1903-4, new works, etc., for transferred departments were treated as transferred expenditure, and were charged to the States on whose behalf the expenditure had been incurred. In subsequent years all such expenditure was regarded as expenditure on new services, and distributed amongst the States *per capita*. Under the arrangement, which superseded the "book-keeping" system, a specific subsidy of 25s. per head of population was made annually by the Commonwealth to the States, and there was no further debiting of expenditure to the several States. The States Grants Act (No. 4 of 1927) provided for the abolition of the *per capita* payments as from 30th June, 1927. From 1st July, 1928, the provisions of the temporary agreement between the Commonwealth and the several States under the *Financial Agreement Act* 1928 were operative, and on 1st July, 1929, the Commonwealth Government took over the debts of the States under this agreement which had been ratified by all Governments concerned. This agreement (except the temporary provisions) has been incorporated in Chapter I.

\* For an exposition of the "book-keeping system" see Commonwealth Year Book No. 6, page 780.

The *Financial Emergency Act* (No. 10, 1931) provided for a reduction of internal interest by 2½ per cent., and of 20 per cent. on salaries and wages of Government employees and on war pensions, and of 12½ per cent. on old-age pensions. More complete details regarding the steps taken to reduce expenditure and balance the budget are given in the Appendix.

2. Details of Expenditure from Consolidated Revenue.—(i) *General*. The following table gives details of the expenditure from Consolidated Revenue exclusive of the "Balance of Interest on States' Debts" (recoverable from the States) during the last five years. Particulars for each individual Department, as constituted at 30th June, 1931, are stated hereinafter.

Administrative changes involving the amalgamation of certain departments and the transfer of some services from one department to another were effected during 1931-32. These changes will be alluded to in the next volume.

#### COMMONWEALTH EXPENDITURE FROM CONSOLIDATED REVENUE.

Heads of Expenditure.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Cost of Departments .. .. .	32,215,254	34,720,926	34,897,077	36,779,707	37,631,261
Miscellaneous—					
New Works .. .. .	224,807	229,626	274,730	245,536	74,444
War Services .. .. .	29,309,083	29,006,212	30,097,751	30,099,806	29,506,218
Payments to or for the States .. .. .	8,262,912	9,085,789	9,036,638	9,489,344	11,112,615
Special Defence Provision .. .. .	996,729	4,215,911	947,578	..	..
Federal Aid Roads .. .. .	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
<b>Total (a) .. .. .</b>	<b>73,008,785</b>	<b>79,258,464</b>	<b>77,253,774</b>	<b>78,614,393</b>	<b>80,324,538</b>
Per head of population (b)	£11 19 2	£12 14 5	£12 4 0	£12 5 3	£12 8 2

(a) Excludes Balances paid into Trust Funds and Balance of Interest on States' Debts recoverable from States. (b) Based on mean population of each financial year.

The items included under the above general heads are referred to in some detail in the succeeding sub-sections.

(ii) *Cost of Departments*.—(a) *Governor-General*. Section 30 of the Constitution enacts that, until the Commonwealth Parliament otherwise provides, there shall be payable out of the Consolidated Revenue Fund for the salary of the Governor-General an annual sum of ten thousand pounds, and a proviso is made that the salary of the Governor-General shall not be altered during his continuance in office. The total expenditure in connexion with the Governor-General and establishment for the five years 1926-27 to 1930-31 is as follows:—

#### EXPENDITURE.—GOVERNOR-GENERAL AND ESTABLISHMENT.

Details.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Salary .. .. .	10,000	10,000	10,000	10,000	10,000
Governor-General's Establishment .. .. .	13,950	10,152	21,576	15,329	11,064
Contingencies (a) .. .. .	6,419	6,361	7,118	5,395	3,099
Interest .. .. .	853	853	853	853	832
<b>Total .. .. .</b>	<b>31,222</b>	<b>27,366</b>	<b>39,547</b>	<b>31,577</b>	<b>24,995</b>

(a) Represents official services outside the Governor-General's personal interests, and carried out mainly at the instance of the Government.

(b) *Parliament*. Under this head have been grouped all the items of expenditure connected with the parliamentary government of the Commonwealth for the last five years. Although the administration of the Electoral Act and the conduct of elections comes within the functions of the Department of Home Affairs, the expenditure in connexion therewith is fundamentally incurred on account of the parliamentary government system, and for that reason is included herein.

## EXPENDITURE.—COMMONWEALTH PARLIAMENT.

Details.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Salaries of Ministers .. ..	15,300	15,300	15,300	15,300	15,300
Allowances to Senators .. ..	35,635	35,251	35,541	35,746	35,504
Allowances to Members of House of Representatives .. ..	74,190	74,278	73,720	74,107	74,012
Officers, staff, contingencies, etc.	71,837	81,941	73,940	78,039	75,764
Repairs, maintenance, etc. ..	1,832	4,459	6,179	5,501	5,327
Printing .. ..	24,623	37,888	24,938	35,003	31,644
Travelling expenses of Members and others .. ..	20,897	28,074	26,725	26,699	25,006
Insurance .. ..	45	..	..	..	..
Electoral Office .. ..	87,007	88,226	86,410	90,051	92,182
Election expenses .. ..	107,051	875	118,831	106,932	1,717
Administration of Electoral Act	43,702	31,260	41,019	39,405	21,874
Miscellaneous .. ..	55,515	22,378	55,160	48,798	42,585
<b>Total .. ..</b>	<b>537,634</b>	<b>419,930</b>	<b>557,763</b>	<b>555,701</b>	<b>420,915</b>

In section 66 of the Constitution, provision is made for payment out of the Consolidated Revenue Fund of the Commonwealth, for the salaries of Ministers of State, of an annual sum which, until Parliament otherwise provides, shall not exceed £12,000. This was modified in 1915-16, when the Minister of the Navy was given separate Cabinet rank. Allowances to Senators and Members of the House of Representatives are also provided for in the Constitution, section 48 of which specifies that until Parliament otherwise provides, each such allowance shall consist of £400 a year reckoned from the day on which the member takes his seat. During the second session of the Parliament in 1907 an Act was passed raising the annual allowance from £400 to £600, such increase to date from 1st July, 1907. In 1920, the salaries of members of both Houses were further increased to £1,000 per annum. By the Income Tax Salaries Act of 1930, the salaries of Ministers or presiding officers in either House of Parliament were subjected to a tax of 15 per cent., Chairman of Committees or Leader of the Opposition in either House, 12½ per cent., and other Members of either House, 10 per cent. The salaries and allowances of members were reduced in July, 1931, by 22½ per cent., under the *Financial Emergency Act 1931*.

(c) *Prime Minister's Department.* This Department was created during the financial year 1911-12. In addition to the services indicated below, this Department administers the external Territories of New Guinea, Papua, Nauru, and Norfolk Island. For convenience, particulars of expenditure on account of these Territories are shown hereinafter under that heading. The expenditure for the last five years is shown in the following table:—

## EXPENDITURE.—PRIME MINISTER'S DEPARTMENT.(a)

Details.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Salaries, contingencies, and mis- cellaneous .. ..	238,033	164,755	153,373	160,409	240,803
Audit Office .. ..	36,512	34,877	36,817	36,871	34,984
Rent, repairs, etc. .. ..	7,201	30,202	19,539	14,458	6,982
Public Service Board's Office ..	52,628	55,946	54,864	52,851	49,877
High Commissioner's Office ..	63,220	80,820	66,133	60,684	56,777
Commissioner for Australia in United States of America ..	15,966	16,808	13,134	15,516	11,228
Interest and Sinking Fund ..	705,468	784,120	907,499	976,126	968,907
Mail Service, Pacific Islands ..	53,092	52,051	49,750	51,989	47,848
Secretariat, League of Nations ..	24,975	23,994	25,758	28,078	30,762
Scientific and Industrial Research	11,803	269,629	19,451	8,664	8,165
Oil Agreement Act .. ..	21,184	..	..	..	..
Pensions and Superannuation ..	5,038	6,072	5,434	6,178	5,398
<b>Total .. ..</b>	<b>1,235,120</b>	<b>1,519,274</b>	<b>1,351,752</b>	<b>1,411,824</b>	<b>1,461,731</b>

(a) Excluding Territories, see page 297.



(d) *Attorney-General's Department.* The extra expenditure connected with this Department of late years has been caused in a large measure by the extension of the Commonwealth Court of Conciliation and Arbitration, the creation of the Bankruptcy Administration, and increases in the items "Patents, Trade Marks, etc." and "Rent, Repairs, etc." Details for the five years 1926-27 to 1930-31 are furnished hereunder :—

## EXPENDITURE.—ATTORNEY-GENERAL'S DEPARTMENT.

Details.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Attorney-General's Office .. ..	26,801	17,337	24,390	19,691	19,709
Crown Solicitor's Office .. ..	24,465	28,626	29,392	27,983	27,144
Salaries of Justices of High Court .. ..	21,500	21,500	21,328	17,926	17,371
High Court expenses .. ..	14,994	13,511	15,218	15,441	15,609
Court of Conciliation and Arbitration .. ..	24,012	27,625	27,491	27,195	21,785
Public Service Arbitrator's Office .. ..	4,220	4,368	4,465	5,471	1,740
Rent, repairs, etc. .. ..	12,039	20,004	24,111	22,613	18,624
Patents, Trade Marks, etc. .. ..	48,119	52,671	51,477	56,301	54,136
Investigation Branch .. ..	10,189	10,769	10,951	11,896	12,175
Bankruptcy .. ..	..	3,102	20,941	24,909	32,586
Miscellaneous .. ..	12,171	32,184	16,981	16,065	12,320
<b>Total .. ..</b>	<b>198,510</b>	<b>231,697</b>	<b>246,745</b>	<b>245,491</b>	<b>233,199</b>

(e) *Treasurer's Department.* The sub-departments under the control of the Commonwealth Treasurer are the Treasury, the Pensions Department, the Taxation Office, the Supply and Tender Board, and the Superannuation Fund Management Board. Details of the expenditure of this Department for the last five years are given below.

## EXPENDITURE.—TREASURER'S DEPARTMENT.

Details.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Treasury .. ..	52,585	53,418	54,548	52,869	51,775
Taxation Office .. ..	416,889	452,738	428,765	440,102	493,793
Pensions Office .. ..	114,446	117,071	83,891	86,940	91,278
Maternity Allowance Office .. ..	16,067	15,297	16,464	15,028	15,002
Coinage .. ..	45,968	43,008	19,540	11,534	3,485
Rent, repairs, etc. .. ..	10,209	16,371	15,672	13,801	8,320
Interest .. ..	..	669	8,168	171,762	555,822
Exchange .. ..	..	..	..	98,367	147,737
Miscellaneous .. ..	42,398	78,511	89,495	48,536	47,958
<b>Departmental Expenditure</b>	<b>698,562</b>	<b>777,083</b>	<b>716,543</b>	<b>938,939</b>	<b>1,415,170</b>
Invalid and Old-age Pensions (a) .. ..	9,034,938	*9,681,837	9,991,299	10,633,979	11,549,828
Maternity Allowance .. ..	660,280	678,920	661,520	642,990	630,652
Maintenance of persons in charitable institutions .. ..	109,651	108,509	132,940	157,346	161,125
<b>Total .. ..</b>	<b>10,503,431</b>	<b>11,246,349</b>	<b>11,502,302</b>	<b>12,373,254</b>	<b>13,756,775</b>

(a) Including the following amounts spent from Trust Funds :—In 1926-27, £285,897; and in 1927-28, £1,421,493.

(f) *Trade and Customs Department.* Under this head have been included the expenditure of all the sub-departments under the control of the Minister for Trade and Customs, in addition to the amounts payable as bounties and the expenses in connexion therewith. Particulars for the five years 1926-27 to 1930-31 are given in the following table:—

## EXPENDITURE.—TRADE AND CUSTOMS DEPARTMENT.

Details.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Chief Office .. .. .	60,423	69,029	70,814	73,855	67,708
Customs—Ordinary .. ..	534,202	563,055	569,168	565,038	545,598
Audit (proportion) .. ..	12,487	10,045	9,421	2,323	10,332
Pensions and Superannuation .. ..	33,922	34,922	37,675	40,322	39,400
Rent, Repairs, etc. .. ..	14,208	19,265	14,387	11,906	5,969
Bounties .. .. .	781,346	890,574	532,564	517,582	446,344
Miscellaneous .. .. .	30,938	49,068	45,086	48,333	42,672
<b>Total .. .. .</b>	<b>1,467,526</b>	<b>1,635,958</b>	<b>1,279,115</b>	<b>1,259,359</b>	<b>1,158,023</b>

(g) *Defence.* The expenditure in connexion with defence for the last five years was as follows:—

## EXPENDITURE.—DEPARTMENT OF DEFENCE.

Details.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Defence—Chief Office .. .. .	27,109	24,182	25,821	23,483	22,809
Military .. .. .	1,299,454	1,284,886	1,270,443	1,455,241	1,364,187
Audit (Proportion) .. .. .	7,052	6,272	6,686	9,647	6,302
Pensions and Retiring Allowances (a) .. ..	13,568	16,551	20,353	23,899	37,336
Rent, Repairs, etc. .. .. .	43,007	28,412	34,577	47,526	25,050
Interest .. .. .	161,017	201,717	209,561	217,203	218,060
Exchange .. .. .	.. .. .	.. .. .	.. .. .	.. .. .	42,933
Miscellaneous .. .. .	42,102	43,409	44,800	45,886	19,146
<b>Total .. .. .</b>	<b>1,593,309</b>	<b>1,605,429</b>	<b>1,612,241</b>	<b>1,822,885</b>	<b>1,735,823</b>
Navy—Chief Office .. .. .	82,366	83,623	83,257	80,537	66,788
Naval .. .. .	2,003,639	1,930,861	1,808,247	1,946,418	1,610,590
Audit (Proportion) .. .. .	2,381	2,465	2,462	6,729	2,557
Pensions and Retiring Allowances (a) .. ..	1,653	2,544	2,451	2,807	3,283
Rent, Repairs, etc. .. .. .	40,865	40,591	43,720	37,166	24,624
Interest .. .. .	61,650	68,235	71,010	76,909	76,622
Exchange .. .. .	.. .. .	.. .. .	.. .. .	.. .. .	38,698
Miscellaneous .. .. .	20,163	23,898	23,296	23,967	11,611
<b>Total .. .. .</b>	<b>2,212,717</b>	<b>2,152,217</b>	<b>2,034,443</b>	<b>2,174,533</b>	<b>1,834,773</b>
Air Services—					
Civil Branch—Pay, etc. .. .. .	17,078	15,285	17,285	20,881	20,909
Development of Civil Aviation .. .. .	57,905	49,985	50,990	75,332	108,787
R. A. F.—					
Pay, etc. .. .. .	188,939	199,960	227,325	237,305	230,301
General Contingencies .. .. .	80,000	74,273	79,346	82,913	69,518
General Stores and Maintenance .. ..	38,000	37,673	32,087	80,862	53,470
Rent, Repairs, etc. .. .. .	11,105	14,176	13,754	16,036	15,802
Interest .. .. .	15,192	18,553	22,226	25,767	26,097
Exchange .. .. .	.. .. .	.. .. .	.. .. .	.. .. .	11,170
Miscellaneous .. .. .	26,526	17,268	14,810	15,936	11,118
<b>Total .. .. .</b>	<b>434,805</b>	<b>428,173</b>	<b>457,823</b>	<b>555,132</b>	<b>547,172</b>
<b>Grand Total .. .. .</b>	<b>4,240,831</b>	<b>4,185,819</b>	<b>4,104,507</b>	<b>4,552,550</b>	<b>4,117,768</b>

(a) Includes Superannuation.

(h) *Postmaster-General's Department.* Details of the expenditure of this Department for the last five years are given in the table hereunder:—

## EXPENDITURE.—POSTAL DEPARTMENT.

Details.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Chief Office .. ..	66,504	77,469	80,440	87,395	93,845
Postal Department (ordinary) .. ..	9,115,787	9,811,847	9,831,131	9,847,327	9,381,512
Wireless .. ..	3,219	25,041	37,903	69,800	74,790
Audit (proportion) .. ..	10,359	11,149	11,593	12,150	12,930
Pensions and retiring allowances .. ..	110,429	102,173	110,605	110,032	110,480
Superannuation .. ..	75,563	93,431	112,546	136,095	156,822
Rents, repairs, etc. .. ..	137,096	151,109	127,855	129,145	68,989
Interest on transferred properties .. ..	203,978	290,262	290,262	290,262	290,262
Interest on Commonwealth Securities .. ..	1,084,431	1,194,453	1,403,069	1,619,995	1,648,754
Sinking Fund on Commonwealth Securities .. ..	416,161	475,009	518,060	560,125	742,569
Exchange .. ..	..	..	..	..	300,115
Miscellaneous .. ..	62,372	161,033	157,261	163,034	113,802
<b>Total .. ..</b>	<b>11,285,899</b>	<b>12,392,976</b>	<b>12,680,725</b>	<b>13,025,360</b>	<b>12,994,870</b>

(i) *Home Affairs Department.* In addition to the undermentioned services, this Department, created in the financial year 1916-17, controls the Northern Territory and the Federal Capital Territory. Expenditure in respect of these Territories is included in sub-section (ii) (a) following. The Electoral Office, which is administered by this Department, is for the purposes of this Chapter shown under sub-section (ii) (b) *ante*. Expenditure by this Department under various headings during the five years ended 1930-31 is shown in the appended table.

## EXPENDITURE.—HOME AFFAIRS DEPARTMENT.(a)

Details.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31
	£	£	£	£	£
Chief Office .. ..	48,328	51,228	50,998	49,411	48,521
Census and Statistics .. ..	27,620	29,170	30,697	31,217	29,593
Meteorological Office .. ..	36,616	36,103	35,935	36,199	36,040
Interest .. ..	2,525	2,735	2,724	2,702	2,711
Sinking Fund .. ..	455	455	455	455	320
Pensions and Retiring Allowances .. ..	5,437	5,777	6,219	7,528	9,370
Rent, repairs, etc. .. ..	12,293	16,579	24,436	19,844	7,930
Petroleum Prospecting .. ..	100,000	..	..	18,800	10,000
Miscellaneous .. ..	98,194	86,871	24,250	15,616	13,779
<b>Total .. ..</b>	<b>331,468</b>	<b>228,918</b>	<b>175,714</b>	<b>181,772</b>	<b>158,264</b>

(a) Excluding Territories, see page 297.

Contributions to the States towards losses arising out of the payment of a guaranteed price to cotton growers amounting to £76,398 in 1926-27 and £48,251 in 1927-28 are included in "Miscellaneous," and an amount of £20,000 in connexion with the Geophysical Survey of Australia is also included under the same heading in 1927-28.

(j) *Works Department.* The extension of Commonwealth works and railways led, in 1916-17, to the separation of these branches from the former Home Affairs Department and the constitution of a separate Works and Railways Department. To this Department was entrusted the administration of the railways originally under the control of the External Affairs Department, and the Lands and Survey branch, which was transferred to it from the Department of Home and Territories in 1925-26. During 1928-29 the administration of the Commonwealth Railways was transferred to the Markets and Transport Department. The expenditure for the last five years was as follows:—

## EXPENDITURE.—WORKS DEPARTMENT.

Details.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.					
	£	£	£	£	£					
Chief Office ..	} 32,752	24,809	26,363	24,686	78,327					
Lands and Survey ..										
Interest .. ..						70,179	80,889	95,887	110,170	114,295
Sinking Fund .. ..						6,735	8,158	8,990	10,521	6,680
Miscellaneous .. ..						13,274	9,034	8,899	9,487	6,937
Total .. ..	122,940	122,890	140,139	154,864	206,239					

(k) *Health Department.* This department came into existence in the financial year 1921-22. Details of expenditure for the last five years are as follows:—

## EXPENDITURE.—HEALTH DEPARTMENT.

Details.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Central Administration ..	18,488	23,769	22,791	19,216	27,498
Salaries, Contingencies, etc.	85,146	91,746	93,202	92,743	88,790
Interest .. ..	11,715	12,784	13,394	13,749	13,680
Rent and repairs .. ..	22,553	23,914	21,126	17,537	8,917
Subsidy, Cattle Tick Control .. ..	17,800	44,832	54,972	57,318	53,066
Miscellaneous .. ..	53,432	177,292	85,627	74,670	29,346
Total .. ..	209,134	374,337	291,112	275,233	221,297

During 1927-28, a sum of £100,000 expended on the purchase of radium was included in the item "Miscellaneous." Other items included in "Miscellaneous" are subsidies in connexion with the control of venereal diseases and tuberculosis, maternal and infant hygiene, Health Research Council, and grants in aid of research. etc.

(l) *Markets Department.* The Department of Markets, which was formed in the financial year 1924-25, took over various functions previously performed by other departments. In 1928-29 the Commonwealth Railways administration was placed

under this Department, the name being altered to "Markets and Transport." Subsequently, in April, 1930, the activities of the Department were separated and a new "Department of Transport" was created. Particulars of the expenditure of the Department of Markets for the last five years are as follows:—

## EXPENDITURE.—MARKETS DEPARTMENT.

Details.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Markets—					
Salaries and Contingencies	58,758	66,398	67,042	74,090	70,965
Administration of Commerce Act .. ..	27,403	33,161	33,781	38,855	48,844
Dried Fruits Export Control .. ..	30,791	27,623	42,753	46,152	38,779
Dairy Produce Export Control .. ..	20,664	21,294	22,374	22,898	24,309
Assistance to Primary Production .. ..	..	..	50,000	50,000	31,000
Miscellaneous .. ..	48,615	30,164	42,062	60,668	65,514
Total .. ..	186,231	178,640	258,012	292,663	279,411

(m) *Transport Department.* The Department of Transport was created in April, 1930. In addition to the activities formerly controlled by the Department of Markets and Transport, the functions of the Marine (Lighthouse) Service and Navigation branches came under the control of the newly-created Department. For purposes of comparison the expenditure on those services within the Department is given for the last five years. It is more convenient to show details relating to railways in a separate sub-paragraph. (See (o) following.)

## EXPENDITURE.—TRANSPORT DEPARTMENT.(a)

Details.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Salaries and Contingencies—					
Administrative .. ..	74,352	72,070	69,318	46,495	22,535
Marine .. ..	275,311	280,225	270,950	263,901	237,103
Interest and Sinking Fund	215,298	286,878	346,443	406,174	391,042
Rent, Repairs, etc. .. ..	5,494	6,386	9,196	5,693	1,978
Miscellaneous .. ..	23,102	18,371	14,692	16,889	23,308
Total .. ..	593,557	663,930	710,599	739,152	675,966

(a) Excluding Railways, see (o) following.

(n) *Territories.* The following table shows the expenditure on account of territorial services for the past five years. The internal territories are administered by the Department of Home Affairs, while the Prime Minister's Department controls the external territories. The expenditure has been grouped in one table for convenience of reference:—

## EXPENDITURE.—TERRITORIES.

Details.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
<b>Internal—</b>					
North and Central Australia (a) .. ..	150,646	132,758	145,380	138,925	149,152
Federal Capital Territory (a) .. ..	141,176	286,879	251,348	365,813	650,827
<b>External—</b>					
Papua .. ..	72,470	58,947	57,411	49,853	52,969
New Guinea .. ..	11,785	13,490	13,346	12,911	8,054
Norfolk Island .. ..	4,339	4,000	4,000	4,000	4,000
<b>Total .. ..</b>	<b>380,416</b>	<b>496,074</b>	<b>471,485</b>	<b>571,502</b>	<b>865,002</b>

(a) Exclusive of Railways. (b) Northern Territory.

(c) *Railways.* During 1928-29 the Commonwealth Railways were transferred from the Department of Works and Railways to the Department of Markets and Transport. In April, 1930, the administration was placed under the Department of Transport. The expenditure on railways for the past five years is shown below as distinct from the expenditure of the other services controlled by the latter Department.

## EXPENDITURE.—COMMONWEALTH RAILWAYS.

Details.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Trans-Australian .. ..	271,398	286,175	301,621	294,090	251,577
North Australian .. ..	57,580	67,967	54,697	56,155	55,606
Central Australian .. ..	130,122	165,306	198,213	198,108	157,076
Federal Capital Territory .. ..	6,818	9,588	10,504	8,458	6,344
Interest .. ..	366,073	407,646	462,728	490,491	500,319
Sinking Fund .. ..	40,502	47,411	50,519	52,479	37,789
Miscellaneous .. ..	18,842	12,675	9,278	9,624	9,814
Exchange .. ..	..	..	..	..	38,281
<b>Total .. ..</b>	<b>891,335</b>	<b>996,768</b>	<b>1,087,560</b>	<b>1,109,405</b>	<b>1,056,806</b>

(iii) *Miscellaneous.* (a) *New Works.* The expenditure on additions, new works, etc., during the last five years was as follows:—1926-27, £224,807; 1927-28, £229,626; 1928-29, £274,730; 1929-30, £245,536; and 1930-31, £74,444.

(b) *War Services.* Full details concerning the expenditure from Consolidated Revenue upon War and Repatriation will be found in a later sub-section.

## Division IV.—Payments to or for the States.

References to the payments by the Commonwealth to or for the States under the various Acts were made in earlier issues of the Official Year Book, while particulars relating to the payments under the *Financial Agreement Act 1928*, are given on pages 20 to 32 of Chapter I. of this volume. The total payments by the Commonwealth in this connexion up to 30th June, 1931, amounted to £238,980,000, details of which are given in the table following.

## PAYMENTS BY THE COMMONWEALTH TO OR FOR THE STATES.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	All States.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1900-01 to 1909-10 (a) ..	27,605	19,815	8,895	6,148	8,728	2,602	73,793
1910-11 to 1926-27 (b) ..	41,634	31,341	15,184	9,926	6,892	4,367	109,344
1927-28 to 1930-31 (c) ..	13,085	9,333	4,966	3,311	2,268	1,183	34,146
Special Grants (d) ..	..	..	..	1,530	4,656	2,761	8,947
Grants for Road Construction, 1922-23 to 1930-31	3,340	2,185	2,244	1,362	2,271	598	12,000
Unemployment Relief, 1930-31 .. ..	194	332	73	45	65	41	750
Total .. ..	85,858	63,006	31,362	22,322	24,880	11,552	238,980

(a) Under Section 87 of the Commonwealth Constitution.  
Revenue Acts.

(c) Under *Financial Agreement Act 1928.*

(b) Under the several Surplus  
(d) Under various State Grants  
Acts.

For the year ended 30th June, 1931, the payments made to or for each State are given below.

## PAYMENTS BY THE COMMONWEALTH TO OR FOR THE STATES, 1930-31.

Particulars.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Total.
	£	£	£	£	£	£	£
Contributions towards Interest on State Debts ..	2,917,411	2,127,159	1,096,235	703,816	473,432	266,859	7,584,912
Sinking Fund on State Debts (a) .. ..	402,441	227,692	153,352	138,978	106,166	29,074	1,057,793
Special Grants .. ..	..	..	..	1,170,000	300,000	250,000	1,720,000
Unemployment Relief ..	194,000	331,750	73,000	45,000	65,000	41,250	750,000
Total .. ..	3,513,852	2,686,601	1,322,587	2,057,794	944,598	587,183	11,112,615

(a) Paid to National Debt Sinking Fund.

In addition to the foregoing, the Commonwealth contributed £2,000,000 during the year in respect of Federal Aid Roads.

## § 3. Trust Funds.

The Trust Fund balances on 30th June, 1931, amounted to £13,372,963 as compared with £12,796,907 for the corresponding date in the year 1930.

## § 4. Commonwealth Loan Funds and Public Debt.

1. **General.**—Although it was not until 1915 that the Federal Government came into the loan market as a borrower, there had previously existed a Commonwealth Public Debt which included several items, such as the balance of the debt taken over from South Australia and the amount owing to the States for transferred properties. In view of the large expansion of the Public Debt, and its present importance in Commonwealth public finance, the different items are treated seriatim in the following sub-sections:—

2. **Loans taken over from South Australia.**—The first portions of the debt were contracted at the beginning of 1911, when the Commonwealth assumed responsibility for the payment of interest on transferred properties (further dealt with in sub-section 4) and for the administration and the liabilities of the Northern Territory and the Port Augusta—Oodnadatta Railway. At 30th June, 1911, the debt on account of the former was £3,657,836, and on account of the latter, £2,274,486—a total of £5,932,322. As the securities fall in they are redeemed by the Commonwealth Government, the money required being taken from the Loan Fund. The item is thus constantly diminishing, and on 30th June, 1931, stood at £1,283,070, of which £362,024 was on account of the Northern Territory, and £921,046 on account of the railway.

3. Loan Fund for Public Works, Redemptions, etc.—Up to the year 1911 the Commonwealth Government had met its public works expenditure out of revenue. In that year, however, in view of the heavy prospective cost of the Trans-Australian Railway and the Federal Capital Territory, it was decided to institute a Loan Fund similar to those of the States. The initiation of this fund was greatly assisted by the fact that the Treasury at that time held a large quantity of gold, principally on behalf of the Australian Notes Account. Up to 30th June, 1914, the money required for loan expenditure was obtained mainly from this source at 3½ per cent., and inscribed stock of an equivalent value was created. Since the outbreak of war, the money required for the Loan Fund has been mainly obtained by the issue of Treasury Bills and other securities issued in London and New York as well as in Australia. The details of the expenditure for the last five years and the total expenditure to 30th June, 1931, are given in the following table:—

## COMMONWEALTH LOAN EXPENDITURE FOR WORKS.

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.	Total to 30th June, 1931.
	£	£	£	£	£	£
Immigration (a) .. .. .	248,104	261,353	132,815	57,705	..	1,680,835
Shipbuilding Yards and Docks .. .. .	..	..	..	..	..	733,711
Ship Construction .. .. .	..	Cr.163,216	Cr. 86,784	Cr.165,000	Cr.165,000	8,394,060
Subscriptions to Capital of Commonwealth Oil Refinery .. .. .	..	..	..	..	..	343,751
Federal Capital Territory Works, Services, and Acquisition of Land .. .. .	1,671,753	998,507	1,193,500	253,988	263,077	7,994,328
North Australia Commission .. .. .	3,400	22,900	40,800	23,000	16,103	111,203
Drill Halls, Stores, Barracks, etc. .. .. .	18,158	26,984	33,014	20,204	458	427,084
Rifles and Ammunition Reserve .. .. .	..	..	..	..	..	315,300
Other Military Services .. .. .	12,978	9,831	231	1,000	..	101,959
Naval Bases, Depots, etc. .. .. .	127,016	62,303	36,907	93,230	6,229	1,466,556
Fleet Construction .. .. .	..	..	..	..	..	355,397
Other Naval Services .. .. .	24,000	..	..	..	..	71,300
Air Services—						
R.A.A.F. .. .. .	140,364	103,227	40,530	32,740	8,766	473,010
Civil Aviation .. .. .	5,516	3,916	..	..	13,596	53,773
Buildings and Works, Munitions Production .. .. .	93,098	101,308	92,513	83,127	38,467	1,185,852
Other Munitions Supply Services .. .. .	2	..	..	..	..	1,150
Lighthouses and Lighthouse Services .. .. .	24,927	23,475	17,673	18,520	89,500	643,900
River Murray Waters Act .. .. .	209,500	250,000	250,000	200,000	122,000	2,105,625
Telegraph and Telephone Construction .. .. .	3,627,619	3,357,432	2,775,991	2,537,489	1,248,197	30,024,968
Post Office Buildings and Land Wireless .. .. .	317,706	296,931	227,397	224,186	38,190	3,398,382
Wireless .. .. .	50,462	50,564	482	10,037	1,727	356,608
Serum and Health Laboratories .. .. .	4,785	4,753	10,082	3,748	..	75,220
Wire and Wire-netting .. .. .	250,000	80,000	230,838	50,000	..	610,838
Railways—						
Trans-Australian .. .. .	88,199	54,896	48,415	64,622	30,387	6,662,298
North Australian .. .. .	398,764	425,875	79,092	20,097	910	1,597,559
Central Australian .. .. .	399,885	731,388	747,894	170,911	30,185	2,477,853
Federal Capital Territory .. .. .	20,500	4,424	3,291	365	175	28,755
Grafton—South Brisbane .. .. .	1,000,000	1,202,000	675,000	586,000	68,000	4,371,000
Other Expenditure .. .. .	..	..	..	..	..	200,000
War Service Homes (b) .. .. .	673,351	752,583	1,673,451	999,964	154,906	7,314,524
London Offices .. .. .	..	..	..	..	..	880,190
Acquisition of Properties not elsewhere included .. .. .	833	655	987	769	10,653	134,544
Miscellaneous .. .. .	Cr. 11,288	..	20,000	7,500	14,500	432,371
<b>Total</b> .. .. .	<b>9,404,632</b>	<b>8,662,089</b>	<b>8,244,119</b>	<b>5,294,202</b>	<b>1,991,026</b>	<b>85,023,904</b>

(a) Exclusive of Loans to States for Immigration Purposes. (b) Prior to 1923-24, expenditure was made from War Loan Fund. The total expenditure to 30th June, 1931, was £20,359,907.

4. Properties Transferred from States.—At the time of federation, when the Commonwealth took over the control of several departments previously administered by the States, a large amount of property was handed over to the Commonwealth Government. A valuation was made, with results set out in detail in Official Year Book No. 14, page 694, and the Commonwealth paid interest at the rate of 3½ per cent. to the States on account of all transferred properties.

The terms of the financial agreement between the Commonwealth Government and the Governments of the several States provided, *inter alia*, that, as a temporary measure, the Commonwealth Government would for the period of two years from



1st July, 1927, to 30th June, 1929, pay to each State interest at the rate of 5 per cent. per annum on the agreed value of transferred properties as follows:—New South Wales, £4,788,005; Victoria, £2,302,862; Queensland, £1,560,639; South Australia, £1,035,631; Western Australia, £736,432; and Tasmania, £500,754; a total of £10,924,323.

From 1st July, 1929, the Commonwealth Government assumed all liability for so much of the Public Debt of the States maturing in London bearing interest at the rate of 5 per cent. per annum as is equivalent to the agreed value of the transferred properties shown above. The Commonwealth Government will receive the freehold or equivalent title to the transferred properties consisting of land or interests in land, and all liability of the Commonwealth to the State in respect of transferred properties is extinguished from that date.

5. **War Loan from the Imperial Government.**—On the outbreak of the European war in 1914, the Commonwealth Government obtained a loan from the Imperial Government for the purpose of financing the prospective large military expenditure. At first, the arrangement was that the Imperial Government should advance the sum of £18,000,000. Subsequently further loans totalling £31,500,000 were negotiated. In addition to this capital indebtedness of £49,500,000, a further sum of £42,696,500 was due to the British Government for the maintenance of Australian troops.

Early in 1921 an arrangement was concluded with the Imperial Government, by means of which almost the entire debt (upwards of £92,000,000) was consolidated. The Commonwealth Government undertook to extinguish the debt in about 35 years by annual payments representing 6 per cent. on the original debt, providing for interest at £4 18s. 4d. per cent., and a sinking fund of £1 1s. 8d. per cent. The Imperial Government agreed to suspend for 1931–32 and 1932–33 the repayment of principal moneys due under the Funding arrangement, and under the “Hoover Plan,” the payment of interest for the year 1931–32 was also suspended, the suspended payments under the “Hoover Plan” being liquidated by ten equal annuities running from 1st July, 1933, at a rate of interest to be determined. These annuities are additional to the usual annual payments. The adoption of these proposals represents a saving to the Commonwealth Budget of £6,145,000, including exchange, for the year 1931–32. The amount outstanding on 30th June, 1931, was £79,724,220.

6. **Flotation of War Loans in Australia.**—In addition to the advances from the Imperial Government, the Commonwealth Government raised large amounts of money in Australia. Full details of the seven War Loans are given in Official Year Book No. 14.

7. **Flotation of Loans, 1930–31.**—During the year 1930–31, the loans raised by the Commonwealth (including “Over the Counter” sales and conversions at State Treasuries) totalled £84,794,397, of which £27,978,856 was for Commonwealth purposes and £56,815,541 for the States. Details respecting these loans are given hereunder.

#### COMMONWEALTH LOANS FLOATED, 1930–31.

For whom Raised.	Amount Raised.			Rate of Interest.	Date of Maturity.	Price.	
	London.	Australia.	Total.				
Commonwealth .. £150,000	£	£	£	%		£	
Commonwealth .. £420,000	..	150,000	150,000	5½	7.10.45	100	
	..	420,000	420,000	6	15.11.38	100	
Conversion and Redemption—	}	25,488,200	25,488,200	6	15.12.32	} 100	
Commonwealth £18,333,612		..	4,364,230	4,364,230	5½		15.12.40
States .. £11,864,698		..	249,880	249,880	5½		12.12.50
		..	96,000	96,000	6		31.8.35
		..	2,950,000	2,950,000	5		2.8.31
States .. .. .	5,000,000	..	5,000,000	4	20.9.31	(b)	
Commonwealth .. £8,900,000	}	18,320,000	18,320,000	(c)	(b)	(b)	
States .. .. .		..	5,000,000	5,000,000	5	2.8.31	(b)
Commonwealth .. £175,244		5,000,000	..	5,000,000	5	2.9.31	(b)
States .. .. .		..	222,756,087	222,756,087	(c)	(b)	100
States .. .. .		..	..	..	..	..	..
<b>Total .. .. .</b>	<b>12,950,000</b>	<b>71,844,397</b>	<b>84,794,397</b>	<b>..</b>	<b>..</b>	<b>..</b>	

(a) “Over the Counter” Sales and Conversions at State Treasuries.  
Bills.

(c) Various.

(b) Short-dated Treasury

8. Public Debt for Commonwealth Purposes.—(i) *Total Debt.* Separate consideration has already been given to the items composing the Public Debt. The table appended shows the debt of the Commonwealth (excluding that of the States) at 30th June, 1931.

## PUBLIC DEBT FOR COMMONWEALTH PURPOSES AT 30th JUNE, 1931.

Particulars.	Payable in London.	Payable in New York.	Payable in Australia.	Total.
	£	£	£	£
<b>War Debt (a)—</b>				
Stock, Bonds, etc. . . . .	11,020,160	..	221,730,257	232,750,417
Indebtedness to United Kingdom Government .. . . .	79,724,220	..	..	79,724,220
<b>Total</b> .. . . .	<b>90,744,380</b>	<b>..</b>	<b>221,730,257</b>	<b>312,474,637</b>
Deduct advances to States for Soldier Land Settlement, etc. .. . . .	..	..	-34,694,412	-34,694,412
<b>Total War Debt</b> .. . . .	<b>90,744,380</b>	<b>..</b>	<b>187,035,845</b>	<b>277,780,225</b>
<b>Works and other Purposes—</b>				
Treasury Bills and Debentures. . . . .	8,820,044	..	14,197,000	23,017,044
Stock, Bonds, etc. . . . .	56,636,596	17,155,718	12,734,767	86,527,081
Balance of Loans taken over from South Australia—				
Northern Territory .. . . .	329,100	..	32,924	362,024
Port Augusta Railway .. . . .	908,686	..	12,360	921,046
Properties transferred from New South Wales .. . . .	..	..	111,125	111,125
<b>Total Works and other Purposes</b> .. . . .	<b>66,694,426</b>	<b>17,155,718</b>	<b>27,088,176</b>	<b>110,938,320</b>
<b>Total Commonwealth Purposes</b> .. . . .	<b>157,438,806</b>	<b>17,155,718</b>	<b>214,124,021</b>	<b>388,718,545</b>

## PER HEAD OF POPULATION. (b)

	£ s. d.	£ s. d.	£ s. d.	£ s. d.
War .. . . .	13 19 2	..	28 15 5	42 14 7
Works and other Purposes .. . . .	10 5 3	2 12 9	4 3 4	17 1 4
<b>Total Commonwealth Purposes</b> .. . . .	<b>24 4 5</b>	<b>2 12 9</b>	<b>32 18 9</b>	<b>59 15 11</b>

(a) Less sinking fund contributions and accumulations. (b) Based on population at 30th June, 1931.

(ii) *Loans to States for Soldier Land Settlement.* In regard to the item "Advances to States for Soldier Land Settlement", the Commonwealth Government has agreed to make remissions to the States in connexion with the losses sustained in respect of Soldier Land Settlement. Upon the ratification of the proposals by all Governments concerned, the Commonwealth Government will, as from 1st October, 1925, assume responsibility for £5,000,000 of States' debts maturing in Australia, and an additional amount of £2,597,783 from 1st July, 1927. Further reference is made to this matter in Chapter XV., Defence, § 10.4.

(iii) *Place of Flotation.* The loans taken over from South Australia, which constituted the first portion of the Federal Public Debt, included both London and Australian securities. The presence in the Treasury of a large holding of gold, and the

moderate rate of interest ruling on gilt-edged securities, made the conditions in 1911 and for some little time afterwards very favourable for the flotation of local loans. London securities were redeemed as they fell due, and replaced by the 3½ per cent. stock of the Loan Fund. Consequently, up to 1914 the amount of the securities repayable in London fell steadily, and the amount repayable in Australia rose rapidly. In 1915 the military loan from the Imperial Government caused a sharp rise in the amount of the securities repayable in London, which was maintained in the two following years. This was, however, more than offset by the flotation of the local war loans. In 1925-26 a loan of £15,411,487, of which £10,402,754 was for Commonwealth purposes and £5,008,733 for the States, was raised in New York. The appended table gives particulars of Commonwealth loans outstanding in each of the last five years which had been floated overseas and in Australia respectively.

## PUBLIC DEBT FOR COMMONWEALTH PURPOSES.—PLACE OF FLOTATION.

Place of Flotation, etc.	At 30th June—				
	1927.	1928.	1929.	1930.	1931.
	£	£	£	£	£
<b>War Debt—</b>					
London .. .. .	95,572,848	96,822,659	93,810,641	92,314,742	90,744,380
<b>Total Overseas .. .. .</b>	<b>95,572,848</b>	<b>96,822,659</b>	<b>93,810,641</b>	<b>92,314,742</b>	<b>90,744,380</b>
Australia .. .. .	201,332,522	196,597,448	194,007,104	190,075,790	187,035,845
<b>Total War Debt .. .. .</b>	<b>296,905,370</b>	<b>293,420,107</b>	<b>287,817,745</b>	<b>282,390,532</b>	<b>277,780,225</b>
<b>Works and other purposes—</b>					
London .. .. .	36,596,850	39,393,188	48,819,932	58,431,407	66,694,426
New York .. .. .	10,383,252	17,291,277	17,155,718	17,155,718	17,155,718
<b>Total Overseas .. .. .</b>	<b>46,980,102</b>	<b>56,684,465</b>	<b>65,975,650</b>	<b>75,587,125</b>	<b>83,850,144</b>
Australia .. .. .	22,726,033	22,679,517	23,828,177	14,979,705	27,088,176
<b>Total Debt for Works, etc. .. .. .</b>	<b>69,706,135</b>	<b>79,363,982</b>	<b>89,803,827</b>	<b>90,566,830</b>	<b>110,938,320</b>
<b>Total Debt—</b>					
London .. .. .	132,169,698	136,215,847	142,630,573	150,746,149	157,438,806
New York .. .. .	10,383,252	17,291,277	17,155,718	17,155,718	17,155,718
<b>Total Overseas .. .. .</b>	<b>142,552,950</b>	<b>153,507,124</b>	<b>159,786,291</b>	<b>167,901,867</b>	<b>174,594,524</b>
Australia .. .. .	224,058,555	219,276,965	217,835,281	205,055,495	214,124,021
<b>Grand Total .. .. .</b>	<b>366,611,505</b>	<b>372,784,089</b>	<b>377,621,572</b>	<b>372,957,362</b>	<b>388,718,545</b>

(iv) *Amount of Debt at Various Rates of Interest.*—When the first debt was taken over from South Australia, it consisted mainly of securities bearing interest varying from 3 per cent. to 4 per cent., the average rate of interest for the first year being £3 12s. 4d. For the first three years the increase in the debt was due almost entirely to the

expansion of the  $3\frac{1}{2}$  per cent. stock of the Loan Fund, consequently the average rate of interest fell steadily, until on 30th June, 1914, it stood at £3 11s.10d. Then came the loans for military and repatriation purposes, and the fall in the average rate was ultimately converted into a rise which was steadily maintained until at 30th June, 1931, the average rate stood at £5 5s. 2d.

The accompanying table gives particulars of rates on interest of the debt for Commonwealth purposes for the financial years ended 30th June, 1930 and 1931.

## PUBLIC DEBT FOR COMMONWEALTH PURPOSES.—RATES OF INTEREST.

Rates of Interest.	At 30th June, 1930.	At 30th June, 1931—Debt Maturing in—			
		London.	New York.	Australia.	Total.
%	£	£	£	£	£
3	33,262	1,000,027	..	5,330,235	6,330,262
£3/2/0	..	175,244	..	..	175,244
3½	4,416,798	8,176,608	..	3,884,990	12,061,598
3¾	802,173	49,173	..	2,900	52,073
4	4,453,778	656,778	..	..	656,778
4½	4,335,436	..	4,335,436	..	4,335,436
4¾	6,000,000	6,000,000	..	..	6,000,000
£4/18/4	81,294,582	79,724,220	..	..	79,724,220
5	69,710,978	46,656,756	12,820,282	9,595,621	69,072,659
5½	92,252,340	..	..	90,913,580	90,913,580
5¾	67,056,390	..	..	67,085,856	67,085,856
5¾	..	..	..	2,710,005	2,710,005
6	77,645,889	15,000,000	..	69,179,817	84,179,817
£6/2/8	175,244	..	..	..	..
Overdue	128,560	..	..	115,429	115,429
Deduct loans to States for Soldier Land Settlement, etc.—	-35,348,068	..	..	-34,694,412	-34,694,412
Total	372,957,362	157,438,806	17,155,718	214,124,021	388,718,545
Total Interest Payable	19,327,613	7,787,344	836,109	11,810,353	20,433,806
Average rate of interest	£5 3 8	£4 8 11	£4 17 6	£5 10 4	£5 5 2

(v) *Amount of Interest Payable.* A table is appended showing the interest payable in Australia and overseas on the Commonwealth Public Debt (excluding amounts raised on behalf of the several States and debts of the States taken over) at 30th June in the years 1927 to 1931 inclusive.

## PUBLIC DEBT FOR COMMONWEALTH PURPOSES.—INTEREST PAYABLE.

Interest on and where payable.	At 30th June—				
	1927.	1928.	1929.	1930.	1931.
	£	£	£	£	£
War Debt—					
London .. .. .	4,791,410	4,854,202	4,721,540	4,647,992	4,571,307
Australia .. .. .	10,542,922	10,567,548	10,454,458	10,235,359	10,485,647
<b>Total War Debt .. .. .</b>	<b>15,334,332</b>	<b>15,421,750</b>	<b>15,175,998</b>	<b>14,883,351</b>	<b>15,056,954</b>
Works and other Purposes—					
London .. .. .	1,835,199	1,984,735	2,460,837	2,943,397	3,216,561
New York .. .. .	519,162	842,858	836,109	836,109	836,109
<b>Total Overseas .. .. .</b>	<b>2,354,361</b>	<b>2,827,593</b>	<b>3,296,946</b>	<b>3,779,506</b>	<b>4,052,670</b>
Australia .. .. .	1,042,470	1,038,433	1,098,733	664,756	1,324,706
<b>Total Debt for Works, etc... ..</b>	<b>3,396,831</b>	<b>3,866,026</b>	<b>4,395,679</b>	<b>4,444,262</b>	<b>5,377,376</b>
<b>Total Debt—</b>					
London .. .. .	6,626,609	6,838,937	7,182,377	7,591,389	7,787,868
New York .. .. .	519,162	842,858	836,109	836,109	836,109
<b>Total Overseas .. .. .</b>	<b>7,145,771</b>	<b>7,681,795</b>	<b>8,018,486</b>	<b>8,427,498</b>	<b>8,623,977</b>
Australia .. .. .	11,585,392	11,605,981	11,553,191	10,900,115	11,810,353
<b>Grand Total .. .. .</b>	<b>18,731,163</b>	<b>19,287,776</b>	<b>19,571,677</b>	<b>19,327,613</b>	<b>20,434,330</b>

The Premiers' Plan provided for the reduction in interest of 22½ per cent. by the conversion of the internal Government debt. This conversion loan was effected during July and August, 1931. Further particulars relating to the conversion are given in the Appendix to this volume.

(vi) *Dates of Maturity.* The dates of maturity of the several portions of the Commonwealth debt are shown hereunder according to years ending 30th June. On that account the figures given are not directly comparable with those published prior to 1929-30. The Commonwealth Government has refrained from issuing interminable stock, but, in respect of a small proportion of the debt, no definite date of maturity had been assigned on 30th June, 1931. While the actual dates of maturity extend from 1931-32 to 1975-76, or a period of 44 years, the average period till maturity of the gross debt is only 10.9 years.

## PUBLIC DEBT FOR COMMONWEALTH PURPOSES.—DUE DATES OF AMOUNTS OUTSTANDING ON 30th JUNE, 1931.(a)

Due Dates (year ended June).	Due in—			Total.
	London.	New York.	Australia.	
	£	£	£	£
1931-32 .. .. .	8,820,044	..	41,173,104	49,993,148
1932-33 .. .. .	..	..	55,414,195	55,414,195
1933-34 .. .. .	39,387	..	3,829,059	3,868,446
1934-35 .. .. .	83,051	..	1,765,260	1,848,311
1935-36 .. .. .	573,727	..	19,140,711	19,714,438
1936-37 .. .. .	372,145	..	50,885,333	51,257,478
1937-38 .. .. .	1,246	..	9,934,190	9,935,436
1938-39 .. .. .	168,149	..	2,634,510	2,802,659
1939-40 .. .. .	54	..	903,538	903,592

PUBLIC DEBT FOR COMMONWEALTH PURPOSES.—DUE DATES OF AMOUNTS  
OUTSTANDING ON 30th JUNE, 1931(a)—*continued.*

Due Dates (year ended June).	Due in—			Total.
	London.	New York.	Australia.	
	£	£	£	£
1940-41 .. ..	15,000,000	..	2,710,005	17,710,005
1941-42 .. ..	..	..	28,270,060	28,270,060
1942-43 .. ..	..	..	18,249,320	18,249,320
1944-45 .. ..	17,354,817	..	..	17,354,817
1948-49 .. ..	..	..	9,311,680	9,311,680
1950-51 .. ..	..	..	139,748	139,748
1956-57 .. ..	..	14,566,855	..	14,566,855
1957-58 .. ..	..	2,588,863	..	2,588,863
1960-61 .. ..	6,000,000	..	..	6,000,000
1965-66 .. ..	..	..	149,274	149,274
1971-72 .. ..	..	..	3,764,716	3,764,716
1975-76 .. ..	29,301,939	..	..	29,301,939
Overdue .. ..	..	..	115,429	115,429
Indefinite .. ..	..	27	317,176	317,203
Annual Repayments ..	79,724,220	..	..	79,724,220
Transferred Properties (b)	..	..	111,125	111,125
Deduct loans to States for Soldier Land Settlement, etc. .. ..	..	..	-34,694,412	-34,694,412
<b>Total .. ..</b>	<b>157,438,806</b>	<b>17,155,718</b>	<b>214,124,021</b>	<b>388,718,545</b>
<b>Average period to maturity —years .. ..</b>	<b>24.0</b>	<b>25.6</b>	<b>5.8</b>	<b>10.9</b>

(a) Loans of which the Government has the option of redemption during a specified period have been in each case classified according to the latest date of maturity. (b) From New South Wales. See §4.4 hereinafter.

9. Sinking Funds.—Particulars relating to the creation of sinking funds are included in previous issues.

The old sinking funds were merged in the National Debt Sinking Fund on 11th August, 1923. Particulars of receipts and expenditure of the Commonwealth Account from the year 1927-28 are as follows:—

## PUBLIC DEBT FOR COMMONWEALTH PURPOSES.—SINKING FUND.

Items.	1927-28.	1928-29.	1929-30.	1930-31.	Total, 1922-23 to 1930-31.
	£	£	£	£	£
<b>Cr. Brought forward .. ..</b>	<b>1,324,897</b>	<b>955,726</b>	<b>746,737</b>	<b>573,276</b>	<b>..</b>
Balance transferred to Fund on 11th August, 1923 .. ..	..	..	..	..	2,262,982
From Consolidated Revenue .. ..	2,276,092	2,469,272	2,668,133	889,170	17,658,137
Repayments of Sundry Loans .. ..	9,931	260,028	261,855	2,967	1,115,664
Purchase Money and Repayments under War Service Homes Act .. ..	787,897	799,508	702,244	491,887	5,778,832
Half Net Profit Commonwealth Bank Reparation Moneys .. ..	320,563	349,204	362,825	391,013	2,078,211
Interest on Investments .. ..	651,779	876,404	877,832	1,264,319	5,571,721
Contributions by States .. ..	54,246	30,312	28,573	24,544	523,576
	8,927	21,013	24,945	9,898	66,001
<b>Total .. ..</b>	<b>5,434,332</b>	<b>5,761,467</b>	<b>5,673,144</b>	<b>3,647,274</b>	<b>35,055,124</b>
<b>Dr. Redemptions .. ..</b>	<b>4,478,606</b>	<b>5,014,730</b>	<b>5,099,868</b>	<b>3,134,330</b>	<b>34,542,180</b>
Carried Forward .. ..	955,726	746,737	573,276	512,944	512,944
<b>Total .. ..</b>	<b>5,434,332</b>	<b>5,761,467</b>	<b>5,673,144</b>	<b>3,647,274</b>	<b>35,055,124</b>

The Imperial Government loan comes in a different category from the others, since it is being liquidated by the funding arrangement described on a previous page.

Information regarding the transactions of the States' Account of the National Debt Sinking Fund is published in Finance Bulletin No. 22 issued by this Bureau.

### § 5. Cost of War and Repatriation.

In view of the importance of the subject, a further reference is here made to the cost of the war. The general policy of the Commonwealth Government has been to pay from Consolidated Revenue all recurring charges for interest, sinking fund, pensions, and other charges consequent upon the war, and part of the expense of repatriation. On the other hand, the whole direct cost of the war and the larger proportion of the cost of repatriation have been paid from loans. The total cost from both sources to the 30th June, 1931, is set out in the following table:—

#### COST OF WAR SERVICES.

Year.	War and Repatriation Services, including War Pensions. (From Consolidated Revenue.)	War Loan Expenditure. (b)	Total.	Interest and Sinking Fund. (From Consolidated Revenue.)
	£	£	£	£
1914-15 .. .. .	896,190	14,100,000	14,996,190	115,145
1915-16 .. .. .	1,718,887	37,423,568	39,142,455	2,059,491
1916-17 .. .. .	2,439,271	53,114,237	55,553,508	5,988,058
1917-18 .. .. .	4,049,955	55,028,180	59,078,135	7,813,296
1918-19 .. .. .	9,966,927	59,547,080	69,514,007	11,288,174
1919-20 .. .. .	8,976,793	43,294,764	52,271,557	15,774,938
1920-21 .. .. .	10,242,345	24,148,501	34,390,846	23,043,888
1921-22 .. .. .	10,261,471	7,576,977	17,838,448	21,075,693
1922-23 .. .. .	9,298,560	1,762,694	11,061,254	20,801,912
1923-24 .. .. .	8,161,230	691,247	8,852,477	20,608,876
1924-25 .. .. .	8,232,656	Cr. 32,051	8,200,605	20,250,105
1925-26 .. .. .	8,473,717	Cr. 7,613	8,466,104	20,698,133
1926-27 .. .. .	8,814,001	23,938	8,837,939	20,495,082
1927-28 .. .. .	8,788,037	Cr. 23,741	8,764,296	20,218,175
1928-29 .. .. .	9,026,749	Cr. 12,972	9,013,777	21,071,002
1929-30 .. .. .	9,520,750	Cr. 2,669	9,518,081	20,579,056
1930-31 .. .. .	10,468,748	Cr. 2,206	10,466,542	19,037,470
Discounts and Flotation Expenses on Loans .. .. .	..	5,948,874	5,948,874	..
Indebtedness to the Government of the United Kingdom for payments made, services rendered, and goods supplied during the war (a) .. .. .	..	43,398,098	43,398,098	..
War Gratuities paid in cash .. .. .	452,295	27,040,253	27,492,548	..
<b>Total to 30th June, 1931</b>	<b>129,788,582</b>	<b>373,017,159</b>	<b>502,805,741</b>	<b>270,918,494</b>

(a) The total indebtedness to the Government of the United Kingdom involved in the *Funding Arrangements Act 1921* was £92,480,157. At 30th June, 1931, the amount outstanding had been reduced to £79,724,220. (b) Excluding expenditure on War Service Homes from 1923-24. (See page 299.)

§ 6. Old-age and Invalid Pensions.

1. **General.**—In previous issues of this work an account was given of the introduction of the old-age pension system in Australia, together with a detailed description of the Commonwealth Invalid and Old-age Pensions Act of 1908, which became operative on 1st July, 1909. (See Year Books, Nos. 3 to 8.) The following statement shows particulars of the rates of pension originally payable and in accordance with the several amendments to the Act:—

RATES OF PENSION PAYABLE.

Date from which Operative.	Pension Payable (Annual Rate.)	Pensioner's Annual Income including pension not to exceed—
	£ s. d.	£ s. d.
1st July, 1909 .. ..	26 0 0	52 0 0
12th October, 1916 .. ..	32 10 0	58 10 0
1st January, 1920 .. ..	39 0 0	65 0 0
13th September, 1923 .. ..	45 10 0	78 0 0
8th October, 1925 .. ..	52 0 0	84 0 0
23rd July, 1931 .. ..	45 10 0	78 0 0

In 1916 an old-age pension of 2s. per week was first paid to pensioners who became inmates of Benevolent Asylums. This amount was increased to 3s. per week in 1923 and extended to pensioners entering hospitals. Further increments to these pensioners were granted in 1925 and 1928 raising the pension to 4s. and 5s. 6d. per week respectively. In 1931 the amount was reduced to 5s. per week.

Asiatics are ineligible for the old-age pension except Indians born in British India, whose disqualification was removed by an amending act operative from 7th October, 1926.

Invalid pensions were granted from 15th December, 1910. In regard to invalid pensions, the applicant must satisfy the Department that her or his disability is both total and permanent and became so in Australia.

In 1920 special provision was made for a permanently blind person, by which the amount of pension may be at such a rate (not exceeding £52—reduced to £45 10s. from 23rd July, 1931) per annum, as will make his income plus that of his wife together with the pension, equal to an amount not exceeding £221 per annum or such other amount as is declared to be a basic wage.

The *Financial Emergency Act*, 1931, reduced old-age and invalid pensions to £45 10s. per annum and the permissible income to £78 per annum. A reduction to 5s. per week was also made in the cases of pensioners in Benevolent Asylums and Hospitals.

§ 2. **Old-age Pensions.**—(i) *Number in force.* At 30th June, 1930, there were 155,196 old-age pensions in force. During 1930–31, 28,844 pension claims were granted, cancellations and deaths amounted to 11,863, giving a net increase of 16,981 pensions for the year and bringing the total pensions in existence at 30th June, 1931, to 172,177.

(ii) *Sexes of Pensioners.* Of the pensioners at 30th June, 1931, 72,857 (or 42 per cent.) were males, and 99,320 (or 58 per cent.) were females. Details for the several States are as follow:—

OLD-AGE PENSIONS.—SEXES OF PENSIONERS, 1930–31.

State.	Males.	Females.	Total.	(a) Masculinity.
New South Wales .. ..	28,003	37,029	65,032	75.6
Victoria .. ..	20,182	29,817	49,999	67.7
Queensland .. ..	10,091	12,285	22,376	82.1
South Australia .. ..	6,255	9,893	16,148	63.2
Western Australia .. ..	4,847	5,614	10,461	86.3
Tasmania .. ..	3,479	4,682	8,161	74.3
<b>Total</b> .. ..	<b>72,857</b>	<b>99,320</b>	<b>172,177</b>	<b>73.4</b>

(a) Number of males to each 100 females.



(iii) *Ages and Conjugal Condition of Pensioners.* The recorded ages of the 28,844 persons, 14,416 males and 14,428 females, to whom pensions were granted during the year 1930-31 varied considerably, ranging from 4,281 at age 60 to 1 at age 97. The conjugal condition of these pensioners was as follows:—Males—single, 3,090; married, 8,721; and widowed, 2,605. Females—single, 1,582; married, 8,223; and widowed, 4,623.

3. *Invalid Pensions.*—(i) *Number in force, 1931.* During the year 1930-31, the number of invalid pensioners increased from 63,304 to 68,343, an increase of 5,039 pensions. Altogether 10,006 claims were allowed and 4,967 pensions were cancelled.

(ii) *Sexes of Pensioners.* Of the 68,343 persons in receipt of invalid pensions on 30th June, 1931, 30,172, or 44 per cent., were males, and 38,171, or 56 per cent., were females. Details for the several States are as follows:—

#### INVALID PENSIONS.—SEXES OF PENSIONERS, 1930-31.

State.	Males.	Females.	Total.	(a) Masculinity.
New South Wales .. ..	12,148	15,948	28,096	76.2
Victoria .. ..	8,841	11,084	19,925	79.8
Queensland .. ..	4,665	5,042	9,707	92.5
South Australia .. ..	1,703	2,751	4,454	61.9
Western Australia .. ..	1,673	1,881	3,554	88.9
Tasmania .. ..	1,142	1,465	2,607	78.0
Total .. ..	30,172	38,171	68,343	79.0

(a) Number of males to each 100 females.

(iii) *Ages and Conjugal Conditions of Pensioners, 1931.* The recorded ages of the 10,006 persons (5,000 males and 5,006 females) to whom invalid pensions were granted during the period under review varied from 16 to 88.

The conjugal condition of persons to whom invalid pensions were granted during the year was as follows:—Males—single, 2,168; married, 2,583; and widowed, 249. Females—single, 1,943; married, 1,991; and widowed, 1,072.

4. *Cost of Administration.*—Under State control the cost of administration differed considerably in the several States, and for 1908-9 represented in New South Wales 4.17 per cent. of the amount actually paid in pensions. In Victoria for the same year the corresponding percentage was 0.70. During the year 1930-31, the total cost to the Commonwealth of administering the Old-age and Invalid Pensions Department was £93,077, or about 0.79 per cent. of the amount actually paid in pensions.

The actual sum disbursed in old-age and invalid pensions in the financial year 1930-31, apart from the cost of administration and inclusive of the amount paid to asylums for the maintenance of pensioners, was £11,710,953.

5. *Summary.*—The following table gives details concerning the working of the Act for the last five years:—

#### OLD-AGE AND INVALID PENSIONS.—SUMMARY, AUSTRALIA.

Year ended 30th June.	Number of Pensioners.				Amount Paid in Pensions.	Total Payment to Pensioners and to Asylums for Maintenance of Pensioners.	Cost of Administration.	Cost of Administration per £100 paid to Pensioners and Asylums.	Average Fortnightly Pension on last day of Financial Year.				
	Old-age.		Invalid.	Total.					£	£	£	s. d.	s. d.
	No.	Est. No. per 1,000 of persons eligible on age qualification. (a)											
1927	133,234	310	52,399	185,633	9,034,938	9,144,589	116,008	1	5	4	38	6	
1928	139,367	310	55,517	194,884	9,681,837	9,790,346	118,641	1	4	3	38	5	
1929	145,393	312	59,148	204,541	9,991,299	10,124,239	86,605	0	17	1	38	5	
1930	155,196	321	63,304	218,500	10,633,979	10,791,325	89,201	0	16	6	38	5	
1931	172,177	345	68,343	240,520	11,549,828	11,710,953	93,077	0	15	11	38	4	

(a) Estimated number of old-age pensioners per 1,000 of the aggregate of males aged 65 and over and females aged 60 and over.

**§ 7. Maternity Allowance.**

1. *General.*—During the session of 1912 the Federal Parliament passed an Act (assented to on 10th October, 1912) providing for the payment of maternity allowances. The scope and main provisions of the Act are given in Year Book No. 14, p. 1047. The most important conditions in the original Act were that the sum of five pounds was payable in the case of each confinement resulting in the birth of a viable child whether such child was born alive or dead. The mother must be a native of the Commonwealth, or intend to settle permanently therein. No payment is made in the case of an aboriginal or an Asiatic. The *Financial Emergency Act* 1931 reduced the allowance payable to £4 and limited the application of the original Act to those cases where the combined income of husband and wife did not exceed £260 in the previous 12 months.

The following table gives a summary in connexion with the working of the Maternity Allowance Act for the years 1927 to 1931 :—

**MATERNITY ALLOWANCE.—SUMMARY.**

Year.	Claims Paid.	Claims Rejected.	Amount Paid.	Cost of Administration.	Cost per £100 of allowance paid.
	No.	No.	£	£	£ s. d.
1926-27 ..	132,056	1,122	660,280	16,181	2 9 0
1927-28 ..	135,784	1,261	678,920	15,489	2 5 8
1928-29 ..	132,304	901	661,520	16,626	2 10 3
1929-30 ..	128,598	821	642,990	15,157	2 7 2
1930-31 ..	126,149	770	630,652a	15,322	2 8 7
Aggregate— 1912-13 to 1930-31 ..	2,475,475	12,308	12,377,280	265,326	2 2 7

(a) Excluding £93 refunded.

2. *Claims paid in each State.*—The following table shows the number of maternity allowance claims (each for £5) paid in each State during the last five years :—

**MATERNITY ALLOWANCE.—CLAIMS PAID IN EACH STATE.**

Year ended 30th June.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	Total.
1927 .. ..	53,064	35,202	19,300	11,336	8,200	4,917	37	132,056
1928 .. ..	55,072	35,656	19,790	11,716	8,598	4,898	54	135,784
1929 .. ..	54,275	34,132	19,040	11,148	8,888	4,777	44	132,304
1930 .. ..	52,335	33,381	18,490	10,361	9,030	4,959	42	128,598
1931 .. ..	51,660	32,241	18,790	9,720	8,909	4,778	51	126,149
Total, 1910 to 1930-31 ..	987,815	649,756	364,862	215,758	155,373	101,143	768	2,475,475

**§ 8. War Pensions.**

1. *General.*—An Act for the provision of war pensions was passed in 1914 and amended in 1915 and 1916. Its scope can be determined by the following extract from Section 3. " Upon the death or incapacity of any member of the forces whose death or incapacity results, or has resulted, from his employment in connexion with warlike operations in which His Majesty is, or has since the commencement of the present state

of war been engaged, the Commonwealth shall, subject to this Act, be liable to pay to the member or his dependants or both, as the case may be, pensions in accordance with this Act." The general reduction of expenditure provided by the *Financial Emergency Act 1931* applied also to War Pensions. No reductions, however, were made in the rate of pension payment to incapacitated soldiers, the necessary economies being effected in payments to other war pensioners.

Prior to 1st July, 1932, the Commonwealth Government bore the cost of exchange in connexion with the payment of pensions to Australian soldiers domiciled overseas.

2. Number of Pensioners and Expenditure on War Pensions.—The following table shows the number of pensioners at 30th June, 1931, and the places where payments were made during 1930-31 :—

WAR PENSIONS.—NUMBER OF PENSIONERS, 1931.

Where Paid.	Incapacitated Members of the Forces.	Dependants of—		Total.	Expenditure.
		Deceased Members.	Incapacitated Members.		
New South Wales ..	25,355	9,971	54,792	90,118	£ 2,736,872 2,367,707 877,044 496,704 787,319 356,801
Victoria ..	25,066	10,994	60,142	96,202	
Queensland ..	8,195	3,486	17,681	29,362	
South Australia ..	4,164	3,084	9,405	16,653	
Western Australia ..	7,507	2,922	17,634	28,063	
Tasmania ..	3,044	1,263	8,424	12,731	
Total, Australia ..	73,331	31,720	168,078	273,129	7,622,447
London ..	1,667	3,674	3,868	9,209	} 373,733
South Africa ..	57	31	80	168	
New Zealand ..	239	186	337	762	
Other Overseas ..	22	6	26	54	
Total ..	75,316	35,617	172,389	283,322	7,996,180
Payments made in Australia in respect of other countries less amounts received from other countries	..	..	..	..	Cr. 9,142
Total, War Pensions Trust Fund Account	..	..	..	..	7,987,038

3. Cost of Administration.—The cost of administration in 1930-31, after allowing for the amount recoverable from the Government of the United Kingdom on account of administrative cost of British pensions was £179,325, or 2.2 per cent. on the total amount paid in pensions.

### § 9. Commonwealth Public Service Superannuation Fund.

This Fund, which was inaugurated on the 20th November, 1922, is maintained by contributions of officers of Parliament, of employees of the Commonwealth Public Service and the Defence Department, and by payments from the Consolidated Revenue—the latter being made when the officers retire on pension. Full particulars as to the benefits, etc., will be found in Official Year Book No. 18, page 383.

The number of contributors to the fund at 30th June, 1931, was 32,133, viz., 28,592 males and 3,541 females, and the average pension contributed for was £119 9s. per annum.

During 1930–31, the receipts of the fund amounted to £1,043,015 (including Treasury advance, £420,000), of which officers' contributions represented £440,400. The expenditure from the fund for the year was £1,023,662 (including repayment of Treasurer's advance, £483,600), of which £420,967 was invested, bringing the total funds invested to £3,385,751 (at cost). The average rate of interest earned on investments at 30th June, 1931, was 5.508 per cent.

Pensions in force on the 30th June, 1931, numbered 3,643, with an annual liability of £305,650, of which £246,829 represents the share payable from the Consolidated Revenue Fund.

Contributions from the Commonwealth Consolidated Revenue to the fund were reduced by 20 per cent. from July, 1931, upon the *Financial Emergency Act 1931*, coming into operation. As the Government contribution in respect of any officer does not commence until he is superannuated, the reduced contribution affects all pensioners including those already in receipt of pensions. The relief to the fund on this account is offset by the reduced interest earning capacity of the fund's investments, which are entirely in Government securities and subject to the interest reduction of 22½ per cent. as part of the "Premiers' Plan".

### § 10. Currency and Coinage.

1. *Australian Mints.*—Soon after the discovery of gold in Australia, steps were taken for the establishment of a branch of the Royal Mint in Sydney. The formal opening took place on the 14th May, 1855. The Melbourne branch was opened on the 12th June, 1872, and the Perth branch on the 20th June, 1899. The States of New South Wales, Victoria, and Western Australia provided an annual endowment in return for which the mint receipts were paid into the respective State Treasuries, and it might be said until recently that, apart from expenditure on buildings, new machinery, etc., the accounts paid into the Treasuries fairly balanced the mint subsidies. Early in 1923, however, it was announced that owing to losses incurred in the operations of recent years, the New South Wales Government had decided to close the Sydney branch at the end of 1923. This decision was, however, not carried out at that time, but the mint was closed at the end of 1926.

2. *Standard Weight and Fineness of Coinage.*—In addition to coins minted at Melbourne and Perth mints, Imperial silver coins legally current in England and which were minted prior to 31st March, 1920, when the fineness was reduced from .925 to .500 are also legal tender in Australia. Sovereigns coined at the Royal Mint, London, or at any of its branches throughout the Empire are legal tender in Australia. The provisions as to legal tender are—gold coins, legal tender to any amount, silver for an amount not exceeding forty shillings, and bronze up to one shilling. The standard weights of the sovereign and half-sovereign are respectively 123.27447 grains and 61.63723 grains, but these coins will pass current if they do not fall below 122.5 grains and 61.125 grains respectively.

3. *Gold Receipts and Issues.* (i) *Receipts.* The receipts of gold during 1931 and the aggregate at each mint to the end of 1931 were as follows:—

## AUSTRALIAN MINTS.—RECEIPTS OF GOLD, 1931, AND TOTAL.

Mint.	Deposits during 1931.	Total to end of 1931.		
		Quantity.		Value.
		Gross.	Fine.	
	ozs. Gross.	ozs.	ozs.	£
Sydney ..	..	(a) 42,082,928	(a) 36,907,045	(a) 156,771,141
Melbourne ..	217,405	41,835,228	38,494,501	163,514,138
Perth ..	606,278	33,850,005	27,733,322	117,803,588
Total ..	823,683	117,768,161	103,134,868	438,088,867

(a) To end of 1926.

In cases of deposits containing over a certain minimum of silver, the excess is paid for at the rate fixed from time to time by the Deputy-Master of the branch mint concerned.

(ii) *Issues.* The Australian mints, besides issuing gold coin in the shape of sovereigns and half-sovereigns, also issue gold bullion, partly for the use of local manufacturers (jewellers and dentists), and partly for export, India taking a considerable quantity of gold cast into 10-oz. bars. During recent years the export was subject to regulation by the Commonwealth Government. The issues during 1931, and the total to the end of that year, are shown in the table below :—

## AUSTRALIAN MINTS.—ISSUES OF GOLD.

Mint.	Coin.			Bullion.	Total.
	Sovereigns.	Half-sovereigns.	Total.		
	£	£	£	£	£
1931—					
Melbourne ..	57,779	..	57,779	637,785	695,564
Perth ..	1,173,568	..	1,173,568	981,219	2,154,787
Total, 1931	1,231,347	..	1,231,347	1,619,004	2,850,351
Aggregate—					
Sydney ..	144,435,550	4,781,000	149,216,550	7,574,408	156,790,958
Melbourne ..	147,283,131	946,780	148,229,911	15,277,086	163,506,997
Perth ..	106,384,197	367,338	106,751,535	11,046,410	117,797,945
Total to end of 1931 ..	398,102,878	6,095,118	404,197,996	33,897,904	438,095,900

(iii) *Withdrawals of Worn Coin.* The mints receive light and worn coin for recoinage. The total withdrawals of worn gold coin were as follows :—Sydney (to 1926), £1,110,867; Melbourne, £882,303 (since and including 1890); and Perth, £1,401.

4. *Price of Gold.*—In consequence of Great Britain's departure from the gold standard on 21st September, 1931, the market value of gold immediately rose by about 17½ per cent. from £4 4s. 11d. to £4 19s. 7d. per ounce fine. Considerable fluctuations have since taken place, and the average monthly value of gold based on the London open market price per ounce fine adjusted to the telegraphic transfer exchange rate (Australia on London) less a small percentage for shipping charges is given in the appended table in £ sterling and £ Australian from January, 1931, to July, 1932. Particulars are also shown for the value of the sovereign.

## PRICE OF GOLD.—LONDON AND AUSTRALIA, 1931-32.

Month.	London.				Australia.				
	Average price per ounce, fine.		Average value of Sovereign.		Average price per ounce, fine.		Average value of Sovereign.		Equivalent to a premium of— %
	£s	s. d.	£s	s. d.	£A	s. d.	£A	s. d.	
1931—									
January to									
August ..	4	4 11	1	0 0	5	8 0	1	5 5	28.4
September ..	4	11 3	1	1 6	5	17 2	1	7 7	37.9
October ..	5	6 3	1	5 0	6	16 5	1	12 1	60.6
November ..	5	10 9	1	6 1	7	2 2	1	13 6	67.3
December ..	6	2 6	1	8 10	7	11 9	1	15 9	78.5
1932—									
January ..	6	0 5	1	8 4	7	8 8	1	15 0	74.9
February ..	5	19 8	1	8 2	7	7 9	1	14 9	73.9
March ..	5	14 1	1	6 10	7	0 1	1	13 2	65.8
April ..	5	10 3	1	6 0	6	16 2	1	12 1	60.2
May ..	5	12 10	1	6 7	6	19 3	1	12 9	64.0
June ..	5	13 4	1	6 8	6	19 11	1	12 11	64.7
July ..	5	16 0	1	7 4	7	3 2	1	13 8	68.5

NOTE.—“£s” represents £ sterling while Australian £s are indicated by “£A.”

5. *Silver and Bronze Coinage.*—(i) *Prices of Silver.* The value of silver has greatly decreased since its demonetization and restricted coinage in almost the whole of Europe. A noticeable increase, however, took place for some years after 1915, the price of silver following the general trend of world prices. Its average price in the London market in recent years is shown in the table in Chapter XVIII., Mineral Industry.

(ii) *Profits on Coinage of Silver.* As sixty-six shillings are coined out of one pound troy of standard silver (.925 fine), the silver required to produce £3 6s. of coin cost, at the average 1931 London market price of 1s. 2.6d. per ounce, approximately 14s. 7d. The difference nearly represents, therefore, the gross profit or seigniorage made on the coinage of every £3 6s. Negotiations for the coinage of silver and bronze coin in Australia took place for a number of years between the Imperial authorities and the Governments of New South Wales and Victoria, but no decision was arrived at. As section 51 of the Commonwealth Constitution makes legislation concerning “currency, coinage, and legal tender” a Federal matter, the question remained in abeyance until 1907, when the matter was discussed at the Colonial Conference, London, with the result that in the latter part of 1908 the Commonwealth Treasurer announced his intention of initiating the coinage. Since 1916 silver and bronze coins have been minted in Australia on behalf of the Commonwealth Treasury.

(iii) *Silver and Bronze Issues.* The total issues of silver and bronze coinage on account of the Commonwealth since 1910, as obtained from returns furnished by the Treasury, are set out in the following table:—

## AUSTRALIAN MINTS.—SILVER AND BRONZE ISSUES BY TREASURY.

Year.	Silver.					Bronze.		
	2/-.	1/-.	6d.	3d.	Total.	1d.	½d.	Total.
	£	£	£	£	£	£	£	£
1910-1926 ..	2,849,600	1,600,900	670,800	641,925	5,763,225	275,243	91,410	366,653
1926-27 ..	381,000	99,400	87,900	74,575	642,875	11,810	8,865	20,675
1927-28 ..	123,400	50,600	64,400	66,800	305,200	18,460	3,620	22,080
1928-29 ..	71,000	12,400	20,000	24,600	128,000	13,030	5,510	18,540
1929-30 ..	30,000	10,000	11,200	10,000	61,200	3,020	2,310	5,330
1930-31 ..	192,000	45,000	..	..	237,000	..	..	..
Total ..	3,647,000	1,818,300	854,300	817,900	7,137,500	321,563	111,715	433,278

(iv) *Withdrawals of Worn Silver Coin.* An examination of the wear on silver coins made by the London Mint Authorities in 1909 revealed that the average life of silver coins (then .925 fine) was:—2s. pieces, 45 years; 1s., 41 years; 6d., 28 years; and 3d., 32 years. The value of worn silver coins received during 1931 was as follows:—Melbourne, £67; Perth, nil. The total withdrawals of worn silver coin to 1931 were:—Melbourne, £1,747,362; Perth, £129,738; Sydney (to 1926), £1,248,672.

6. *Australian Note Issue.*—(i) *General.* Information in some detail regarding Australian Notes has been given in earlier issues of this work. In December, 1920, the Australian Note Issue passed to the control of the Commonwealth Bank, the notes, however, remaining Treasury Notes. The Note Issue Department is administered by the Board of Directors of the Commonwealth Bank.

(ii) *Reserve against Note Issue.* Prior to 19th June, 1931, the reserve held in gold against the note issue was fixed at 25 per cent. of the total notes in circulation. To permit further shipments of gold to meet short-term obligations in London, an Amending Act reduced the statutory gold reserve by graduations to 15 per cent. with provision for the restoration to 25 per cent. within a period not exceeding five years. A further Amending Act provided that portion of the note issue reserve may be held in British sterling, which was defined as follows:—(a) Balances standing to the credit of the Bank at the Bank of England or at any other of its bankers in London; (b) Bills of Exchange or advances secured thereby which will mature in not more than three months and which are payable in the United Kingdom in currency which is legal tender therein; and (c) Treasury Bills or other securities of the United Kingdom which will mature in not more than three months.

(iii) *Notes in Circulation.* Particulars of the average notes in circulation and of the gold reserve for the years 1914 and 1928 to 1931 are given in the table hereunder.

#### COMMONWEALTH NOTE ISSUE.—PARTICULARS.

Particulars.	Average of twelve monthly statements for year—				
	1914.	1928.	1929.	1930.	1931.
Notes held by—	£	£	£	£	£
Banks ..	(a)	19,769,048	18,199,104	21,322,892	24,939,874
Public ..	(a)	25,620,845	25,162,705	23,446,192	25,221,885
Total ..	11,944,848	45,389,893	43,361,809	44,769,084	50,161,759
Gold Reserve ..	5,368,822	22,154,038	22,014,414	18,143,823	13,144,494
Percentage of Reserve on Total Issue ..	%	%	%	%	%
	44.9	48.8	50.8	40.5	20.5

(a) Not available.

Details of the average value of each of the several denominations of Australian Notes outstanding in 1914 and from 1927 to 1931 are given in Finance Bulletin No. 22 issued by this Bureau.

7. *Legal Tender Extant.*—Accurate information regarding the amount of token money in circulation is not available, but the following table gives an estimate of the amount of of legal tender extant about the middle of the years 1930 and 1931.

## ESTIMATED LEGAL TENDER EXTANT.—AUSTRALIA.

Particulars.	1930.	1931.
Australian Note Issue (a)—	£,000.	£,000
Held by Banks .. .. .	22,342	25,351
Held by Public .. .. .	22,572	25,302
Notes of Trading Banks outstanding (b) .. .. .	199	198
Coin—Gold—Held by Banks (c) .. .. .	1,091	312
Held by Public .. .. .	..	..
Silver—Held by Banks .. .. .	2,577	2,026
Held by Public .. .. .	4,163	5,031
Bronze—Held by Banks .. .. .	145	133
Held by Public .. .. .	288	300
<b>Total .. .. .</b>	<b>53,377</b>	<b>58,653</b>

(a) Last Monday in June.

(b) Average for June quarter.

(c) At 30th June.

The figures given above for silver coin represent the total issues of Australian silver coin less the excess of exports of Australian coins to New Zealand and the Pacific Islands over the re-imports of Australian coins. The amount of English coin in circulation in Australia is negligible, and as it is not possible to ascertain accurately its volume, no allowance has been made therefor. The figures given for bronze coins refer to the total issues of Australian coin, the small amount of British coin in circulation being disregarded.

## C. STATE FINANCE.

## § 1. General.

1. **Functions of State Governments.**—In comparing the financial returns of the States allowance must be made for the various functions discharged by the respective Governments, and for local conditions in each case. Direct comparisons of expenditure are difficult, owing to the fact that functions which in one State are assumed by the Central Government are in another relegated to local governing bodies, and that costly developmental work may, under certain conditions, be not only economically justifiable but may be essential to progress, while parsimonious expenditure may be an economic blunder. A large expenditure may, therefore, be an indication either of gross extravagance and bad economy on the one hand, or of healthy progress and good economy on the other. Similarly, as regards revenue, imposts which in some States are levied by the Central Government, are in others dealt with by local or quasi-governmental bodies. Care, therefore, is needed in instituting comparisons, and the particulars contained in this chapter should be read in connexion with those contained in the chapter dealing with Local Government. In many respects moreover, the budgets of the Australian Governments differ materially from those of most European countries, owing to the inclusion therein of the revenue and expenditure of departments concerned in rendering public services, such for instance as railways, tramways, water supply, etc., which in other countries are often left to private enterprise.

2. **Accounts of State Governments.**—The various financial transactions of the States are in each case mainly concerned with one or other of three Funds—the “Consolidated Revenue Funds,” the “Trust Funds,” and the “Loan Funds.” All revenue (except certain taxation items paid into special funds) collected by the State is placed to the credit of its Consolidated Revenue Fund, from which payments are made under the authority of an Annual Appropriation Act passed by the Legislature, or by a permanent appropriation under a special Act. From 1st July, 1928, the accounts of the Railway and Tramway services, Sydney Harbour Trust, and certain water supply services were separated from the Consolidated Revenue Fund of New South Wales. To preserve the comparability of the State finance statistics, information in respect of the above services has been included in the tabular statements in this section. The Trust Funds comprise all moneys held in trust by the Government, and include such items as savings banks funds, sinking funds, insurance companies’ deposits, etc. The Loan Funds are debited with all loan moneys raised by the State, and credited with the expenditure therefrom on public works or other purposes.



3. *Inter-relation of Commonwealth and State Finances.*—In regard to the inter-relation of Commonwealth and State Finances, a statement in some detail, covering the period from the inception of Federation to the passing of the *Financial Agreement Act* 1928, was published in Official Year Book No. 22, pages 379-80.

## § 2. Consolidated Revenue Funds.

### Division I.—Revenue.

1. *General.*—The principal sources of State revenue are :—

- (a) Taxation; (b) The public works and services controlled by the State Governments; (c) Sale of and rental from Crown lands; (d) Payments by Commonwealth Government under the *Financial Agreement and Special Grants Acts*; and (e) Miscellaneous sources, comprising fines, fees, interest, etc.

In regard to item (b) attention is directed to the statement (see C. § 1 (2) *ante*) appertaining to the New South Wales accounts. In connexion with the Railway Accounts for that State the Consolidated Revenue Fund contributes to the Railways Commissioners a sum not exceeding £800,000 in respect of losses on country developmental railways. To avoid duplication in determining the aggregate receipts and expenditure for each of the past three years, this amount has not been included in the railways receipts or Consolidated Revenue Expenditure. During 1929-30, a refund of £327,129 was made to the Railways Commissioners from the Consolidated Revenue Surplus of 1928-29 in respect of Sinking Fund Contribution paid by the Railways Commissioners in 1928-29. This amount also has not been included in revenue for the year 1929-30.

Of these sources, that yielding the largest revenue for the States as a whole is the group of Public Works and Services, the principal contributor being the Government Railways and Tramways. Next in magnitude comes Taxation, followed in order by the Commonwealth Payments and Land Revenue.

2. *Revenue Received.*—The following table furnishes particulars of the total amounts and the amounts per head, of consolidated revenue received by the several States during the last five years :—

#### STATE CONSOLIDATED REVENUE.

Year.	N.S.W. (a)	Victoria. (a)	Q'land.	S. Aust.	W. Aust. (b)	Tasmania.	All States.
TOTAL COLLECTIONS.							
	£	£	£	£	£	£	£
1926-27	47,060,753	27,128,700	16,147,787	10,784,897	9,750,833	3,040,220	113,913,190
1927-28	47,997,372	27,357,917	16,718,070	11,346,903	9,807,949	2,962,687	116,190,898
1928-29	50,447,100	28,156,034	16,725,682	10,840,914	9,947,951	2,766,434	118,884,115
1929-30	46,904,889	27,323,842	15,997,870	10,551,016	9,750,515	2,956,272	113,484,404
1930-31	40,920,872	25,575,504	15,072,652	10,725,811	8,686,756	2,609,290	103,590,885
PER HEAD OF POPULATION.(c)							
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1926-27	20 1 2	15 17 0	18 5 3	19 1 4	25 14 2	14 9 0	18 13 8
1927-28	20 0 1	15 14 3	18 11 3	19 14 9	25 0 2	14 1 1	18 13 8
1928-29	20 12 6	15 19 11	18 4 8	18 14 7	24 10 4	13 0 2	18 16 2
1929-30	18 18 10	15 7 5	17 3 2	18 3 11	23 8 11	13 14 11	17 14 9
1930-31	16 7 6	14 5 7	15 17 7	18 8 7	20 13 8	11 19 2	16 0 9

(a) Includes certain moneys not paid into Consolidated Revenue Fund, such as receipts from Railways, Tramways, Sydney Harbour Trust, certain Water Supply and Sewerage Services and motor taxation in New South Wales and motor tax in Victoria. (b) Excludes motor taxation. (c) Based on mean population of each financial year.

There was a marked increase in the collections per head in all the States up to the year 1928-29, but in 1929-30 there was a decline of about 22s. per head in the total. A further fall of £1 14s. per head was recorded in 1930-31 when the revenue per head of £16 os. 9d. was the lowest since 1922-23. Taxation revenue was buoyant up to 1929-30, but decreased by slightly over £1,000,000 in 1930-31. Revenue from Business Undertakings receded by about £5 millions in 1929-30 and by £8.7 millions in 1930-31.

3. Sources of Revenue.—(i) *General.* Classifying the revenue of the several States in the manner indicated in *I ante*, particulars for the year 1930-31 are as follows:—

## STATE CONSOLIDATED REVENUE.—SOURCES, 1930-31.

Particulars.	N.S.W. (a)	Victoria. (a)	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
<b>TOTAL REVENUE.</b>							
	£	£	£	£	£	£	£
Taxation (e) ..	11,248,871	8,056,615	94,272,566	3,339,766	91,134,385	1,071,263	29,123,466
Business Under- takings ..	23,525,314	12,242,787	6,654,596	4,377,581	4,782,031	501,473	52,083,782
Territorial ..	1,578,088	279,205	1,232,463	152,809	338,759	51,720	3,633,044
Commonwealth pay- ments ..	2,917,411	2,127,159	1,096,235	61,873,816	6773,432	6516,859	9,304,912
Interest ..	587,303	1,908,322	1,062,181	918,879	(e)	447,739	4,924,424
Miscellaneous ..	1,063,885	961,416	754,611	62,960	1,658,149	20,236	4,521,725
<b>Total ..</b>	<b>40,920,872</b>	<b>25,575,504</b>	<b>15,072,652</b>	<b>10,725,811</b>	<b>8,686,756</b>	<b>2,609,290</b>	<b>103,590,885</b>
<b>PER HEAD OF POPULATION.(h)</b>							
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Taxation (e) ..	4 10 0	4 10 0	4 10 0	5 14 9	2 14 0	4 18 3	4 10 2
Business Under- takings ..	9 8 3	6 16 8	7 0 2	7 10 5	11 7 9	2 6 0	8 1 3
Territorial ..	0 12 8	0 3 1	1 6 0	0 5 3	0 16 2	0 4 9	0 11 3
Commonwealth pay- ments ..	1 3 4	1 3 9	1 3 1	3 4 5	1 16 10	2 7 5	1 8 10
Interest ..	0 4 9	1 1 4	1 2 5	1 11 7	(e)	2 1 1	0 15 3
Miscellaneous ..	0 8 6	0 10 9	0 15 11	0 2 2	3 18 11	0 1 10	0 14 0
<b>Total ..</b>	<b>16 7 6</b>	<b>14 5 7</b>	<b>15 17 7</b>	<b>18 8 7</b>	<b>20 13 8</b>	<b>11 19 2</b>	<b>16 0 9</b>

(a) Includes certain moneys not paid into Consolidated Revenue Fund. See note (a) to table immediately preceding. (b) Including special grant. (c) In some States certain taxation collections are not paid into Consolidated Revenue Fund. For total collections see next page. (d) Excludes £800,000 paid to Railways Commissioners from Consolidated Revenue in respect of losses on country developmental railways. (e) Included with Miscellaneous. (f) Excludes Western Australia. (g) Excludes Motor Tax. (h) Based on mean population of the financial year.

In connexion with the item Business Undertakings, it should be borne in mind that services performed by the Government in one State may, in another, be carried out by a Board or Trust. For instance, in New South Wales and Western Australia the tramway systems are controlled by the Government, while in the other States ownership is largely vested in Trusts or private companies. Harbour and river services and water supply and sewerage are also controlled in some cases by the State and in others by Trusts.

The magnitude of the revenue per head from Business Undertakings in the case of Western Australia is mainly due to the fact that the number of miles of railway in that State is large compared with the population, while the revenue earning power of the railways is high. In New South Wales and Western Australia the revenue from tramways is also included.



Prior to Federation, duties of Customs and Excise constituted the principal source of revenue from taxation. At present, the most productive State tax is the income tax, imposed in all the States, and representing for 1930-31, 39 per cent. of the total taxation revenue. For 1930-31, unemployment relief tax (17 per cent.) occupied second place. In addition to these, a State land tax and licence fees of various kinds are collected in all the States, while a dividend tax is levied in Western Australia and a family endowment tax is imposed in New South Wales.

The total amounts and the amounts per head raised from all sources of taxation by the several State Governments, including amounts not paid into the Consolidated Revenue Fund, during the five years ended 1930-31 are given in the following table :—

## STATE REVENUE FROM TAXATION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
TOTAL.							
	£	£	£	£	£	£	£
1926-27	12,698,642	6,440,192	4,759,829	2,885,753	1,485,536	1,229,823	29,499,775
1927-28	13,217,001	7,213,597	5,362,964	3,736,223	1,587,920	1,134,528	32,252,143
1928-29	13,604,187	7,192,115	5,128,170	3,767,994	1,721,833	1,111,533	32,525,832
1929-30	15,148,398	7,426,295	4,795,240	3,487,815	1,846,333	1,119,722	33,823,803
1930-31	16,650,630	8,104,229	5,468,777	3,399,942	1,524,846	1,071,263	36,219,687

## PER HEAD OF POPULATION.(a)

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1926-27	5 8 3	3 15 3	5 7 8	5 2 0	3 18 4	5 16 11	4 16 9
1927-28	5 10 2	4 2 10	5 19 1	6 10 0	4 1 0	5 7 8	5 3 9
1928-29	5 11 3	4 1 9	5 11 10	6 10 2	4 4 10	5 4 6	5 2 11
1929-30	6 2 4	4 3 7	5 2 10	6 0 3	4 8 9	5 4 2	5 5 9
1930-31	6 13 3	4 10 6	5 15 3	5 16 10	3 12 7	4 18 3	5 12 2

(a) Based on mean population of each financial year.

During the period between 30th June, 1927, and 30th June, 1931, State revenue from taxation increased by about 23 per cent., the increase varying considerably in the different States and in the different sources of taxation.

Taking the States as a whole, taxation increased by 15s. 5d. per head during the same period, the most marked increase, £1 5s. od., occurring in the case of New South Wales, due to the introduction of the Family Endowment Tax in 1927-28, and Unemployment Relief Tax in 1930-31. Increases were recorded in all States except Western Australia and Tasmania, where the decreases per head of population represented 5s. 9d. and 18s. 8d. respectively.

(b) *Probate and Succession Duties.* Probate duties have been levied for many years in all the States, but the provisions of the Acts governing the payment of duty differ widely both in regard to the ordinary rates and those which apply to special beneficiaries. A table showing the values of the estates in which probates and letters of administration were granted is given later. (See Chapter IX., Private Finance, Section F.)

The duties collected for the last five financial years are as follows :—

**STATE PROBATE AND SUCCESSION DUTIES.—COLLECTIONS.**

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
New South Wales .. ..	1,223,979	1,596,804	1,816,927	1,860,052	1,496,641
Victoria .. ..	1,111,876	1,117,164	1,079,840	1,133,422	1,131,603
Queensland .. ..	402,173	556,456	524,135	491,892	528,129
South Australia .. ..	242,187	327,940	329,924	395,082	254,264
Western Australia .. ..	66,366	81,452	82,469	75,707	72,093
Tasmania .. ..	151,200	99,640	74,812	65,991	78,275
Total .. ..	3,197,781	3,779,456	3,908,107	4,022,146	3,561,005

(c) *Other Stamp Duties.* The revenue derived from stamp duties (exclusive of probate and succession duties and stamp duties on betting tickets) for the past five years is shown in the accompanying table :—

**STATE STAMP DUTIES.—COLLECTIONS.**

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
New South Wales .. ..	1,626,318	1,552,117	1,586,776	1,362,147	931,308
Victoria .. ..	1,061,219	1,005,957	1,017,908	985,088	704,958
Queensland .. ..	558,063	558,970	575,809	555,391	442,149
South Australia .. ..	420,932	445,517	469,861	379,546	285,915
Western Australia .. ..	246,089	263,871	291,400	255,725	170,949
Tasmania .. ..	62,700	62,267	62,623	64,929	114,401
Total .. ..	3,975,321	3,888,699	4,004,377	3,602,826	2,649,680

(d) *Land Tax.* All the States impose a land tax, although Queensland, the last State to fall into line, collected its first levy in 1915-16. In the other States the impost is of long standing. In New South Wales the State land tax is levied on the unincorporated portion of the western division of the State only.

The following table shows the amount collected by means of such taxes during the financial years 1926-27 to 1930-31 :—

**STATE LAND TAX.—COLLECTIONS.**

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
New South Wales .. ..	2,870	2,744	2,870	2,588	2,486
Victoria .. ..	517,229	560,013	560,765	531,426	506,025
Queensland .. ..	481,937	531,940	569,551	556,532	503,656
South Australia .. ..	367,318	458,222	452,994	440,265	486,505
Western Australia .. ..	147,415	162,906	196,301	219,066	168,579
Tasmania .. ..	114,322	97,494	99,384	99,453	97,963
Total .. ..	1,631,091	1,813,319	1,881,865	1,849,330	1,765,214

(e) *Income Tax.* A tax on the incomes of persons, whether derived from personal exertion or from property, is also imposed in all the States. As might be expected, the rates, exemptions, etc., are widely divergent, but the general principles of the several Acts are similar. The Dividend Duties Act of Western Australia supplied to a certain extent the place of an income tax in that State in former years, but, with the increasing demands upon the Treasury, the levying of a direct income tax was found necessary.

The following table shows the total amount collected in the several States during the years 1926-27 to 1930-31. In the case of Western Australia the amount of dividend duty collected is included. The tax levied on prizes in lotteries although coming within the Income Tax class has been excluded from the amounts given below.

## STATE INCOME AND DIVIDEND TAXES.—COLLECTIONS.

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
New South Wales ..	7,739,627	6,382,467	7,343,049	7,084,465	6,183,481
Victoria ..	2,382,991	3,035,014	2,881,917	2,981,050	2,659,585
Queensland ..	2,784,967	3,041,302	2,714,764	2,405,810	2,522,300
South Australia ..	1,359,437	1,803,829	1,735,922	1,507,375	1,802,176
Western Australia ..	619,140	648,537	644,836	751,116	562,695
Tasmania ..	303,112	280,377	309,165	322,098	302,925
Total ..	15,189,274	15,191,526	15,629,653	15,051,914	14,033,162

(f) *Unemployment Relief Tax.* During 1930-31 a special unemployment relief tax was levied in New South Wales, Victoria and Queensland. In South Australia portion of the moneys for expenditure on unemployment relief was raised by an increment in the rate of income tax. In Western Australia and Tasmania no special tax for this purpose was raised. Further references to this matter are included in Chapter XXVI., Labour, Wages and Prices.

(g) *Motor Taxation.* Motor taxation comprises tax and registration fees on motor vehicles; licences of motor dealers, motor drivers and motor cycle riders, and public vehicles except when controlled by local government authorities. The following table shows the collections for the past five years:—

## MOTOR TAXATION.—COLLECTIONS.

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
New South Wales ..	1,247,915	1,478,986	1,710,453	1,807,376	1,669,969
Victoria ..	833,159	957,945	1,103,718	1,196,831	1,118,170
Queensland ..	275,362	403,956	477,310	523,881	519,108
South Australia ..	a 368,698	a 539,481	a 623,587	a 620,627	461,955
Western Australia ..	221,107	215,567	265,059	314,300	286,140
Tasmania ..	58,729	68,916	80,296	89,791	95,370
Total ..	3,004,970	3,664,851	4,260,423	4,552,806	4,150,712

(a) Includes motor spirit tax.

In all the States except South Australia and Tasmania, the proceeds of Motor Tax and Motor Registration Fees, which latter are included herein, are now paid into a special roads fund and the amounts do not appear in the Consolidated Revenue Fund. In New South Wales a proportion of the collections is however retained and paid to Consolidated Revenue as an offset against administrative charges.

(iii) *Business Undertakings*—(a) 1930-31. A very large proportion of State revenues is made up of receipts from public works and services under the control of the Governments. The principal of these are railways and tramways, harbour works, and water supply and sewerage, while, in addition, State batteries for the treatment of auriferous ores exist in Western Australia, and various minor revenue-producing services are rendered by the Governments of all States. For the year 1930-31 the revenue from these sources was £52,033,782, or 50 per cent. of the revenue from all sources. Details of revenue are as follows:—

## STATE REVENUE FROM BUSINESS UNDERTAKINGS, 1930-31.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Railways and tramways	c 18,264,212	a 9,816,353	a 6,426,965	a 2,604,455	3,425,220	a 406,212	40,943,417
Harbour services ..	c 840,078	53,307	75,314	478,087	296,121	..	1,742,907
Water supply and sewerage ..	d 3,020,159	b 579,616	..	819,259	589,521	..	5,008,555
Other ..	1,400,865	1,793,511	152,317	475,780	471,169	e 95,261	4,388,903
<b>Total ..</b>	<b>23,525,314</b>	<b>12,242,787</b>	<b>6,654,596</b>	<b>4,377,581</b>	<b>4,782,031</b>	<b>501,473</b>	<b>52,083,782</b>

(a) Railways only. (b) Water supply only. (c) Not paid into Consolidated Revenue. See C. § 1 (2). (d) Portion only of this amount is paid to Consolidated Revenue Fund. (e) Excludes electricity supply.

As mentioned in the footnote to the table on page 317 the particulars shown above for New South Wales railways and tramways do not include a sum of £800,000, recouped to Railways Commissioners from Consolidated Revenue in respect of losses on operating country developmental railways.

(b) 1926-27 to 1930-31. Particulars of the revenue from Business Undertakings for the past five years are given below.

## STATE REVENUE FROM BUSINESS UNDERTAKINGS.(a)

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Railways and Tramways ..	52,208,705	52,778,799	52,764,377	48,606,108	40,943,417
Harbour Services ..	2,667,353	2,639,429	2,277,611	2,120,023	1,742,907
Water Supply and Sewerage ..	4,223,036	4,079,036	5,188,584	5,185,780	5,008,555
Other .. ..	4,505,898	5,172,386	5,493,876	4,868,376	4,388,903
<b>Total .. ..</b>	<b>63,604,992</b>	<b>64,669,650</b>	<b>65,724,448</b>	<b>60,780,287</b>	<b>52,083,782</b>

(a) See notes to previous table.

During the quinquennium the total revenue from Business Undertakings decreased by 18.1 per cent., Railways and Tramways showing a decrease of 21.6 per cent. and Harbour Services 34.6 per cent. Revenue from Water Supply and Sewerage Services increased by 18.6 per cent.

(iv) *Territorial.* The revenue from the sale and rental of Crown lands has, with few exceptions, been treated from the earliest times as forming part of the Consolidated Revenue Funds, and has been applied to meet ordinary expenses. Where the rentals received are for lands held for pastoral or residential purposes such application of the revenue would appear justifiable. On the other hand, where the rentals are for mineral and timber lands, and in all cases of sales of lands, the proceeding is essentially a disposal of capital to defray current expenses, and is, therefore, open to criticism. The following table gives the revenue from sales and rentals of Crown lands for the year 1930-31 :—

## STATE TERRITORIAL REVENUE, 1930-31.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Sales ..	44,193	19,374	..	17,896	107,046	14,035	202,544
Rentals ..	1,490,684	194,545	1,139,513	134,913	145,952	27,303	3,132,910
Forestry ..	43,211	65,286	92,950	..	85,761	10,382	297,590
<b>Total ..</b>	<b>1,578,088</b>	<b>279,205</b>	<b>1,232,463</b>	<b>152,809</b>	<b>338,759</b>	<b>51,720</b>	<b>3,633,044</b>

(v) *Commonwealth Payments.* The payments to the States (inclusive of special grants but excluding the contributions in respect of sinking fund on States' Debts and Federal Aid Roads grants) represent in each instance a considerable proportion of the States' revenue, and for the year 1930-31 aggregated £9,304,912, or 9 per cent. of the total revenue of the States.

(vi) *Miscellaneous.* In addition to the foregoing, there are in each State several miscellaneous sources of revenue, including such items as interest, fines, fees, etc., which for the year 1930-31 aggregated £9,445,671. Of this amount, interest was responsible for £4,924,424.

### Division II.—Expenditure.

1. *General.*—The principal heads of State expenditure from Consolidated Revenue Funds are :—

- (a) Interest and sinking funds in connexion with public debt; (b) Working expenses of railways and tramways; (c) Justice; (d) Police; (e) Penal establishments; (f) Education; (g) Medical and charitable expenditure; and (h) All other expenditure.

Generally, the working expenses of Railways and Tramways were the most important item in Governmental expenditure. For four years prior to 1930-31 expenditure on these services represented about 35 per cent. of the total. In 1930-31 the decreased revenue necessitated considerable curtailment of services, which, together with staff reductions and other economies, reduced the expenditure as compared with the previous year by £7,476,395 to £34.3 millions or 29 per cent. of the total expenditure. For 1930-31 Public Debt charges represented 35 per cent. of the total expenditure; next in importance was Education, 9 per cent; Law and Order, 5 per cent; Charitable, 5 per cent; and Public Health and Hospitals, 3 per cent.

2. *Total Expenditure.*—The total expenditure from Consolidated Revenue Funds in the several States, and the expenditure per head of population during each of the past five years are given in the table hereunder —

### STATE EXPENDITURE.—CONSOLIDATED REVENUE FUNDS.

Year.	N.S.W. (a)	Victoria. (a)	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
TOTAL.							
	£	£	£	£	£	£	£
1926-27	45,481,416	27,744,903	16,490,954	11,834,947	9,722,588	2,855,077	114,129,885
1927-28	48,857,763	27,521,270	16,707,564	11,621,834	9,834,415	2,867,605	117,410,451
1928-29	50,470,660	28,104,947	16,902,145	11,771,772	10,223,919	2,855,977	120,329,420
1929-30	52,167,117	28,496,712	16,721,055	12,176,840	10,268,519	2,981,992	122,812,235
1930-31	48,916,654	28,029,702	15,914,696	12,539,668	10,107,295	2,854,394	118,362,409
PER HEAD OF POPULATION.(b)							
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1926-27	.. 19 7 8	16 4 2	18 13 0	20 18 5	25 12 8	13 11 5	18 14 4
1927-28	.. 20 7 3	15 16 2	18 11 1	20 4 4	25 1 7	13 12 1	18 17 7
1928-29	.. 20 12 8	15 19 4	18 8 6	20 6 9	25 4 0	13 8 7	19 0 9
1929-30	.. 21 1 4	16 0 8	17 18 8	21 0 0	24 13 10	13 17 4	19 3 11
1930-31	.. 19 11 6	15 13 0	16 15 4	21 10 11	24 1 4	13 1 8	18 6 6

(a) Includes expenditure of certain moneys not paid into Consolidated Revenue, such as receipts from Railways, Tramways, Sydney Harbour Trust, certain Water Supply and Sewerage Services, and motor taxation in New South Wales and motor tax in Victoria. (b) Based on mean population of each financial year.



Details of the expenditure for the year 1930-31 are given in the next table.

3. Details of Expenditure for 1930-31.—The following table shows the total expenditure and expenditure per head under each of the principal items:—

STATE EXPENDITURE.—DETAILS, 1930-31.

Particulars.	N.S.W. (c)	Victoria. (c)	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
<b>TOTAL.</b>							
Public debt (interest, sinking fund, etc.)	£ 15,660,323	£ 9,076,379	£ 6,162,054	£ 5,582,886	£ 3,961,593	£ 1,254,894	£ 41,698,129
Railways and Tramways (working expenses) ..	16,005,871	47,349,989	5,004,605	2,712,098	2,765,710	465,184	34,303,457
Water Supply and Sewerage (f) ..	993,900	249,038	14,946	337,828	279,457	..	1,820,169
Justice ..	581,968	252,293	165,469	67,906	93,840	34,749	1,196,225
Police ..	1,811,469	850,372	550,473	323,541	237,996	93,732	3,867,583
Penal establishments	355,783	112,451	33,649	48,507	31,468	12,341	594,199
Education ..	4,573,027	2,821,612	1,592,015	967,361	711,977	307,930	10,973,922
Medical and charitable	2,957,223	2,578,524	1,087,190	1,252,269	813,909	228,717	8,917,832
All other expenditure	6,032,090	4,739,044	1,304,295	1,247,272	1,211,345	456,847	14,990,893
<b>Total ..</b>	<b>48,916,654</b>	<b>28,029,702</b>	<b>15,914,696</b>	<b>12,539,668</b>	<b>10,107,295</b>	<b>2,854,394</b>	<b>118,362,409</b>

PER HEAD OF POPULATION.(h)

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Public debt (interest, sinking fund, etc.)	6 5 4	5 1 4	6 9 10	9 11 10	9 8 8	5 15 0	6 9 1
Railways and Tramways (working expenses) ..	6 8 1	4 2 1	5 5 5	4 13 3	6 11 8	2 2 8	5 6 3
Water Supply and Sewerage ..	0 7 6	0 2 10	0 0 4	0 11 7	0 13 4	..	0 5 8
Justice ..	0 4 8	0 2 10	0 3 6	0 2 4	0 4 5	0 3 2	0 3 8
Police ..	0 14 6	0 9 6	0 11 7	0 11 1	0 11 4	0 8 7	0 12 0
Penal establishments	0 2 10	0 1 3	0 0 8	0 1 8	0 1 6	0 1 2	0 1 10
Education ..	1 16 7	1 11 6	1 13 6	1 13 3	1 13 11	1 8 3	1 14 0
Medical and charitable	1 3 8	1 8 9	1 2 11	2 3 0	1 18 9	1 1 0	1 7 7
All other expenditure	2 8 4	2 12 11	1 7 7	2 2 11	2 17 9	2 1 10	2 6 5
<b>Total ..</b>	<b>19 11 6</b>	<b>15 13 0</b>	<b>16 15 4</b>	<b>21 10 11</b>	<b>24 1 4</b>	<b>13 1 8</b>	<b>18 6 6</b>

(a) Including 9.79 miles of electric tramways operated by the Victorian Railways. (b) Railways only. (c) Includes expenditure of certain moneys not paid into Consolidated Revenue, see note (a) to previous table. (d) Excludes £800,000 paid from Consolidated Revenue Fund on account of losses on country developmental railways. (e) Water Supply and Irrigation Commission only. (f) Includes Water Conservation and Irrigation—New South Wales, £118,089 and South Australia, £85,902. (g) Portion only from Consolidated Revenue Fund. (h) Based on mean population of the financial year. (i) Excluding interest paid by Commonwealth on behalf of New South Wales which will be included in New South Wales expenditure for 1931-32.

Division III.—Surplus Revenue.

The following table shows for each of the years 1926-27 to 1930-31 the amount and amount per head of the surplus or deficit of each State.

STATE SURPLUS REVENUE.

Year.	N.S.W.(a)	Victoria.(a)	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
1926-27 ..	1,579,337	-6,161,203	-343,167	-1,050,050	28,245	185,143	-216,695
1927-28 ..	-860,391	-103,353	10,506	-274,931	-26,466	95,082	-1,219,553
1928-29 ..	-23,560	51,087	-176,463	-930,858	-275,968	-89,543	-1,445,305
1929-30 ..	-5,262,228	-1,172,870	-723,185	-1,625,824	-518,004	-25,720	-9,327,831
1930-31 ..	b-7,995,782	-2,454,198	-842,044	-1,813,857	-1,420,539	-245,104	-14,771,524

STATE SURPLUS REVENUE—*continued.*

## PER HEAD OF POPULATION.(c)

Year.	N.S.W.(a)		Victoria.(a)		Q'land.		S. Aust.		W. Aust.		Tasmania.		All States.	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.
1926-27 ..	0	13 6	-0	7 2	-0	7 9	-1	17 1	0	1 6	0	17 7	-0	0 8
1927-28 ..	-0	7 2	-0	1 11	0	0 2	-0	9 7	-0	1 5	0	9 0	-0	3 11
1928-29 ..	-0	0 2	0	0 7	-0	3 10	-1	12 2	-0	13 8	-0	8 5	-0	4 7
1929-30 ..	-2	2 6	-0	13 3	-0	15 6	-2	16 1	-1	4 11	-0	2 5	-1	9 2
1930-31 ..	-3	4 0	-1	7 5	-0	17 9	-3	2 4	-3	7 8	-1	2 6	-2	5 9

NOTE.—Minus sign (-) indicates deficit.

(a) After allowing for payments into and expenditure from certain special funds. (b) Excludes £1,672,222 Interest, etc., paid by Commonwealth Government on behalf of New South Wales and which will be included in New South Wales expenditure for 1931-32. (c) Based on mean population of each financial year.

## § 3. State Trust Funds.

1. *Nature.*—In addition to the moneys received as revenue and paid to the credit of their respective Consolidated Revenue Funds, considerable sums are held by the State Governments in trust for various purposes. Municipal sinking funds placed in the hands of the Governments are paid to the credit of the appropriate Trust Fund. In all the States except New South Wales where the practice is confined to those companies transacting workers' compensation insurance, life assurance companies operating are required to deposit a substantial sum in cash or approved securities with the Government, and these deposits help to swell the trust funds. Various other deposit accounts, superannuation funds, suspense accounts, etc., also find a place. The trust funds have at various times enabled the several State Treasurers to tide over awkward financial positions, but the propriety of allowing deficits to be liquidated in this manner is open to question.

2. *Extent.*—The amount of trust funds held on the 30th June, 1931, was as follows:—

## STATE TRUST FUNDS, 30th JUNE, 1931.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Amount of trust funds	23,698,304	5,472,501	1,581,780	1,581,610	14,166,282	634,362	47,134,839

## § 4. State Loan Funds.

## Division I.—Loan Expenditure.

1. *General.*—So far back as the year 1842, revenue collections were supplemented with borrowed moneys, the earliest loan being by New South Wales for the purpose of assisting immigration, at rates of interest varying from 2½d. to 5½d. per £100 per diem, or approximately from 4¼ per cent. to 8 per cent. per annum. Australian public borrowing, however, is mainly due to the fact that the State Governments, in addition to ordinary administrative duties, undertake functions which in other countries are usually entrusted to local authorities or left to private enterprise. Foremost amongst these are the construction and control of the railway systems, but loan moneys have largely been used for improvements to harbours and rivers, and the construction of water supply and sewerage works. The State loan expenditure and public debt thus differ very materially from those of most European countries, and from those of the Commonwealth, where such expenditure was very largely incurred for purposes of defence, or in the prosecution of war. As shown above, the State debts consist chiefly of moneys raised and expended with the object of assisting the development of the resources of the country, and are to a very large extent represented by tangible assets.

2. Loan Expenditure, 1930-31.—For the year ended 30th June, 1931, State net expenditure from loan funds (inclusive of revenue deficits charged to loan and Treasury Bills retired) was £15,490,611. Details for the year for each State are given in the following table:—

## STATE NET LOAN EXPENDITURE, 1930-31.

Heads of Expenditure.	N.S.W. (a)	Victoria.	Q'land. (c)	S. Aust.	W. Aust.	Tasmania. (b)	Total.
	£	£	£	£	£	£	£
Railways .. ..	2,312,557	455,293	434,350	Cr. 55,467	454,395	44,725	3,595,256
Tramways .. ..	Cr. 5,810	..	..	Cr. 54,337	9,550		
Water Supply .. ..	360,174	766,902	Cr. 12,311 (d)	6,091	197,238	..	2,050,981
Sewerage .. ..	240,453						
Water Conservation, &c. .. ..	321,119	..	..	36,085	(f)	..	..
Harbours, Rivers, and Lighthouses .. ..	143,274	..	Cr. 1,384	8,063	133,706	..	283,659
Roads and Bridges ..	1,592,919	216,784	44,469	Cr. 16,446	..	85,616	1,923,342
Public Buildings (other than State Schools) .. ..	131,470	29,042	83,257	40,897	..	10,391	295,057
State Schools .. ..	118,221	59,519	..	5,545	..	1,903	176,188
Immigration .. ..	1,484	..	..	..	1,063	..	2,547
Development of Mines and Mineral Re- sources .. ..	..	..	Cr. 3,568	..	29,077	..	25,509
Agricultural Bank ..	..	..	Cr. 29,741	..	298,734	..	268,993
Advances to Settlers	596,411	314,364	Cr. 40,596	521,136	536,684	7,534	2,473,827
Land Purchased for Settlement .. ..	59,688	494,212					
Soldier Settlement ..	..	214,967	Cr. 23,547	Cr. 44,544	39,369	Cr. 51,137	135,108
Loans to Local Bodies	..	..	327,754	Cr. 12,582	3,619	Cr. 12,523	306,268
Rabbit-proof Fencing	Cr. 768	21,877	Cr. 17,686	Cr. 3,528	..	..	Cr. 105
Electricity Supply ..	39,814	959,898	..	..	11,289	87,353	1,098,354
Other Public Works and Purposes .. ..	40,482	28,909	Cr. 56,737	Cr. 20,837	2,437	35,275	29,529
<b>Total .. ..</b>	<b>5,951,488</b>	<b>3,552,767</b>	<b>(c) 727,317</b>	<b>464,541</b>	<b>1,759,263</b>	<b>(b) 209,137</b>	<b>12,664,513</b>
Revenue Deficit .. ..	..	..	..	2,826,098	..	..	2,826,098
<b>Grand Total .. ..</b>	<b>5,951,488</b>	<b>3,552,767</b>	<b>(c) 727,317</b>	<b>3,290,639</b>	<b>1,759,263</b>	<b>(b) 209,137</b>	<b>15,490,611</b>

(a) Expenditure charged to Loan Fund. (b) Excludes £616,352 Soldier Settlement and other losses funded. (c) In addition, £1,074,945 was charged to loan to cover debit balances on certain industrial undertakings, expenditure on which was made from Trust Funds in previous years, and £100,000, portion of repayments, was transferred to Consolidated Revenue and applied to Sinking Fund Contributions. (d) Includes Loans to Local Bodies for Water Supply and Sewerage. (e) Loans to Local Bodies for Tramways. (f) Included with Water Supply.

3. Loan Expenditure, 1926-27 to 1930-31.—The following table gives the loan expenditure during each of the years 1926-27 to 1930-31:—

## STATE NET LOAN EXPENDITURE.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
<b>TOTAL.</b>							
	£	£	£	£	£	£	£
1926-27	10,422,270	8,781,353	3,598,957	6,074,387	4,113,054	329,698	33,319,719
1927-28	14,407,619	9,016,208	3,198,506	3,882,268	4,680,260	377,777	35,562,638
1928-29	14,249,082	7,225,704	2,141,653	3,536,422	4,372,269	348,818	31,873,948
1929-30	10,878,627	6,467,067	1,295,866	2,493,287	3,693,052	146,853	24,974,752
1930-31	5,951,488	3,552,767	727,317	464,541	1,759,263	209,137	12,664,513

## PER HEAD OF POPULATION.

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1926-27	4 8 10	5 4 9	4 1 5	10 14 9	10 16 11	1 11 4	5 9 11
1927-28	6 0 0	4 17 5	3 11 0	6 15 1	11 18 3	1 15 10	5 12 8
1928-29	5 16 6	4 1 0	2 6 8	6 2 2	10 15 6	1 12 10	5 0 5
1929-30	4 7 10	3 7 11	1 7 10	4 6 0	8 17 7	0 13 8	3 16 9
1930-31	2 7 8	2 5 2	0 15 4	0 16 0	4 3 9	0 19 2	2 0 9

The loan expenditure per head of population varies in the different States and in different years, reaching its highest point for the five years under review in Western Australia in 1927-28 with £11 18s. 3d. per head, and its lowest in Tasmania in 1930-31 with 13s. 8d. per head.

4. Total Loan Expenditure to 30th June, 1931.—The total loan expenditure inclusive of revenue deficits, etc. of the States from the initiation of borrowing to the 30th June, 1931, amounted to £785,037,195. The purposes for which this sum was expended are shown in the following table:—

## TOTAL STATE LOAN EXPENDITURE TO 30th JUNE, 1931.

Heads of Expenditure.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£	£	£	£	£	£	£
Railways .. ..	137,359,159	73,765,858	61,630,689	32,169,667	23,723,485	7,044,239	352,585,361
Tramways .. ..	12,286,299	..	..	63,515,303	1,090,662	..	..
Telegraphs and Tele- phones .. ..	1,762,095	..	524,387	991,772	332,293	142,410	3,752,957
Water Supply .. ..	23,344,236	..	5,013,736	12,798,959	7,566,313	..	..
Sewerage .. ..	13,609,049	27,605,180	..	2,490,645	1,987,192	..	118,316,265
Water Conservation ..	14,017,167	..	2,208,358	7,075,430	..	..	..
Harbours, Rivers, and Lighthouses .. ..	22,421,928	1,327,364	2,416,524	7,609,247	5,796,815	6,770,708	80,355,648
Roads and Bridges .. ..	14,932,682	11,628,803	2,289,773	3,186,007	1,975,797	..	..
Defence .. ..	1,457,536	149,323	..	291,615	..	128,224	2,026,698
Public Buildings (ex- cluding State Schools)	..	1,070,736	3,361,485	1,331,954	1,565,337	1,141,889	28,097,894
State Schools .. ..	12,166,590	5,056,642	..	1,747,101	..	656,100	28,097,894
Immigration .. ..	764,309	20,000	2,763,071	..	503,062	235,714	4,286,156
Development of Mines and Mineral Resources	..	520,421	1,876,712	..	2,491,058	..	4,888,191
Agricultural Bank .. ..	..	..	2,427,538	..	4,883,023	..	7,310,566
Advances to Settlers ..	1,935,933	2,459,872	..	2,442,506	..	739,667	..
Land Purchased for Settlement .. ..	68,707,755	11,685,227	2,258,841	1,679,025	14,504,580	..	46,413,406
Soldier Settlement .. ..	..	26,889,957	1,799,245	8,710,138	7,954,302	2,640,605	47,994,247
Loans to Local Bodies ..	..	1,129,414	6,261,937	342,136	98,013	1,224,701	9,056,201
Rabbit-proof Fencing ..	383,323	669,714	333,733	253,804	328,703	..	1,960,277
Electricity Supply .. ..	1,174,822	17,252,890	..	..	1,182,181	3,893,756	23,503,649
Other Public Works and Purposes .. ..	49,162,521	2,556,930	9,951,985	10,305,385	3,450,291	1,581,478	37,008,590
<b>Total .. ..</b>	<b>275,485,404</b>	<b>183,779,331</b>	<b>105,118,014</b>	<b>97,540,754</b>	<b>79,433,112</b>	<b>26,199,491</b>	<b>767,556,106</b>
Treasury Bills Retired	..	..	..	..	..	..	..
Revenue Deficits .. ..	..	3,875,682	4,185,338	3,863,089	..	496,272	12,420,381
Deficits on Loans .. ..	..	..	5,060,708	..	..	..	5,060,708
<b>Grand Total .. ..</b>	<b>275,485,404</b>	<b>187,655,013</b>	<b>114,364,060</b>	<b>101,403,843</b>	<b>79,433,112</b>	<b>26,695,763</b>	<b>785,037,195</b>

(a) Includes Industrial Undertakings, Grain Elevators, &c.

(b) Loans to Local Bodies for Tramways.

(c) Includes advances to Closer Settlement Account, £1,256,300.

The figures in the table show the amounts actually spent, and differ from those given later in the statements relating to the public debt, which represent the amount of loans still unpaid. The statement above includes all expenditure, whether the loans have been repaid or are still in existence. In the public debt statement, however, loans repaid are not included, and in the case of loans still outstanding, each is shown according to the amount repayable at maturity, and not according to the amount originally available for expenditure.

## Division II.—State Public Debts.

1. General.—The first government loan raised in Australia was obtained by New South Wales in 1842. This and nine other loans prior to 1855 were all procured locally. In the last-mentioned year, Australia approached the London market, the occasion being the placing of the first instalment of the New South Wales 5 per cent. loan for £683,300. Victoria first appeared as a borrower in 1854, and made its first appearance on the London market in 1859. In the other States the first public loans were raised in the following years:—Queensland 1861, South Australia 1856, Western Australia 1845, and Tasmania 1867.

2. *State Debts, 1927 to 1931.*—The table hereunder shows the State public debts and the amounts owing per head of population at the 30th June in each year from 1927 to 1931 inclusive. The totals include sums advanced by the Commonwealth to the States for settling returned soldiers on the land, and for this reason they differ in some cases from those given in previous issues. On the transfer of the Queensland State Savings Bank business to the Commonwealth Bank in 1920, Queensland Government securities were handed to the latter for the Savings Bank current account credit balance and for amounts owing on account of Advances to Settlers and Workers' Dwellings. This transaction added a total of £5,936,916 to the Public Debt without involving any additional borrowing. Repayments reduced this amount at 30th June, 1931, to £3,000,139.

As provided in the *Financial Agreement Act 1928* (particulars of which are given in Chapter I., pages 20 to 32), the Commonwealth Government on 1st July, 1929, assumed, as between Commonwealth and States, the liabilities of the States to bondholders in respect of the debts of the States existing at 1st July, 1929, and taken over by the Commonwealth. Reference is made in Chap. XIV. of this volume to certain remissions which the Commonwealth Government has agreed to make to the States on account of losses sustained by the States in connexion with soldier land settlement. These remissions will, when legally ratified, reduce the States' debts at 30th June, 1926, by £5,000,000, and from 30th June, 1927, and onwards, by £7,597,783.

## STATE PUBLIC DEBTS.

Date.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
TOTAL.							
30th June, 1927	£ 240,725,935	£ 146,353,163	£ 105,711,107	£ 88,112,110	£ 71,455,083	£ 24,512,321	£ 676,869,719
" 1928	258,474,898	157,283,470	112,138,970	92,223,165	77,071,749	24,826,560	722,018,812
" 1929	269,975,883	155,989,652	113,355,041	94,256,162	70,132,660	22,697,092	726,406,490
" 1930	270,630,848	155,719,888	112,623,979	93,986,118	71,990,141	22,688,862	727,639,836
" 1931	287,831,556	165,958,684	112,706,189	100,094,447	77,360,885	23,365,812	767,317,573

## PER HEAD OF POPULATION.(a)

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
30th June, 1927	101 10 11	84 15 5	118 3 9	154 6 9	185 11 6	117 14 11	109 19 2
" 1928	106 13 6	89 18 1	122 19 11	159 12 5	192 16 6	117 19 2	115 2 4
" 1929	109 12 9	88 5 1	122 5 5	162 13 6	170 6 9	106 16 1	114 4 0
" 1930	108 17 11	87 6 7	119 10 6	161 17 5	171 19 3	105 5 4	113 4 11
" 1931	114 16 2	92 6 7	117 9 1	171 10 4	183 18 5	106 12 7	118 5 7

(a) Based on population at 30th June in each year.

The greatest increase in indebtedness was experienced in New South Wales, which added £47,105,621 during the period under review. The public debt of the whole of the States increased during the same period by £90,447,854, or at the rate of over £22,600,000 per annum. The debt per head of population rose during the quinquennium from about £110 to £118 5s. 7d. per head—an increase of slightly over 7½ per cent. The greatest advance was shown by South Australia, where the rate per head rose by over £17, followed by New South Wales with an increase of over £13, and Victoria with over £7. Queensland and Western Australia showed slight decreases, while the greatest decrease occurred in Tasmania, with a fall of over £11 per head during the period.

3. *Place of Flotation of Loans.*—As pointed out previously, the yearly loans, usually for comparatively small amounts, were raised locally, but, with the increasing demand for loan funds and the more favourable terms offering in the London market, the practice of raising loans in London came into vogue, and for many years local flotations, except for short terms or small amounts, were comparatively infrequent. In more recent years, however, the accumulating stocks of money in Australia seeking investment have led to the placing of various redemption and other loans locally, with very satisfactory results. Moreover, certain loans have been placed in New York on

account of all States. The following table gives particulars of loans outstanding on the 30th June, 1931, which had been floated abroad and in Australia respectively:—

## STATE PUBLIC DEBTS, 30th JUNE, 1931.—PLACE OF FLOTATION OF LOANS.

State	Floated Abroad.			Floated in Australia.	Grand Total.
	London.	New York.	Total.		
	£	£	£	£	£
New South Wales	164,361,244	13,825,624	178,186,868	109,644,688	287,831,556
Victoria ..	63,260,573	4,658,461	67,919,034	98,039,650	165,958,684
Queensland ..	63,329,246	7,825,460	71,154,706	41,551,483	112,706,189
South Australia ..	43,378,386	1,789,767	45,168,153	54,926,294	100,094,447
Western Australia	46,143,092	2,100,051	48,243,143	29,117,742	77,360,885
Tasmania ..	13,633,275	236,309	13,869,584	9,496,228	23,365,812
Total ..	394,105,816	30,435,672	424,541,488	342,776,085	767,317,573

Particulars of the aggregate debts of the States maturing overseas and in Australia for the past five years will be found on page 334.

4. Rates of Interest.—(i) *At 30th June, 1931.* As mentioned previously, the highest rate of interest paid for the earliest State loans was 5¼d. per £100 per diem, or, approximately, 8 per cent. per annum. At present the rates vary from 7 per cent. to 3 per cent., eighteen separate rates being involved. The average rate payable on the aggregate indebtedness is £4 18s. 4d. per cent. For the separate States the average varies considerably, being lowest in the case of Tasmania and highest in that of South Australia, the difference between these two average rates being about one quarter of one per cent. The table hereunder gives particulars of the rates of interest payable at the 30th June, 1931:—

## STATE PUBLIC DEBTS.—RATES OF INTEREST PAYABLE AT 30th JUNE, 1931.

Rate of Interest.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£	£	£	£	£	£	£
7 .. ..	..	..	2,334,532	..	..	..	2,334,532
6½ .. ..	6,430,500	..	2,900,820	2,990,500	250,000	2,349,567	14,921,387
6 .. ..	..	..	386,000	..	..	..	386,000
6 .. ..	38,596,505	19,919,533	6,687,188	20,251,369	13,763,767	2,513,520	101,731,882
5½ .. ..	19,480,108	4,081,145	79,695	382,970	1,090,873	36,470	25,151,261
5 .. ..	..	175,000	..	..	..	..	175,000
5 .. ..	23,954,668	11,672,391	6,207,600	4,517,891	997,709	351,500	47,701,759
5 .. ..	..	197,000	..	..	..	..	197,000
5 .. ..	54,018,183	25,753,080	10,104,330	22,465,094	4,507,496	3,140,826	119,989,009
5 .. ..	67,913,831	70,853,854	45,945,130	27,728,334	28,962,062	5,153,069	246,556,280
4½ .. ..	..	6,180,730	..	500,000	..	..	6,680,730
4½ .. ..	14,983,822	906,734	7,660,490	78,050	4,902,145	223,853	28,755,094
4½ .. ..	..	..	..	..	..	140,750	140,750
4 .. ..	23,668,690	5,126,005	12,460,065	6,332,583	9,173,401	4,047,579	60,808,323
3½ .. ..	1,911,650	220,000	2,019,900	1,632,102	888,608	..	6,672,260
3½ .. ..	18,336,380	10,980,463	10,431,056	6,478,727	9,262,586	4,467,678	59,956,890
£3 2s. od. ..	1,928,054	1,432,212	..	734,756	729,734	..	4,824,756
3 .. ..	16,596,415	8,460,537	5,489,383	6,001,771	2,832,504	941,000	40,321,610
Overdue .. ..	12,750	..	..	300	..	..	13,050
Total { London ..	164,361,244	63,260,573	63,329,246	43,378,386	46,143,092	13,633,275	394,105,816
New York	13,825,624	4,658,461	7,825,460	1,789,767	2,100,051	236,309	30,435,672
Australia	109,644,688	98,039,650	41,551,483	54,926,294	29,117,742	9,496,228	342,776,085
Interest payable—	287,831,556	165,958,684	112,706,189	100,094,447	77,360,885	23,365,812	767,317,573
London (a) ..	7,784,334	2,878,533	2,944,890	2,001,703	2,043,358	591,463	18,244,281
New York ..	671,666	228,729	452,895	89,488	105,003	11,816	1,559,597
Australia ..	5,839,171	5,109,930	2,001,193	2,925,967	1,548,704	506,787	17,931,752
Total ..	14,295,171	8,217,192	5,398,978	5,017,158	3,697,065	1,110,066	37,735,630
Average rate ..	£ s. d. 4 19 4	£ s. d. 4 19 1	£ s. d. 4 15 10	£ s. d. 5 0 3	£ s. d. 4 15 7	£ s. d. 4 15 0	£ s. d. 4 18 4

(a) Includes contributions payable by Commonwealth and British Governments towards interest on Migration Loans.

The average rate of interest payable shows a very slight increase, having risen from £4 18s. 2d. per cent. in 1926-27 to £4 18s. 4d. in 1930-31.

(ii) *Variations from 1901 to 1931.*—The variations in the rates of interest payable on the public debts of the States are shown in the following table which gives the percentages of the total debts in various interest groups during the years specified, and the average rate of interest in each year :—

**STATE PUBLIC DEBTS.—PERCENTAGES, ETC., IN VARIOUS INTEREST GROUPS.**

Interest Rates.	Percentage of Total Debt at 30th June.			
	1901.	1911.	1921.	1931.
	%	%	%	%
3 per cent. .. .. .	18.0	17.5	10.2	5.3
Exceeding 3 per cent. but not exceeding 4 per cent. .. .. .	78.5	82.3	45.4	17.2
Exceeding 4 per cent. but not exceeding 5 per cent. .. .. .	3.1	0.1	15.6	36.8
Exceeding 5 per cent. but not exceeding 6 per cent. .. .. .	0.4	0.1	23.5	38.4
Exceeding 6 per cent. .. .. .	..	..	5.3	2.3
Total .. .. .	100.0	100.0	100.0	100.0
Average Rate .. .. .	3.7	3.6	4.4	4.9

5. *Dates of Maturity.*—Securities like the British Consols are interminable, but Australian debts have in most cases a fixed date for repayment, there being a few exceptions which are included in the following table under the headings “interminable,” “terminable at Government option,” and “date not fixed.” Those “terminable at Government option” include amounts which are payable by the respective Governments after giving a specified notice, and those “date not fixed” consist of certain amounts owing to the Commonwealth Government. In most cases, at date of maturity renewal is effected in respect of the greater portion of the loan. In order to avoid application to the market at an unfavourable time, several States adopted the practice of specifying a period prior to the date of maturity within which the Government, on giving twelve, or in some cases six months’ notice, has the option of redeeming the loan. The Government can, therefore, take advantage of opportunities that may offer during the period for favourable renewals. Particulars concerning the due dates of the State loans outstanding on the 30th June, 1931, are given in the following table, the various maturities being grouped according to years ending 30th June.

Where the Government has the option of redemption during a specified period the loan is classified according to the latest date of maturity.

While the latest dates of maturity of the various loans extend over the period 1931-32 to 1975-76, the average period to maturity for the States as a whole is about 14½ years.

STATE PUBLIC DEBTS.—LATEST DATE OF MATURITY OF AMOUNT  
OUTSTANDING ON 30th JUNE, 1931.

Year of Maturity (ending 30th June).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£	£	£	£	£	£	£
1932 .. ..	23,083,181	14,992,425	622,220	8,671,506	6,025,328	782,335	54,176,995
1933 .. ..	39,452,858	12,522,439	1,653,939	7,015,896	5,145,687	1,166,214	58,257,033
1934 .. ..	16,142,347	19,244,845	3,004,340	6,246,353	2,594,106	402,728	47,634,719
1935 .. ..	23,339,134	15,874,520	489,770	9,552,388	7,476,944	624,065	57,356,821
1936 .. ..	16,809,447	9,017,587	3,450,820	4,141,739	1,993,627	602,880	36,016,100
1937 .. ..	4,581,702	4,857,117	5,809,164	9,103,482	1,641,809	226,010	26,219,284
1938 .. ..	304,798	520,000	390,700	1,312,959	1,939,250	31,737	4,499,444
1939 .. ..	3,652,350	3,657,995	2,335,597	5,052,792	2,293,353	1,769,872	18,761,959
1940 .. ..	5,707,250	3,132,872	1,581,320	2,344,273	836,069	6,348,630	19,950,474
1941 .. ..	17,949,190	5,505,295	2,079,695	6,352,470	3,832,133	2,239,692	37,958,475
1942 .. ..	14,130,135	1,815,270	3,763,787	2,049,021	292,680	60,841	22,111,734
1943 .. ..	8,956,454	15,514,540	1,178,200	10,051,727	652,297	1,291,697	37,644,915
1944 .. ..	918,537	..	..	64,650	756,100	15,281	1,754,568
1945 .. ..	6,400	807,475	7,435,750	798,811	5,654,390	200,000	14,902,826
1946 .. ..	10,985,800	1,065,268	..	..	10,500	..	12,061,568
1947 .. ..	..	..	6,553,558	..	1,453,600	250,000	8,257,158
1948 .. ..	8,100	..	..	..	250,000	..	258,100
1949 .. ..	3,300	5,467,314	995,500	..	..	..	6,466,114
1950 .. ..	6,200	6,231,957	946,600	..	..	42,000	7,226,757
1951 .. ..	12,117,570	190,203	7,003,710	25,700	2,500	2,801,500	22,141,183
1952 .. ..	..	..	125,400	..	..	..	125,400
1953 .. ..	8,000	239,500	2,137,609	..	..	..	2,385,109
1954 .. ..	3,300	478,874	..	..	..	143,000	625,174
1955 .. ..	2,700	..	..	..	3,345,804	..	3,348,504
1956 .. ..	25,579,922	2,751,094	1,884,825	762,560	1,531,655	..	32,510,056
1957 .. ..	4,946,984	..	..	..	..	..	4,946,984
1958 .. ..	22,826,217	1,907,367	1,551,238	1,027,207	568,396	236,309	28,116,734
1959 .. ..	..	..	..	..	..	..	..
1960 .. ..	..	2,970,700	..	..	888,608	..	3,859,308
1961 .. ..	..	6,000,000	20,228,799	2,989,617	..	..	29,218,416
1962 .. ..	..	..	..	..	4,964,083	..	4,964,083
1963 .. ..	10,500,000	..	..	..	..	..	10,500,000
1964 .. ..	..	..	..	..	1,566,000	..	1,566,000
1965 .. ..	..	..	..	..	..	..	..
1966 .. ..	14,130,000	..	..	..	2,661,664	..	16,791,664
1967-1969 ..	..	..	..	..	..	..	..
1970 .. ..	..	..	2,000,000	..	..	..	2,000,000
1971-1975 ..	..	..	..	..	..	..	..
1976 .. ..	2,966,285	14,510,529	19,716,763	14,058,787	13,343,100	1,248,025	65,843,489
Overdue ..	12,750	..	..	300	..	..	13,050
Interminable ..	534,889	..	..	98,383	..	..	631,272
Terminable at Government option ..	7,361,771	..	..	5,001,771	..	..	12,363,542
Half-yearly ..	..	..	13,066,302	..	..	663,432	13,729,734
Date not fixed ..	9,805,985	16,683,498	2,700,583	3,372,055	5,431,202	2,129,564	40,122,887
Total ..	287,831,556	165,958,684	112,706,189	100,094,447	77,360,885	23,365,812	767,317,573
Average period to maturity in years ..	12.9	11.8	22.3	12.7	17.9	11.6	14.5

6. Sinking Funds.—Prior to the passing of the *Financial Agreement Act 1928*, the practice of providing sinking funds by the States had been consistently adopted in the case of Western Australia only. This State had established, in connexion with each of its loans, sinking funds varying from 1 per cent. to 3 per cent. per annum of the nominal amount of the loan. The funds were placed with trustees in London, by whom they are invested in securities, and applied from time to time to the redemption



of loans falling due. In the other States the sinking fund provision varied, consisting in certain instances of the revenues from specified sources, in others of the Consolidated Revenue Fund surplus, and in others again of fixed annual amounts. The *Financial Agreement Act 1928* contains provisions for the establishment of a sinking fund on States' debts, and details are included in Part III., Section 3 of the *Financial Agreement between the Commonwealth and States* which is reprinted in Chapter I., pages 20 to 32, of this volume. Details of the transactions of the National Debt Sinking Fund (States' Account) are given in *Finance Bulletin No. 22*, issued by this Bureau. The following table gives the sinking funds and net indebtedness of each State at the 30th June, 1931:—

## STATE SINKING FUNDS AND NET INDEBTEDNESS, 30th JUNE, 1931.

State.	Gross. Indebtedness.	Sinking Fund.	Net Indebtedness.	Net Indebtedness- per Head.
	£	£	£	£ s. d.
New South Wales ..	287,831,556	174,703	287,656,853	114 14 9
Victoria .. ..	165,958,684	Dr. 3,922	165,962,606	92 6 8
Queensland ..	112,706,189	777,443	111,928,746	116 12 11
South Australia ..	100,094,447	28,804	100,065,643	171 9 4
Western Australia ..	77,360,885	1,265,703	76,095,182	180 18 3
Tasmania .. ..	23,365,812	19,985	23,345,827	106 10 9
Total .. ..	767,317,573	2,262,716	765,054,857	117 18 7

## D. COMMONWEALTH AND STATE FINANCE.

1. Revenue and Expenditure.—The appended statements show the aggregate revenue and expenditure of the Commonwealth and States for each of the last five years to 1930-31, allowance having been made in cases of duplication.

## COMMONWEALTH AND STATES.—REVENUE.

Year ended 30th June—	Revenue collected by Commonwealth Government.(a)	Revenue collected by State Governments.(b)	Total.
	£	£	£
1927 .. ..	73,760,988	105,298,063	179,059,051
1928 .. ..	71,817,299	107,779,249	179,596,548
1929 .. ..	72,782,640	110,929,407	183,712,047
1930 .. ..	75,137,160	104,989,492	180,126,652
1931 .. ..	67,882,839	94,285,973	162,168,812

(a) Excluding Interest on Loans to States for Soldier Land Settlement, Miscellaneous Loans, and Balance of Interest on States' Debts.

(b) Excluding Payments by Commonwealth Government under "Surplus Revenue", "Special Grants", "Financial Agreement", and "Federal Aid Roads" Acts.

## COMMONWEALTH AND STATES.—EXPENDITURE.

Year ended 30th June—	Expenditure by Commonwealth Government.(a)	Expenditure by State Governments.	Total.
	£	£	£
1927 .. .. .	62,610,265	114,129,885	176,740,150
1928 .. .. .	68,855,887	117,410,451	186,266,338
1929 .. .. .	67,186,907	120,329,420	187,516,327
1930 .. .. .	68,113,253	122,812,235	190,925,488
1931 .. .. .	69,335,546	118,362,409	187,697,955

(a) Excluding Payments to States and Interest on States' Debts, etc.

2. Taxation.—In the table hereunder showing the combined Commonwealth and State taxation for each of the years 1926-27 to 1930-31, as well as the amount per head of population, certain taxation collections by the State Governments which are not paid into the Consolidated Revenue Fund have been included:—

## TOTAL COMMONWEALTH AND STATE TAXATION.

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
<b>Commonwealth—</b>					
Customs and Excise ..	43,552,478	41,446,730	41,058,571	41,774,391	28,295,073
Other .. .. .	15,442,331	15,191,128	15,244,918	16,413,384	22,125,033
<b>Total .. .. .</b>	<b>58,994,809</b>	<b>56,637,858</b>	<b>56,303,489</b>	<b>58,187,775</b>	<b>50,420,106</b>
<b>State .. .. .</b>	<b>29,499,775</b>	<b>32,252,143</b>	<b>32,525,832</b>	<b>33,823,803</b>	<b>36,219,687</b>
<b>Grand Total .. .. .</b>	<b>88,494,584</b>	<b>88,890,001</b>	<b>88,829,321</b>	<b>92,011,578</b>	<b>86,639,793</b>
<b>Taxation per head(b)—</b>					
<b>Commonwealth—</b>					
Customs and Excise ..	£7/2/7	£6/13/1	£6/9/8	£6/10/4	£4/7/5
Other .. .. .	£2/10/7	£2/8/9	£2/8/2	£2/11/2	2£3/8/5
<b>Total .. .. .</b>	<b>£9/13/2</b>	<b>£9/1/10</b>	<b>£8/17/10</b>	<b>£9/1/6</b>	<b>£7/15/10</b>
<b>State .. .. .</b>	<b>£4/16/9</b>	<b>£5/3/9</b>	<b>£5/2/11</b>	<b>£5/5/9</b>	<b>£5/12/2</b>
<b>Grand Total .. .. .</b>	<b>£14/9/8</b>	<b>£14/5/3</b>	<b>£14/0/5</b>	<b>£14/6/11</b>	<b>£13/7/9</b>

(a) Includes Sales Tax, £3,472,854 (10s. 9d. per head). (b) Based on mean population of each financial year; that for States, on the aggregate mean population of the six States.

3. Public Debt.—(i) *General.* The table hereunder shows the public debt of the Commonwealth and of the States at the 30th June in each of the years 1927 to 1931. In this table all moneys borrowed by the Commonwealth on behalf of the States have been included with State debts only, and similarly, the debts taken over by the Commonwealth from South Australia on account of the Northern Territory and of the Port Augusta-Oodnadatta Railway have now been included with the Commonwealth Debt.

## COMMONWEALTH AND STATES' PUBLIC DEBTS.

Particulars.	Redeemable.	At 30th June—				
		1927.	1928.	1929.	1930.	1931.
		£	£	£	£	£
Commonwealth— War Debt ..	Overseas	95,572,848	96,822,659	93,810,641	92,314,742	90,744,380
	Australia	201,332,522	196,597,448	194,007,104	190,075,790	187,035,845
	<b>Total</b>	<b>296,905,370</b>	<b>293,420,107</b>	<b>287,817,745</b>	<b>282,390,532</b>	<b>277,780,225</b>
Works and Other Purposes ..	Overseas	46,980,102	56,684,465	65,975,650	75,587,125	83,850,144
	Australia	22,726,033	22,679,517	23,828,177	14,979,705	27,088,176
	<b>Total</b>	<b>69,706,135</b>	<b>79,363,982</b>	<b>89,803,827</b>	<b>90,566,830</b>	<b>110,938,320</b>
	Overseas	142,552,950	153,507,124	159,786,291	167,901,867	174,594,524
	Australia	224,058,555	219,276,965	217,835,281	205,055,495	214,124,021
	<b>Grand Total</b>	<b>366,611,505</b>	<b>372,784,089</b>	<b>377,621,572</b>	<b>372,957,362</b>	<b>388,718,545</b>
States ..	Overseas	373,360,219	416,660,672	412,496,612	405,726,668	424,541,488
	Australia	303,509,500	305,358,140	313,909,878	321,913,168	342,776,085
	<b>Total</b>	<b>676,869,719</b>	<b>722,018,812</b>	<b>726,406,490</b>	<b>727,639,836</b>	<b>767,317,573</b>
Grand Total Public Debt Commonwealth and States	Overseas	515,913,169	570,167,796	572,282,903	573,628,535	599,136,012
	Australia	527,568,055	524,635,105	531,745,159	526,968,663	556,900,106
	<b>Grand Total</b>	<b>1,043,481,224</b>	<b>1,094,802,901</b>	<b>1,104,028,062</b>	<b>1,100,597,198</b>	<b>1,156,036,118</b>

(ii) *Dates of Maturity.* The particulars given in the appended table show separately as at 30th June, 1931, the amounts of Commonwealth and States securities maturing in Australia and overseas according to year of maturity, together with the amount of interest payable yearly thereon. It should be noted that the year of maturity is given for fiscal years ended 30th June and for that reason the information is not directly comparable with statements published in previous years. Debts with optional dates of maturity, representing about 75 per cent. of the total overseas obligations, have been grouped according to the latest year of maturity.

COMMONWEALTH AND STATES' PUBLIC DEBTS, 30th JUNE, 1931.—  
DATES OF MATURITY.

Year of Maturity.	Commonwealth and States' Debts.			Annual Interest Payable at 30th June, 1931. In respect of Commonwealth and States' Debts Maturing in the Years stated.		
	Maturing in Australia.	Maturing Overseas.	Total.	Interest Payable.		
				In Australia.	Overseas.	Total.
	£	£	£	£	£	£
1931-32 .. ..	71,095,142	33,075,001	104,170,143	3,825,032	1,194,422	5,019,454
1932-33 .. ..	100,747,077	12,924,152	113,671,229	5,551,051	743,139	6,294,190
1933-34 .. ..	37,863,179	13,639,986	51,503,165	2,009,934	590,207	2,600,141
1934-35 .. ..	43,641,922	15,563,210	59,205,132	2,406,958	714,234	3,121,192
1935-36 .. ..	40,994,610	14,735,928	55,730,538	2,191,922	466,636	2,658,558
1936-37 .. ..	70,729,084	6,747,678	77,476,762	4,142,654	308,816	4,451,470
1937-38 .. ..	14,433,634	1,246	14,434,880	744,083	47	744,130
1938-39 .. ..	19,038,193	2,526,425	21,564,618	1,125,664	88,447	1,214,111
1939-40 .. ..	15,247,452	5,606,554	20,854,006	795,328	198,979	994,307
1940-41 .. ..	7,063,230	48,605,250	55,668,480	395,850	2,951,200	3,347,050
1941-42 .. ..	48,047,262	2,334,532	50,381,794	2,588,307	163,417	2,751,724
1942-43 .. ..	31,255,485	24,638,750	55,894,235	1,639,948	1,231,938	2,871,886
1943-44 .. ..	1,754,568	..	1,754,568	98,379	..	98,379
1944-45 .. ..	2,114,780	30,142,863	32,257,643	74,722	1,447,143	1,521,865
1945-46 .. ..	27,000	12,034,568	12,061,568	1,109	546,804	547,913
1946-47 .. ..	484,480	7,772,678	8,257,158	23,534	302,044	325,578
1947-48 .. ..	258,100	..	258,100	16,614	..	16,614
1948-49 .. ..	10,575,648	5,202,146	15,777,794	526,004	156,064	682,068
1949-50 .. ..	1,107,062	6,119,695	7,226,757	34,711	214,189	248,900
1950-51 .. ..	1,413,503	20,867,428	22,280,931	56,907	774,361	831,268
1951-52 .. ..	125,400	..	125,400	4,389	..	4,389
1952-53 .. ..	2,385,109	..	2,385,109	92,251	..	92,251
1953-54 .. ..	625,174	..	625,174	29,481	..	29,481
1954-55 .. ..	2,700	3,345,804	3,348,504	121	117,103	117,224
1955-56 .. ..	..	32,510,057	32,510,057	..	1,596,077	1,596,077
1956-57 .. ..	..	19,513,839	19,513,839	..	954,015	954,015
1957-58 .. ..	..	30,705,597	30,705,597	..	1,579,956	1,579,956
1958-59 .. ..	..	..	..	..	..	..
1959-60 .. ..	8,584	3,850,724	3,859,308	343	151,808	152,151
1960-61 .. ..	4,582	35,213,834	35,218,416	190	1,675,834	1,676,024
1961-62 .. ..	..	4,964,083	4,964,083	..	198,563	198,563
1962-63 .. ..	107,604	10,392,396	10,500,000	4,304	415,696	420,000
1963-64 .. ..	1,566,000	..	1,566,000	62,640	..	62,640
1964-65 .. ..	..	..	..	..	..	..
1965-66 .. ..	149,274	16,791,664	16,940,938	8,210	826,276	834,486
1966-67 .. ..	..	..	..	..	..	..
1967-68 .. ..	..	..	..	..	..	..
1968-69 .. ..	..	..	..	..	..	..
1969-70 .. ..	..	2,000,000	2,000,000	..	70,000	70,000
1970-71 .. ..	..	..	..	..	..	..
1971-72 .. ..	3,764,716	..	3,764,716	131,765	..	131,765
1972-73 .. ..	..	..	..	..	..	..
1973-74 .. ..	..	..	..	..	..	..
1974-75 .. ..	..	..	..	..	..	..
1975-76 .. ..	5,000	95,140,428	95,145,428	250	4,757,075	4,757,325
Overdue .. ..	117,929	10,550	128,479	..	..	..
Interminable ..	630,072	1,200	631,272	25,218	60	25,278
Treasurers' Option ..	9,930,943	2,433,499	12,363,542	317,952	73,005	390,957
Indefinite .. ..	5,745,649	27	5,745,676	216,140	1	216,141
Half-yearly Drawings ..	..	..	13,729,734	596,251	..	596,251
Annual Repayments ..	13,729,734	79,724,220	79,724,220	..	3,920,299	3,920,299
Transferred Properties ..	111,125	..	111,125	3,889	..	3,889
Total .. ..	556,900,106	599,136,012	1,156,036,118	29,742,105	28,427,855	58,169,960

(iii) Rates of Interest, 30th June, 1931. The amount of Commonwealth and States Public Debt at each rate of interest (internal and external debt shown separately), is given in the following table.

## COMMONWEALTH AND STATES' PUBLIC DEBTS, 30th JUNE, 1931.—AMOUNT AT EACH RATE OF INTEREST.

Rate of Interest.	Commonwealth and States' Debt maturing—		
	In Australia.	Overseas.	Total.
	£	£	£
3%	16,548,370	30,103,502	46,651,872
£3 2s.	..	5,000,000	5,000,000
3½%	13,405,220	58,613,268	72,018,488
3¾%	2,997,152	3,727,181	6,724,333
4%	11,005,306	50,459,795	61,465,101
4½%	3,000	137,750	140,750
4¾%	9,223,678	23,866,852	33,090,530
4¾%	681,730	11,999,000	12,680,730
£4 18s. 4d.	..	79,724,220	79,724,220
5%	78,568,526	237,060,413	315,628,939
5½%	193,032,089	17,870,500	210,902,589
5¾%	197,000	..	197,000
5¾%	101,137,866	13,649,749	114,787,615
5¾%	175,000	..	175,000
5¾%	8,983,888	18,877,378	27,861,266
6%	151,620,342	34,291,357	185,911,699
£6 18s. 3d.	386,000	..	386,000
6½%	3,511,422	11,409,965	14,921,387
7%	..	2,334,532	2,334,532
Overdue ..	117,929	10,550	128,479
Deduct Loans to States for Soldier Land Settlement ..	—34,694,412	..	—34,694,412
Total ..	556,900,106	599,136,012	1,156,036,118
Average Rate of Interest ..	5.34	4.75	5.03

(iv) *Interest Payable.* The table hereunder shows the interest payable on the public debt of the Commonwealth and of the States at the 30th June in each of the years 1927 to 1931.

## COMMONWEALTH AND STATES' PUBLIC DEBTS, INTEREST PAYABLE.

Particulars.	Where Payable.	At 30th June—				
		1927.	1928.	1929.	1930.	1931.
		£	£	£	£	£
Commonwealth— War Debt ..	Overseas ..	4,791,410	4,854,202	4,721,540	4,647,992	4,571,307
	Australia ..	10,542,922	10,567,548	10,454,458	10,235,359	10,485,647
	Total ..	15,334,332	15,421,750	15,175,998	14,883,351	15,056,954
Works and Other Purposes ..	Overseas ..	2,354,361	2,827,593	3,296,946	3,779,506	4,052,670
	Australia ..	1,042,470	1,038,433	1,098,733	664,756	1,324,706
	Total ..	3,396,831	3,866,026	4,395,679	4,444,262	5,377,376
Total, Commonwealth	Overseas ..	7,145,771	7,681,795	8,018,486	8,427,498	8,623,977
	Australia ..	11,585,392	11,605,981	11,553,191	10,900,115	11,810,353
	Grand Total ..	18,731,163	19,287,776	19,571,677	19,327,613	20,434,330
States ..	Overseas ..	17,510,151	19,611,441	19,512,507	19,169,300	19,803,878
	Australia ..	15,853,382	15,954,987	16,415,301	16,869,207	17,931,752
	Total ..	33,363,533	35,566,428	35,927,808	36,038,507	37,735,630
Grand Total Public Debt Commonwealth and States ..	Overseas ..	24,655,922	27,293,236	27,530,993	27,596,798	28,427,855
	Average Rate per cent. ..	4.78	4.79	4.81	4.81	4.75
	Australia ..	27,438,774	27,560,968	27,968,492	27,769,322	29,742,105
Grand Total Public Debt Commonwealth and States ..	Average Rate per cent. ..	5.20	5.25	5.26	5.27	5.34
	Grand Total ..	52,094,696	54,854,204	55,499,485	55,366,120	58,169,960
	Average Rate per cent. ..	4.99	5.01	5.02	5.03	5.03

4. **The Australian Loan Council.**—The Australian Loan Council, consisting of the Treasurers of the Commonwealth and of the States, was created during 1923-24 as the result of representations made by the Commonwealth Government, and has for its object the prevention of undue competition and clashing in the raising of loans.

Until July, 1925, the Council consisted of the Treasurers of the Commonwealth and of each of the States; in August of that year the Treasurer of New South Wales withdrew from the Council, but rejoined at the end of 1927.

Prior to the passing of the *Financial Agreement Validation Act* (No. 4, 1929), assented to on 18th March, 1929, the Australian Loan Council functioned on a purely voluntary basis. The Act referred to, in which is embodied the agreement between the Commonwealth and States Governments, invested the Loan Council with full constitutional authority. Details of the constitution of the Loan Council are included in Part I, section 3 of the Financial Agreement and may be found in Chapter I., pp. 22-26 of this volume.

At its first meeting, held on 1st February, 1924, the Loan Council recognized the necessity for co-operation in the raising of loans. The terms to be offered by the several governments for loans in Australia up to 30th June, 1924, were agreed to, and arrangements were made to prevent unnecessary clashing during the period required by the Commonwealth for the flotation of its War Gratuity Redemption and Conversion Loan.

Up to June, 1925, the Commonwealth and States issued their own loans in London and elsewhere outside Australia, but the amounts were limited to sums agreed upon at the Loan Council by the several Treasurers. About the middle of 1925, however, the Loan Council decided that there should be no competition for loans in the American market, and that borrowing in America, and borrowing simultaneously in America and London, on behalf of the Commonwealth and of the States, should be conducted solely by the Commonwealth. The successful flotation in July, 1925, of a loan of £20,000,000 in London and New York was regarded as proof of the soundness of the Council's new policy.

## CHAPTER IX.

## PRIVATE FINANCE.

## A. GENERAL.

In previous issues of the Official Year Book information relating to Private Finance was included in the Chapter dealing with Finance generally. Commencing with this issue, however, a separate chapter is devoted to the subject of Private Finance which is subdivided into the following sections :—

Banking, including Savings Banks ;  
Companies ;  
Insurance ;  
Friendly Societies ; and  
Probates.

## B. BANKING.

## § 1. Cheque-Paying Banks.

1. *Banking Legislation.*—(i) *Commonwealth Legislation.* Under Section 51 of the Commonwealth Constitution Act, the Commonwealth Parliament has power to legislate with respect to "Banking, other than State banking, also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money." Legislation under this authority comprises the following Acts : No. 27 of 1909, dealing with Bills of Exchange, Cheques, and Promissory Notes ; No. 11 of 1910, dealing with Australian Notes ; and No. 14 of 1910, a Bank Notes Tax Act. The Notes Act and the Bank Notes Tax Act were supplemented in the following year by the passing of Act No. 18 of 1911, "An Act to provide for a Commonwealth Bank," which passed both Houses and was assented to on 22nd December, 1911. The Commonwealth Bank Act, 1924, assented to on the 20th August, 1924, and brought into operation on the 10th October, 1924, provided for a broadening of the scope of the Commonwealth Bank. Several amendments to the original Act were included in this measure and a further amendment in 1927 provided for the separation of the Savings Bank from the General Bank.

(ii) *State Legislation.* The Acts under which the various banks are incorporated differ somewhat. While most of the older banks were incorporated by special Act or Charter, e.g., the Bank of New South Wales, by Act of Council 1817 ; the Bank of Australasia, by Royal Charter ; the Bank of Adelaide, by Act of the South Australian Parliament ; and the Bank of New Zealand, by Act of the General Assembly of New Zealand, the newer banks are generally registered under a "Companies Act," or some equivalent Act. This is also the case with those banks which, after the crisis of 1893, were reconstructed. Banks transacting business in any State are obliged under the existing State laws to furnish a quarterly statement of their assets and liabilities, and they have since the year 1908 furnished to the Commonwealth Statistician under the *Census and Statistics Act 1905* quarterly statements which contain the average of the thirteen weekly statements prepared by each bank. These returns form the basis on which the statistics included herein have been compiled.

2. *Presentation of Banking Statistics.*—In presenting statistical tabulations relating to average liabilities and assets, it is considered desirable to show the figures for the Commonwealth Bank separately from those of other cheque-paying banks. The aggregate business of all trading banks is, however, given in additional paragraphs. Previously it was customary to show separate figures for each State, but it has been decided to discontinue this practice. The figures quoted in all cases refer to the average liabilities and assets within the Commonwealth of Australia.

3. Banks in Operation, Capital Resources, etc.—(i) Year 1931. The paid-up capital of the 21 cheque-paying banks, together with their reserve funds, the rate per cent., and the amount of their last dividends are shown in the table hereunder. The information relates to the balance-sheet last preceding the 30th June, 1931. In regard to the reserve funds it must be noted that in the case of some of the banks these are invested in Government securities, while in other cases they are used in the ordinary business of the banks, and in a few instances they are partly invested and partly used in business :—

CHEQUE-PAYING BANKS.—CAPITAL RESOURCES, 30TH JUNE, 1931.

Bank.	Paid-up Capital.	Reserves.	Balance on Profit and Loss Account and Dividends Declared but not Paid.	Total Shareholders' Funds.	Dividends.	
					Amount for Year.	Average Rate per cent.
	£	£	£	£	£	%
<b>Australian Joint Stock Banks—</b>						
Bank of Australasia ..	4,500,000	4,475,000	462,027	9,437,027	585,000	13
Union Bank of Australia Ltd. English, Scottish and Australian Bank Ltd. ..	4,000,000	4,850,000	170,010	9,020,010	280,000	7
Bank of New South Wales ..	3,000,000	3,190,000	417,134	6,607,134	240,000	8
Commercial Banking Coy. of Sydney Ltd. ..	7,500,000	6,150,000	335,678	13,985,678	731,250	9½
Australian Bank of Commerce Ltd. (a) ..	4,739,012	4,300,000	313,786	9,352,798	402,816	8½
Primary Producers' Bank of Australia Ltd. (b) ..	2,208,000	1,111,880	59,507	3,379,387	88,320	4
National Bank of Australasia Ltd. ..	439,402	81,706	9,423	530,531	..	..
Commercial Bank of Australia Ltd. ..	5,000,000	3,300,000	349,112	8,649,112	425,000	8½
Ballarat Banking Coy. Ltd. Queensland National Bank Ltd. ..	4,117,350	2,250,000	207,683	6,575,033	305,263	4 Pref., 11¼ Ord. 7½
Queensland Deposit Bank Ltd. (c) ..	153,000	92,500	11,478	256,978	11,475	6½
Federal Deposit Bank Ltd. (d) ..	1,750,000	860,000	43,307	2,653,307	113,750	9
Brisbane Permanent Building and Banking Co. ..	66,836	52,225	11,824	130,885	6,074	9
Bank of Adelaide ..	328,024	92,000	17,508	437,532	30,280	9
	400,000	130,000	22,172	552,172	40,000	10
	1,250,000	1,000,000	91,295	2,341,295	87,500	7
<b>Total Australian Joint-Stock Banks ..</b>	<b>39,451,624</b>	<b>31,935,311</b>	<b>2,521,944</b>	<b>73,908,879</b>	<b>3,346,728</b>	<b>..</b>
<b>Other Cheque-paying Banks—</b>						
Commonwealth Bank of Australia—						
General Bank ..	4,000,000	1,185,718	..	5,185,718	..	..
Rural Credits ..	1,458,128	236,839	..	1,694,967	..	..
(h) Rural (New South Wales Government) ..	5,509,200d	559,001	..	6,068,201	..	..
State Bank of South Australia ..	1,809,000e	..	..	1,809,000	..	..
<b>Total Australian Banks ..</b>	<b>52,227,952</b>	<b>33,916,869</b>	<b>2,521,944</b>	<b>88,666,765</b>	<b>..</b>	<b>..</b>
Bank of New Zealand ..	6,858,113	3,575,000	1,077,695	11,510,808	817,968	(f)
Comptoir National d'Escompte de Paris (g) ..	3,225,806	3,466,887	167,118	6,859,811	516,128	16
Yokohama Specie Bank Ltd. (g) ..	10,000,000	11,500,000	1,143,613	22,643,613	1,000,000	10
<b>Grand Total .. ..</b>	<b>72,311,871</b>	<b>52,458,756</b>	<b>4,910,370</b>	<b>129,680,997</b>	<b>5,680,824</b>	<b>..</b>

(a) Subsequently amalgamated with Bank of New South Wales. (b) Subsequently in liquidation. (c) Subsequently amalgamated with Brisbane Permanent Building and Banking Co. (d) Stock and debentures issued. (e) Capital advanced by Government of South Australia and Sale of Bonds. (f) Dividends for 1930-31.—Preference "A," 10 per cent.; Preference B (and Bonus), 13-2/11 per cent.; "C" Long Term Mortgage, 6 per cent.; "D" Long Term Mortgage, 7½ per cent.; Ordinary (and Bonus), 14½ per cent.; and Guaranteed Stock, 4 per cent. (g) Approximate. (h) Subsequently absorbed by Commonwealth Bank.



(ii) *Suspension of Payments.* (a) *Rural Bank Department, Government Savings Bank of New South Wales.*—Owing to the continuous demands of depositors depleting the liquid assets of the bank, the Commissioners decided, after abortive negotiations for its absorption by the Commonwealth Savings Bank, to suspend payments to depositors from 22nd April, 1931, until further notice.

On 7th September, 1931, the Government appointed new Commissioners and the Bank re-opened, accepting deposits in what were termed "new business" accounts. No arrangements had then been completed to enable depositors in the "old business" division to withdraw deposits, although transfers from one account to another in that division were permitted.

Negotiations for the absorption of the Bank by the Commonwealth Bank were re-opened by the new Commissioners, and early in December, 1931, agreement was reached in regard to all aspects of the transfer.

Under the agreement, the Rural Bank transferred to the Commonwealth Bank the liabilities of the "old business division" to the public, consisting of deposits amounting to £11,167,796, in addition to those assets comprising fixed deposits with Trading Banks (£936,280) and deposits with the New South Wales Treasury (£506,685)—a total of £1,436,965. The net difference between the liabilities and assets so transferred was covered by the issue of inscribed stock or debentures of the Rural Bank Department. The whole of the liabilities and assets of the "new business division" were transferred as a going concern to the Commonwealth Bank.

The Commonwealth Bank, under the terms of the agreement, made available to fixed depositors of the "old business division" 10 per cent. of the amount of their deposits as from 15th December, 1931. In January, 1932, all restrictions on the operation of depositors on their accounts were removed.

(b) *Primary Producers' Bank of Australia Ltd.* On the 24th August, 1931, the Primary Producers' Bank of Australia Ltd. was forced to close its doors owing to the depletion of its liquid assets. Before closing, unsuccessful attempts had been made to amalgamate with some other financial house, and at the end of September, 1931, steps were taken for the winding up of the bank's business.

(c) *Federal Deposit Bank.* Following on the closure of the Primary Producers' Bank, which had its origin in Queensland, considerable uneasiness developed amongst depositors in the small banks, and the stream of withdrawals seriously embarrassed the managements of these institutions. The Brisbane Permanent Building and Banking Co. Ltd., and the Queensland Deposit Bank received the support of some of the stronger trading banks, and were able to withstand the demands on their resources. The directors of the Federal Deposit Bank decided to suspend payment as from 5th September, 1931, and court orders were subsequently issued for placing the affairs of the bank in the hands of a liquidator. At the end of October, 1931, a scheme of settlement was placed before depositors, providing for the immediate payment of small current accounts and extended payment of higher amounts.

(iii) *Amalgamations.* Negotiations for the amalgamation of the Australian Bank of Commerce Ltd. with the Bank of New South Wales were completed and became effective from the 17th November, 1931.

On the 12th November, 1931, an agreement was completed for the amalgamation of the Brisbane Permanent Building and Banking Co. Ltd., and the Queensland Deposit Bank.

4. *Commonwealth Bank.*—(i) *General.* A brief account of the foundation of the Commonwealth Bank was given in Nos. 6 to 10 of the Official Year Book. Although Savings Bank business was transacted in some States from July, 1912, the Bank was formally opened for general and Savings Bank business on the 20th January, 1913, and as no capital was advanced and the initial expenses were heavy, the operations in the early years resulted in a small loss. The increasing prosperity of the institution due to Savings Bank business, the holding of Government accounts and the stimulus of War finance soon enabled the early deficits to be reduced until on June 30th, 1915, they were entirely extinguished.

An important stage in the history of the Bank was the passing of the Commonwealth Bank Act, 1924, which was assented to on the 20th August, 1924, and brought into operation on the 10th October, 1924. This Act was passed to broaden the scope of the Commonwealth Bank and to enable it to perform the functions for which it had been established. Five main amendments to the Bank Act 1911-20 were included, in accordance with which the following changes were made:—(1.) A Board of Directors was appointed to control not only the general business, but also that of the note issue. The Board consists of the Governor of the Bank, the Secretary to the Treasury, and six others who are or have been actively engaged in agriculture, commerce, finance or industry. In addition to the above Board there is a Board of Advice in London. (2.) The Bank was strengthened by the capitalization of £4,000,000 of the accumulated profits, and the Treasurer was authorized to raise by loans sums aggregating £6,000,000 and to lend the proceeds to the Commonwealth Bank as additional capital. The Government does not propose to interfere with the authority already included in the Commonwealth Bank Act to issue debentures up to £10,000,000. (3.) The Board is to fix and publish its discount rate. (4.) The associated banks settle their exchanges through the Commonwealth Bank. (5.) The associated banks supply to the Treasurer each quarter a statement of average weekly liabilities and assets in accordance with the schedule prescribed. The operations of the Bank, which holds in addition to the Commonwealth Government's accounts, those of the States of Victoria (portion only), Queensland, South Australia, Western Australia and Tasmania, and many local governing bodies, have led to its development in the direction of a Central Bank. Unlike ordinary commercial banks, it does not offer special inducements to attract private accounts.

The Bank has played a most important part in the financing of Government deficits during the years 1930-31 and 1931-32. References to this aspect of its business are given in the Appendix to this volume. It may be mentioned here that in December, 1931, the Bank Board undertook the responsibility of regulating sterling exchange and announcing rates each week.

A further amending act—The Commonwealth Bank Act, 1927—provided for the separation of the Savings Bank Department from the General Bank and its establishment as a separate institution, and the transfer to the "Commonwealth Savings Bank of Australia" of all assets and liabilities of the Savings Bank Department. The date on which this amending act became operative was fixed by proclamation as the 9th June, 1928.

The amount of capital and reserves at the date of separation was allocated as follows, Commonwealth Bank of Australia, Capital £4,000,000; Reserve Fund, £303,857; Commonwealth Savings Bank of Australia, Reserve Fund, £1,075,298.

Since the 1st July, 1927, the Bank has published a weekly statement of the accounts of the note issue and general banking departments of the Bank.

Particulars of the aggregate net profits from the initiation of the Bank to the end of each of the last five financial years are as follow:—

**COMMONWEALTH BANK.—AGGREGATE PROFITS.**

Date.	Aggregate Net Profit to Date.			
	General Bank.	Savings Bank.	Rural Credits Department.	Total.
	£	£	£	£
30th June, 1927 ..	4,585,181	1,446,333	26,000	6,057,514
„ 1928 ..	4,909,327	1,795,822	61,266	6,766,415
„ 1929 ..	5,367,950	2,037,957	109,928	7,514,935
„ 1930 ..	5,868,398	2,288,389	179,337	8,336,124
„ 1931 ..	6,502,217	2,522,576	265,890	9,290,683

In accordance with the provisions of section 30 of the Bank Act and section 9 (2) of the National Debt Sinking Fund Act, half of the net profits of the Bank have been placed to the credit of the Bank's Reserve Fund and half to the credit of the National Debt Sinking Fund. Up to 30th June, 1931, the latter fund had benefited to the extent of £2,310,403.

(ii) *Liabilities in Australia, 1930-31 and 1931-32.* The following table gives particulars of the average liabilities for each quarter from September, 1930 to June, 1932 :—

**COMMONWEALTH BANK OF AUSTRALIA.—LIABILITIES,  
QUARTERLY AVERAGES.**

Quarter Ended—	Bills in Circula- tion.	Balances Due to Other Banks. (b)	Deposits.			Total Liabilities.
			Not Bearing Interest.	Bearing Interest.	Total Deposits.	
	£	£	£	£	£	£
30th September, 1930 ..	278,909	15,665,654	11,605,134	13,451,927	25,057,061	41,001,624
31st December, 1930 ..	510,043	20,824,225	10,765,755	13,551,578	24,317,333	45,651,601
31st March, 1931 ..	424,783	29,715,891	a 7,907,248	13,793,605	21,700,853	51,841,527
30th June, 1931 ..	265,871	32,234,744	a 8,425,860	14,785,744	23,211,604	55,712,219
30th September, 1931 ..	213,065	22,960,881	a 8,795,686	16,681,966	25,477,652	48,651,598
31st December, 1931 ..	193,945	22,233,101	a 8,924,199	18,399,107	27,323,306	49,750,352
31st March, 1932 ..	387,631	32,099,900	a 9,019,923	26,253,882	35,273,805	67,761,336
30th June, 1932 ..	449,679	29,119,080	a 8,606,629	26,609,760	35,216,389	64,785,148

(a) Government "Set off" Accounts (Interstate) deducted, cheque-paying banks."

(b) Includes deposits of "other

(iii) *Liabilities in Australia, June Quarter, 1928 to 1932.* The average liabilities for the June quarter of the years 1928 to 1932 are given in the table below. In any comparisons with previous years, it should be noted that the Savings Bank Department functioned as a separate entity after June, 1928.

**COMMONWEALTH BANK OF AUSTRALIA.—AVERAGE LIABILITIES, JUNE  
QUARTERS.**

Quarter ended 30th June—	Bills in Circula- tion.	Balances Due to Other Banks. (c)	Deposits.				Total Liabilities.
			Not Bearing Interest.	Bearing Interest.	Savings Bank Deposits.	Total Deposits.	
	£	£	£	£	£	£	£
1928 ..	327,570	12,053,761	14,901,816	9,411,560	45,705,114	70,018,490	82,399,821
1929 ..	258,661	9,225,120	17,479,342	10,413,202	(a)	27,892,544	37,376,325
1930 ..	278,860	16,937,846	12,279,194	13,090,193	(a)	25,369,387	42,586,093
1931 ..	265,871	32,234,744	b 8,425,860	14,785,744	(a)	23,211,604	55,712,219
1932 ..	449,679	29,119,080	b 8,606,629	26,609,760	(a)	35,216,389	64,785,148

(a) The Commonwealth Savings Bank was created a separate department on 9th June, 1928.

(b) Government "Set-off" Accounts, Interstate deducted. (c) Includes deposits of "other cheque-paying banks".

(iv) *Assets in Australia, 1930-31 and 1931-32.* The average assets for each quarter from September, 1930, to June, 1932, were as follows :—

**COMMONWEALTH BANK OF AUSTRALIA.—ASSETS, QUARTERLY AVERAGES.**

Quarter Ended—	Coin.	Bullion.	Austra- lian Notes.	Govern- ment and Municipal Securities. (a)	Landed and House Property.	Balances Due from Other Banks.	Notes and Bills of Other Banks.	Discounts, Overdrafts, and all other Assets (not including Contingent Assets).	Total Assets.
30th September, 1930	£ 1,065,225	£ 1,967	£ 6,894,138	£ 24,092,893	£ 629,785	£ 386,360	£ 3,975	£ 12,549,111	£ 45,623,454
31st December, 1930	883,768	4,677	6,058,032	29,521,156	665,116	200,760	6,039	12,494,150	49,833,698
31st March, 1931	798,128	31,547	6,049,966	33,115,776	668,114	125,329	10,893	13,334,830	56,134,583
30th June, 1931	537,291	29,649	4,136,174	39,977,658	683,075	127,289	10,614	13,113,024	58,614,774
30th September, 1931	548,565	73,185	4,038,522	33,647,790	765,929	93,574	9,104	13,265,205	52,441,874
31st December, 1931	595,225	137,676	5,632,460	39,397,985	815,036	402,040	16,196	12,024,761	50,021,379
31st March, 1932	695,970	42,843	5,711,834	39,188,906	933,867	624,022	13,561	11,522,964	58,733,967
30th June, 1932	850,787	67,508	6,028,267	36,548,954	928,096	648,350	6,375	11,792,021	56,870,338

(a) Includes short-term loans in Australia.

(b) Government "Set-off" accounts (Interstate) deducted.

(v) *Assets in Australia, June Quarter, 1928 to 1932.*—Particulars of the assets for the June quarter of the last five years are given in the following table :—

COMMONWEALTH BANK OF AUSTRALIA.—AVERAGE ASSETS,  
JUNE QUARTERS.

Quarter Ended— 30th June—	Coin.	Bullion.	Austra- lian Notes.	Government and Municipal Securities. (b)	Landed and House Property.	Balances Due from Other Banks.	Notes and Bills of Other Banks.	Discounts, Overdrafts, and all other Assets (not including Contingent Assets).	Total Assets.
	£	£	£	£	£	£	£	£	£
1928 ..	755,581	51,302	4,507,681	57,057,707	644,182	142,832	2,154,022	16,697,661	82,010,968
1929(a) ..	1,044,917	1,663	4,216,102	13,695,886	519,511	80,311	3,042	14,721,274	34,282,706
1930(a) ..	1,376,712	1,760	5,743,707	23,282,564	540,053	170,345	3,025	15,111,842	46,230,008
1931(a) ..	537,291	29,649	4,136,174	39,977,658	683,075	127,289	10,614	13,113,024	58,614,774
1932(a) ..	850,787	67,508	6,028,267	36,548,954	928,096	648,350	6,375	11,792,021	56,870,358

(a) Excludes Commonwealth Savings Bank.

(b) Includes short-term loans in Australia.

(c) Government "Set-off" accounts (Interstate) deducted.

5. *Other Cheque-paying Banks.*—(i) *General.* The term "Other Cheque-paying Banks" has been adopted in preference to "Joint-stock Banks." The latter term, although used for some time, was not strictly correct, as the statistics relating thereto for recent years included returns for the Rural Bank Department of the Government Savings Bank of New South Wales and the State Bank of South Australia, both of which are governmental banking institutions. The figures showing average liabilities and assets given in paragraphs (ii) to (v) immediately following are, however, comparable with those given under "Joint-stock Banks" in previous issues.

(ii) *Liabilities in Australia, 1930-31 and 1931-32.* Particulars of the average liabilities of "Other Cheque-paying Banks" for each quarter from September, 1930, to June, 1932, are given in the table following :—

OTHER CHEQUE-PAYING BANKS.—LIABILITIES, QUARTERLY AVERAGES.

Quarter ended—	Notes in Circulation not Bearing Interest.	Bills in Circulation not Bearing Interest.	Balances Due to Other Banks.	Deposits.			Total Liabilities.
				Not Bearing Interest.	Bearing Interest.	Total.	
	£	£	£	£	£	£	£
30th Sept., 1930	199,275	2,680,741	1,726,138	84,566,033	195,203,800	279,769,833	284,375,987
31st Dec., 1930	198,968	2,835,331	2,044,137	85,246,308	195,399,108	280,645,416	285,723,852
31st March, 1931	198,735	2,330,994	1,919,704	85,607,491	195,305,722	280,913,213	285,362,646
30th June, 1931	198,478	2,330,632	1,727,353	82,620,931	195,855,323	278,476,254	282,732,717
30th Sept., 1931	198,151	2,148,754	1,538,586	79,733,594	194,524,824	274,258,328	278,143,819
31st Dec., 1931	197,342	2,374,876	1,530,029	88,833,969	195,411,635	284,245,604	288,347,851
31st March, 1932	197,289	2,224,167	1,318,118	93,030,651	195,801,166	288,831,817	292,571,391
30th June, 1932	197,121	2,131,777	1,398,712	87,830,372	196,194,572	284,024,944	287,752,554

(iii) *Liabilities in Australia, June Quarters, 1928 to 1932.* The next table shows the average liabilities of "Other Cheque-paying Banks" for the quarters ended 30th June, 1928 to 1932.

## OTHER CHEQUE-PAYING BANKS.—AVERAGE LIABILITIES, JUNE QUARTERS.

June Quarter.	Notes in Circulation not Bearing Interest.	Bills in Circulation not Bearing Interest.	Balances Due to Other Banks.	Deposits.			Total Liabilities.
				Not Bearing Interest.	Bearing Interest.	Total.	
	£	£	£	£	£	£	£
1928 .. ..	200,326	3,500,006	2,851,923	111,678,372	177,857,260	289,535,632	296,087,887
1929 .. ..	199,846	3,653,919	2,629,601	110,215,432	192,059,284	302,274,716	308,758,082
1930 .. ..	199,337	2,829,140	2,938,944	91,688,866	193,506,073	285,194,939	291,162,360
1931 .. ..	198,478	2,330,632	1,727,353	82,620,931	193,855,323	278,476,234	282,732,717
1932 .. ..	197,121	2,131,777	1,398,712	87,830,372	196,194,572	284,024,944	287,752,554

(iv) *Assets in Australia, 1930-31 and 1931-32.* The average assets of the banks are shown in the following table:—

## OTHER CHEQUE-PAYING BANKS.—ASSETS, QUARTERLY AVERAGES.

Quarter ended.	Coin.	Bullion.	Australian Notes and Cash with Commonwealth Bank.	Government and Municipal Securities.	Landed and House Property.	Balances Due from other Banks.	Notes and Bills of other Banks.	Discounts, Overdrafts, and all other Assets.	Total Assets.
	£	£	£	£	£	£	£	£	£
30th Sept., 1930	2,635,127	134,498	33,796,918	20,361,706	8,171,607	5,132,990	1,491,030	279,031,995	350,755,871
31st Dec., 1930 ..	2,027,570	143,381	38,463,738	23,083,876	8,237,209	4,784,225	1,673,511	278,719,160	357,132,670
31st March, 1931	1,980,146	127,368	47,616,122	23,070,643	8,231,169	5,542,301	1,587,346	268,820,423	356,975,518
30th June, 1931..	1,812,599	165,936	51,314,263	22,674,055	8,347,211	5,110,114	1,362,381	263,471,760	354,258,319
30th Sept., 1931	1,832,725	178,415	43,426,605	29,077,170	8,443,502	5,553,056	1,081,973	262,202,472	351,795,918
31st Dec., 1931 (a)	1,844,146	243,516	41,014,173	34,624,195	8,448,729	6,666,151	1,341,768	254,456,003	348,638,681
31st March, 1932(a)	1,892,441	285,080	51,255,006	40,697,248	8,387,791	6,219,266	1,424,042	248,444,800	358,605,674
30th June, 1932(a)	1,722,283	241,448	47,933,637	44,349,844	8,242,497	5,528,715	1,295,806	249,125,494	358,439,724

(a) Includes Assets of "Old business" division of the Rural Bank Department of the New South Wales Government Savings Bank.

(v) *Assets in Australia, June Quarter, 1928 to 1932.* The average assets of the banks for the June quarters of each of the years 1928 to 1932 are given below.

## OTHER CHEQUE-PAYING BANKS.—AVERAGE ASSETS, JUNE QUARTER.

June Quarter.	Gold and Silver and Other Metals, Coin, Bullion or Bars.	Australian Notes and Cash with Commonwealth Bank.	Government and Municipal Securities.	Landed and Other Property.	Balances Due from Other Banks.	Notes and Bills of Other Banks.	Discounts, Overdrafts, and all Other Assets.	Total Assets.
	£	£	£	£	£	£	£	£
1928	25,796,158	27,284,852	23,918,520	6,975,330	5,554,746	2,129,041	240,677,748	332,336,395
1929	25,455,684	23,108,635	24,391,764	7,358,170	5,119,493	2,135,397	267,831,631	355,400,684
1930	4,752,840	33,462,049	20,466,859	7,939,765	6,674,517	1,870,263	284,283,139	359,449,432
1931	1,978,535	51,314,263	22,674,055	8,347,211	5,110,114	1,362,381	263,471,760	354,258,319
1932a	1,963,731	47,933,637	44,349,844	8,242,497	5,528,715	1,295,806	249,125,494	358,439,724

(a) Includes assets of "Old business" division of Rural Bank Department of New South Wales Government Savings Bank.

6. All Cheque-paying Banks.—(i) *General.* Particulars of the aggregate average liabilities and assets of all cheque-paying banks in the Commonwealth, including the Commonwealth Bank of Australia, are given in the subjoined paragraphs.

(ii) *Liabilities in Australia, 1930-31 and 1931-32.* The average liabilities of all cheque-paying banks for each quarter of the two years ending June, 1932, were as follow:—

ALL CHEQUE-PAYING BANKS.—LIABILITIES—QUARTERLY AVERAGES.

Quarter ended—	Notes in Circulation.	Bills in Circulation.	Balances Due to Other Banks.(b)	Deposits.			Total Liabilities.
				Not Bearing Interest.	Bearing Interest.	Total Deposits.	
	£	£	£	£	£	£	£
30th Sept., 1930	199,275	2,959,650	17,391,792	96,171,167	208,655,727	304,826,894	325,377,611
31st Dec., 1930	198,968	3,345,374	22,868,362	96,012,063	208,950,686	304,962,749	331,375,453
31st March, 1931	198,735	2,755,777	31,635,595	a 93,514,739	209,099,327	302,614,066	337,204,173
30th June, 1931	198,478	2,596,503	33,962,097	a 91,046,791	210,641,067	301,687,858	338,444,936
30th Sept., 1931	198,151	2,361,819	24,499,467	a 88,529,190	211,206,790	299,735,980	326,795,417
31st Dec., 1931	197,342	2,568,821	23,763,130	a 97,758,168	213,810,742	311,568,910	338,098,203
31st March, 1932	197,289	2,611,798	33,418,018	a 102,050,574	222,055,048	324,105,622	360,332,727
30th June, 1932	197,121	2,581,456	30,517,792	a 96,437,001	222,804,332	319,241,333	352,537,702

(a) Government "Set-off accounts, Interstate (Commonwealth Bank) deducted. (b) Deposits of Other Cheque-paying Banks with Commonwealth Bank are treated in returns as "Balances due to Other Banks".

(iii) *Liabilities in Australia, June Quarters, 1928 to 1932.* The next table shows the average liabilities in Australia for the June quarter of the years 1928 to 1932.

ALL CHEQUE-PAYING BANKS.—AVERAGE LIABILITIES, JUNE QUARTERS.

Quarter Ended 30th June—	Notes in Circulation.	Bills in Circulation.	Balances due to Other Banks. (b)	Deposits.				Total Liabilities.
				Not Bearing Interest.	Bearing Interest.	Savings Bank Deposits.	Total.	
	£	£	£	£	£	£	£	£
1928 ..	200,326	3,827,576	14,905,684	126,580,188	187,268,820	45,705,114	359,554,122	378,487,708
1929 ..	199,846	3,912,580	11,854,721	127,694,774	202,472,486	(a)	330,167,260	346,134,407
1930 ..	199,337	3,108,000	19,876,790	103,968,060	206,596,266	(a)	310,561,326	333,748,453
1931 ..	198,478	2,596,503	33,962,097	99,046,791	210,641,067	(a)	301,687,858	338,444,936
1932 ..	197,121	2,581,456	30,517,792	96,437,001	222,804,332	(a)	319,241,333	352,537,702

(a) The Commonwealth Savings Bank was created a separate department of the Commonwealth Bank on 9th June, 1928. (b) Deposits of Other Cheque-paying Banks with Commonwealth Bank are treated in returns as "Balances due to other Banks." (c) Government "Set-off" Accounts, Interstate (Commonwealth Bank) deducted.

(iv) *Assets in Australia, 1930-31 and 1931-32.* Particulars of the average assets in Australia for each quarter of the years 1930-31 and 1931-32 are given in the following table:—

ALL CHEQUE-PAYING BANKS.—ASSETS, QUARTERLY AVERAGES.

Quarter Ended—	Coin.	Bullion.	Australian Notes and Cash with Commonwealth Bank.	Government and Municipal Securities. (a)	Landed and House Property.	Balances Due from Other Banks.	Notes and Bills of Other Banks.	Discounts, Overdrafts, and all other Assets (not including Contingent Assets).	Total Assets.
	£	£	£	£	£	£	£	£	£
30th Sept., 1930 ..	3,700,352	136,465	40,691,056	44,454,599	8,801,392	5,519,350	1,495,005	291,581,106	396,379,325
31st Dec., 1930 ..	2,911,338	148,058	44,521,770	52,605,032	8,902,325	4,984,985	1,679,550	291,213,310	406,966,368
31st March, 1931 ..	2,778,274	158,915	53,666,088	65,186,419	8,899,283	5,667,630	1,598,239	282,155,253	413,110,101
30th June, 1931 ..	2,349,890	195,585	55,450,437	66,265,713	9,030,286	5,237,403	1,372,995	276,584,784	412,873,093
30th Sept., 1931 ..	2,381,290	251,600	47,465,127	66,274,960	9,209,431	5,646,630	1,091,077	275,467,677	404,237,792
31st Dec., 1931 ..	2,439,371	381,192	46,646,633	66,502,180	9,263,765	7,068,191	1,357,964	266,480,764	398,660,060
31st March, 1932 ..	2,588,411	327,923	56,966,840	67,886,154	9,321,658	6,843,288	1,437,603	259,967,764	417,339,641
30th June, 1932 ..	2,573,070	308,956	53,961,904	68,098,798	9,170,593	6,177,065	1,302,181	260,917,515	415,310,082

(a) Includes short-term loans in Australia. (b) Government "Set-off" Accounts, Interstate (Commonwealth Bank) deducted.

(v) *Assets in Australia, June Quarters, 1928 to 1932.* The average assets in Australia for the June quarters of the years 1928 to 1932 were as follows:—

**ALL CHEQUE-PAYING BANKS.—AVERAGE ASSETS, JUNE QUARTERS.**

Quarter ended 30th June—	Coin and Bullion.	Austral-an Notes. (a)	Government and Municipal Securities.	Landed Property.	Balances Due from Other Banks.	Notes and Bills of Other Banks.	Advances and All other Assets.	Total Assets.
	£	£	£	£	£	£	£	£
1928..	26,603,041	31,792,533	80,976,227	7,619,512	5,697,578	4,283,063	257,375,409	414,347,363
1929..	26,502,264	27,324,737	38,087,650	7,877,681	5,199,714	2,138,439	282,552,905	389,683,390
1930..	6,131,312	39,205,756	43,749,423	8,479,818	6,844,862	1,873,288	299,394,981	405,679,440
1931..	2,545,475	55,450,437	b 62,651,713	9,030,286	5,237,403	1,372,995	276,584,784	412,873,093
1932..	2,882,026	53,961,904	b 80,898,798	9,170,593	6,177,065	1,302,181	260,917,515	415,310,082

(a) Includes Cash with Commonwealth Bank. (Commonwealth Bank) deducted.

(b) Government "Set-off" Accounts, Interstate

(vi) "*Liquid Assets*" and *Liabilities*. While it is not strictly correct to assume that a division of deposits with cheque-paying banks into those bearing interest and not bearing interest would in all cases coincide with a definite division into fixed deposits and current accounts respectively, in the absence of the data required to permit of an accurate apportionment, such a division has been adopted for the purposes of this analysis, wherein liabilities "at call" are to be understood as embracing the notes of banks of issue still outstanding and deposits not bearing interest. Since 1912, the former item has steadily decreased and is now of almost negligible dimensions. The figures used to show "liquid assets" comprise coin, bullion, and Australian notes, including cash with Commonwealth Bank.

The statement hereunder shows for the June quarter of each year, 1928 to 1932, in respect of all cheque-paying banks combined, particulars of total liabilities to the public, "liabilities at call" and "liquid assets," together with the percentages of the latter on each of the former items.

**ALL CHEQUE-PAYING BANKS.—LIQUID ASSETS AND LIABILITIES, JUNE QUARTERS.**

Quarter ended 30th June.—	Total Liabilities to the Public.	Liabilities at Call.	Liquid Assets.		
			Total.	Percentage on—	
				Total Liabilities to the Public.	Liabilities at Call.
	£	£	£	%	%
1928 ..	378,487,108	126,780,514	58,395,574	15.4	46.1
1929 ..	346,134,407	127,894,620	53,827,001	15.6	42.1
1930 ..	333,748,453	104,167,397	45,337,068	13.6	43.5
1931 ..	a 338,444,936	a 91,245,269	57,995,912	17.1	63.6
1932 ..	a 352,537,702	a 96,634,122	56,843,930	16.1	58.8

(a) Government "Set-off" Accounts, Interstate, of Commonwealth Bank deducted.

The unsettled business conditions during the past two years necessitated the holding of a much greater proportion of the banks' assets in liquid form than was hitherto considered necessary. For the June quarters of the years 1931 and 1932 the proportions of "liquid" assets to "call" liabilities were approximately 64 and 59 per cent. respectively, while for several years previously, the percentage was roughly between 40 and 46.

The percentages of "liquid assets" on the liabilities "at call" and on total liabilities are given in the following table for the June quarters of the years 1928 to 1932 in respect of the Commonwealth Bank and other cheque-paying banks separately :—

PERCENTAGE OF "LIQUID ASSETS" ON LIABILITIES "AT CALL" AND TOTAL LIABILITIES—JUNE QUARTERS.

Quarter ended 30th June—	On Total Liabilities.			On Liabilities "at Call."		
	Commonwealth Bank.	Other Cheque-paying Banks.	Total.	Commonwealth Bank.	Other Cheque-paying Banks.	Total.
1928 ..	6.5	17.9	15.4	35.7	47.4	46.1
1929 ..	14.1	15.7	15.6	30.1	44.0	42.1
1930 ..	16.7	13.1	13.6	58.0	41.6	43.5
1931 ..	8.4	18.8	17.1	55.8	64.3	63.6
1932 ..	10.7	17.3	16.1	80.7	56.7	58.8

(vii) *Advances, and Advances and Investments.—Percentage on Total Deposits.*

The table following shows particulars for the June quarters 1928 to 1932 of the percentages of Advances, and Advances and Investments on total deposits of the Commonwealth and other cheque-paying banks :—

ALL CHEQUE-PAYING BANKS.—PERCENTAGE OF ADVANCES, AND ADVANCES AND INVESTMENTS ON TOTAL DEPOSITS (a), JUNE QUARTERS.

Quarter ended 30th June—	Advances on Total Deposits.			Advances and Investments on Total Deposits.		
	Commonwealth Bank.	Other Cheque-paying Banks.	Total.	Commonwealth Bank.	Other Cheque-paying Banks.	Total.
1928 ..	23.9	83.1	71.6	105.3	91.4	94.1
1929 ..	52.8	88.6	85.6	101.9	96.7	97.1
1930 ..	59.6	99.7	96.4	151.3	106.9	110.5
1931 ..	56.5	94.6	91.7	228.7	102.8	112.5
1932 ..	33.5	87.7	81.7	137.3	103.3	107.1

(a) Includes deposits with and advances and investments of Commonwealth Savings Bank in 1928.

(viii) *Deposits per head of Population.* Particulars of the deposits per head of population, calculated on the mean population of the quarter, are given for the June quarter of each of the past five years in the following table. The figures given, which are based on the aggregate for all cheque-paying banks in each State, are not adjusted on account of the Government "set-off" accounts of the Commonwealth Bank.



## ALL CHEQUE-PAYING BANKS.—DEPOSITS (a) PER HEAD OF POPULATION.

Quarter ended 30th June—	New South Wales (b).	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.	Total.
	£	£	£	£	£	£	£	£
1928 (a) ..	53.0	54.8	48.7	41.5	34.3	34.5	51.9	50.0
1929 ..	54.7	58.8	50.6	39.7	33.7	35.7	47.4	51.9
1930 ..	52.5	52.2	47.2	38.7	29.2	34.3	37.6	48.3
1931 ..	48.5	53.9	45.8	38.5	30.4	32.7	35.6	47.0
1932 ..	44.0	67.1	44.9	41.7	35.4	36.2	34.3	49.5

(a) Excludes deposits with Commonwealth Savings Bank. (b) Includes Federal Capital Territory.

It may be mentioned here that deposits of "other cheque-paying banks" with the Commonwealth Bank are treated in the returns as "balances due to other banks."

(ix) *Proportion of Non-Interest Bearing Deposits to Total Deposits.* The subjoined table shows for each State the proportion of non-interest bearing deposits to the total deposits during the June quarter of each of the years 1928 to 1932. The figures relate to all cheque-paying banks and no adjustment has been made in respect of Government "set-off" accounts of the Commonwealth Bank.

## ALL CHEQUE-PAYING BANKS.—PROPORTION OF NON-INTEREST BEARING DEPOSITS TO TOTAL DEPOSITS. (a)

Quarter ended 30th June—	New South Wales (b)	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.	Total.
	%	%	%	%	%	%	%	%
1928 ..	43.1	35.2	43.0	34.5	50.9	41.8	55.9	40.3
1929 ..	41.9	33.3	41.1	32.8	49.3	38.7	54.9	38.7
1930 ..	37.0	28.3	33.8	28.8	43.9	36.2	52.2	33.5
1931 ..	34.0	26.3	33.0	25.8	40.2	29.1	49.2	31.0
1932 ..	37.1	25.0	33.1	26.5	39.9	31.6	49.3	31.2

(a) Excludes deposits with Commonwealth Savings Bank. (b) Includes Federal Capital Territory.

7. *Deposit Rates.*—The "Premiers Plan" for financial rehabilitation included, *inter alia*, provisions for the reduction of bank interest rates for deposits and advances. The steps taken in this direction are referred to in the Appendix to this volume, but the statement below shows the changes made in the deposit rates during 1931 and 1932.

## BANK DEPOSIT RATES.

Dates.	Rate on Deposits for—			
	Three Months.	Six Months.	Twelve Months.	Two Years.
To 25th June, 1931 ..	% 4½	% 4½	% 5	% 5½
26th June, 1931 ..	3½	3½	4	4½
27th November, 1931 ..	3	3½	3½	4
8th March, 1932 ..	2½	3	3½	4
May-June, 1932 (a) ..	2½	3	3½	3½

(a) All banks did not take simultaneous action.

8. Clearing House Returns.—Particulars of the aggregate bank clearings for each capital city, as furnished by the Associated Banks, Melbourne, are given in the following table. Since October, 1929, transactions connected with the issue and redemption of Treasury Bills have resulted in largely inflated clearings. These transactions are of an abnormal character, and for the years 1929 to 1931 are shown separately. A weekly average of bank clearings is compiled from information supplied by the Commonwealth Bank, Sydney, and published in the Quarterly Summary of Australian Statistics.

CLEARING HOUSE RETURNS.—VALUE OF BILLS, CHEQUES, ETC., 1870 TO 1931.

Year.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1870 .. ..	..	68,221	..	..	..	..
1880 .. ..	..	103,353	..	..	..	..
1890 .. ..	..	315,190	..	..	..	..
1895 .. ..	108,509	130,787	..	..	..	..
1900 .. ..	144,080	159,949	..	..	..	..
1905 .. ..	189,826	187,632	32,255	..	..	..
1910 .. ..	274,344	261,383	61,060	..	..	..
1915 .. ..	357,803	299,295	96,291	60,950	..	..
1920 .. ..	764,546	725,006	160,539	166,011	80,758	..
1925 .. ..	909,114	803,083	192,968	171,092	101,085	25,557
1926 .. ..	954,253	790,111	195,710	178,898	103,523	25,691
1927 .. ..	1,034,894	825,676	192,274	186,752	111,454	26,805
1928 .. ..	1,033,511	762,851	196,566	164,166	112,503	28,226
1929—						
Ordinary Transac- tions .. ..	..	812,105	..	..	..	..
Treasury Bills Tran- sactions .. ..	..	2,566	..	..	..	..
Total .. ..	1,043,320	814,671	196,253	156,686	114,587	27,365
1930—						
Ordinary Transac- tions .. ..	872,390	697,641	..	..	..	..
Treasury Bills Tran- sactions .. ..	20,771	28,274	..	..	..	..
Total .. ..	893,161	725,915	167,999	125,684	89,034	23,092
1931—						
Ordinary Transac- tions .. ..	683,176	566,865	..	..	..	..
Treasury Bills Tran- sactions .. ..	151,512	85,999	..	..	..	..
Total .. ..	834,688	652,864	144,814	96,867	71,356	18,057

9. Rates of Exchange.—(i) *Australia on London.* The following statement, which has been prepared from data very kindly supplied by the General Manager of the Bank of New South Wales, Sydney, gives particulars of the various rates of exchange, Australia on London, in operation since 16th October, 1913. The details given show the value in Australia of £100 in London according to the rates quoted by the Associated Banks for buying and selling £100 in London on telegraphic transfer. Prior to 30th October, 1920, when "T.T." buying rates were not quoted, the rate was determined approximately by applying the difference between the buying and selling rates for "On Demand" drafts to the quoted "T.T." selling rate.

EXCHANGE RATES.—AUSTRALIA ON LONDON, TELEGRAPHIC TRANSFER,  
1913 TO 1932.

Date on which Rate began to Operate.	Exchange.			Commission for £100 (Sterling).
	London.	Australia (Mean of Buying and Selling Rates).		
	£ sterling 100	£ 100 plus	£ s. d.	s. d.
16th October, 1913 .. ..	..	..	0 6 3	8 9
19th August, 1914 .. ..	..	..	0 10 0	15 0
29th September, 1914 .. ..	..	..	0 15 0	15 0
24th October, 1914 .. ..	..	..	1 0 0	15 0
12th May, 1915 .. ..	..	..	0 17 6	15 0
30th September, 1915 .. ..	..	..	1 0 0	12 6
23rd February, 1916 .. ..	..	..	1 5 0	12 6
15th November, 1916 .. ..	..	..	0 18 9	13 9
29th May, 1917 .. ..	..	..	0 12 6	15 0
3rd October, 1917 .. ..	..	..	0 7 6	15 0
12th January, 1920 .. ..	..	..	0 2 6	15 0
8th October, 1920 .. ..	..	..	0 15 0	15 0
14th October, 1920 .. ..	..	..	0 13 9	16 3
30th October, 1920 .. ..	..	..	1 5 0	15 0
10th December, 1920 .. ..	..	..	1 15 0	15 0
23rd December, 1921 .. ..	..	..	1 10 0	15 0
17th February, 1922 .. ..	..	..	1 2 6	12 6
6th April, 1922 .. ..	..	..	0 15 0	15 0
15th May, 1922 .. ..	..	..	0 10 0	15 0
14th July, 1922 .. ..	..	..	0 2 6	15 0
8th September, 1922 .. ..	..	100 less	0 3 9	13 9
10th October, 1922 .. ..	..	..	0 7 6	12 6
7th November, 1922 .. ..	..	..	0 10 0	15 0
14th January, 1924 .. ..	..	..	1 0 0	10 0
22nd February, 1924 .. ..	..	..	1 5 0	10 0
10th March, 1924 .. ..	..	..	1 10 0	10 0
8th May, 1924 .. ..	..	..	2 0 0	10 0
5th September, 1924 .. ..	..	..	2 5 0	10 0
29th September, 1924 .. ..	..	..	2 10 0	10 0
15th October, 1924 .. ..	..	..	3 0 0	10 0
6th May, 1925 .. ..	..	..	0 12 6	2 6
10th June, 1925 .. ..	..	..	0 2 6	2 6
9th June, 1926 .. ..	..	..	0 1 3	3 9
20th April, 1927 .. ..	..	100 plus	0 6 3	3 9
27th June, 1927 .. ..	..	..	0 8 9	3 9
8th July, 1927 .. ..	..	..	0 11 3	3 9
19th March, 1928 .. ..	..	..	0 15 0	5 0
22nd July, 1929 .. ..	..	..	1 0 0	5 0
3rd September, 1929 .. ..	..	..	1 5 0	5 0
10th October, 1929 .. ..	..	..	1 10 0	5 0
18th December, 1929 .. ..	..	..	1 17 6	5 0
28th January, 1930 .. ..	..	..	2 6 3	6 3
17th February, 1930 .. ..	..	..	2 16 3	6 3
10th March, 1930 .. ..	..	..	3 16 3	6 3
24th March, 1930 .. ..	..	..	6 6 3	3 9
9th October, 1930 .. ..	..	..	8 15 0	5 0
6th January, 1931 .. ..	..	..	15 6 3	3 9
13th January, 1931 .. ..	..	..	18 3 9	3 9
17th January, 1931 .. ..	..	..	25 5 0	5 0
29th January, 1931 .. ..	..	..	30 5 0	5 0
18th March, 1932 .. ..	..	..	20 5 0	5 0

The "Commission" which represents the banks' "turn" on each £100 sterling exchanged has been computed by taking half the difference between the buying and selling rates.

(ii) *Australia on New Zealand.* Particulars of the rates of exchange, Australia on New Zealand, in force in 1931 are given hereunder.

EXCHANGE RATES.—AUSTRALIA ON NEW ZEALAND, 1931.

On and after—	"Telegraphic Transfer" or "On Demand."	
	Buying.	Selling.
	£ s. d.	£ s. d.
4th June, 1931 .. .. .	118 12 6	119 7 6
3rd December, 1931 .. .. .	113 12 6	114 7 6

The above quotations are on the basis of £100 in New Zealand.

(iii) *Interstate.* Exchange rates between the several capital cities of the States at 30th June, 1931, were as follows:—

INTERSTATE EXCHANGE RATES, 30TH JUNE, 1931.

Between.	And—					
	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart and Launceston.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Sydney .. .. .	.. .. .	2 6	2 6	5 0	10 0	5 0
Melbourne .. .. .	2 6	.. .. .	7 6	2 6	7 6	5 0
Brisbane .. .. .	2 6	7 6	.. .. .	10 0	12 6	10 0
Adelaide .. .. .	5 0	2 6	10 0	.. .. .	5 0	7 6
Perth .. .. .	10 0	7 6	12 6	5 0	.. .. .	12 6
Hobart and Launceston .. .. .	5 0	5 0	10 0	7 6	12 6	.. .. .

## § 2. Savings Banks.

1. *General.*—The inauguration of Savings Banks in Australia dates from the year 1819, when a private Savings Bank was opened in Sydney, New South Wales. In the other States provision for placing deposits with Savings Banks dates from 1842 in Victoria; 1851 in Queensland; 1840 in South Australia; 1863 in Western Australia (a Savings Bank was opened in 1856 but was closed a year later); 1835 in Launceston; and 1845 in Hobart. Some of these early banks functioned as private institutions, but were later absorbed by or amalgamated with Government Savings Banks, except the Hobart and Launceston institutions, which have been Trustee Savings Banks since 1848. With these two exceptions all Savings Banks operating in the States are now either Commonwealth or State Government institutions.

Post Office Savings Banks were established in all States except South Australia dating from 1863 onwards.

2. *The Commonwealth Savings Bank.*—The Commonwealth Savings Bank opened for business in Victoria on the 15th July, 1912; in Queensland on the 16th September, 1912; in the Northern Territory on the 21st October, 1912; and in New South Wales, South Australia and Western Australia on the 13th January, 1913. The Tasmanian State Savings Bank was absorbed by the Commonwealth Bank in January, 1913, and the Queensland State Savings Bank was taken over in 1920. The Savings Bank Department was separated from the General Bank in June, 1928, and has since then functioned as a separate entity, publishing its own balance-sheets and profit and loss accounts.

3. Recent Amalgamations.—(i) *Government Savings Bank of New South Wales.*—Owing to the depletion of the liquid assets of the bank consequent upon the continuous demands of depositors, the Commissioners, after abortive negotiations for the absorption of the institution by the Commonwealth Savings Bank, decided to suspend payments to depositors from the 22nd April, 1931, until further notice.

On the 7th September, 1931, the Government appointed new Commissioners, and the Savings Bank re-opened, accepting deposits repayable on demand in what were termed "new business" accounts. No arrangements had then been completed to enable depositors in the "old business" division to withdraw deposits, although transfers from one account to another in that division were permitted.

Negotiations for the absorption of the Government Savings Bank by the Commonwealth Savings Bank were re-opened by the new Commissioners, and early in December, 1931, agreement was reached upon all contentious aspects of the transfer. The full terms of the agreement are contained in the New South Wales Act No. 62 of 1931. The Commonwealth Savings Bank on and from the 15th December, 1931, provided relief to depositors in the "old business" division to the extent of up to £10 or 10 per cent. of their deposits, whichever was the greater, and early in 1932 depositors were allowed full access to their deposits.

(ii) *State Savings Bank of Western Australia.*—During August, 1931, increasing withdrawals caused the Government of Western Australia to negotiate for the amalgamation of the State Savings Bank with the Commonwealth Savings Bank, and the transfer was effected in October, 1931.

4. Extension of Facilities.—The prime object of the foundation of Savings Banks in Australia was the encouragement of thrift—deposits of one shilling and upwards being accepted—nevertheless the facilities offered, while preserving the original object, have led to developments in another direction. Although depositors may not operate on their accounts by means of cheques, they have practically all the other advantages of a current account, in addition to receiving interest on their minimum monthly balances, while no charge is made by the banks for keeping the accounts.

For many years considerable use has been made of the Savings Bank account as an alternative to maintaining a fixed deposit with a cheque-paying bank. Deposits in Savings Banks may be withdrawn at any time with a minimum loss of interest, the rate of which is now about the same as that offered by trading banks for six months' deposits.

5. Classification of Depositors' Balances.—The classification of deposits published by Savings Banks does not permit of a fully detailed analysis with respect to Australia as a whole, but information supplied by four State institutions shows that at 30th June, 1931, the amount on deposit in accounts with balances of less than £100 represented 21 per cent. of the total deposits; balances of over £100 but under £500, 48 per cent.; over £500 but under £750, 16 per cent.; over £750 but under £1,000, 8 per cent.; while those of over £1,000 accounted for 7 per cent. School, Penny Bank, and Special Purpose accounts have been excluded in determining the above percentages. At 30th June, 1930, it was estimated that approximately 95 per cent. of the accounts open had balances of under £300, while the deposits in such accounts represented about 48 per cent. of the total amount on deposit. In the absence of complete information, therefore, inferences respecting the amount of deposits per head of population must be made with caution.

6. Number of Accounts.—The collection of information regarding the number of accounts has been discontinued for the reasons set out as follows. In the first place it is possible in some States for the same person to have accounts in both Commonwealth and State Savings Banks. Secondly, the amalgamations referred to in para. 3 have resulted in a very considerable reduction in the number of accounts in New South Wales and Western Australia. Effective comparison of the present number of accounts open with those for previous years is, therefore, not possible.

7. Rates of Interest on Deposits.—The "Premiers' Plan" of 1931, which is dealt with in the appendix to this volume, provided, *inter alia*, for the reduction of the banks' rate of interest on deposits and advances. The Commonwealth Savings Bank reduced the rate of interest on depositors' balances by one per cent. from 1st July, 1931, and the other Savings Banks have since taken similar action. The statements given hereunder show the rates of interest allowed at 30th June, 1931, and at 30th June, 1932, respectively by (i) State or Trustee Banks and (ii) by the Commonwealth Bank.

The table hereunder refers to interest rates allowed by State Savings Banks :—

## STATE SAVINGS BANKS—INTEREST RATES ON DEPOSITS.

State.	Interest-bearing Limit.	Rates at 30th June, 1931.	Rates at 30th June, 1932.
	£	%	%
New South Wales .. ..	1,000	4	(d)
Victoria .. ..	1,000	4 (a)	3 ; (b) 3½
Queensland .. ..	(e)	(e)	(e)
South Australia .. ..	1,000	4½	3½
Western Australia .. ..	Unlimited	£1-£500..4 £501-£1,000..3½ Over £1,000..3	(d)
Tasmania—			
Hobart .. ..	300	4½ ; (c) 5	3 ; (c) 4
Launceston .. ..	300	4½	3½

(a) Similar rate for Deposit Stock. (b) Deposit Stock. (c) Fixed Deposits, twelve months. (d) Absorbed by Commonwealth Bank, see following table. (e) State Savings Bank amalgamated with Commonwealth Bank in 1920.

Particulars regarding the rates allowed by the Commonwealth Savings Bank are incorporated in the following table :—

## COMMONWEALTH SAVINGS BANK—INTEREST RATES ON DEPOSITS.

State.	Interest-bearing Limit.	Rate at 30th June, 1931.	Rate at 30th June, 1932.
		%	%
New South Wales .. ..	£1,300	£1-£500 .. 4	3
Victoria .. ..		£501-£1,000 .. 3½	2½
South Australia .. ..		£1,001-£1,300 3	2
Western Australia .. ..			
Tasmania .. ..	£2,000	£1-£500 .. 4	3
Queensland .. ..		£501-£2,000 .. 3½	2½

8. Statistical Returns.—Commencing from July, 1931, monthly returns have been furnished by Savings Bank authorities, and the collated data is disseminated in the form of monthly press notices. In addition, the particulars are published in the Quarterly Summary of Australian Statistics issued by the Commonwealth Statistician. The information given in the following paragraphs relates to the deposits at the 30th June in each year. For convenience of reference the information has been grouped under the following headings—

- (i) All Savings Banks ;
- (ii) Commonwealth Savings Banks ; and
- (iii) State (including Trustee Banks in Tasmania) Savings Banks.

9. All Savings Banks.—(i) *Returns for Year 1930-31.* The following statement gives details of the business transacted by all Savings Banks for the year 1930-31.

## ALL SAVINGS BANKS.—PARTICULARS, 1930-31.

States and Territories.	Amount on deposit at 30th June, 1930.	Amount deposited during year 1930-31.	Interest added during year 1930-31.	Total.	Amounts withdrawn during year 1930-31.	Amount on deposit at 30th June 1931.
	£	£	£	£	£	£
New South Wales	82,465,430	57,878,169	2,789,845	143,133,444	73,322,675	69,810,769
Victoria ..	69,367,253	48,452,879	2,447,917	120,268,049	57,025,521	63,242,528
Queensland ..	23,901,136	20,966,572	851,255	45,718,963	23,364,638	22,354,325
South Australia ..	24,012,176	13,131,971	951,307	38,095,454	16,673,396	21,422,058
Western Australia	11,728,617	10,510,982	427,709	22,667,308	11,799,887	10,867,421
Tasmania ..	5,699,321	3,605,006	225,468	9,529,795	4,163,971	5,365,824
Northern Territory	48,913	36,013	1,704	86,630	43,372	43,258
Federal Capital Territory ..	287,671	301,456	9,792	598,919	329,705	269,214
Total ..	217,510,517	154,883,048	7,704,997	380,098,562	186,723,165	193,375,397

(ii) *Deposits—Years 1927 to 1932.* The table hereunder shows for all Savings Banks the amount at credit of depositors and the average deposits per head of population at 30th June, 1927 to 1932. The figures for 1932 are preliminary and subject to revision.

## ALL SAVINGS BANKS.—DEPOSITS.

30th June.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	All States.
<b>TOTAL.</b>									
	£	£	£	£	£	£	£	£	£
1927	78,145,643	65,352,619	22,452,749	23,600,897	9,694,396	5,079,274	48,025	206,090	204,579,693
1928	81,627,667	68,826,768	23,324,829	24,941,688	10,645,373	5,522,766	64,617	234,754	215,188,462
1929	85,727,513	72,706,991	24,075,504	25,228,402	11,609,190	5,811,458	47,291	279,355	225,485,704
1930	82,465,430	69,367,253	23,901,136	24,012,176	11,728,617	5,699,321	48,913	287,671	217,510,517
1931	69,810,769	63,242,528	22,354,325	21,422,058	10,867,421	5,365,824	43,258	269,214	193,375,397
1932	71,647,869	65,680,220	22,951,758	21,566,825	10,217,739	5,586,621	40,440	274,836	197,966,308

## PER HEAD OF POPULATION.

	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.						
1927	32	19	3	37	17	1	25	2	1	41	6	10	25	3	7	24	0	11	5	6	27	5	3	33	3	5	
1928	33	13	9	39	6	10	25	11	8	43	3	5	26	12	8	26	4	10	15	4	4	29	6	1	34	4	10
1929	34	16	3	41	2	8	25	19	5	43	10	10	28	3	11	27	6	11	11	6	10	33	10	3	35	7	7
1930	33	3	8	38	18	0	25	7	4	41	7	2	28	0	4	26	8	10	10	5	0	32	10	9	33	15	7
1931	27	16	11	35	3	8	23	5	10	36	14	2	25	16	9	24	9	9	9	5	11	31	16	6	29	14	11
1932	28	6	10	36	7	8	23	11	9	36	16	0	24	3	8	25	5	4	8	19	6	32	15	6	30	4	7

For the year ended 30th June, 1932, all States combined show an increase in deposits of £4,550,530 or about 2.4 per cent. All the States except Western Australia, where the fall was 6 per cent., showed increases. In Victoria and Tasmania the increase amounted to 4 per cent.; in New South Wales and Queensland to 2½ per cent.; and in South Australia to under 1 per cent.

Since the year 1921, deposits per head increased at the rate of roughly 3 per cent. per annum up to a high point of £35 per head in 1929. In the war years before 1921 the rate of increase was even more rapid. From June, 1929, to June, 1931, there was a decline of 16 per cent., but in the year ended 30th June, 1932, the downward trend was reversed and deposits increased by nearly 2 per cent. The deposits per head, however, are still about 15 per cent. below the high point of 1929—the decreases for each State being—New South Wales, 19 per cent.; Victoria, 11 per cent.; Queensland, 9 per cent.; South Australia, 15 per cent.; Western Australia, 14 per cent.; and Tasmania, 7 per cent.

Considered in relation to purchasing power, the figures are more satisfactory. Retail prices (food and housing) have fallen 23 per cent. since 1929, while the purchasing power of deposits per head has increased by about 10 per cent. during the same period although the nominal value has fallen 15 per cent.

10. Commonwealth Savings Bank.—(i) *Returns for Year 1930-31.* Returns for the States and Territories for the year 1930-31 have been incorporated in the table below.

## COMMONWEALTH SAVINGS BANK.—RETURNS, 1930-31.

States and Territories.	Amount on Deposit at 30th June, 1930.	Amount Deposited during Year 1930-31.	Interest Added during Year 1930-31.	Total.	Amounts Withdrawn during Year 1930-31.	Amounts on Deposit at 30th June, 1931.
	£	£	£	£	£	£
New South Wales	11,899,198	17,603,121	439,948	29,942,267	15,449,330	14,492,937
Victoria ..	6,424,278	7,411,803	221,000	14,060,081	7,955,817	6,104,264
Queensland ..	23,901,136	20,966,572	851,255	45,718,963	23,364,638	22,354,325
South Australia ..	2,145,811	1,836,635	72,517	4,054,963	2,103,812	1,951,151
Western Australia	3,240,252	3,293,314	107,556	6,641,122	3,852,749	2,788,373
Tasmania ..	1,682,727	1,078,253	57,822	2,818,802	1,299,384	1,519,418
Northern Territory	48,013	36,013	1,704	86,630	43,372	43,258
Federal Cap. Ter.	220,559	249,660	7,623	477,842	257,907	219,935
Total ..	49,562,874	52,478,371	1,759,425	103,800,670	54,327,009	49,473,661

(ii) *Deposits—Years 1927 to 1932.* The amount on deposit with the Commonwealth Savings Bank in each State, in the Territories of New Guinea and Papua, and in London, at the 30th June in each of the years 1927 to 1932 was as follows:—

## COMMONWEALTH SAVINGS BANK.—DEPOSITS.

Place of Deposit.	At 30th June—					
	1927.	1928.	1929.	1930.	1931.	1932.
	£	£	£	£	£	£
New South Wales	10,287,555	10,974,932	11,832,307	11,899,198	14,492,937	(a) 17,647,869
Victoria ..	6,072,831	6,045,409	6,577,350	6,424,278	6,104,264	7,098,817
Queensland ..	22,452,749	23,324,829	24,075,504	23,901,136	22,354,325	22,951,758
South Australia	2,566,300	2,365,059	2,296,777	2,145,811	1,951,151	2,127,288
Western Australia	2,728,867	2,949,438	3,214,231	3,240,252	2,788,373	(a) 10,217,739
Tasmania ..	1,577,731	1,646,895	1,801,289	1,682,727	1,519,418	1,581,718
Northern Territory	48,025	64,617	47,291	48,913	43,258	40,440
Federal Capital Territory ..	206,090	196,017	213,882	220,559	219,937	274,836
Total ..	45,940,148	47,567,196	50,058,631	49,562,874	49,473,661	115,940,465
Papua and New Guinea (b) ..	95,923	106,217	112,583	114,914	107,919	125,931
London (b) ..	442,949	450,739	434,141	371,936	236,151	233,605
Grand Total ..	46,479,020	48,124,152	50,605,355	50,049,724	49,817,731	116,300,001

(a) State Savings Bank absorbed during 1931-32. (b) Not included in the figures given in paras. (1) and (ii).

(iii) *Balance Sheet, 30th June, 1931.* The Commonwealth Savings Bank publishes a half-yearly balance-sheet, and the statement hereunder shows the position at the 30th June, 1931.



## COMMONWEALTH SAVINGS BANK.(a)—BALANCE-SHEET, 30TH JUNE, 1931.

Liabilities.		Assets.	
£		£	
Reserve Fund ..	1,528,672	Coin and Cash Balances ..	3,887,995
Depositors' Balances ..	49,817,731	Australian Notes ..	101,171
Other Liabilities ..	255,493	Government Securities ..	30,579,865
		Securities of Municipal and Other Public Authorities ..	14,916,051
		Other Assets ..	2,116,814
	51,601,896		51,601,896

(a) Includes London, Papua and Territory of New Guinea Branches.

(iv) *Profits.* For the year ended 30th June, 1931, the profits earned by the Commonwealth Savings Bank were £234,187, one-half of which was paid to the National Debt Sinking Fund and the remainder carried to reserves. The aggregate net profit from the inception of the bank to the 30th June, 1931, was £2,522,576.

II. *State Savings Banks.*—(i) *Returns for 1930-31.* Particulars of the transactions of all State Savings Banks for the year 1930-31 are given hereunder. Throughout the following tables the figures for Tasmania refer to the Trustee Savings Banks in Hobart and Launceston. Although the accounts of these institutions are made up for half-yearly periods ending 28th February and 31st August, the managements have furnished particulars of deposits at 30th June in each year since and including 1929.

## STATE SAVINGS BANKS.—RETURNS, 1930-31.

State or Territory.	Amount on Deposit at 30th June, 1930.	Deposits during 1930-31.	Interest added 1930-31.	Total.	Withdrawals during 1930-31.	Total Deposits 30th June, 1931.
	£	£	£	£	£	£
New South Wales ..	70,566,232	40,275,048	2,349,897	113,191,177	57,873,345	55,317,832
Victoria ..	62,942,975	41,038,076	2,226,917	106,207,968	49,069,704	57,138,264
Queensland (a) ..	..	..	..	..	..	..
South Australia ..	21,866,365	11,295,336	878,790	34,040,491	14,569,584	19,470,907
Western Australia ..	8,488,365	7,217,668	320,153	16,026,186	7,947,138	8,079,048
Tasmania (b) ..	4,016,594	2,526,753	167,646	6,710,993	2,864,587	3,846,406
Northern Territory (c) ..	..	..	..	..	..	..
Federal Capital Territory ..	67,112	51,796	2,169	121,077	71,798	49,279
Total ..	167,947,643	102,404,677	5,945,572	276,297,892	132,396,156	143,901,736

(a) State Savings Bank absorbed by Commonwealth Bank in 1920. (b) Trustee Savings Banks, Hobart and Launceston. (c) No State Savings Bank in operation.

(ii) *Deposits—Years 1927 to 1932.* The following statement shows the amount on deposit with State Savings Banks at the 30th June in each of the years 1927 to 1932.

## STATE SAVINGS BANKS.—DEPOSITS.

State or Territory.	At 30th June—					
	1927.	1928.	1929.	1930.	1931.	1932.(e)
	£	£	£	£	£	£
New South Wales ..	67,858,088	70,652,735	73,895,206	70,566,232	55,317,832	(d)
Victoria ..	59,279,788	62,781,359	66,129,641	62,942,975	57,138,264	58,581,403
Queensland (a) ..	..	..	..	..	..	..
South Australia ..	21,034,597	22,576,629	22,931,625	21,866,365	19,470,907	19,439,537
Western Australia ..	6,965,529	7,695,935	8,394,959	8,488,365	8,079,048	(d)
Tasmania (f) ..	(g)3,501,543	(g)3,875,871	4,010,169	4,016,594	3,846,406	4,004,903
Northern Territory (b) ..	..	..	..	..	..	..
Federal Capital Territory ..	(c)	38,737	65,473	67,112	49,279	(d)
Total ..	158,639,545	167,621,266	175,427,073	167,947,643	143,901,736	82,025,843

(a) State Savings Bank amalgamated with Commonwealth Bank in 1920. (b) No State Savings Bank in operation. (c) Included with New South Wales. (d) State Savings Bank amalgamated with Commonwealth Savings Bank. (e) Preliminary figures. (f) Trustee Savings Banks, Hobart and Launceston. (g) At 31st August.

(iii) *Assets.* At 30th June, 1931, the assets of all State Savings Banks amounted to £155,654,320, distributed as shown hereunder.

## STATE SAVINGS BANKS.—ASSETS, 30TH JUNE, 1931.

Particulars.	New South Wales. (b)(d)	Victoria.	Queensland. (a)	South Australia.	Western Australia. (d)	Tasmania. (c)	Total.
	£	£	£	£	£	£	£
Government Securities	28,080,801	28,657,563	..	9,669,446	6,602,260	1,907,958	74,918,028
Municipal Securities	2,874,324	2,757,541	..	370,381	339,937	400,525	6,742,708
Other Public Securities	14,765,442	16,232,279	..	394,356	542,970	30,000	31,965,047
Mortgages ..	2,694,596	1,677,577	..	6,370,392	39,554	933,500	11,715,619
Other Investments ..	23,552	36,454	..	..	..	..	60,006
Securities held by Commonwealth Bank against Special Deposit Account ..	1,106,623	..	..	..	..	..	1,106,623
Outstanding Interest, Dividends and Rents	..	804,303	..	289,547	48,719	62,588	1,205,157
War Service Homes Landed and House Property ..	1,740,000	818,143	..	126,297	71,462	11,751	2,767,653
Fixed Deposits	7,275,086	7,045,000	..	2,187,000	400,000	497,100	17,404,186
Cash at Credit of Trust Account ..	..	..	..	110,000	..	..	110,000
Cash in hand, in transit and on Current Account ..	390,418	2,985,940	..	1,195,412	109,582	413,881	5,205,233
All other Assets ..	21,528	1,828	..	..	..	340	23,696
<b>Total Assets ..</b>	<b>58,972,370</b>	<b>63,556,992</b>	<b>..</b>	<b>20,712,831</b>	<b>8,154,484</b>	<b>4,257,643</b>	<b>155,654,320</b>

(a) State Savings Bank amalgamated with Commonwealth Bank in 1920. (b) Includes Federal Capital Territory. (c) Year ended 31st August, 1931. See para. (i). (d) Subsequently amalgamated with Commonwealth Bank.

(iv) *Profit and Loss Accounts 1930-31.* Details of the Profit and Loss Accounts of the several State Savings Banks for the year 1930-31 are given in the following table.

## STATE SAVINGS BANKS.—PROFIT AND LOSS ACCOUNTS FOR YEAR ENDED 30TH JUNE, 1931.

Particulars.	New South Wales. (a)(e)	Victoria.	Queensland. (b)	South Australia.	Western Australia. (e)	Tasmania. (c)	Total.
	£	£	£	£	£	£	£
<i>Dr.</i>							
Interest allotted to Depositors ..	2,352,066	2,226,917	..	878,790	320,153	166,462	5,944,388
Amount allotted to Consolidated Revenue ..	..	..	..	..	16,640	..	16,640
Amount carried to Reserves and Depreciation Funds ..	..	..	..	174,030	..	7,098	181,128
Writing off Bank Premises ..	46,793	20,500	..	..	..	..	67,293
Expenses of Management ..	436,464	473,598	..	118,272	53,732	28,555	1,110,621
All other Expenses ..	..	165,021	..	(d) 52,671	20	1,682	219,394
Balance carried forward ..	284,601	353,047	..	98,556	20,105	80,698	837,007
<b>Total ..</b>	<b>3,119,924</b>	<b>3,239,083</b>	<b>..</b>	<b>1,322,319</b>	<b>410,650</b>	<b>284,495</b>	<b>8,376,471</b>
<i>Cr.</i>							
Balance brought forward ..	20,418	131,928	..	97,095	16,864	74,020	340,325
Interest, Dividends, and Rents ..	3,099,506	3,107,155	..	1,225,224	390,667	210,475	8,036,146
All other Receipts ..	..	..	..	..	3,119	..	3,119
<b>Total ..</b>	<b>3,119,924</b>	<b>3,239,083</b>	<b>..</b>	<b>1,322,319</b>	<b>410,650</b>	<b>284,495</b>	<b>8,376,471</b>

(a) Includes Federal Capital Territory. (b) State Savings Bank amalgamated with Commonwealth Bank in 1920. (c) Year ended 31st August, 1931; see para. (i). (d) Includes £40,000, provision for interest accrued on Depositors' Balances from 7th to 30th June, 1931. (e) Subsequently amalgamated with Commonwealth Savings Bank.

## C. COMPANIES.

## § 1. General.

Statistics available in regard to registered companies embrace (a) Returns relating to Trustees, Executors and Agency Companies; (b) Returns relating to Registered Building and Investment Societies; and (c) Returns relating to Registered Co-operative Societies.

## § 2. Trustees, Executors and Agency Companies.

Returns are available for eight Victorian, two New South Wales, one Queensland, four South Australian, two Western Australian and four Tasmanian companies. The paid-up capital of these twenty-one companies amounted to £1,355,952; reserve funds and undivided profits to £1,024,570; other liabilities, £541,414; total liabilities, including capital, £2,921,936. Among the assets are included—Deposits with Governments, £225,976; other investments in public securities, fixed deposits, etc., £579,775; loans on mortgage, £493,855; property owned, £1,032,297; other assets, £590,033. Of the twenty-one companies, ten show the total amount of the estates, etc., under administration, the total for 1931 being approximately 128 millions. In respect of the twenty-one companies, net profits for the year totalled £155,792, of which £119,110 was paid in dividends.

## § 3. Registered Building and Investment Societies.

1. Summary.—Returns have been received relating to 218 societies, but the information is not exhaustive, as particulars regarding unimportant organizations are not included.

## REGISTERED BUILDING AND INVESTMENT SOCIETIES.—SUMMARY, 1930.

Particulars.	N.S.W., <sup>(d)</sup> 1929-30.	Vic., 1930.	Q'land., 1929-30.	£. Aust., 1930.	W. Aust., 1929-30.	Tas., 1930.	Total.
Societies making returns—							
Permanent .. No.	7	22	} 10	{ 8	5	} 4	218
Terminating .. No.	136	3					
Total .. No.	143	25	10	24	12	4	218
Number of shareholders ..	(c) 2,125	9,487	8,011	16,663	17,071	4,778	58,135
Number of shares ..	(c) 28,774	(a)	2,051,728	63,179	38,800	48,751	b2,231,232
Number of borrowers ..	(c) 4,492	12,302	5,535	3,308	2,960	1,670	30,267
Income for year from							
Interest .. £	192,843	388,935	99,672	34,104	64,873	51,537	831,964
Working expenses for year £	102,868	182,894	13,302	21,808	47,164	6,668	374,704
Amount of deposits during year .. £	468,684	1,286,799	228,983	190,144	279,582	48,830	2,503,022
Repayment of loans during year .. £	748,877	1,052,065	254,136	151,929	239,011	124,235	2,570,253
Loans granted during year £	832,834	868,247	174,899	100,818	312,765	142,102	2,431,665

(a) Not available. (b) Exclusive of Victoria. (c) Permanent societies only.  
(d) Excludes seven Terminating Societies and three Investment Societies for which complete details are not available.

2. **Liabilities and Assets.**—The balance-sheets of the companies in respect of which particulars of liabilities and assets are stated hereunder cover periods ended during the year 1930. The figures quoted for the States of Victoria, South Australia and Tasmania refer to the calendar year 1930, while those for the remaining States are for the fiscal year 1929-30.

## REGISTERED BUILDING AND INVESTMENT SOCIETIES.—LIABILITIES, 1930.

State.	Paid-up Capital or Subscriptions.	Reserve Funds.	Deposits.	Bank Overdrafts and other Liabilities.	Total Liabilities.
	£	£	£	£	£
New South Wales ..	2,894,379	690,927	621,073	131,114	4,337,493
Victoria ..	2,035,108	789,190	1,898,543	328,487	5,051,328
Queensland ..	1,358,030	44,047	5,934	98,461	1,506,472
South Australia ..	764,853	85,003	53,024	11,922	914,802
Western Australia ..	861,184	..	120,007	49,349	1,030,540
Tasmania ..	334,613	102,154	278,870	8,015	723,652
<b>Total ..</b>	<b>8,248,167</b>	<b>1,711,321</b>	<b>2,977,451</b>	<b>627,348</b>	<b>13,564,287</b>

## REGISTERED BUILDING AND INVESTMENT SOCIETIES.—ASSETS, 1930.

State.	Advances on Mortgage.	Landed and House Pro- perty, Furni- ture, etc.	Cash In Hand and on Deposit and other Assets.	Total Assets.
	£	£	£	£
New South Wales ..	3,715,194	156,892	465,407	4,337,493
Victoria ..	4,759,273	155,633	136,422	5,051,328
Queensland ..	1,434,899	42,821	28,752	1,506,472
South Australia ..	849,439	28,809	36,554	914,802
Western Australia ..	982,012	22,771	25,757	1,030,540
Tasmania ..	644,041	10,390	69,221	723,652
<b>Total ..</b>	<b>12,384,858</b>	<b>417,316</b>	<b>762,113</b>	<b>13,564,287</b>

## § 4. Co-operative Societies.

(i) **General.**—The returns relating to Co-operative Societies have been divided into two classes—(i) those engaged in the manufacture and marketing of primary products and trade requirements, and (ii) those engaged in retailing general household requirements. The former may be described briefly as Producers' Co-operative and the latter as Consumers' Co-operative Societies. The following table shows the number of societies, the membership, and the financial results for the year 1930. The particulars given for New South Wales relate to societies registered under the Co-operation Acts 1923-1929. Particulars of those Producers' Societies which are also Consumers' Societies are included under the former heading only.

## CO-OPERATIVE SOCIETIES.—SUMMARY, 1930.

Particulars.	N.S.W.(e) 1929-30.	Vic. 1929-30.	Qld. 1929-30.	S.A. 1930.	W.A. 1929-30.	Tas. 1929-30.	Total.
<b>PRODUCERS' SOCIETIES.(a)</b>							
Number of Societies ..	92	71	52	33	7	12	267
Number of Branches ..	(c) 38,498	20	53	9	42	25	(d) 149
Number of Members ..	38,498	42,380	36,288	6,870	10,004	5,509	139,549
Gross Turnover (Sales) £	14,769,572	6,798,367	7,207,424	555,064	1,446,514	479,304	31,256,245
Other Income ..	17,002	308,241	57,272	105,288	213,730	18,422	719,955
Total Income ..	14,786,574	7,106,608	7,264,696	660,352	1,660,244	497,726	31,976,200
Total Purchases during Year £	7,577,168	5,530,797	4,953,893	613,500	1,204,305	416,804	20,356,467
Total Expenditure (b) £	9,779,579	6,932,455	6,111,850	827,428	1,614,134	920,713	26,186,159
Rebates and Bonuses ..	536	6,121	13,866	29,808	20,105	213	70,709
Dividends on Share Capital £	12,946	27,300	18,649	13,216	2,341	2,367	76,819
Rate per cent. ..	1.55	2.76	3.47	6.80	0.91	2.92	2.65

<b>CONSUMERS' SOCIETIES.</b>							
Number of Societies ..	47	30	6	9	58	3	153
Number of Branches ..	(c) 59,019	11	23	47	20	2	(d) 103
Number of Members ..	59,019	13,531	23,429	38,992	8,285	466	143,722
Gross Turnover (Sales) £	3,553,038	952,024	49,878	1,174,481	883,246	82,996	6,695,663
Other Income ..	17,265	25,335	13,753	36,814	48,114	2,051	143,332
Total Income ..	3,570,303	977,359	63,631	1,211,295	931,360	85,047	6,838,995
Total Purchases during Year £	2,190,255	770,511	39,580	900,941	745,728	69,303	4,716,318
Total Expenditure (b) £	2,874,111	942,164	60,124	1,141,935	898,593	151,812	6,068,739
Rebates and Bonuses ..	244,040	40,008	728	29,199	17,120	1,371	332,466
Dividends on Share Capital £	36,815	9,274	7,110	26,780	11,155	1,083	92,217
Rate per cent. ..	3.62	5.43	24.65	4.74	5.59	5.26	4.61

(a) Particulars for Producers' Societies which are also Consumers' Societies are included under Producers' Societies only. (b) Includes purchases. (c) Not available. (d) Excluding New South Wales. (e) Particulars relate to Societies registered under Co-operation Acts 1923-29.

2. Liabilities and Assets.—The next table gives the liabilities and assets.

## CO-OPERATIVE ORGANIZATIONS.—LIABILITIES AND ASSETS, 1930.

Particulars.	N.S.W.(c) 1929-30.	Vic. 1929-30.	Qld. 1929-30.	S.A. 1930.	W.A. 1929-30.	Tas. 1929-30.	Total.
<b>PRODUCERS' SOCIETIES.(d)</b>							
<b>Liabilities—</b>	£	£	£	£	£	£	£
Paid-up Capital ..	834,816	990,631	536,850	194,341	257,636	81,036	2,895,310
Loan Capital ..	(a) 223,456	123,899	228,027	174,698	45,277		4,127,017
Bank Overdraft ..	1,733,067	1,063,159	104,739	165,752	233,184	31,759	
Accumulated Profits ..	643,826	182,273	66,713	34,442	40,563	11,063	1,854,629
Reserve Funds ..		259,532	369,127	118,773	111,698	16,619	
Sundry Creditors ..	(b)	368,403	569,519	242,745	571,134	27,098	1,778,899
Other Liabilities ..		85,581	45,045	164,775	4,374	19,501	319,276
<b>Total Liabilities ..</b>	<b>3,211,709</b>	<b>3,173,035</b>	<b>1,815,892</b>	<b>1,148,855</b>	<b>1,393,287</b>	<b>232,353</b>	<b>10,975,131</b>
<b>Assets—</b>							
Land and Buildings ..	1,645,412	1,350,999	537,738	142,630	124,447	97,129	4,957,618
Machinery, Plant and other fixed Assets ..			618,739	259,556	145,126	35,842	
Stocks ..	528,638	551,793	289,204	516,045	172,380	51,232	2,109,292
Sundry Debtors ..	867,672	933,809	263,371	92,622	764,442	30,887	2,952,803
Cash in hand and on deposit ..	94,245	49,449	57,705	53,165	12,702	2,469	269,735
Profit and Loss Account ..		90,193	2,536	8,547	10,855	3,699	115,830
Other Assets ..	75,742	196,792	46,599	76,290	163,335	11,095	569,853
<b>Total Assets ..</b>	<b>3,211,709</b>	<b>3,173,035</b>	<b>1,815,892</b>	<b>1,148,855</b>	<b>1,393,287</b>	<b>232,353</b>	<b>10,975,131</b>

(a) Including Sundry Creditors. (b) Included in Bank Overdraft, &c. (c) Particulars relate to Societies registered under Co-operation Acts, 1923-1929. (d) Particulars for Producers' Societies which are also Consumers' Societies are included under Producers' Societies only.

## Co-operative Organizations.—Liabilities and Assets, 1930—continued.

Particulars.	N.S.W.(c) 1929-30.	Vic. 1929-30.	Qld. 1929-30.	S.A. 1930.	W.A. 1929-30.	Tas. 1929-30.	Total.
<b>CONSUMERS' SOCIETIES.</b>							
<b>Liabilities—</b>	£	£	£	£	£	£	£
Paid-up Capital ..	1,016,778	170,946	28,849	565,041	199,629	20,580	2,001,823
Loan Capital ..	} 682,842	66,685	11,974	140,329	10,958	..	} 1,127,162
Bank Overdraft ..		99,687	2,337	47,930	60,745	3,675	
Accumulated Profits ..	} 432,544	24,439	3,713	2,352	30,615	4,876	} 894,518
Reserve Funds ..		117,307	8,807	148,305	113,470	8,090	
Sundry Creditors ..	(b)	84,750	3,333	36,991	136,770	11,281	273,125
Other Liabilities ..	..	7,717	2,387	2,178	11,519	3,868	27,669
<b>Total Liabilities ..</b>	<b>2,132,164</b>	<b>571,531</b>	<b>61,400</b>	<b>943,126</b>	<b>563,706</b>	<b>52,370</b>	<b>4,324,297</b>
<b>Assets—</b>							
Land and Buildings ..	} 1,072,568	175,748	30,161	270,385	96,865	13,907	} 1,792,885
Machinery, Plant and other fixed Assets ..		32,915	3,325	67,948	27,404	1,659	
Stocks ..	507,616	162,535	16,345	310,326	174,851	18,582	1,190,255
Sundry Debtors ..	423,421	165,493	4,650	182,969	226,612	8,371	1,011,516
Cash in hand and on deposit ..	52,034	25,745	4,551	18,063	16,935	6,446	123,774
Profit and Loss Account ..	..	..	104	6,837	2,593	3,064	12,598
Other Assets ..	76,525	9,095	2,264	86,598	18,446	341	193,269
<b>Total Assets ..</b>	<b>2,132,164</b>	<b>571,531</b>	<b>61,400</b>	<b>943,126</b>	<b>563,706</b>	<b>52,370</b>	<b>4,234,297</b>

(a) Including Sundry Creditors. (b) Included in Bank Overdraft, &c. (c) Particulars relate to Societies registered under Co-operation Acts, 1923-1929.

**D. INSURANCE.****§ 1. General.**

Although insurance business is conducted under State laws where such laws are in existence, or otherwise under various Companies Acts or Special Acts, Section 51 of the Commonwealth Constitution Act confers the necessary powers on the Commonwealth Parliament to legislate in regard to "insurance other than State insurance; also State insurance extending beyond the limits of the State concerned". In 1905, the Commonwealth Parliament passed "An Act relating to Assurance on the Lives of Children by Life Assurance Companies or Societies", but no further legislation relating to life assurance was enacted until 1932, when Act No. 4, "An Act relating to Insurance" was passed. The principal features of this latter Act are given hereunder.

Companies, persons or associations of persons carrying on insurance business are required to deposit money or approved securities with the Commonwealth Treasurer, to the extent specified in the schedule hereunder. In the case of an existing Company, the specified deposit must be made within six months after the commencement of the Act, and a new company must lodge its deposit before conducting business. The penalty for failing to lodge the prescribed deposit is £2,000, and, in addition, £500 per day for each day on which business is unlawfully carried on.

**SCHEDULE OF DEPOSITS.**

Class of Company.	Life Assurance Business.	Other Insurance Business.
Existing companies (Australian and foreign)	£1,000 for every £5,000 of net liability up to a maximum deposit of £50,000	£1,000, periodically as prescribed, for each £5,000 of annual premium income. Maximum deposit £40,000
New companies—Australia	£5,000 per annum until maximum of £50,000 is reached. For mutual companies, after the initial deposit of £5,000, £1,000 per annum until deposit reaches a maximum of £50,000	Initial deposit, £5,000. £1,000, periodically as prescribed for every £5,000 by which the premium income exceeds £25,000 until deposit reaches a maximum of £40,000
Overseas—		
British .. ..	£50,000 .. ..	£50,000
Foreign .. ..	£60,000 .. ..	£60,000

Deposits in respect of existing Life Assurance Companies are based on their net liability and those in respect of other insurance business on the annual premium income.

Initial deposits must be accompanied by prescribed certified returns showing the extent of the business, and prescribed annual returns must also be submitted to the Treasurer by depositors. The penalty for false return is imprisonment for two years.

Money deposited is to be invested by the Treasurer in prescribed securities at the discretion of the depositor, and all interest accruing on deposits or securities is to be paid to depositors. Deposits are to remain as security against liability to policy-holders, and are to be available to satisfy judgments obtained in respect of policies.

If the value of money and approved securities deposited has depreciated below the value required by the Act, the Treasurer may require the depositor to lodge additional deposits to bring the total to the prescribed amount.

After this Act comes into force, no State laws governing insurance deposits shall operate. Deposits held by States on 1st February, 1932, may remain with the States until the Treasury requires their return to depositors who must immediately make deposits with the Treasurer to the prescribed extent.

The following are not regarded as insurance businesses under this Act :—

- Staff superannuation schemes ;
- Schemes of religious organizations solely for insurance of their property ; and
- Friendly Society, Union and Association schemes involving superannuation or insurance benefits to employees.

This Act does not apply to State insurance within the limits of the State concerned.

In 1909, the Commonwealth Parliament passed an "Act relating to Marine Insurance" which altered the conditions under which marine insurance policies had previously been issued.

## § 2. Life Assurance.

[NOTE.—A Conspectus of Australian Life Assurance Legislation was published in Official Year Book No. 18, 1925, in Chap. XXVII. "Miscellaneous."]

1. *General.*—Returns for the year 1930 have been collected from life assurance societies, with results which are in the main satisfactory. The figures in the succeeding paragraphs refer to Australian business only, except where otherwise indicated.

2. *Companies Transacting Business.*—(i) *General.* The number of companies transacting life assurance business in Australia during 1930 was 30, three of which were overseas companies. Of the twenty-seven Australian companies, seven are purely mutual, and twenty are proprietary companies. One office is a State government institution.

(ii) *Ordinary and Industrial Business.* Of the societies enumerated in the preceding paragraph, fifteen transacted both ordinary and industrial business and one society industrial business only. Ordinary and industrial business have, where possible, been kept separate, while figures relating to companies whose head offices are in New Zealand or Europe or America have been restricted to the Australian business.

3. *Australian Business, 1930.*—(i) *Ordinary.* The subjoined table shows the ordinary life business in force for each of the last five years. While the total sum assured has increased by over 45 million pounds (18 per cent.), the average per policy has increased from £293 to £326. The amount assured in 1930 represents an average of approximately £45 per head of population.

### ORDINARY LIFE ASSURANCE.—AUSTRALIAN BUSINESS.

Year.	Policies in Force.	Amount.	Average per Policy.	Annual Premium Income.
	No.	£	£	£
1926 .. ..	848,427	248,549,883	293	8,248,511
1927 .. ..	866,710	262,276,366	303	8,532,723
1928 .. ..	889,521	276,391,009	311	9,154,560
1929 .. ..	908,807	290,313,414	319	9,513,249
1930 .. ..	901,645	294,267,070	326	9,780,876

(ii) *Industrial.* Information in regard to the industrial business of the sixteen societies transacting it is given in the following table.

The amount assured has increased by 15 million pounds (27 per cent.) in the period under review. The average amount per policy in 1930 was £44, compared with an average of £39 in 1926.

## INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN BUSINESS.

Year.	Policies in Force.	Amount.	Average per Policy.	Annual Premium Income.
		No.	£	£
1926 .. ..	1,395,744	54,990,807	39	3,167,523
1927 .. ..	1,481,044	60,732,865	41	3,524,919
1928 .. ..	1,564,081	65,966,754	42	3,884,416
1929 .. ..	1,640,989	71,053,864	43	4,170,989
1930 .. ..	1,598,877	69,977,444	44	4,259,755

4. *Income and Outgo.*—(i) *Ordinary Business.* The following table shows the aggregate Australian income for the last four years of all the societies doing business in Australia. In the latter year premiums—new and renewal—amounted to nearly 57 per cent., and interest, dividends, and rent to almost 40 per cent. of the Australian income.

## ORDINARY LIFE ASSURANCE.—AUSTRALIAN INCOME.

Heading.	Amount.			
	1927.	1928.	1929.	1930.
	£	£	£	£
Premiums—New .. ..	1,027,378	1,133,529	1,067,895	1,021,764
Renewal .. ..	7,505,345	8,021,031	8,445,354	8,759,112
Consideration for annuities .. ..	62,766	83,941	92,841	69,969
Interest, dividends, and rents .. ..	5,611,813	6,070,259	6,469,996	6,808,125
Other receipts .. ..	244,769	686,337	341,546	371,218
Total Income .. ..	14,452,071	15,995,097	16,417,632	17,030,188

In 1930, outgo amounted to £11,252,790, of which claims accounted for almost 48 per cent., surrenders nearly 16 per cent., expenses of management 8 per cent., and commission 6 per cent.

## ORDINARY LIFE ASSURANCE.—AUSTRALIAN OUTGO.

Heading.	Amount.			
	1927.	1928.	1929.	1930.
	£	£	£	£
Claims .. ..	4,936,336	4,990,017	5,389,720	5,356,945
Surrenders .. ..	975,115	1,049,259	1,164,504	1,761,192
Annuities .. ..	103,990	101,752	116,015	103,451
Commission .. ..	691,972	752,344	769,252	681,424
Expenses of management .. ..	883,879	963,876	928,696	932,179
Licence fees and taxes .. ..	175,902	186,952	425,202	509,337
Shareholders' dividends .. ..	74,080	78,263	102,367	92,953
Cash bonuses paid to shareholders .. ..	444,322	483,033	579,490	758,991
All other expenses .. ..	190,755	350,866	395,726	1,056,318
Total outgo .. ..	8,476,351	8,956,362	9,870,972	11,252,790



The excess of income over outgo during the past four years was as follows:—1927, £5,975,720; 1928, £7,038,735; 1929, £6,546,660; and 1930, £5,777,398.

(ii) *Industrial Business.* The aggregate Australian income for the years 1927 to 1930 of societies transacting industrial business was as follows:—

#### INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN INCOME.

Heading.	Amount.			
	1927.	1928.	1929.	1930.
	£	£	£	£
Premiums—New and renewal ..	3,524,919	3,884,416	4,170,989	4,259,755.
Consideration for annuities ..	13	13	14	..
Interest, dividends, and rents ..	914,468	981,444	1,105,141	1,205,959.
Other receipts .. ..	21,812	17,328	18,732	17,477
<b>Total income .. ..</b>	<b>4,461,212</b>	<b>4,883,201</b>	<b>5,294,876</b>	<b>5,483,191</b>

Outgo during 1930 totalled £3,730,624. Claims amounted to almost 43 per cent., commission 24 per cent., and expenses of management 14 per cent.

#### INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN OUTGO.

Heading.	Amount.			
	1927.	1928.	1929.	1930.
	£	£	£	£
Claims .. ..	1,170,393	1,278,853	1,408,735	1,586,080
Surrenders .. ..	125,638	150,508	194,202	317,384
Annuities .. ..	295	254	195	195
Commission .. ..	847,891	944,909	988,565	895,421
Expenses of management ..	456,872	464,057	508,883	520,102
Licence fees and taxes ..	31,478	33,549	87,186	106,229
Shareholders' dividends ..	67,762	70,034	68,980	66,705
All other expenses .. ..	60,174	87,040	129,597	238,508
<b>Total outgo .. ..</b>	<b>2,760,503</b>	<b>3,029,204</b>	<b>3,386,343</b>	<b>3,730,624</b>

The excess of income over outgo for each of the past four years was:—1927, £1,700,709; 1928, £1,853,997; 1929, £1,908,533; and 1930, £1,752,567.

5. *Liabilities and Assets, 1930.*—(i) *General.* The liabilities of the Australian societies consist mainly of their assurance funds; as already mentioned, however, some of the societies are proprietary, and in these cases there is a further liability on account of the shareholders' capital. The assets consist chiefly of loans on mortgage and policies, government, municipal, and similar securities, shares, freehold property, etc. Loans on personal security are granted by very few of the Australian societies.

(ii) *Ordinary and Industrial Business.* For various reasons several societies do not attempt the division of liabilities and assets between the industrial and ordinary branches, and a few societies cannot state the amount of liabilities in Australia. In the following table, therefore, the figures relate to both branches.

## ORDINARY AND INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN LIABILITIES.

Heading.	Amount.			
	1927.	1928.	1929.	1930.
	£	£	£	£
Shareholders' capital, paid up ..	1,978,098	1,965,386	1,729,408	1,706,160
Assurance and annuity funds ..	78,419,126	85,295,617	91,938,296	90,551,713
Other funds .. ..	7,409,078	8,330,742	9,532,291	11,098,669
Claims admitted but not paid ..	846,112	891,849	920,549	884,365
All other liabilities .. ..	2,192,928	2,619,086	2,521,056	2,684,814
<b>Total Australian liabilities (a)</b>	<b>90,845,342</b>	<b>99,102,680</b>	<b>106,641,600</b>	<b>106,925,721</b>

(a) Excluding Mutual Life and Citizens, National Mutual, Western Australian, Liverpool and London and Globe, and Mutual Life of United States.

Assets for the years specified are set out in detail in the table hereunder :—

## ORDINARY AND INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN ASSETS.

Heading.	Amount.			
	1927.	1928.	1929.	1930.
	£	£	£	£
Government and municipal securities .. ..	62,202,524	65,206,148	70,578,790	72,777,464
Mortgages .. ..	29,144,316	32,378,820	34,632,357	37,852,782
Loans on companies' policies ..	11,576,592	12,644,271	13,864,243	16,795,179
Landed and house property ..	4,467,563	4,944,345	5,327,568	5,691,395
Life interests and reversions ..	204,552	143,710	151,724	175,093
Other investments .. ..	2,670,305	3,089,755	3,195,550	3,404,720
Outstanding premiums .. ..	963,851	1,001,740	1,052,187	1,170,984
Outstanding interest, dividends, and rents .. ..	1,142,496	1,303,410	1,425,585	1,525,703
Cash .. ..	2,570,576	2,724,952	2,015,003	2,169,606
Establishment and organization accounts .. ..	1,288,052	1,320,700	1,259,921	1,084,240
All other assets .. ..	2,043,220	2,286,136	1,096,050	1,308,602
<b>Total Australian assets ..</b>	<b>118,274,047</b>	<b>127,043,987</b>	<b>134,598,978</b>	<b>143,955,768</b>

(iii) *Total Assets.* It has been thought advisable to restrict the figures relating to life assurance to business in Australia. Several of the companies whose head offices are in Australia transact, however, a large amount of business elsewhere, viz., in New Zealand, in South Africa, and in the United Kingdom, while in the case of the foreign companies, the Australian business is insignificant compared with that done elsewhere. Particulars as to this foreign business of both Australian and foreign companies will be found in "Finance Bulletin No. 22."

The total assets of all life companies operating in Australia amounted to £401,119,245 in 1930, of which government and municipal securities (£113,188,129), and mortgages (£103,526,816), represented more than 50 per cent.

6. *New Policies issued in Australia, 1930.*—(i) *Ordinary Business.* During 1930 73,897 new policies were issued for £29,664,852. The average amount per policy was £401, which compares with an average of £326 per policy for all policies which were in existence at the end of 1930.

(ii) *Industrial Business.* New policies to the number of 279,408 were issued during the year, for a total of £14,003,189. The average per policy was over £50, or £6 more than the average for all industrial policies which were current at the end of 1930.

7. *Policies Discontinued in Australia.*—(i) *Ordinary Business.* The volume of business which from various causes becomes void in each year is always large. The number and amount of policies, including annuities, discontinued in the last three years, and the reasons for discontinuance are given in the following table :—

**ORDINARY LIFE ASSURANCE.—POLICIES(a) DISCONTINUED IN AUSTRALIA.**

Mode.	1928.		1929.		1930.	
	No. of Policies.	Amount.	No. of Policies.	Amount.	No. of Policies.	Amount.
		£		£		£
Death or maturity ..	16,134	3,704,379	17,280	3,933,620	17,151	3,838,242
Surrender ..	16,340	4,479,639	15,823	4,409,649	19,928	6,192,092
Forfeiture ..	34,535	11,776,182	32,538	11,461,656	33,566	13,789,977
Total ..	67,009	19,960,200	65,641	19,804,925	70,645	23,820,311

(a) Includes Annuities.

(ii) *Industrial Business.* The number of policies discontinued in this branch each year is also very large. Of the total amount of discontinuance during 1930 only 20 per cent. was due to death or maturity, while 75 per cent. was due to forfeiture.

**INDUSTRIAL LIFE ASSURANCE.—POLICIES DISCONTINUED IN AUSTRALIA.**

Mode.	1928.		1929.		1930.	
	No. of Policies.	Amount.	No. of Policies.	Amount.	No. of Policies.	Amount.
		£		£		£
Death or maturity ..	53,624	1,282,237	56,374	1,388,032	61,159	1,555,890
Surrender ..	9,158	448,426	11,111	553,886	16,915	830,367
Forfeiture ..	169,921	8,978,480	183,605	9,680,842	231,991	12,253,600
Total ..	232,703	10,709,143	251,090	11,622,760	310,065	14,639,857

8. *Conspectus of Australian Life Assurance Legislation.*—A conspectus of Australian Life Assurance Legislation as then existing appeared in Official Year Book No. 18, pp. 1041 to 1059.

**§ 3. Fire, Marine, and General Insurance.**

1. *Australasian Companies\*.*—(i) *General.* Returns in some detail are available showing the revenue and expenditure, assets and liabilities, and investments of 39 insurance companies having their head offices either in Australia, New Zealand, or Fiji. The business transacted by these companies represents roughly 60 per cent. of the total Australian business, some particulars of which are given in the succeeding pages.

(ii) *Revenue and Expenditure.* The most important items of revenue and expenditure are given below. The trade surplus in 1930–31 was £133,269, or 1.91 per cent. of premium income.

\* The statistical information in this paragraph has been extracted from the Australasian Insurance and Banking Record.

## FIRE, MARINE, AND GENERAL INSURANCE COMPANIES.—SUMMARY OF REVENUE AND EXPENDITURE.

Heading.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Premiums, less re-insurances ..	8,432,000	8,412,080	8,321,762	8,304,632	6,975,834
Losses .. ..	4,881,671	5,016,717	4,993,394	4,829,345	4,293,384
Expenses, commission, and taxes	2,727,885	2,833,854	2,812,676	2,795,130	2,549,181
Trade surplus .. ..	815,444	561,509	515,692	680,157	133,269
Interest, rent, etc. .. ..	756,897	783,969	779,314	829,410	787,978
Total surplus .. ..	1,572,341	1,345,478	1,295,006	1,509,567	921,247
Dividends and Bonuses paid ..	607,961	641,085	659,704	653,595	574,626
Ratio to premium income of—					
(a) Losses .. .. per cent.	57.98	59.64	60.00	58.15	61.55
(b) Expenses, etc. .. per cent.	32.35	33.69	33.80	33.66	36.54
(c) Trade surplus .. per cent.	9.67	6.68	6.20	8.19	1.91

(iii) *Liabilities and Assets.* The liabilities and assets for the same period are set out in the following tables. Comparison of the results for 1930-31 with those for 1926-27 shows that paid-up capital increased by 3 per cent. and reserves by 19 per cent. Government securities and landed and other property each increased by 20 per cent., and loans on mortgage by 16 per cent.

## FIRE, MARINE, AND GENERAL INSURANCE COMPANIES.

Heading.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
<b>PAID-UP CAPITAL, RESERVES, AND LIABILITIES.</b>					
	£	£	£	£	£
Paid-up capital .. ..	6,292,050	6,400,284	6,423,425	6,541,033	6,479,866
Reserves and re-insurance funds (a) .. ..	8,637,831	9,487,950	10,048,875	10,136,075	10,236,760
Undivided profits .. ..	706,528	612,827	766,041	784,695	622,801
Losses unsettled .. ..	987,670	988,700	935,219	974,016	933,350
Sundry creditors, etc. ..	2,309,610	2,379,748	2,417,780	2,419,285	1,979,736
Dividends, etc., to pay ..	384,006	387,887	405,109	376,091	354,279
Life assurance funds (b) ..	1,436,372	1,706,108	2,008,769	2,331,665	2,603,598
Total liabilities .. ..	20,754,067	21,963,504	23,005,218	23,562,860	23,210,390

## INVESTMENTS AND OTHER ASSETS.

	£	£	£	£	£
Loans on mortgage .. ..	727,850	759,382	768,378	829,079	845,085
Government securities, etc.	12,004,751	12,668,290	13,331,925	13,932,258	14,464,207
Landed and other property	2,841,654	3,307,205	3,550,460	3,584,044	3,397,399
Fixed deposits, etc. .. ..	1,929,271	1,828,566	1,850,771	2,194,546	1,667,753
Loans on life policies (b) ..	62,451	84,871	104,175	136,899	182,574
Investments .. ..	139,955	234,321	239,496	149,841	165,630
Cash and bills receivable ..	763,272	757,970	769,923	670,078	603,896
Sundry debtors and other assets .. ..	2,285,763	2,322,899	2,390,090	2,066,115	1,883,846
Total assets .. ..	20,754,067	21,963,504	23,005,218	23,562,860	23,210,390

(a) Including amount required as reserves against unexpired risks.

(b) Some of the companies transact Life Business.

(iv) *Marine Insurance.* Separate returns regarding this branch of insurance are not available. Act No. 11 of 1909, "An Act relating to Marine Insurance," passed by the Commonwealth Parliament, and assented to on the 11th November, 1909, altered the conditions under which marine policies had up till then been issued.

2. *Aggregate Australian Business.*—(i) *States.* While the foregoing statements relate to those companies only whose head offices are located in Australasia or Fiji, the following particulars which are somewhat restricted in the range of information available are in respect of all Companies operating in Australia.

The appended table shows for each State the aggregate premium income, less reinsurances and returns, and claims paid, less reinsurances, together with the proportions of losses on premiums for all classes of insurance other than life for the years 1929-30 and 1930-31. The figures for 1929-30 published on p. 308 of Official Year Book No. 24, have been revised by the inclusion of particulars relating to Workers' Compensation Insurance in Queensland and by the deduction of amounts representing payments to and recoveries from insurers outside the State from the premium income and losses of insurance companies operating in Queensland.

#### FIRE, MARINE, AND GENERAL INSURANCE—PREMIUMS AND LOSSES, STATES.

State.	Premiums, less reinsurances and returns.		Losses, less reinsurances.		Proportion of Losses on Premiums.	
	1929-30.	1930-31.	1929-30.	1930-31.	1929-30.	1930-31.
	£	£	£	£	%	%
New South Wales ..	6,038,874	4,789,032	3,330,404	2,640,800	55.15	55.14
Victoria ..	3,569,734	3,240,266	1,975,075	1,587,632	55.33	49.00
Queensland ..	1,597,841	1,543,388	883,865	863,182	55.32	55.93
South Australia ..	977,459	786,942	355,946	298,770	36.42	37.97
Western Australia ..	1,226,101	965,892	581,607	485,620	47.44	50.28
Tasmania ..	313,429	285,497	112,988	206,919	36.05	72.48
All States ..	13,723,438	11,611,017	7,239,885	6,082,923	52.76	52.39

The extraordinary increase in the proportion of losses on premiums in Tasmania was mainly due to heavy losses in the Fire Department, where the ratio increased from 37.7 per cent. in 1929-30 to 84.5 per cent. in 1930-31. On the other hand the Victorian ratio for fire losses decreased from 62 per cent. to 45.4 per cent. in 1930-31.

(ii) *Classes of Insurance.* The statement hereunder shows premiums and losses in respect of the principal classes of risks, with the proportions of losses on premiums for the years 1929-30 and 1930-31.

#### FIRE, MARINE, AND GENERAL INSURANCE.—PREMIUMS AND LOSSES, PRINCIPAL CLASSES OF RISK.

Class of Risk.	Premiums, less reinsurances and returns.		Losses, less reinsurances.		Proportion of Losses on Premiums.	
	1929-30.	1930-31.	1929-30.	1930-31.	1929-30.	1930-31.
	£	£	£	£	%	%
Fire ..	6,046,048	5,713,334	3,128,470	2,628,328	51.74	46.00
Workers' Compensation ..	2,866,586	2,142,873	1,935,077	1,554,697	67.50	72.55
Motor Vehicle ..	2,589,402	1,911,040	1,366,664	1,122,434	52.78	58.73
Marine ..	918,064	667,552	346,356	249,271	37.73	37.34
Personal Accident ..	409,555	349,936	189,113	158,019	46.18	45.16
All other ..	893,783	826,282	274,205	370,174	30.68	44.80
Total ..	13,723,438	11,611,017	7,239,885	6,082,923	52.76	52.39

During each of the above years, the volume of business measured by the amounts of premium income shows that fire insurances represented slightly under 50 per cent. of the total, while the proportion of motor vehicle and workers' compensation insurances was between 16 and 21 per cent.

With a receding volume of business in 1930-31, it is safe to make the general inference that slightly more than half the premiums received are paid out in satisfaction of claims, and slightly less than half are required for expenses and profits.

### E. FRIENDLY SOCIETIES.

1. *General.*—Friendly societies are an important factor in the social life of the community, as probably one-third of the total population of Australia comes either directly or indirectly under their influence. Their total membership exceeds 600,000, but as certain benefits, such as medical attendance and free medicines, and in many cases funeral expenses, are granted to members' families as well as to members themselves, this figure must, even when due allowance is made for young and unmarried members, be multiplied by about four to arrive at the total number of persons more or less connected with these societies. Legislation has conferred certain privileges on friendly societies, but, on the other hand, it insists on their registration, and it is the duty of the Registrars in the various States, prior to registering a new society, to see that its proposed rules are conformable to the law, and that the scale of contribution is sufficiently high to enable the promised benefits to be conferred on members. Societies are obliged to forward annual returns as to their membership and their finances to the Registrar, and reports are published in most of the States dealing with the returns thus received.

2. *Number of Societies, Lodges, and Members.*—The number of different societies and lodges, the total number of benefit members at the end of the year, and their average number during the year are shown in the following table:—

FRIENDLY SOCIETIES.—SOCIETIES, LODGES, AND MEMBERS, 1930.

State.	Number of Registered Friendly Societies.	Number of Lodges.	Benefit Members at End of Year.	Average No. of Benefit Members during the Year.
New South Wales (c) ..	33	2,511	252,086	249,908
Victoria .. .. .	55	1,471	164,899	164,603
Queensland .. .. .	18	(a) 599	67,895	67,620
South Australia .. .. .	17	740	76,363	77,074
Western Australia .. .. .	14	353	24,993	24,759
Tasmania .. .. .	20	193	27,155	(b) 27,157
<b>Total .. .. .</b>	<b>..</b>	<b>5,867</b>	<b>613,391</b>	<b>611,121</b>

(a) Excluding Juvenile Branches. (b) Estimated. (c) Exclusive of twenty miscellaneous societies consisting of Medical Institutes, Dispensaries, and Accident and Burial Societies.

With regard to the number of registered Friendly Societies a total is not given for Australia, as many of the societies operate in all the States.

3. *Sickness and Death Returns.*—Sick pay is generally granted for a number of months at full rates, then for a period at half rates, and in some societies is finally reduced to quarter rates. The following table shows the total number of members who received sick pay during the year, the number of weeks for which they received pay in the

aggregate, and the average per member sick, and further the number of benefit members who died during the year, together with the proportion of deaths per thousand average members :—

FRIENDLY SOCIETIES.—SICKNESS AND DEATH RETURNS, 1930.

State.	Number of Members who received Sick Pay.	Total Number of Weeks Sick Pay Granted.	Average Number of Weeks per Member Sick.	Benefit Members.	
				Deaths.	Proportion of deaths per 1,000 (Average).
New South Wales ..	45,355	(a)	(a)	1,985	7.94
Victoria .. ..	32,674	349,691	10.70	1,608	9.77
Queensland .. ..	12,205	113,305	8.28	605	8.95
South Australia ..	14,102	172,317	12.22	767	9.96
Western Australia ..	5,243	41,209	7.86	203	8.20
Tasmania .. ..	4,769	51,717	10.84	230	8.47
Total .. ..	114,348	(b) 728,239	(b) 10.56	5,398	8.83

(a) Not available.

(b) Exclusive of New South Wales.

4. Revenue and Expenditure.—(i) *Revenue.* The financial returns are not prepared in the same way in each State, but an attempt has been made in the subjoined table to group the revenue under the main headings :—

FRIENDLY SOCIETIES.—REVENUE, 1930.

State.	Year ended—	Entrance Fees, Members' Contributions, and Levies.	Interest, Dividends, and Rents.	All other Income.	Total Revenue.
		£	£	£	£
New South Wales ..	30.6.30	815,551	226,889	68,925	1,111,365
Victoria .. ..	..	563,222	273,324	48,700	885,246
Queensland .. ..	..	242,211	89,914	(a)	332,125
South Australia ..	31.12.30	242,061	127,307	33,062	402,430
Western Australia ..	30.6.30	86,475	26,769	30,053	143,297
Tasmania .. ..	31.12.30	91,008	22,070	13,667	126,745
Total .. ..	..	2,040,528	766,273	194,407	3,001,208

(a) Included in interest, dividends, and rents.

(ii) *Expenditure.* The returns relating to expenditure are more complete than those for revenue. The figures show that the excess of revenue for the year was £519,384 for Australia, representing about 17s. od. per average benefit member.

FRIENDLY SOCIETIES.—EXPENDITURE, 1930.

State.	Year ended—	Sick Pay.	Medical Attendance and Medicine.	Sums Paid at Death of Members and Members' Wives.	Adminis-tration.	All other Expendi-ture.	Total Expendi-ture.
		£	£	£	£	£	£
New South Wales ..	30.6.30	319,329	331,052	86,790	171,410	42,422	951,003
Victoria .. ..	..	215,454	229,532	38,480	118,046	97,337	698,849
Queensland .. ..	..	83,086	105,466	31,997	55,183	(a)	275,732
South Australia ..	31.12.30	101,824	101,257	34,878	54,421	30,046	322,426
Western Australia ..	30.6.30	29,126	33,834	10,182	19,731	31,353	124,226
Tasmania .. ..	31.12.30	34,243	29,674	18,001	19,672	7,998	109,588
Total .. ..	..	783,062	830,815	220,328	438,463	209,156	2,481,824

(a) Included in administration.

It appears from the above figures that sick pay averaged about 25s. 8d. per week per average benefit member, but, as the returns include pay at half and quarter rates, and as the proportion of these to full rates is not stated, the average given must be taken for what it is worth. Medical attendance and medicine came to about 27s. 2d. per average benefit member.

5. Funds.—The two foregoing tables show that the surplus of revenue over expenditure in all States amounted to £519,384 for the year, and a small surplus must, of course, result annually in every society which levies adequate contributions to enable it to meet all possible claims. These accumulations of profits are generally invested, and at the end of the year 1930 the total funds of friendly societies amounted to £14,033,165, (£22 16s. per benefit member), of which approximately £13,500,000 was invested, principally on mortgage, loans on members' homes, and in Government and Municipal securities.

F. PROBATES.

1. Probates and Letters of Administration.—The value of the estates left by deceased persons gives some idea of the distribution of property among the general population. There were in 1930 approximately 44,283 deaths of adult persons, while the number of probates and letters of administration granted during the same period was 19,977. It would therefore appear that about 45 per cent. of the adults who died during the year were possessed of sufficient property to necessitate the taking out of probate. The details for each State are shown in the table hereunder :—

PROBATES AND LETTERS OF ADMINISTRATION, 1930.

State.	Year ended—	Number of Estates.			Net Values of Estates.		
		Probates.	Letters of Administration.	Total.	Probates.	Letters of Administration.	Total.
					£	£	£
New South Wales ..	30.6.30	(e) 8,406	(a)	8,406	25,002,546	(a)	25,002,546
Victoria ..	31.12.30	4,991	1,657	6,648	19,926,784	(a)	19,926,784
Queensland ..	30.6.30	878	194	1,072	(b)4,448,7869	(b)361,425	4,810,211
South Australia ..	31.12.30	1,588	352	1,940	4,020,13	210,643	4,230,782
Western Australia ..	"	(c) 888	361	1,249	1,796,849	212,245	2,009,094
Tasmania ..	"	577	85	662	1,568,944	42,479	1,611,423
Total ..	..	17,328	(d) 2,649	19,977	56,764,048	(f) 826,792	57,590,840

(a) Included with Probates. (b) Gross value. (c) Applications lodged. (d) Excluding New South Wales. (e) Includes Letters of Administration. (f) Excludes New South Wales and Victoria.

2. Intestate Estates.—The number of intestate estates placed under the control of the Curator during the year, and the amount of unclaimed money paid into Consolidated Revenue in each State during the year 1930, are given hereunder :—

INTESTATE ESTATES, 1930.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Intestate estates placed under control of Curator during 1930—							
Number ..	(a)	(b)	1,349	(g) 186	332	(e) 89	1,956
Value .. £	(a)	(b)	635,588	(g) 76,671	(d) 26,460	(e) 32,008	(e) 770,727
Unclaimed money paid into Consolidated Revenue By Curator during 1930 £	(f)	7,401	12,891	4,528	6,862	30,165	61,847

(a) Included with Probates. (b) Not available. (c) Incomplete. (d) Gross Value. (e) Estates wound up by Public Trustee. (f) Not paid to Consolidated Revenue—held by Public Trustee (g) Included with Letters of Administration.



## CHAPTER X.

### EDUCATION.

#### § 1. Evolution of Educational Systems in Australia.

1. *Educational Systems of the States.*—(i) *Place of New South Wales in Australian Education.* The first settlement in Australia being in New South Wales, it is but natural that Australian Education should have had its beginning in that State. In the evolution of educational method and system in Australia, New South Wales also has played a leading part, and has had practically a dominating influence. The subject is dealt with in some detail in No. I. and No. II. issues of the Commonwealth Official Year Book, but it is not proposed to repeat it in the present volume. (See also 2 hereunder.)

(ii) *Educational Systems of other Commonwealth States.* A more or less detailed account of the origin and development of the educational systems of the other States also appears in No. I. and No. II. issues of the Year Book.

(iii) *Medical Inspection of State School Children.* See Chapter XIII., Public Hygiene.

2. *Later Development in State Educational Systems.*—Preceding issues of the Official Year Book contained an outline of later developments of the educational systems of the various States (see No. 22, pp. 426–29), but it has been decided to omit this information from the present volume.

As pointed out in previous issues, the educational system of New South Wales may now be considered as a more or less homogeneous entity, the various stages succeeding one another by logical gradation from kindergarten to university. In the other States development is proceeding on somewhat similar lines, activity in this respect being greatly helped by interstate conferences of directors of education and of inspectors and teachers as well as by the Council alluded to in 3. hereunder.

3. *Australian Council for Educational Research.*—This Council, which was constituted on 10th February, 1930, receives from the Carnegie Corporation an endowment of £5,000 a year for ten years for general purposes, and a further sum of £2,500 a year for five years for administrative purposes. It consists of nine members of whom six are elected by the State Institutes for Educational Research, and three are co-opted members. The publications of the Council appear in the form of a Research Series published by the Melbourne University, and up to the end of 1931 six numbers had appeared. The Council makes grants for travelling studentships, of which six were awarded to the end of 1931, and has also granted 58 applications for assistance to persons who wished to carry out investigations, or have their works published. During the same period, the Council itself initiated a number of investigations. In addition to organizing the carrying out of research, the Council acts as a centre for the collection and dissemination of information concerning Australian education. Expenditure to the end of June, 1931, amounted to £5,317.

#### § 2. State Schools.

1. *General.*—The State Schools, or, as they are sometimes termed, the “public” schools, of Australia comprise all schools directly under State control, in contradistinction to the so-called “private” schools, the bulk of which, though privately managed, nevertheless cater for all classes of the community. Separate information regarding Technical Education is given in § 6, but the junior technical schools are included hereunder. The returns include figures relating to correspondence schools, but evening continuation classes are not included.

2. Returns for Year 1930.—(i) *General.* The following table shows the number of State Schools, together with the teachers employed and the enrolment and average attendance in each State during the year 1930 :—

## STATE SCHOOLS.—RETURNS, 1930.

State or Territory.	Schools.(a)	Teachers.	Enrolment.	Average Attendance.	Percentage of Attendance on Enrolment
New South Wales (b) ..	3,332	12,286	(c) 357,319	313,728	87·8
Victoria .. ..	2,758	9,693	(c) 239,404	213,048	89·0
Queensland .. ..	1,726	4,266	(d) 137,683	115,267	83·7
South Australia ..	1,058	3,631	(d) 89,828	78,496	87·4
Western Australia ..	873	2,294	(c) 56,659	51,613	92·0
Tasmania .. ..	506	1,352	(c) 32,905	29,401	89·3
Northern Territory ..	4	11	(d) 245	176	71·8
Australia .. ..	10,257	33,533	914,043	801,729	87·7

(a) Schools open during year. (b) Including Federal Capital Territory. (c) Weekly. (d) Monthly.

During recent years the percentage of attendance on enrolment has risen considerably. This is due partly to the greater attractiveness of school life consequent on improved methods in teaching and school management and partly to more effective administration of the compulsory provisions of the Education Acts. The comparatively high average in 1930 was also in some measure due to the absence of widespread epidemics affecting school children. Allowance, moreover, must be made for the fact that in periods of depression, when employment is difficult to obtain, there is a tendency for pupils to remain longer at school.

As the table shows, the methods of calculating enrolment are not identical throughout the States. The matter of securing uniformity in this respect has been under consideration for some time, and the Educational Research Council, alluded to in § 1, 3 *ante*, is devoting attention to the question of securing greater uniformity in methods of collection and presentation of educational data generally. Uniformity in educational statistics also was included in the agenda set down for discussion at the eighth Conference of Directors of Education in Australia and New Zealand held in Melbourne in May, 1930.

(ii) *Schools in the Federal Capital Area.*—(a) *General.* During the year 1930 sixteen State Schools were in operation in the Federal Capital Territory (Yass-Canberra). The individual pupils enrolled numbered 1,350 and the average attendance 1,063. Cost of upkeep amounted to £15,173. By arrangement with the Federal Government these schools are conducted by the New South Wales Education Department on the same lines as the ordinary State Schools, the Department being recouped for expenditure. Ample provision has been made for both primary and secondary education, and this will be increased to meet requirements. (b) *The Canberra University College* (see § 5-6 hereinafter).

3. *Increase in Average Attendance.*—The average attendance at the State Schools in Australia is shown below for the years 1891, 1901, 1911, and for each year of the period 1926 to 1930 :—

## STATE SCHOOLS.—AVERAGE ATTENDANCE.—AUSTRALIA.

Year.	Total Population. (a)	Average Attendance.	Year.	Total Population. (a)	Average Attendance.
1891 .. ..	3,421	350,773	1927 .. ..	6,235	748,712
1901 .. ..	3,825	450,246	1928 .. ..	6,337	764,496
1911 .. ..	4,573	463,799	1929 .. ..	6,414	777,626
1926 .. ..	6,111	730,571	1930 .. ..	6,476	801,729

(a) At 31st December, in thousands.

During the last five years the average attendance increased by about 9.7 per cent., the figures ranging from about 13 per cent. and 9 per cent. in New South Wales and South Australia respectively to about 5 per cent. in Tasmania.

4. **Distribution of Educational Facilities.**—(i) *In Sparsely-settled Districts.*—  
 (a) *General.* The methods adopted in the various States to carry the benefits of education into the remotest and most sparsely-settled areas are set out in some detail in previous issues of the Official Year Book (see No. 22, pp. 430–31), but limitations of space preclude their repetition in the present volume. It may be interesting to note, however, that the districts worked by the four itinerant teachers in Queensland in 1930 cover an area of approximately 179,000 square miles, and that in their visits to 290 families during the year these teachers travelled altogether a distance of nearly 25,000 miles.  
 (b) *Correspondence Teaching.* Teaching by correspondence has been adopted to meet the needs of children out of reach of the ordinary means of education, including those incapacitated from attending school by reason of physical ailment. Over 14,000 children were receiving instruction in this way during 1930, the respective numbers in each State being New South Wales, 5,044; Victoria, 938; Queensland, 4,659; South Australia, 1,275; Western Australia, 1,903; Tasmania, 297.

(ii) *Centralization of Schools.* The question of centralization of schools adopted so successfully in America and Canada has received some attention in Australia, and particularly in New South Wales. It is recognized that a single adequately staffed and well-equipped central institution can give more efficient teaching than a congeries of small scattered schools in the hands of less highly trained teachers, and the small schools in some districts were therefore closed and the children conveyed to the central institution. The principle was first adopted in New South Wales in 1904, and in 1930 a sum of £62,869 was expended in boarding allowance and conveyance to central schools. Cost of conveyance to State Schools in Victoria during 1930 was returned as £14,058. In South Australia the sum of £12,740 was disbursed in connexion with travelling expenses of school children in 1930, while £12,566 was spent in Western Australia, and about £5,420 in Tasmania. (It may be pointed out, however, that the parents are often reluctant to part with the small schools which form, as it were, "heart centres" in their little community, while the kindly help of the teachers is a great asset in the social and intellectual life of the districts served by the schools.)

(iii) *Education of Retarded and Defective Children.* This subject was alluded to at some length in preceding issues of the Official Year Book (see No. 22, pp. 431–2), but the information cannot be repeated in this issue.

(iv) *Evening Schools.* Evening Public Schools have been in existence for many years in some of the States, but their progress has been uncertain. In New South Wales the 46 Evening Continuation Schools had an average weekly enrolment in 1930 of 5,841 and an average attendance of 4,639. The schools for boys are classed as commercial, commercial preparatory, junior technical, and junior technical preparatory, and for girls as domestic and domestic preparatory. Attendances at the schools for boys numbered 3,686, and at those for girls 953. The comparatively high proportion of attendance to enrolment shows that the institutions are attractive. In Victoria, although the Education Act of 1910 gives authority for the establishment of evening continuation classes at which the attendance of boys up to the age of seventeen years and living within a radius of 2 miles may be made compulsory for six hours a week, considerations of expense have prevented the free exercise of this power. In 1928 there were eleven evening continuation classes with an attendance of 73, but none were recorded later. In Western Australia evening continuation classes were held at 23 centres in 1930, with an average enrolment of 2,777 pupils.

(v) *Higher State Schools.* In all the States higher schools have been established which provide advanced courses of instruction for pupils who have completed the primary grades. Reference to the development of these schools will be found in preceding Official Year Books (see No. 22, pp. 433–4), but considerations of space preclude the repetition of this information herein.

(vi) *Agricultural Training in State Schools.* Extended reference to the methods adopted in the teaching of agriculture in State Schools will be found in preceding Official Year Books (see No. 22, pp. 434–7), but considerations of space preclude the repetition of this matter herein.

5. Teachers.—The distribution of the teaching staff in the State Schools during the year 1930, including teachers of needlework, was as follows:—

## STATE SCHOOLS.—TEACHING STAFF, 1930.

State.	Principal Teachers.		Assistants.		Pupil or Junior Teachers.		Sewing Mis- tresses.	Total.		
	Males.	Fem.	Males.	Fem.	Males.	Fem.		Males.	Fem.	Total.
New South Wales	2,499	626	2,875	6,081	..	..	205	5,374	6,912	12,286
Victoria	1,818	791	1,467	3,269	678	1,326	344	3,963	5,730	9,693
Queensland	1,092	582	831	1,582	92	87	..	2,015	2,251	4,266
South Australia	706	407	702	1,327	71	152	266	1,479	2,152	3,631
Western Australia	479	372	258	815	25	186	159	762	1,532	2,294
Tasmania	233	306	109	393	47	262	2	389	963	1,352
Northern Territory	5	1	..	4	..	1	..	5	6	11
Total	6,832	3,085	6,242	13,471	913	2,014	976	13,987	19,546	33,533

(a) Not including 468 subsidized school teachers.

The figures for principal teachers include mistresses of departments, while students in training colleges have been grouped with assistants. Some of the teachers in sole charge of small schools have had very little training, but future permanent appointments will be confined as far as possible to those who have gone through a regular course of instruction.

It will be observed that there is a fairly large number of junior teachers, or pupil teachers, as they are called in some of the States. Although expert pedagogical opinion throughout the world is against the pupil-teacher system, motives of practical expediency compel its retention, or some modification thereof, in most countries.

In New South Wales and in some of the other States attention has recently been drawn to the difficulty of securing an adequate supply of teachers, particularly male teachers for small schools in out-back districts. Difficulty is also experienced in some of the States in securing suitable living accommodation for teachers of these small schools.

6. Training Colleges.—The development of the training systems of the various States has been alluded to at some length in earlier issues of the Year Book (see No 22, pp. 437-9), but considerations of space will not permit of its retention herein.

7. Expenditure.—(i) *Maintenance—All Schools.* The net expenditure on maintenance in all grades of schools, excepting senior technical schools, and the cost per head of average attendance for the five years ended 1930 are shown below. The figures do not include expenditure on buildings, which is given separately in a subsequent table.

## STATE SCHOOLS.—EXPENDITURE ON MAINTENANCE.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Total.
TOTAL.								
	£	£	£	£	£	£	£	£
1926	3,689,183	2,132,519	1,406,853	710,499	556,748	251,307	4,443	8,751,552
1927	3,751,913	2,340,581	1,438,969	743,274	605,704	257,653	4,406	9,142,500
1928	4,004,495	2,464,714	1,471,322	778,715	624,271	266,281	5,153	9,614,951
1929	4,282,083	2,536,674	1,547,076	813,485	633,306	269,202	5,744	10,087,570
1930	3,996,517	2,445,861	1,514,456	792,981	648,508	269,764	5,626	9,673,713

## PER HEAD OF AVERAGE ATTENDANCE.

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1926	13 11 0	10 16 6	12 12 10	9 17 10	11 4 6	9 0 3	18 19 9	12 0 8
1927	13 4 7	11 14 6	12 14 6	10 3 2	12 1 5	9 4 11	18 10 2	12 5 4
1928	13 15 4	12 1 11	12 13 7	10 6 6	12 5 1	9 17 3	21 4 1	12 12 9
1929	14 6 8	12 4 10	13 6 3	10 13 3	12 10 11	9 12 0	24 17 4	13 0 10
1930	12 12 10	11 9 7	13 2 9	10 2 0	12 11 4	9 3 6	31 19 4	12 1 4

The combined growth in cost of maintenance during the four years 1926–29 was brought about chiefly by the higher salaries and allowances paid to teachers, and the increased expenditure in connexion with the supply of materials and equipment. Practically the whole of the increase in Western Australia for the year 1927 was due to the reclassification and new salary scales for teachers. The financial stringency is reflected in the considerable drop in the total and average expenditure for 1930, all States except Western Australia showing a decrease. In New South Wales the heavy fall was occasioned by reductions in teachers' salaries and curtailment of maintenance expenditure generally. Savings in maintenance costs were effected in various ways in the other States mentioned, e.g., South Australia, where considerable reductions were made in salaries and administration, and further general reductions were foreshadowed for 1931.

(ii) *Maintenance—Secondary Schools.* The figures given in the preceding table refer to expenditure on maintenance of all State primary and secondary schools, exclusive of technical colleges. It has been thought desirable by the State Education Departments to give separate information in regard to the cost of secondary education. Any satisfactory estimate of this nature is, however, rendered difficult by the circumstance that there is no exactly comparable definition of the term "secondary" as applied in the various States, while difficulties arise in connexion with the correct apportionment amongst the various branches of expenses of administration, inspection, and the training of teachers. A further complication is caused by the fact that both elementary and higher education are in some instances given in the same school and by the same teacher. The figures quoted in regard to cost hereunder have been extracted from the Reports of the State Education Departments, and are subject to the qualifications above enumerated.

#### STATE SECONDARY SCHOOLS.—EXPENDITURE ON MAINTENANCE, 1930.

State.				Cost.	Cost Per Head of Population.
				£	s. d.
New South Wales	..	..	..	549,489	4 6
Victoria	..	..	..	343,929	3 11
Queensland	..	..	..	165,047	3 6
South Australia	..	..	..	104,288	3 7
Western Australia	..	..	..	140,200	6 8
Tasmania	..	..	..	22,845	2 1

The figures in all cases are exclusive of cost of buildings. In the case of Victoria the total includes the expenditure on "intermediate" education amounting to £103,705. For Queensland, the figure quoted does not include the cost of the Agricultural High School and College, which amounted in 1930 to £25,289. For Western Australia the total includes £77,170 on account of "post primary" education.

(iii) *Buildings.* Expenditure on school buildings exclusive of technical Colleges in each of the years quoted was as follows:—

#### STATE SCHOOLS.—EXPENDITURE ON BUILDINGS.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Total.
	£	£	£	£	£	£	£	£
1926	638,387	508,121	138,784	231,207	57,337	34,716	132	1,608,684
1927	668,412	578,691	98,905	156,520	53,506	21,751	..	1,577,785
1928	1,004,252	398,939	143,995	102,477	68,957	44,150	..	1,762,770
1929	772,296	360,262	127,504	111,137	76,025	32,801	..	1,480,025
1930	488,776	114,826	110,196	68,006	63,578	23,065	920	869,367

The large increases in expenditure shown in several instances during the three years ending in 1928 were due to the efforts made to overtake arrears in necessary buildings and repairs, while the growing necessity for economy is reflected in the figures for the last two years.

(iv) *Total.* The net total cost during the year 1930 was as follows:—

**STATE SCHOOLS.—NET TOTAL COST, 1930.**

Item.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Total.
	£	£	£	£	£	£	£	£
Net cost of education, including buildings	4,485,293	2,560,687	1,624,652	860,987	712,086	292,829	6,546	10,543,080

The figures in this and the preceding tables refer to all grades of State Schools (with the exception of senior technical schools). Including buildings, the net cost per scholar in average attendance for the whole of the State schools in Australia amounted in 1930 to £13 13s., as compared with £4 9s. 3d. in 1901.

8. **School Savings Banks.**—In New South Wales the control of these institutions was taken over in 1924 by the Government Savings Bank, which allows interest on the children's deposits. At the 30th June, 1931, there were 142,746 depositors having at credit £184,377. In Victoria banks were in operation at 2,410 schools at the 30th June, 1931. On the same date the number of depositors amounted to 167,636 and balances at credit to £288,195. School Savings Banks began operations in Queensland in July, 1928, and at the 30th June, 1931, there were 959 banks, with 53,547 depositors, and balances amounting to £45,893. In South Australia, there were 70,093 depositors in 1930 at 1,100 banks with £97,621 to their credit; and in Western Australia, there were 738 school banks, with 56,810 depositors and £89,963 to their credit.

**§ 3. Private Schools.\***

1. **Returns for 1930.**—The following table shows the number of private schools, together with the teachers engaged therein, and the enrolment and average attendance in 1930:—

**PRIVATE SCHOOLS, 1930.**

State.	Schools.	Teachers.	Enrolment.	Average Attendance.
New South Wales .. .. .	730	4,636	106,319	78,780
Victoria .. .. .	502	2,400	68,556	58,270
Queensland .. .. .	201	1,264	32,244	27,335
South Australia .. .. .	181	917	16,530	13,214
Western Australia .. .. .	122	542	11,716	10,910
Tasmania .. .. .	66	326	6,539	5,078
Northern Territory .. .. .	1	5	120	104
<b>Total .. .. .</b>	<b>1,803</b>	<b>10,090</b>	<b>242,024</b>	<b>193,691</b>

The totals for New South Wales include returns from the Sydney Grammar School, which receives a yearly State subsidy of £1,500, and which, in 1930 had an enrolment of 660, and an average attendance of 623.

The figures for Queensland include the returns from Grammar Schools, of which there are ten—six for boys and four for girls, with an enrolment of 1,526 boys and 860 girls. These schools are governed by boards of trustees, partly nominated by Government, and partly by the subscribers to the funds. The trustees make regulations regarding the fees of scholars, the salaries of teachers, and generally for the management of the schools. The Government endowment received in 1930 amounted to £17,225. In addition, a sum of £22,491 was received by way of fees for the tuition of State scholarship holders. The Grammar schools are inspected annually by officers of the Department of Public Instruction. In Central Australia there is a privately conducted school for natives and half-castes at Hermannsburg Mission Station with an enrolment of 92. Returns regarding this institution have not been included in the preceding table.

\* Private schools include all schools not wholly under State control. The term "private," though popularly applied, is, of course, a misnomer.

2 **Growth of Private Schools.**—The enrolment and average attendance at private schools during 1891, 1901, 1911, and in each year of the period 1926 to 1930 are as follows :—

**PRIVATE SCHOOLS.—ENROLMENT AND ATTENDANCE.**

Year.	Enrolment.	Average Attendance.	Year.	Enrolment.	Average Attendance.
1891 .. ..	124,485	99,588	1927 .. ..	235,074	181,396
1901 .. ..	148,659	120,742	1928 .. ..	237,713	184,464
1911 .. ..	160,794	132,588	1929 .. ..	242,077	189,018
1926 .. ..	233,566	178,985	1930 .. ..	242,024	193,691

The increase in average attendance during the last five years amounted to about 8.2 per cent.

3. **Registration of Private Schools.**—Conditions in regard to the registration of private schools were alluded to in previous Year Books (*vide* No. 18, p. 451), but considerations of space preclude the repetition of this information in the present issue.

**§ 4. Free Kindergartens.**

The following information regarding Free Kindergartens has been compiled from particulars supplied by the principals of the chief institutions or the organizing secretary in each State, except in the case of Western Australia, the details for which were furnished by the Education Department.

**FREE KINDERGARTENS, 1930.**

State.	No. of Schools.	Average Attendance.	Permanent Instructors.	Student Teachers.	Voluntary Assistants.
New South Wales (Sydney)	16	1,041	30	50	50
Victoria (Melbourne)	28	1,597	66	45	385
(Ballarat) ..	1	50	2	..	15
Queensland (Brisbane) ..	6	(a)320	8	22	26
South Australia (Adelaide)	9	372	13	28	28
Western Australia (Perth)	7	338	13	15	18
Tasmania (Hobart) ..	4	130	7	7	3
(Launceston) ..	2	95	4	2	6
Total .. ..	73	3,943	143	169	531

(a) Estimate.

In New South Wales there were 109 students at the Kindergarten Training College. At the Melbourne College, 45 students were in training. The Brisbane Training College had 22 students in training, the Training College at Adelaide 37, and at Perth 14. Seven students were in training at Hobart.

The information given above refers to institutions under private kindergarten unions or associations, and is exclusive of the kindergarten branches in the Government schools of the various States.

**§ 5. Universities.**

1. **Origin and Development.**—A brief account of the origin and development of the Universities in the various States is given in preceding issues of the Official Year Book (see No. 22, pp. 442-3), but this information cannot be repeated herein

2. Teachers and Students.—The following table shows the number of professors and lecturers, and the students in attendance at each of the State Universities during the year 1930 —

## UNIVERSITIES.—TEACHERS AND STUDENTS, 1930.

University.	Professors.	Lecturers and Demonstrators.	Students attending Lectures.		
			Matriculated.	Non-matriculated.	Total.
Sydney .. .. .	51	168	..	..	2,824
Melbourne .. .. .	29	166	..	..	2,757
Queensland (Brisbane) .. .. .	14	39	617	161	778
Adelaide .. .. .	19	107	1,113	964	2,077
Western Australia (Perth) .. .. .	14	39	580	18	598
Tasmania (Hobart) .. .. .	10	19	383	66	449

Students at the Conservatorium of Music have been included in the case of Melbourne and Adelaide their respective numbers being 283 and 438.

The Conservatorium in Sydney, while attached to the Education Department, is not under the control of the University.

3. University Revenue.—The income of the Universities from all sources during the year 1930 was as shown in the table below. The figures in the column "private foundations" refer to income received from foundations, the cash value of benefactions received during the year being shown separately in the appended note.

## UNIVERSITIES.—REVENUE, 1930.

University.	Government Grants.		Fees.	Private Foundations. (a)	Other.	Total.
	Endowment.	Other.				
	£	£	£	£	£	£
Sydney .. .. .	32,000	41,161	51,791	88,877	8,177	222,006
Melbourne .. .. .	63,958	4,500	92,772	29,447	11,559	202,236
Queensland (Brisbane) .. .. .	20,000	4,382	15,302	19,530	2,205	61,419
Adelaide .. .. .	4,000	(b) 52,934	29,274	15,680	7,333	109,221
Western Australia (Perth) .. .. .	31,500	820	4,105	35,791	9,544	81,760
Tasmania (Hobart) .. .. .	4,000	11,526	3,354	1,581	325	20,786
Total .. .. .	155,458	115,323	196,598	190,906	39,143	697,428

(a) Not including value of new foundations received during the year as follows:—New South Wales £45,381; Victoria, £24,080; South Australia, £51,899. (b) Including £17,100 yearly parliamentary appropriation and £35,834 special vote.

In preceding issues of the Official Year Book information was given in some detail in regard to the extent to which the Universities have benefited from private beneficence. Space will permit of reference to the most important benefactions only herein. Thus the Challis bequest to the Sydney University amounted to £277,000 (now valued at £408,000): Mr. G. H. Bosch contributed £234,000: Sir P. N. Russell £100,000: Mr. W. O. Watt £81,000: Mr. Thos. Fisher £30,000. Mr. Sidney Myer's gifts to the Melbourne University amounted to £50,000, while Sir Samuel Gillott, Mr. Edward Wilson (Argus Trust), and Sir Samuel Wilson contributed £41,000, £34,000, and £30,000 respectively. Mr. R. B. Ritchie's gifts for the endowment of a Chair of Economics amount to £30,000, and a similar sum was received from the Supreme Court Library Fund for the endowment of a Chair of Public Law. The Hon. Francis Ormond contributed £20,000 to the University as well as benefactions to Ormond College amounting to considerably over £100,000. Queensland University received about £200,000 from the McCaughey estate, and up to the end of April, 1931, had benefited to the extent of £26,800 from the Walter and Eliza Hall Trust. The chief benefactors



to Adelaide University were Sir Thomas Elder, £99,000; Sir Langdon Bonython, £62,000; Mr. T. E. Barr Smith £30,000; Mrs. Jane Marks, £30,000; Family of John Darling, £25,000; and R. B. Smith and family, £21,000. Several very valuable properties, in addition to shares which produced a sum of £58,450, were also bequeathed to this University by Mr. Peter Waite. Under the will of Sir Winthrop Hackett the University of Western Australia received £425,000, while the late Robert Gladden bequeathed an estate valued at £60,000.

4. **University Expenditure.**—For the year 1930 the expenditure by the Universities under various headings was as follows —

UNIVERSITIES.—EXPENDITURE, 1930.

University.	Salaries and Administration.	Scholar-Ships, Bursaries, etc.	General Maintenance.	Buildings and Grounds.	Other.	Total.
	£	£	£	£	£	£
Sydney .. ..	155,750	6,686	32,102	15,803	492	210,833
Melbourne .. ..	126,092	6,357	7,244	10,407	(a)48,760	198,860
Queensland (Brisbane) ..	35,247	1,914	3,345	399	(b)17,481	58,386
Adelaide .. ..	63,641	1,404	4,718	1,641	(c)37,505	108,909
Western Australia (Perth)	31,139	10,153	3,990		(d)13,767	149,272
Tasmania (Hobart) ..	13,785	1,286	2,465	787	(e)1,461	19,784
Total .. ..	425,654	27,800	53,864	119,260	119,466	746,044

(a) Including laboratory and research, £12,081. (b) Includes laboratory and research, £8,360.  
 (c) Laboratory and research, £19,833. (d) Includes laboratory and research, £5,221. (e) Includes laboratory and research, £1,249.

5. **University Extension.**—Some account of the initiation and progress of university extension is given in preceding Official Year Books (see No. 22, p. 446), but considerations of space preclude the insertion of this matter in the present issue.

6. **The Canberra University College.**—The question of the establishment of a University at the Federal Capital is still under consideration, and in the meantime a University College has been established under the *Canberra University College Ordinance*, 1929. By virtue of a regulation of the University of Melbourne, the College is empowered to provide approved lectures in the subjects of the Arts, Science, Commerce, and Law courses of that University. Lectures commenced in 1930 with the aid of several part-time lecturers, and 30 students were enrolled during the year. The curriculum was extended in 1931 and two full-time lecturers were appointed. In 1931 the number of students increased to 62.

7. **Workers' Educational Association.**—In 1913, Workers' Educational Associations were formed in all the States of Australia, and later in New Zealand. The movement has for its object the bringing of the University into closer relationship with the masses of the people, and thereby providing for the higher education of the workers in civic and cultural subjects. There are now direct grants from all State Governments except Western Australia, and an additional University grant in New Zealand. The particulars of grants for classes in 1931 were as follow :—New South Wales, £4,533, 57 classes and 3 study circles; Victoria, £4,250, 33 tutorial classes and extension work; Tasmania, £1,578, 15 classes; South Australia, £2,025, 5 tutorial classes and 26 lecture classes and study circles; Queensland, £1,000, 10 classes and 169 correspondence students. In addition, the New South Wales Association receives a Government grant for general organizing purposes of £500, paid on the basis of £1 for £1 on subscriptions and donations up to this amount. The Queensland and South Australian Associations received grants of £600 and £240 respectively. The Carnegie Corporation has in recent years shown its interest in the work by allotting substantial grants to the Associations and to the Universities. The principal subjects chosen in all States are Industrial History, Economics, Political Science, and Sociology, but there is an increasing number of classes

in other subjects such as History, Psychology, Philosophy, Literature, Music, Physiology and Biology. Each University co-operates with the W.E.A. in the formation of a joint committee for tutorial classes, which supervises the work with the assistance of a University officer with the title of Director of Tutorial Classes. In addition to the longer University tutorial classes, many preparatory classes, study circles, and summer schools are organized by the Association, numerous courses of public lectures are delivered, educational conferences promoted, and an extensive book service is spreading educational literature throughout Australia.

**§ 6. Technical Education.**

1. **General.**—Although provision has been made in all of the States in respect to many necessary forms of technical education, the total provision made would imply that this branch of education has not been regarded as of outstanding importance. As will be seen later on, the expenditure on technical education for the whole of Australia is comparatively small. In preceding issues of the Official Year Book an outline was given of the origin and development of technical education in each State (see No. 22, pp 447-51), but considerations of space preclude its repetition in the present volume.

2. **Returns for Year 1930.**—Returns for the year 1930 in regard to enrolments and attendances, etc., in each State are given in the table hereunder.

**TECHNICAL EDUCATION.—ENROLMENTS, ETC., 1930.**

State.	Number of Classes.	Teachers.	Enrolments.	Average Attendance.	Fees Received.
New South Wales ..	766	632	34,796	(a)15,819	£ 25,445
Victoria ..	320	635	25,814	18,600	39,922
Queensland ..	(b)	438	12,422	10,600	13,888
South Australia ..	599	224	12,933	9,436	9,498
Western Australia ..	435	121	8,677	7,667	2,773
Tasmania(c) ..	(b)	67	950	770	(d)1,570
<b>Total ..</b>	<b>2,120</b>	<b>2,117</b>	<b>95,592</b>	<b>62,892</b>	<b>93,096</b>

(a) Individual Students. (b) Not available. (c) Senior Technical Colleges and Schools of Mines. (d) Includes receipts from fees, Junior Technical Schools.

Figures for earlier years will be found in preceding volumes. Owing to the considerable differences in scope and methods in the States, effective comparison of the results is somewhat difficult. With regard to the figure quoted for number of classes in Victoria, it is stated that each grade of a subject is counted as a class.

3. **Expenditure on Technical Education.**—The expenditure on technical education in each State for the year 1930 is shown below :—

**TECHNICAL EDUCATION.—EXPENDITURE, 1930.**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
1930	(a) £ 218,280	£ 318,799	£ 104,939	£ 95,909	£ 22,468	£ 23,299	£ 783,694
	(b) 6,447	14,120	9,403	181	821	1,191	32,163

(a) Maintenance. (b) Buildings.

The expenditure on maintenance for technical education in 1930 amounted to 2s. 5d. per head of the population of Australia, as compared with 30s. per head expended on maintenance for primary and secondary education.

### § 7. Business Colleges and Shorthand Schools.

There has been a considerable development in recent years both in the number and scope of privately conducted institutions which aim at giving instruction in business methods, shorthand, typewriting, the use of calculating machines, etc. Particulars for all States excepting Queensland are given in the following table :—

BUSINESS COLLEGES, SHORTHAND SCHOOLS, ETC., 1930.

State.	Schools.	Teachers.	Students Enrolled.		Average Attendance.		Fees Received.
			Males.	Females.	Males.	Females.	
New South Wales ..	24	203	1,871	5,871	802	2,943	£ 64,583
Victoria ..	15	134	3,236	2,588	3,048	2,157	(b)
Queensland (a) ..	..	..	..	..	..	..	..
South Australia ..	7	40	650	893	529	707	14,064
Western Australia ..	12	54	2,637	1,363	(b)	(b)	26,694
Tasmania ..	3	12	63	159	57	145	3,108

(a) Included in private schools. (b) Not available.

The figures for New South Wales are exclusive of students instructed at home through the medium of correspondence classes.

### § 8. Diffusion of Education.

1. **General Education.**—A rough indication of the state of education of the people is obtained at each Census under the three headings, “read and write,” “read only,” and “cannot read.” Particulars for each State and Territory were included in previous issues of the Official Year Book (see No. 19, p. 439). Detailed tables dealing with various aspects of education were published in connexion with the Census of 1921. Here it must suffice to mention that during the period 1871 to 1921 the proportion per 10,000 of the population of Australia able to read and write advanced from a little over 6,000 to nearly 8,500, while that of those able to read only fell from about 1,100 to under 30.

2. **Education as shown by Marriage Registers.**—Another common method of testing the spread of education is to compare the number of mark signatures in the marriage registers with the total number of persons married during each year of a series. The percentage signing with a mark on the total persons married in the Census year 1921 was only 0.17, as compared with 24.60 in 1861.

### § 9. Miscellaneous.

1. **Scientific Societies.**—(i) *Royal Societies.* In previous issues of the Official Year Book an outline was given of the origin and progress of the Royal Society in each State (see No. 22, pp. 454-5), but considerations of space preclude the retention of this matter in the present volume. The accompanying table, however, contains the latest available statistical information regarding these institutions, which in every case have their headquarters in the capital cities.

ROYAL SOCIETIES—PARTICULARS, 1931.(a)

Heading.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.
Year of origin .. ..	1821	1854	1884	1853	1897	1843
Number of members ..	293	204	185	166	217	263
Vols. of transactions issued	65	73	43	55	20	67
Number of books in library	30,000	17,000	6,000	6,500	2,900	17,000
Societies on exchange list ..	343	314	200	220	127	253
Income .. .. .£	1,389	470	163	414	286	280
Expenditure .. ..£	1,464	407	104	430	224	276

(a) The Royal Society of Australia, with headquarters at Canberra, was founded on the 25th July, 1930, and received permission to use its title on the 14th January, 1931. The members, including associates, numbered 65 in 1931.

In connexion with the year of origin it may be pointed out that the title Royal Society was in most cases assumed at a later date than that shown in the tables, as the Societies originated under different names.

(ii) *The Australasian Association for the Advancement of Science.* This Association was founded in 1887, with headquarters at the Royal Society's House in Sydney. Its meetings are usually held biennially within the various States and in the Dominion of New Zealand. The next meeting will be held in Sydney in 1932. The library of the Association contains 4,000 volumes.

(iii) *Other Scientific Societies.* The Linnean Society of New South Wales, with headquarters in Sydney, was founded in 1874. The soundness of its present position is due to the benefactions of Sir William Macleay, who during his lifetime and by his will endowed the Society to the amount of £67,000, which has been increased by judicious investment to over £80,000. The Society maintains a research bacteriologist and offers annually 4 research fellowships in various branches of natural history. Two fellowships were awarded in 1931. The library comprises some 14,000 volumes, valued at about £7,000. Fifty-six volumes of proceedings have been issued, and the Society exchanges with some 228 kindred institutions. The ordinary membership at the end of 1931 was 171.

The British Astronomical Society has a branch in Sydney, and in some of the States the British Medical Association has branches.

In addition to the societies enumerated above, there are various others in each State devoted to branches of scientific investigation.

2. **Public Libraries.**—(i) *States.* In each of the capital cities there is a well-equipped Public Library, the institutions in Melbourne and Sydney especially comparing very favourably with similar institutions elsewhere. The following statement gives the number of volumes in the Public Library of each capital city:—

METROPOLITAN PUBLIC LIBRARIES, 1930.

City.	Number of Volumes in—			Total.
	Reference Branch.	Ordinary Lending Branch.	Country Lending Branch.	
Sydney .. .. .	(a) 373,375	(b)	71,938	445,313
Melbourne .. ..	376,279	62,042	..	438,321
Brisbane .. ..	56,671	..	..	56,671
Adelaide .. ..	157,411	77,558	..	234,969
Perth .. .. .	136,962	..	18,817	155,779
Hobart .. .. .	29,867	7,093	..	36,960

(a) Including 126,183 volumes in the Mitchell Library.

(b) The maintenance and control of the ordinary lending branch of the Public Library at Sydney were transferred in 1908 to the Municipal Council. In 1930 the books numbered 49,971.

In connexion with the Country Lending Branch of the Sydney Public Library, it may be noted that books are forwarded on loan to State schools, to approved associations, to Schools of Art and to individual students. During the year 1930-31, over 82,000 books were lent to small State schools, 12,000 to Schools of Arts, 5,700 to branches of the Teachers' Federation, 3,400 to Agricultural Bureaux, and 35,000 to individual borrowers.

A special research staff attached to the Public Library gives valuable assistance in making readily available to inquirers the store of information contained in books, etc., which, owing to limitations of space, are not in open access.

The Mitchell Library in Sydney consisted of over 60,000 volumes and pamphlets, and 300 paintings, principally relating to Australasia, valued at £100,000, and bequeathed in 1907 by Mr. D. S. Mitchell, together with an endowment of £70,000. The testators stipulated that the regulations of the British Museum were to be adopted as far as practicable, hence the library is the resort of specialists. There are now over 126,000 volumes in the library in addition to valuable manuscripts, collections of Australian postage and fiscal stamps, and various pictures, coins, etc.

Amongst other important libraries in New South Wales may be mentioned the "Fisher" Library at Sydney University, with 196,000 volumes; the library at the Australian Museum, 27,000; the Teachers' College library, 38,000; Sydney Technical College library, 16,000; and the library at the Botanic Gardens, 10,000. The libraries attached to State schools contain about 524,000 volumes.

The reading room at the Melbourne Public Library ranks among the finest in the world. It was opened in 1913, and has a diameter of 114 feet, with a similar height, and is capable of seating 320 readers at a time, all of whom are under efficient supervision from the centre of the room. The Library forwards volumes on loan to Mechanics' Institutes and Free Libraries, and to individual borrowers in the country.

The library at Brisbane (South) contained about 14,500 volumes at the end of June, 1930.

For some years past efforts have been made in South Australia to collect original documents likely to be of service in compiling a history of the State. So far back as 1914, Professor Henderson, of Adelaide University, under commission from the South Australian Government, visited and reported on the system of keeping archives in England, France, Belgium, Holland, and Ceylon, and obtained valuable information also from the United States and Canada. A department of historical documents has been created under the care of an archivist, and valuable work has been done in connexion with examination, classification, and permanent preservation of the available papers. A suitable building for housing the documents and the staff was provided in 1921. At the 30th June, 1931, the collection numbered 289,621 documents, 12,061 views, and 1,162 maps.

During 1922 the Tasmanian Public Library adopted the plan of lending books to individual country borrowers and to families or committees of residents in country districts. The Public Library at Launceston contains 36,500 volumes.

Statistics in regard to libraries generally are not available for all States, while the information supplied is not in all cases complete. Returns for Victoria in 1930 showed a total of 420 libraries in receipt of State or municipal aid, but statistics are now only collected from institutions in Greater Melbourne and the chief extra metropolitan towns. The 26 metropolitan libraries returned a total of 620,000 books, while there were 281,000 in the 48 country libraries which furnished returns. Queensland returned 261 libraries, with 624,000 books; South Australia, 238 libraries and 856,000 books; Tasmania, 21 libraries and 136,000 books; while there were 3 libraries, with 6,000 books, in the Northern Territory.

(ii) *Commonwealth*—(a) *Parliamentary and National Library*. When the Commonwealth Parliamentary Library was created in 1902, it was recognized that at such time as the Federal Capital was established it would be necessary to have available there, for the use of members and the public servants, a library whose scope was wider than that usually associated with a purely Parliamentary one. To this end, therefore, this library was developed on lines similar to those of a State Public Library, and particular attention was given to the acquisition of works relating to or published in Australia.

In pursuance of this policy it acquired in 1909 a valuable collection of *Australiana*, comprising about 10,000 volumes and 6,500 pamphlets and other matter which had been formed by Mr. E. A. Petherick. In 1912, also, a provision was included in the Commonwealth Copyright Act requiring the publisher of any book, pamphlet, etc., printed in the Commonwealth to supply a free copy to this library. In the same year it undertook the publication of the Historical Records of Australia, and 34 volumes were issued before publication was temporarily suspended in 1926. The rapid development of the Australian and National Sections of the library led the Library Committee in 1923 to decide that the title "Commonwealth National Library" should be given to these, and that at Canberra the library should be divided into two sections—a Parliamentary and a National Section—the former to be housed in Parliament House, the latter in a separate building, to which the public would be given free access. As the accommodation for the National Section is not at present available, the whole library is maintained at the Parliament building, but to meet the requirements of University students and the general public the privileges of the Library have been extended to them in respect to borrowing as well as reference.

The total number of volumes at the beginning of 1932 was 99,669 books and 7,000 pamphlets, the chief feature being a unique collection of Captain Cook's manuscripts and early works relating to Australia, also an extensive series of official publications of Great Britain and all the Dominions.

(b) *Patents Office Library.* The free library attached to the Commonwealth Patents Office in Melbourne contains over 46,000 volumes, and includes literature dealing with patents in the principal countries of the world.

3. *Public Museums and Art Galleries.*—Previous issues of the Official Year Book contained a brief description of the public museums and art galleries in each State (see No. 22, pp. 457-9), but considerations of space preclude the incorporation of this matter in the present volume.

4. *State Expenditure on Education.*—The expenditure from the Consolidated Revenue on education in each State during the year 1930-31 was as follows:—

STATE EXPENDITURE ON EDUCATION, 1930-31.

State or Territory.	1930-31.	State or Territory.	1930-31
New South Wales ..	{ Total £ 4,573,027 Per head 36/5	Western Australia {	{ Total £ 711,977 Per head 33/10
Victoria ..	{ Total £ 2,821,612 Per head 31/6	Tasmania ..	{ Total £ 307,930 Per head 27/11
Queensland ..	{ Total £ 1,592,015 Per head 33/7	Australia ..	{ Total £ 10,973,922 Per head 33/11
South Australia ..	{ Total £ 967,361 Per head 33/3		

Expenditure on education by the Commonwealth Government in the Northern Territory, during 1930-31, amounted to £6,955.

During the ten years ending in 1930-31, the total expenditure has risen by over £2,559,000, while the expenditure per head of population showed a rise of 3s. 4d. This comparatively heavy increase has been largely due to the expanding provision for State-aided education, to greater cost of building, equipment, and maintenance, and to increments in teachers' salaries and allowances.

## CHAPTER XI. PUBLIC JUSTICE.

### § 1. Police.

1. *General.*—In early issues of the Year Book a résumé was given of the evolution of the police force in Australia up to the passing of the Police Act of 1862 (25 Vic. No. 16) in New South Wales, but considerations of space preclude its inclusion in the present volume.

2. *Strength of Police Force.*—(i) *General.* The strength of the police force in each State during the five years ended 1930 is given in the table hereunder. It may be mentioned that the police forces (with the exception of the small body of Commonwealth police maintained in the Northern Territory and at the Federal Capital) are entirely under State control, but, by arrangement, the Commonwealth Government utilizes their services in various directions, such as the collection of particulars for Commonwealth electoral rolls, etc.

#### POLICE FORCES.—STRENGTH.

State.	Area of State in Sq. Miles.	1926.	1927.	1928.	1929.	1930.
New South Wales..	309,432	2,970	3,109	3,444	3,631	3,709
Victoria..	87,884	1,963	1,977	2,112	2,141	2,115
Queensland..	670,500	1,167	1,191	1,125	1,229	1,236
South Australia..	380,070	642	716	801	784	762
Western Australia	975,920	537	541	549	581	562
Tasmania..	26,215	245	246	239	237	252
Northern Territory	523,620	38	39	39	42	41
Fed. Cap. Territory	940	..	(a)13	13	13	13
<b>Total..</b>	<b>2,974,581</b>	<b>7,562</b>	<b>7,832</b>	<b>8,322</b>	<b>8,658</b>	<b>8,690</b>

(a) Organization created in September, 1927.

The figures for New South Wales for 1930 are exclusive of 22 "black trackers," i.e., natives employed in detection of offenders chiefly in outlying districts, and 4 matrons, while the Victorian returns are exclusive of 3 matrons and 2 black trackers. For Queensland the figures exclude 68 native trackers and 1 female searcher; for South Australia 2 "black trackers" and 1 female searcher, and for the Northern Territory 23 "black trackers." There are also 45 "black trackers" and 5 female searchers in Western Australia, not included in the table. According to the returns, women police are employed in all the States, the respective numbers being—New South Wales 8, Victoria 8, Queensland 2 (on probation), South Australia 12, Western Australia 5, and Tasmania 1. Their work is mainly preventive, and the importance and usefulness of their duties have been referred to in very high terms by the Commissioners of Police.

(ii) *Proportion to Population.*—The average number of inhabitants to each officer in each State during the same period is as follows. In considering these figures, allowance must, of course, be made for the unequal area and unequal distribution of the population of the various States.

#### POLICE FORCES.—COMPARISON WITH POPULATION.

State.	Number Persons per Sq. Mile, 1921 Census.	Inhabitants to each Police Officer.				
		1926.	1927.	1928.	1929.	1930.
New South Wales..	6.80	792	772	710	682	674
Victoria..	17.42	872	881	834	830	847
Queensland..	1.13	756	755	815	757	767
South Australia..	1.30	882	804	723	740	764
Western Australia	0.34	705	725	739	717	748
Tasmania..	8.15	877	877	906	924	875
Northern Territory	..	103	112	102	106	113
Fed. Cap. Territory	..	..	441	622	637	657
<b>Total..</b>	<b>1.83</b>	<b>808</b>	<b>796</b>	<b>761</b>	<b>741</b>	<b>745</b>

The above figures show, therefore, that the rate of protection maintained for Australia as a whole has remained fairly constant.

3. **Duties of the Police.**—In addition to the ordinary employment attaching to their office, the police are called upon to perform many duties which in other countries are carried out by various functionaries. Thus, in New South Wales, according to the Report of the Inspector-General, the time of one-fifth of the force was taken up during 1921 in extraneous duties unconnected with the protection of life and property, while the cash value of the services rendered to other Government departments was stated as over £200,000 per annum. The Queensland Commissioner refers to the circumstance that in 1930 no less than 72 subsidiary offices were held by the police. In South Australia, the Commissioner alludes to the large number of subsidiary duties performed by police officers, and mentions that for the year ended June, 1931, over 218,800 inquiries were made on behalf of other departments. While these special tasks doubtless involve some degree of sacrifice of ordinary routine duties, the fact that the general intelligence of the police is adequate for their performance, besides being most creditable, results in a large saving of the public money.

4. **Cost of Police Forces.**—The expenditure from Consolidated Revenue on the police forces in each State, and the cost per head of population during the five years 1926-27 to 1930-31, are given in the following table:—

## POLICE FORCES.—COST.

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
TOTAL.					
	£	£	£	£	£
New South Wales .. .. .	1,200,017	1,364,609	1,749,575	1,863,021	1,811,469
Victoria .. .. .	872,555	894,121	917,454	921,383	850,372
Queensland .. .. .	563,391	571,706	595,490	596,057	550,473
South Australia .. .. .	262,140	275,342	315,338	327,572	323,541
Western Australia .. .. .	215,908	220,511	236,332	250,200	237,996
Tasmania .. .. .	88,725	91,645	93,609	96,214	93,732
Total .. .. .	3,202,736	3,417,934	3,907,798	4,054,447	3,867,583
PER HEAD OF POPULATION.					
	s. d.	s. d.	s. d.	s. d.	s. d.
New South Wales .. .. .	10 2	11 4	14 4	15 0	14 6
Victoria .. .. .	10 2	10 3	10 5	10 4	9 6
Queensland .. .. .	12 9	12 9	13 0	12 10	11 7
South Australia .. .. .	9 3	9 7	10 11	11 3	11 1
Western Australia .. .. .	11 5	11 3	11 8	12 0	11 4
Tasmania .. .. .	8 3	8 6	8 8	8 9	8 6
Total .. .. .	10 6	11 0	12 4	12 8	12 0

The totals quoted above, which to some extent differ from those published in previous issues, refer exclusively to the State police forces, and are based on returns supplied by the States for the respective financial years. As shown in the first table in this chapter, the Commonwealth Government maintains small police forces in the Northern Territory and in the Federal Capital Territory, the expenditure on which in 1930-31 amounted to £20,708 and £5,339 respectively.

5. **Interstate Police Conferences.**—In February, 1921, a Conference of the chief officers of the police forces of the various States was held in Melbourne. In addition to the discussion of matters of common interest, arrangements were made for the interchange of detectives. The results were so satisfactory that it was decided to hold similar Conferences annually. Amongst other matters discussed at the Hobart



Conference in 1927, particular attention was given to the subject of traffic regulation in view of the large and increasing number of motor vehicles. The Conference was held at Melbourne in 1928, and at Perth in 1929. Owing to the need for economy there was no meeting in 1930, and the usual interchange of detectives was not carried out during the year.

## § 2. Lower (Magistrates') Courts.

1. **General.**—In considering the criminal returns of the various States, due allowance must be made on account of several factors, such as the relative powers of the courts, both lower and higher, etc. In the case of lower courts, the actual number of laws in each State the breach of which renders a person liable to fine or imprisonment must be taken into account. Again, the attitude of the magistracy and police towards certain classes of offences is a factor, for in the case of liquor laws, or laws connected with vagrancy or gaming, the views of the magistrates, and instructions issued to the police, may be responsible for considerable variations in the returns. The strength and distribution of the police forces, and the age-constitution and distribution of the States' population, also influence the results. Due weight should also be given to the prevalence of undetected crime, but information on this point is not available for all States. It may be mentioned that each State has its own separate judicial system, the Commonwealth jurisdiction being confined to the High Court of Australia, which is largely a Court of Appeal intermediate to the Privy Council, although it has also original jurisdiction, and the Commonwealth Court of Conciliation and Arbitration and the Federal Court of Bankruptcy. Full particulars regarding the judicial power of the Commonwealth will be found in Chapter III. of the Commonwealth Constitution.

2. **Powers of the Magistrates.**—Preceding issues of the Official Year Book contained a brief statement of the powers of the magistrates in the various States (see No. 22, page 462), but it is not proposed to repeat this information in the present volume.

3. **Persons Charged at Magistrates' Courts.**—The total number of persons who were charged before magistrates in each State is given below for the five years 1926 to 1930 :—

MAGISTRATES' COURTS.—PERSONS CHARGED.

State.	1926.	1927.	1928.	1929.	1930.
New South Wales ..	116,675	124,030	137,079	132,439	124,538
Victoria ..	75,556	67,276	60,562	58,097	56,749
Queensland ..	29,196	30,479	27,300	27,719	29,369
South Australia ..	23,637	25,455	21,766	20,106	18,475
Western Australia ..	12,335	13,325	15,499	16,972	15,734
Tasmania ..	7,848	7,309	7,413	7,468	7,504
Northern Territory ..	142	317	456	500	441
Total ..	265,389	268,191	270,075	263,301	252,810

Investigation of the returns shows that considerable variations in the figures for single States are occasioned by breaches of new Acts, or the more stringent enforcement of the provisions of existing Acts. Any deductions drawn from the total returns as to the increase or otherwise of criminality must, therefore, be largely influenced by a careful analysis of the detailed list of offences. Thus, the considerable increase in the total offences in New South Wales for the year 1926 as compared with the preceding year was due chiefly to the large number of charges under the Traffic Act, the total recorded in 1926 being 20,594 as compared with 11,895 in 1925. The increase in this State for the year 1928 as compared with the previous year was chiefly due to a rise in the offences against good order and in the miscellaneous class, amounting in the case of the former to over 4,000, and in the latter to 7,760, the bulk of the increase in the latter consisting of charges under the Traffic Act.

4. **Convictions and Committals.**—The figures given in the tabulation above include, of course, a number of people who were wrongly charged, and statistically are not of general importance. The actual number of convictions in connexion with the persons who appeared before the lower courts in each year of the period 1926 to 1930 is, therefore, given hereunder. A separate line is added showing the committals to higher courts.

MAGISTRATES' COURTS.—CONVICTIONS AND COMMITTALS.

State.		1926.	1927.	1928.	1929.	1930.
New South Wales ..	Convictions	100,644	107,657	119,936	113,398	102,670
	Committals	1,832	1,895	2,003	2,403	2,725
Victoria ..	Convictions	60,728	53,612	47,865	45,318	45,537
	Committals	761	774	731	950	948
Queensland ..	Convictions	26,815	28,763	25,563	25,324	26,814
	Committals	328	337	313	309	358
South Australia ..	Convictions	21,417	22,876	18,665	17,320	15,609
	Committals	299	301	420	403	491
Western Australia ..	Convictions	11,105	12,114	14,197	15,565	14,358
	Committals	87	84	76	93	114
Tasmania ..	Convictions	7,200	6,766	6,835	6,898	6,743
	Committals	99	72	98	105	76
Northern Territory	Convictions	129	287	424	460	354
	Committals	2	6	2	14	11
Total ..	Convictions	228,038	232,075	233,485	224,283	212,085
	Committals	3,408	3,469	3,643	4,277	4,723

5. **Convictions for Serious Crime.**—While the figures given in the preceding table refer to the entire body of convictions, the fact must not be overlooked that they include a large proportion of offences of a technical nature, many of them unwittingly committed, against various Acts of Parliament. Cases of drunkenness and minor breaches of good order, which, if they can be said to come within the category of crime at all, at least do so in a very different sense from some other offences, also help to swell the list. The following table has therefore been prepared for the purpose of showing the convictions at magistrates' courts for what may be regarded as the more serious offences, i.e., against the person and property, either separately or conjointly, and forgery and offences against the currency:—

MAGISTRATES' COURTS.—CONVICTIONS FOR SERIOUS CRIME.

State.	1926.	1927.	1928.	1929.	1930.
NUMBER.					
New South Wales ..	9,340	10,132	10,237	11,674	11,822
Victoria ..	3,249	3,588	3,415	3,860	4,060
Queensland ..	2,608	2,712	3,135	3,420	4,148
South Australia ..	872	1,017	1,091	1,235	1,254
Western Australia ..	1,177	1,163	1,344	1,508	1,736
Tasmania ..	607	551	616	743	725
Northern Territory ..	22	7	51	99	90
Total ..	17,875	19,170	19,889	22,539	23,835

PER 10,000 OF THE POPULATION.

New South Wales ..	41.8	42.6	42.2	47.2	47.3
Victoria ..	19.1	20.8	19.5	21.8	22.8
Queensland ..	29.8	30.5	34.5	37.0	44.2
South Australia ..	15.6	17.8	18.9	21.3	21.6
Western Australia ..	31.4	30.2	33.7	36.7	41.5
Tasmania ..	28.7	26.2	29.1	34.8	33.5
Northern Territory ..	58.4	16.5	121.2	237.0	193.6
Total ..	29.6	31.1	31.6	35.4	37.0

The rate for 1930 is the highest recorded for the quinquennium, the increase in this year being mainly due to a rise in convictions for offences against the person in Queensland, against the person and property in Western Australia, and against property in Victoria.

6. *Decrease in Serious Crime, 1881 to 1930.*—(i) *Rate of Convictions.* The figures quoted in the preceding table show that during the last five years the rate of serious crime has increased, but if the comparison be carried back to 1881 the position is seen to be more satisfactory. The rate of convictions at magistrates' courts per 10,000 of the population is given below for each of the years 1881, 1891, 1901, 1921, and 1930. Only the more serious offences particularized in the preceding sub-section have been taken into consideration.

**MAGISTRATES' COURTS.—SERIOUS CRIME.—RATE OF CONVICTIONS, 1881 TO 1930.**

Year.	Convictions per 10,000 Persons.
1881 .. .. .	69.3
1891 .. .. .	44.8
1901 .. .. .	29.1
1921 .. .. .	29.2
1930 .. .. .	37.0

The figures already quoted refer to total convictions, and in respect of individuals necessarily involve a considerable amount of duplication, especially as regards the less important offences, such as petty larcenies, etc.

(ii) *Causes of Decrease.* The statistics given above show that there has been a considerable decrease in crime throughout Australia over the period dealt with. The results so far quoted are restricted entirely to the lower or magistrates' courts. There has also been a gratifying decrease in regard to offences tried at the higher courts, as will be seen later. A review of the various factors responsible for this decline is given in preceding issues of the Official Year Book. (See No. 22, p. 465.)

7. *Drunkenness.*—(i) *Cases and Convictions.* The number of cases of drunkenness and the convictions recorded in connexion therewith during the period 1926 to 1930 will be found in the following table :—

**DRUNKENNESS.—CASES AND CONVICTIONS.**

State.	1926.		1927.		1928.		1929.		1930.	
	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.
New South Wales	31,922	31,361	33,011	32,649	35,590	35,155	33,819	33,136	26,126	25,655
Victoria .. .. .	10,150	6,461	10,793	7,050	9,635	6,241	9,385	5,866	8,132	6,243
Queensland .. .	12,713	12,650	12,829	12,657	10,836	10,599	9,882	9,747	9,476	9,385
South Australia	6,050	6,029	5,925	5,913	4,996	4,946	4,312	4,291	2,582	2,577
Western Australia	3,318	3,299	3,904	3,881	4,039	4,011	3,567	3,539	2,996	2,879
Tasmania .. . .	333	330	313	303	281	274	329	321	240	240
Northern Territory	68	68	108	108	232	232	157	153	103	100
Total .. .. .	64,554	60,198	66,883	62,561	65,609	61,458	61,451	57,053	49,565	47,079

Under the heading drunkenness, are included cases of ordinary drunkenness, drunkenness and disorderliness, and habitual drunkenness. In the figures quoted for Western Australia, convictions for disorderliness attributable to drink were formerly included in the second category, but for the last two years the returns relate only to drunkenness either as a single or concurrent offence.

The number of convictions is, as might naturally be expected, almost identical with the number of cases. Victoria, however, is an exception, but in this State it is explained that offenders are generally discharged on a first appearance, and no conviction is recorded, a similar procedure being also adopted in the case of those arrested on Saturday and detained in custody till Monday. The logic of excluding these cases from the list of convictions is open to doubt.

(ii) *Convictions per 10,000 of Population.* The convictions for drunkenness per 10,000 of the population during each of the years from 1926 to 1930 are given hereunder:—

**DRUNKENNESS.—CONVICTIONS PER 10,000 INHABITANTS.**

State.	1926.	1927.	1928.	1929.	1930.
New South Wales .. ..	134.8	137.2	144.5	134.1	102.7
Victoria .. ..	38.1	40.8	35.6	33.2	35.0
Queensland .. ..	144.5	141.9	116.6	105.4	99.8
South Australia .. ..	107.9	103.5	85.7	74.0	44.4
Western Australia .. ..	88.0	100.8	100.4	86.0	68.8
Tasmania .. ..	15.6	14.4	12.9	15.0	11.1
<b>Total .. ..</b>	<b>99.5</b>	<b>101.4</b>	<b>97.8</b>	<b>89.5</b>	<b>73.1</b>

During the last four years there has been a considerable decline in convictions, and as shown in the following table this has been accompanied by a falling off in the consumption of intoxicating beverages.

The convictions for drunkenness taken by themselves are not an altogether satisfactory test of the relative sobriety of the inhabitants of each State, inasmuch as several important factors must be taken into consideration. The age and sex constitution of the people, for example, are by no means identical in all the States. (Owing to the smallness of the population the figures for the Northern Territory are, of course, abnormal and have not, therefore, been included in the above table.) The avocations of the people affect the result, since persons engaged in strenuous callings are, on the whole, more likely to indulge in alcoholic stimulants than those employed in less arduous ones. The distribution of the population is also a factor, the likelihood of arrest or summons for drunkenness obviously being greater in the more densely populated regions, while allowance must be made for the attitude of the magistracy, the police, and the public generally in regard to the offence. Due account also must be taken of the effect of legislation dealing with the limitation of hours during which liquor may be sold in hotels.

(iii) *Consumption of Intoxicants.* The following table shows the consumption of spirits, wine, and beer per head of the population in Australia during each year of the quinquennium 1927-31:—

**INTOXICANTS, CONSUMPTION.—AUSTRALIA.**

Year.	Consumption per Head of Population.		
	Spirits.	Wine.	Beer.
	Imp. Galls.	Imp. Galls.	Imp. Galls.
1926-27 .. ..	0.41	0.50	11.56
1927-28 .. ..	0.40	0.50	11.44
1928-29 .. ..	0.38	0.50	11.31
1929-30 .. ..	0.36	0.50	10.22
1930-31 .. ..	0.18	0.50	8.12

The figures in regard to wine are approximate, and are probably to some extent understated. It is impossible to ascertain exactly the consumption, as a beverage, of wine produced in Australia.

(iv) *Treatment of Drunkenness.* (a) *General.* Though the problem of the correct method of dealing with dipsomania is by no means an easy one, it seems fairly clear that the present plan of bringing offenders before magistrates, and subjecting them to the penalty of imprisonment or fine, has little deterrent effect, as the same offenders are constantly reappearing before the courts. Further, the casting of an inebriate into prison, and placing him in his weakened state in the company of professional malefactors, certainly lowers his self-respect, and doubtless tends to swell the ranks of criminals. Examination of the prison records in New South Wales some years ago

disclosed the fact that over 40 per cent. of the gaol population had commenced their criminal career with a charge of drunkenness. During the last few years the dangers of moral contamination in this way have been more accurately appreciated, and a system of classification of prisoners has been adopted whereby the petty offender is as far as possible kept from association with the more evilly-disposed. The Comptroller-General of Prisons in Queensland stated in his Report for the year 1907 that "the drunken habit in many cases is merely one of the many symptoms which jointly indicate the existence of a graver condition than simple habitual drunkenness."

(b) *Remedial.* Legislation has been passed in each State, providing for the commitment of inebriates to special Government institutions. The laws in the various States are as follows:—New South Wales, Inebriates Act 1912; Victoria, Inebriates Acts 1915 and 1923; Queensland, Inebriate Institutions Act 1896; South Australia, Inebriates Acts 1908, 1913, and 1920; Western Australia, Inebriates Acts 1912 and 1919; Tasmania, Inebriates Act 1885, Inebriate Hospitals Act 1892. Curative work was first undertaken by the Government of New South Wales in 1907. In most cases the institutes are connected with the gaols, and, naturally, custodial measures are still a strong feature in their management; nevertheless, the results of remedial measures have been encouraging.

8. **First Offenders.**—In all the States statutes dealing with first offenders have been in force for some years, the dates of passing the Acts being as follows:—New South Wales, 1894; Victoria, 1890, 1908, and 1915 (Crimes Act, sec. 340); Queensland, 1887; South Australia, 1887, 1913, 1924, and 1925; Western Australia, 1892; Tasmania, 1886. The method of procedure is practically the same in all cases, *i.e.*, with regard to most first offenders the magistrate or judge is empowered to allow the offender to go free on recognizances being entered into for his good behaviour for a certain period. In practice, this humane law has been found to work excellently, very few of those to whom its provisions have been extended having been found to relapse into crime.

9. **Children's Courts.**—Special courts for the trial of juvenile offenders have been established in New South Wales, Victoria, Queensland, Western Australia, Tasmania, and New Zealand, while Children's Courts, although not under that name, are practically provided for by the State Children's Acts of 1895 and 1900 in South Australia. The object of these courts is to avoid, as far as possible, the unpleasant surroundings of the ordinary police court.

10. **Committals to Superior Courts.**—(i) *General.* In a previous sub-section it has been pointed out that comparisons of criminality based on a consideration of the total returns from magistrates' courts are somewhat inadequate, seeing that the figures include numbers of cases which are merely technical breaches of laws having in some instances a purely local significance. The committals to higher courts give a better basis of comparison, although even in this connexion allowance must be made for the want of uniformity in jurisdiction. The table below gives the number of committals in each year from 1926 to 1930, with the rate of such committals per 10,000 of the population:—

#### COMMITTALS TO SUPERIOR COURTS.

State.	1926.	1927.	1928.	1929.	1930.
NUMBER.					
New South Wales	1,832	1,895	2,003	2,403	2,725
Victoria.. ..	761	774	731	950	948
Queensland .. ..	328	337	313	309	358
South Australia .. ..	299	301	420	403	491
Western Australia .. ..	87	84	76	93	114
Tasmania .. ..	99	72	98	105	76
Northern Territory .. ..	2	6	2	14	11
<b>Total .. ..</b>	<b>3,408</b>	<b>3,469</b>	<b>3,643</b>	<b>4,277</b>	<b>4,723</b>

COMMITTALS TO SUPERIOR COURTS—*continued.*

State.	1926.	1927.	1928.	1929.	1930.
PER 10,000 OF THE POPULATION.					
New South Wales ..	7.9	8.0	8.2	9.7	10.9
Victoria ..	4.5	4.5	4.2	5.4	5.4
Queensland ..	3.7	3.8	3.4	3.3	3.8
South Australia ..	5.4	5.3	7.3	7.0	8.5
Western Australia ..	2.3	2.2	2.0	2.3	2.7
Tasmania ..	4.7	3.4	4.6	4.9	3.5
Total ..	5.6	5.6	5.7	6.7	7.3

(ii) *Decrease in Rate since 1861.* The figures in the preceding table show that the rate of committals for serious crime has increased slightly during the last five years, but if the comparison be carried further back, it will be found that there has been a very considerable improvement. This will be evident from an examination of the following figures, which show the rate of committals per 10,000 persons in Australia at various periods since 1861 :—

## RATE OF COMMITTALS, AUSTRALIA, 1861 TO 1930.

Year .. .. .	1861.	1871.	1881.	1891.	1901.	1911.	1921.	1930.
Committals per 10,000 inhabitants	22	14	12	11	8	6	7	7

The decline in proportion to population since 1861 has therefore been about 68 per cent.

## § 3. Superior Courts.

1. *Convictions at Superior Courts.*—The number of convictions at superior courts and the rate per 10,000 of the population are given below for each of the years 1926 to 1930 :—

## SUPERIOR COURTS.—CONVICTIONS.

State.	1926.	1927.	1928.	1929.	1930.
NUMBER.					
New South Wales (a) ..	744	877	846	1,034	1,208
Victoria ..	461	474	521	630	720
Queensland ..	269	259	244	193	198
South Australia ..	174	196	264	258	304
Western Australia ..	64	61	51	74	92
Tasmania ..	69	37	70	73	65
Northern Territory ..	..	..	4	21	2
Total ..	1,781	1,904	2,000	2,283	2,589
PER 10,000 OF THE POPULATION.					
New South Wales (a) ..	3.2	3.7	3.5	4.2	4.8
Victoria ..	2.7	2.7	3.0	3.6	4.0
Queensland ..	3.1	2.9	2.7	2.0	2.1
South Australia ..	3.1	3.4	4.6	4.5	5.2
Western Australia ..	1.7	1.6	1.3	1.8	2.2
Tasmania ..	3.3	1.8	3.3	3.4	3.0
Total ..	2.9	3.1	3.2	3.6	4.0

(a) Year ended 30th June following.

The rate in 1901 was 4.6 per 10,000, and the decrease to the end of 1930 was, therefore, about 13 per cent. During the last five years, however, the rate of convictions in Australia increased by about 38 per cent., Queensland being the only State to show a tendency towards decrease. Owing to the particular conditions prevailing there, the figures for the Northern Territory are abnormal, and the rates have, therefore, been excluded from the table.

2. **Offences for which Convictions were recorded at Superior Courts.**—In the following table will be found a classification of the principal offences for which persons were convicted at the higher courts during each year of the period 1926 to 1930. Owing to lack of uniformity in the presentation of the returns the information is confined to the chief offences against the person only.

**SUPERIOR COURTS.—CONVICTIONS, OFFENCES AGAINST THE PERSON,  
AUSTRALIA.**

Offences.	1926.	1927.	1928.	1929.	1930.
Murder, and attempts at ..	24	30	25	33	21
Manslaughter ..	13	15	17	15	8
Rape, and attempts at ..	15	14	11	15	14
Other offences against females ..	125	130	159	124	136
"    "    "    the person	235	224	222	244	224
Total .. ..	412	413	434	431	403

The total convictions for similar offences in 1901 amounted to 432. Stated according to the proportion per 10,000 of mean population, the rate in 1930 amounted to 0.63, as compared with a rate of 1.14 in 1901, the decrease for the period amounting, therefore, to about 45 per cent.

3. **Habitual Offenders.**—Some account of the methods adopted in each State in connexion with habitual offenders is given in preceding Year Books (see No. 22, pp. 469-70), but this information cannot be repeated in this issue.

4. **Capital Punishment.**—The table below gives the number of executions in each State during the period 1926 to 1930:—

**EXECUTIONS.**

State.	1926.	1927.	1928.	1929.	1930.
New South Wales .. ..	..	2	..	..	..
Victoria .. ..	..	..	..	..	..
South Australia .. ..	..	2	..	1	..
Western Australia (a) ..	3	1	1	..	1
Tasmania .. ..	..	..	..	..	..
Total .. ..	3	5	1	1	1

(a) Year ended 30th June following.

Under the Criminal Code Amendment Act of 1922, capital punishment was abolished in Queensland.

In the early days of the history of Australia the penalty of death was attached to a large number of offences, many of which at the present time would be dealt with in the lower or magistrates' courts. With the growth of settlement, and the general amelioration in social and moral conditions, the list was, however, considerably curtailed, and the existing tendency is practically to restrict death sentences to cases of murder. It may be remarked that in cases of rape, which is a capital offence in some of the Australian

States, the penalty has been but sparingly inflicted during the last few years. Juries are reputed to be loth to convict on this charge, owing to the uncertainty whether sentence of death will be pronounced.

During the period 1861 to 1880 the annual average number of executions in Australia was 9, from 1881 to 1900 the average was 6, for the period 1901 to 1910 the figure was 4, from 1911 to 1920 it was 2, while the average for the last ten years was about 1.7.

#### § 4. Prisons.

1. Prison Accommodation and Prisoners, 1930.—The table below shows the number of prisons in each State, the accommodation therein, and the number of prisoners in confinement at the end of 1930 :—

PRISON ACCOMMODATION AND PRISONERS, 1930.

State.	Number of Prisons.	Accommodation in—		Prisoners at End of Year.
		Separate Cells.	Wards.	
New South Wales (a)	26	(b) 2,224	..	1,691
Victoria .. .. .	15	1,758	464	1,299
Queensland .. .. .	7	581	98	323
South Australia .. .. .	15	770	212	361
Western Australia .. .. .	16	601	542	382
Tasmania .. .. .	1	142	4	116
Northern Territory .. .. .	3	..	62	26
<b>Total</b> .. .. .	<b>83</b>	<b>6,076</b>	<b>1,382</b>	<b>4,198</b>

(a) Year ended 30th June following.

(b) Total accommodation.

The figures refer to prisoners under sentence and are exclusive of aborigines.

2. Prisoners in Gaol, 1926 to 1930.—The number of prisoners in gaol at the 31st December in each of the years 1926 to 1930 and the proportion per 10,000 of the population are given in the following table. The figures refer to prisoners under sentence, and are exclusive of aborigines.

PRISONERS IN GAOL.

State.	1926.	1927.	1928.	1929.	1930.
NUMBER.					
New South Wales (a)	1,429	1,682	1,699	1,842	1,691
Victoria .. .. .	915	883	934	1,145	1,299
Queensland .. .. .	366	353	365	368	323
South Australia .. .. .	326	312	403	368	361
Western Australia .. .. .	208	221	236	315	382
Tasmania .. .. .	81	85	73	89	116
Northern Territory .. .. .	2	6	18	30	26
<b>Total</b> .. .. .	<b>3,327</b>	<b>3,542</b>	<b>3,728</b>	<b>4,157</b>	<b>4,198</b>

(a) Year ended 30th June following.



PRISONERS IN GAOL—*continued.*

State.	1926.	1927.	1928.	1929.	1930.
PER 10,000 OF THE POPULATION.					
New South Wales .. ..	6.1	7.0	7.0	7.5	6.8
Victoria .. ..	5.4	5.1	5.3	6.5	7.3
Queensland .. ..	4.2	4.0	4.0	4.0	3.4
South Australia .. ..	5.8	5.5	7.0	6.4	6.2
Western Australia .. ..	5.5	5.7	5.9	7.7	9.1
Tasmania .. ..	3.8	4.0	3.4	4.2	5.4
Total .. ..	5.5	5.7	5.9	6.5	6.5

The proportion to population of prisoners in gaol under sentence has risen by about 18 per cent. in Australia during the last five years, but, if the comparison be carried farther back, the position is seen to be more favourable, the proportion in 1891 being as high as 16 per 10,000. Rates for the Northern Territory have not been included on account of the abnormal conditions prevailing there.

3. **Improvement in Prison Methods.**—In previous issues of the Official Year Book a more or less detailed account was given of the improvements effected in each State during recent years in regard to methods of prison management (see Official Year Book 22, pp. 471-4), but this information cannot be repeated in the present volume.

## § 5. Civil Courts.

1. **Lower Courts.**—The transactions of the lower courts on the civil side during the year 1930 are given in the table hereunder. Particulars for earlier years will be found in preceding issues of the Official Year Book.

## LOWER COURTS.—CIVIL CASES, 1930.

State.	1930.	State.	1930.
New South Wales	{ Cases No. 92,054 Amount £ 462,803	Western Australia	{ Cases No. 31,116 Amount £ 195,249
Victoria .. ..	{ Cases No. 120,063 Amount £ 882,594	Tasmania .. ..	{ Cases No. 11,410 Amount £ 92,091
Queensland .. ..	{ Cases No. 25,244 Amount £ 309,365	Total .. ..	{ Cases No. 317,301 Amount £ 2,218,538
South Australia .. ..	{ Cases No. 37,414 Amount £ 276,436		

Particulars in regard to the amount of judgments involved in the 478 civil cases in the Northern Territory were not available.

The figures just given represent the returns from Petty Sessions Courts in New South Wales and Victoria, the Petty Debts Courts in Queensland, the Local Courts of South Australia and Western Australia, and the Courts of Requests in Tasmania.

2. **Superior Courts.**—In the next table will be found the transactions on the civil side in the Superior Courts during the year 1930. Particulars for previous years will be found in preceding issues.

The New South Wales returns refer to the total amounts of judgments in the District Courts, and are exclusive of judgments signed in the Supreme Court, for which the amount is not available.

SUPERIOR COURTS.—CIVIL CASES, 1930.

State.	1930.	State.	1930.
New South Wales	{ Causes No. 2,576 Amount £ 443,892	Western Australia	{ Causes No. 1,650 Amount £ 149,390
Victoria..	{ Causes No. 1,055 Amount £ 415,301	Tasmania	{ Causes No. 565 Amount £ 38,816
Queensland	{ Causes No. 324 Amount £ 14,750	Total	{ Causes No. 6,421 Amount £ 1,216,912
South Australia	{ Causes No. 251 Amount £ 154,763		

In addition, four civil cases were returned from Courts in the Northern Territory, but details regarding judgments were not available.

3. **Divorces and Judicial Separations.**—The number of divorces and judicial separations in each State during the period 1926 to 1930 is shown below. The figures refer in the case of divorces to decrees made absolute in each year and include decrees for nullity of marriage.

DIVORCES AND JUDICIAL SEPARATIONS.

State.	1926.		1927.		1928.		1929.		1930.	
	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.
New South Wales ..	834	12	1,068	20	921	6	1,078	17	933	7
Victoria ..	466	2	513	2	481	..	546	..	387	1
Queensland ..	99	1	64	..	117	..	89	..	119	2
South Australia ..	71	1	97	..	113	..	107	..	148	1
Western Australia ..	128	..	106	..	142	1	167	1	153	2
Tasmania ..	34	..	51	..	55	..	48	..	42	..
Northern Territory ..	..	..	..	..	..	..	1	..	1	..
Total ..	1,632	16	1,899	22	1,829	9	2,036	21	1,783	13

The average annual number of divorces and judicial separations in Australia at decennial periods from 1871 to 1930 and the proportion per 10,000 existing marriages were as follow :—

DIVORCES AND JUDICIAL SEPARATIONS.—AUSTRALIA, 1871 TO 1930.

	1871-80.	1881-90.	1891-1900.	1901-10.	1911-20.	1921-30.
Averages ..	29	70	358	401	707	1,699
Per 10,000 existing marriages ..	0.98	1.74	6.86	6.15	8.13	15.45

The bulk of the divorces and judicial separations refer to New South Wales and Victoria, the Acts of 1899 and 1889 in the respective States having made a separation of the marriage tie comparatively easy.

4. **Probates.**—Information in regard to probates and letters of administration will be found under F, Chapter IX., Private Finance.

5. **Bankruptcies.**—Particulars relating to bankruptcy in each State up to the end of the year 1927 were incorporated under this heading in preceding issues of the Official Year Book. Under the terms of the Bankruptcy Act 1924-1928 jurisdiction in insolvency was taken over by the Commonwealth from 1st August, 1928. The Act constituted each State a single bankruptcy district, excepting in the case of New South Wales, which includes the Federal Capital Territory, and Queensland, which has been divided into three districts corresponding to the three Supreme Court districts in that

State. The Territories of North Australia and Central Australia were also constituted a separate bankruptcy district. Operations under the Act for the year ended 31st July, 1931, are given in the table hereunder. For purposes of comparison, figures for each of the preceding two years have been appended to the table, and the totals offer a clear index of the effect of the depression throughout Australia.

## COMMONWEALTH BANKRUPTCY ACT RETURNS—1930-31.

Heading.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Australia.	
Sequestration Orders and Orders for administration of Deceased Debtors' Estates	Number ..	702	473	215	258	116	82	1,846
	Liabilities £	739,788	564,565	158,991	290,329	123,648	49,320	1,926,641
	Assets £	515,581	290,457	138,223	171,065	97,805	19,956	1,233,087
Composition, etc. after Bankruptcy	Number ..	..	..	..	12	..	..	12
	Liabilities £	..	..	..	26,310	..	..	26,310
	Assets £	..	..	..	28,575	..	..	28,575
Compositions, etc. without Bankruptcy	Number ..	43	26	7	759	287	5	1,127
	Liabilities £	136,848	53,448	12,077	1,016,462	543,727	11,983	1,774,545
	Assets £	102,540	21,301	13,463	722,624	852,367	9,036	1,721,331
Deeds of arrangement	Number ..	795	553	136	15	97	64	1,660
	Liabilities £	2,025,875	1,108,495	415,346	87,200	479,296	135,206	4,251,418
	Assets £	2,004,144	1,009,103	450,288	107,505	682,849	123,653	4,377,542
Total, 1930-31	Number ..	1,540	1,052	358	1,044	500	151	4,645
	Liabilities £	2,902,511	1,726,508	586,414	1,420,301	1,146,671	196,509	7,978,914
	Assets £	2,622,265	1,320,861	601,974	1,029,769	1,633,021	152,645	7,360,535
Total, 1929-30	Number ..	1,057	705	317	510	485	94	3,168
	Liabilities £	2,158,088	1,244,443	556,271	686,107	1,146,194	155,006	5,946,109
	Assets £	1,806,023	976,035	442,496	551,547	1,716,707	87,962	5,580,770
Total, 1928-29	Number ..	697	474	264	306	352	52	2,145
	Liabilities £	1,134,659	1,597,499	324,418	342,847	624,899	34,374	4,058,696
	Assets £	832,280	1,229,299	225,162	264,680	1,009,927	20,590	3,581,944

No transactions were recorded for the year in the Territories of North Australia and Central Australia. The Commonwealth Attorney-General's Report for the year ended 31st July, 1929, states that comparative tables have not been prepared in relation to State bankruptcy or insolvency for previous years, as the methods of collection and presentation do not afford a reliable common basis. It is also pointed out that the procedure in certain States has been largely influenced by the procedure in force prior to the passing of the Commonwealth Act, and that, therefore, no particular significance attaches to the large number of compositions, etc. in South Australia and Western Australia. The Bankruptcy Act 1930 created a Federal Court of Bankruptcy and gave power to appoint two Judges thereto. No appointments were made in 1929-30 under this Act, but later a Judge was appointed to deal with bankruptcy work, in addition to the State Judges, in New South Wales and Victoria, the Courts in these States having been unable to cope with the business. Practically all the bankruptcy work in those States is now being performed by the Federal Judge who sits in Sydney and Melbourne alternately.

6. High Court of Australia.—Under the provisions of section 71 of the Commonwealth Constitution Act, the judicial power of the Commonwealth is vested in a Federal Supreme Court, called the High Court of Australia, and in such other courts as the Parliament creates or invests with federal jurisdiction. The Federal High Court possesses both original and appellate jurisdiction. The powers of the Court are defined in Chapter III. of the Constitution Act and in the Judiciary Acts of 1903-27. At present the Court consists of a Chief Justice and five other judges. Sittings of the Court are held in the capitals of the various States as occasion may require. The High Court also functions as a Court of Appeal for Australia. The following statement shows the transactions of the High Court for the years 1930 and 1931. Figures for previous years are given in preceding issues.

**COMMONWEALTH HIGH COURT.—TRANSACTIONS, 1930 AND 1931.**

Original Jurisdiction.	1930.	1931.	Appellate Jurisdiction.	1930.	1931.
	Number of writs issued ..	65		82	Number of appeals set down for hearing ..
Number of causes entered for trial ..	8	8	Number allowed ..	31	25
Verdicts for plaintiffs ..	11	7	Number dismissed ..	50	43
Verdicts for defendants ..	..	2	Otherwise disposed of ..	7	12
Otherwise disposed of ..	6	9			
Amount of judgments ..	£9,532	£24,805			

The fees collected in 1930 amounted to £859, and in 1931 to £699.

During the years 1930 and 1931, the Court dealt also with other matters as follows:—

Appeals from Assessments under the Taxation Assessment Acts, 130 and 41; Special cases stated for the opinion of the Full Court, 19 and 5; Applications for Prohibitions, etc., 19 and 6.

7. Commonwealth Court of Conciliation and Arbitration.—A more or less detailed statement regarding the operation of this Court, which was established under the provisions of the Commonwealth Conciliation and Arbitration Act of 1904-26, will be found in Chapter XXVI.

**§ 6. Cost of Administration of Justice.**

1. Expenditure by the States.—The table below shows the expenditure from Consolidated Revenue during the year 1930-31 in connexion with the administration of justice in each of the States.

**STATE EXPENDITURE ON JUSTICE, 1930-31.**

State.	Expenditure.	Per Head of Population.	State.	Expenditure.	Per Head of Population.
	£	s. d.		£	s. d.
N.S.W. ..	1,811,469	14 6	W.A. ..	237,996	11 4
{ Police	355,783	2 10	{ Gaols	31,468	1 6
{ Gaols	581,968	4 8	{ Other	93,840	4 6
{ Other	850,372	9 6	Tas. ..	93,732	8 6
Vic. ..	112,451	1 3	{ Police	12,341	1 1
{ Gaols	252,293	2 10	{ Gaols	34,749	3 2
{ Other	550,473	11 7			
Q'land ..	33,649	0 9			
{ Police	165,469	3 6			
{ Gaols	323,541	11 1			
{ Other	48,507	1 8	Total ..	3,867,583	12 0
S.A. ..	67,906	2 4	{ Police	594,199	1 10
			{ Gaols	1,196,225	3 8
			{ Other		

The total expenditure in connexion with the administration of justice in the various States has risen from 15s. 11d. per inhabitant in 1926-27 to 17s. 6d. in 1930-31. Police expenditure increased by 1s. 6d. per head, the average for gaols by 6d. per head, while the expenditure on courts and the remaining machinery of justice decreased by 5d. per head during the period. Increased salaries and allowances, and the heavier cost of materials and equipment were largely responsible for the rise in cost during the last few years. As might naturally be expected, however, in view of the necessity for economy, the total expenditure on this service for the year 1930-31 amounting to £5,658,000, shows a considerable decline as compared with that for 1929-30 when the total was returned at £6,055,000.

2. Federal Expenditure.—The expenditure shown in the foregoing table is that incurred by the State Governments only, and does not include expenditure in connexion with the Commonwealth Attorney-General's Department, which is given hereunder for the period 1926-27 to 1930-31 :—

**COMMONWEALTH ATTORNEY-GENERAL'S DEPARTMENT—EXPENDITURE.**

Year.				Amount.	Year.				Amount.
				£					£
1926-27	..	..	..	198,510	1929-30	..	..	..	245,491
1927-28	..	..	..	231,697	1930-31	..	..	..	233,199
1928-29	..	..	..	246,745					

The totals for each year include expenditure in connexion with Patents and Copyright which increased from £48,691 in 1925-26 to £54,136 in 1930-31. As pointed out previously, the Commonwealth took over jurisdiction in bankruptcy in August, 1928, and the expenditure thereon in 1930-31 amounted to £30,294. Expenditure in connexion with the Federal Capital Territory police amounted in 1930-31 to £5,339 while £1,115 was expended on miscellaneous items including the Law Court, Titles Office, and Industrial Arbitration Board. During the same year the Department of the Interior expended the following amounts in the Northern Territory :—Police, £20,708 ; Prisons, £6,232 ; other expenditure in connexion with administration of Justice, £3,962.

## CHAPTER XII.

### PUBLIC BENEVOLENCE.

#### § 1. Introductory.

Charity and charitable effort in Australia may be classified under three headings, viz. :—(a) State ; (b) public ; (c) private. To the first belong all institutions wholly provided for by the State, such as the principal hospitals for the insane in the various States, the Government hospitals in Western Australia, and the Government asylums for the infirm in New South Wales. The second class comprises public institutions of two kinds, viz. :—(i) those partially subsidized by the State or State endowed, but receiving also private aid, and (ii) those wholly dependent upon private aid. To the former division belong such institutions as the principal metropolitan hospitals. In the latter are included institutions established and endowed by individuals for the benefit of the needy generally. All charitable movements of a private character are included in the third group. A more or less accurate statistical account is possible in classes (a) and (b), but in regard to (c) complete tabulation is, for obvious reasons, impossible. Owing to differences in the method and date of collection and tabulation it is impossible to bring statistics of charitable institutions to a common year. In general, there is considerable want of harmony in the statistical information available for the different States.

No poor-rate is levied in Australia. Reference to old-age pensions, invalid pensions, and maternity allowances, which are provided by the Commonwealth, will be found on pages 307 to 309 of Chapter VIII. "Public Finance."

From time to time relief funds have been organized for famine-stricken countries in various parts of the world, or for places where plagues, flood, fire, or earthquake have shown the need of urgent relief. Special funds were also raised for persons disabled or bereaved through war. Complete statistical information in regard to these forms of charity is not, however, available. It may be mentioned that the daily Press frequently accepts the duty of collectorship in charity appeals. In regard to subscriptions to the various patriotic funds which were instituted in consequence of the war, the total for Australia was estimated to exceed £12,500,000 sterling.

#### § 2. The Larger Charities of Australia.

1. Public Hospitals (other than Hospitals for the Insane).—(i) *General*. All the State capitals have several large and well-equipped hospitals, and there is at least one in every important town. In large centres there are hospitals for infectious diseases, consumptives, women, children, incurables, etc.

The particulars given herein refer to public hospitals at the latest available date, and include all, other than private, institutions affording hospital relief, whether general or special, with the exception of the hospitals for the insane. It is considered that the extension of the scope of these statistics to embrace both general and special institutions will afford a better comparison as between the various States than the statistics previously issued relating to general hospitals only.

(ii) *Principal Hospitals in each State.* In earlier issues of the Official Year Book (See No. 22, pp. 481-2) particulars respecting staff, accommodation, etc., of each of the principal hospitals were given.

(iii) *Number, Staff, and Accommodation, 1930.* Details regarding the number of hospitals, staffs, and accommodation for the year 1930, or nearest available year, are given in the appended table :—

PUBLIC HOSPITALS.—NUMBER, STAFFS, AND ACCOMMODATION, 1930 (a).

Particulars..	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>Number of Hospitals—</b>							
Government .. ..	4	68	11	11	19	3	508
Other .. ..	162		117	39	68	16	
<b>Total .. ..</b>	<b>166</b>	<b>68</b>	<b>118</b>	<b>50</b>	<b>87</b>	<b>19</b>	<b>508</b>
<b>Medical Staff—</b>							
Honorary .. ..	1,201	792	242	134	52	43	3,110
Salaried .. ..	277	175	138	41			
<b>Total .. ..</b>	<b>1,478</b>	<b>967</b>	<b>380</b>	<b>175</b>	<b>52</b>	<b>58</b>	<b>3,110</b>
<b>Nursing Staff—</b>							
Males .. ..	1131	1,992	80	676	3	3	9,141
Females .. ..	3,532						
<b>Total .. ..</b>	<b>3,645</b>	<b>1,992</b>	<b>1,805</b>	<b>676</b>	<b>707</b>	<b>316</b>	<b>9,141</b>
<b>Accommodation—</b>							
Number of dormitories, wards, etc. ..	1,310	701	1,062	455	494	219	4,151
Capacity in cubic feet ..	10,273,953	7,322,912	5,724,784	2,448,467	2,331,566	1,214,238	29,315,920
Number of beds, etc. ..	8,988	6,062	4,809	1,966	2,228	1,134	25,181
Cubic feet to each bed..	1,143	1,208	1,190	1,249	1,046	1,071	1,164

(a) The figures relate to the years ended as follows :—New South Wales—31st December, 1929 (latest available); South Australia and Tasmania—31st December, 1930; Victoria—30th June, 1930; Queensland and Western Australia—30th June, 1931.

(iv) *Patients Treated.* The table hereunder furnishes particulars respecting patients treated. In addition to the facilities provided in the ordinary wards, a considerable amount of accommodation for certain classes of cases is furnished in out-door or verandah sleeping places, and this can be augmented; full particulars in connexion with these are not available. So far as the returns show, there were 1,453 out-door beds in New South Wales, 771 in Queensland, 210 in South Australia, 272 in Western Australia, and 154 in Tasmania. These figures are not included in the totals given in the table above.

## PUBLIC HOSPITALS.—PATIENTS TREATED, 1930 (a).

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Indoor Relief—Total Cases Treated—							
Males .. ..	76,753	34,310	38,257	12,396	15,474	7,578	184,768
Females .. ..	75,402	40,211	34,022	13,718	13,534	9,088	185,975
Total .. ..	152,155	74,521	72,279	26,114	29,008	16,666	370,743
Inmates at beginning of year—							
Males .. ..	3,512	2,174	1,810	634	811	366	9,307
Females .. ..	3,195	2,129	1,392	552	583	395	8,246
Total .. ..	6,707	4,303	3,202	1,186	1,394	761	17,553
Admissions and Re-admissions during year—							
Males .. ..	73,241	32,136	36,447	11,762	14,663	7,212	175,461
Females .. ..	72,207	38,082	32,630	13,166	12,951	8,693	177,729
Total .. ..	145,448	70,218	69,077	24,928	27,614	15,905	353,190
Discharges—							
Recovered or Relieved:							
Males .. ..	66,237	28,881	33,483	9,890	13,316	6,636	158,443
Females .. ..	66,933	35,690	30,533	11,543	12,271	8,194	165,164
Total .. ..	133,170	64,571	64,016	21,433	25,587	14,830	323,607
Unrelieved or Incurable:							
Males .. ..	2,208	340	780	612	412	232	(e)
Females .. ..	2,145	386	579	688	244	257	(e)
Total .. ..	4,353	(b) 726	(f) 1,359	1,300	656	489	(e)
Not stated or Indefinite:							
Males .. ..	..	235	301	409	..	12	(e)
Females .. ..	..	107	224	313	..	11	(e)
Total .. ..	..	(c) 342	(d) 525	722	..	23	(e)
Deaths—							
Males .. ..	4,727	2,615	1,758	864	944	349	11,257
Females .. ..	3,046	1,755	1,042	575	420	266	7,104
Total .. ..	7,773	4,370	2,800	1,439	1,364	615	18,361
Inmates at end of year—							
Males .. ..	3,581	2,239	1,935	621	802	349	9,527
Females .. ..	3,278	2,273	1,644	599	599	360	8,753
Total .. ..	6,859	4,512	3,579	1,220	1,401	709	18,280
Average Daily Number Resident—							
Males .. ..	(e)	(e)	(e)	663	(e)	291	(e)
Females .. ..	(e)	(e)	(e)	639	(e)	386	(e)
Total .. ..	7,501	4,589	3,311	1,302	1,358	677	18,738

(a) See footnote (a) to previous table. (b) Incurable only. (c) Includes unrelieved.  
(d) Removed to other institutions. (e) Not available. (f) Or at own request.



(v) *Revenue and Expenditure.* The revenue and expenditure for the year 1930 were as follow :—

**PUBLIC HOSPITALS.—REVENUE AND EXPENDITURE, 1930. (a)**

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	£	£	£	£	£	£	£
<b>Revenue—</b>							
Fees of patients, etc.	287,813	162,101	132,275	70,076	95,509	49,638	797,412
Government grants	903,078	265,543	326,766	225,412	120,103	59,875	1,900,777
Other .. ..	700,969	446,404	236,494	72,634	43,712	20,404	1,520,617
<b>Total ..</b>	<b>1,891,860</b>	<b>874,048</b>	<b>695,535</b>	<b>368,122</b>	<b>259,324</b>	<b>129,917</b>	<b>4,218,806</b>
<b>Expenditure—</b>							
Salaries and Maintenance ..	1 288,578	746,460	603,722	270,192	238,439	94,835	3,242,226
Buildings .. ..	409,623	186,823	107,180	98,131	7,462	10,341	1,075,986
Other .. ..	151,456	51,649		8,315	15,957	29 049	
<b>Total ..</b>	<b>1,849,657</b>	<b>984,932</b>	<b>710,902</b>	<b>376,638</b>	<b>261,858</b>	<b>134,225</b>	<b>4,318,212</b>

(a) See note (a) to table on page 402.

(vi) *Summary for Five Years, 1926 to 1930.* Returns for the last five years of the number of hospitals in Australia, admissions, patients treated, deaths, and expenditure, are given in the following table. The figures for the years 1926 to 1929 relate mainly to general hospitals, while those for 1930 relate to both general and special hospitals. It should be noted that the statistics for the States cannot be brought to a common year and consequently the following particulars relate to a combination of calendar and financial years.

**PUBLIC HOSPITALS.—SUMMARY, AUSTRALIA.**

Particulars.	1926.	1927.	1928.	1929.	1930.
Number of institutions ..	458	470	472	480	508
Number of beds ..	20,784	21,657	21,638	22,029	25,181
Admissions during year ..	274,577	287,662	311,103	319,754	353,190
Total indoor cases treated ..	288,036	302,296	326,049	335,530	370,743
Deaths .. ..	15,912	16,287	17,265	18,004	18,361
Expenditure .. ..	£ 3,404,622	3,656,890	3,862,048	4,064,654	4,318,212

In addition to those admitted to the institutions, there are large numbers of out-patients. The exact number of these cannot be given, but a rough estimate of distinct cases places the total between 800,000 and 900,000.

2. *Benevolent and Destitute Asylums.*—(i) *General.* There has been a great increase in recent years in the amount of aid provided for the aged, due partly to the fact that the general age of the community has advanced and partly to the increased regard paid in all British communities to the well-being of the helpless. In Australia numerous establishments have been founded for the housing and protection of persons no longer able to care for themselves. These institutions are supported by Government and municipal aid, public subscriptions, charity performances, bequests, etc.; and in many cases relatives of indigent and afflicted persons contribute to their maintenance.

The impossibility of an entirely satisfactory statistical tabulation in regard to all forms of charitable aid is especially marked in the case of benevolent institutions, since the conditions under which they have been established in the different centres in Australia have resulted in differences in the classes of cases treated by them. For example, in Western Australia, the Home for Destitute Women includes a maternity ward, for which the statistics are not separately kept. Since the chief function of the institution is aid to the destitute, it has been included amongst benevolent asylums. In Victoria, although several of the hospitals were also benevolent asylums, a separation was effected and asylum patients were transferred to appropriate institutions. In South Australia, the Destitute Asylum includes lying-in and children's departments.

(ii) *Principal Institutions.* Particulars respecting the accommodation and the numbers of inmates of the principal institutions were published in earlier issues of the Official Year Book (See No. 22, p. 485).

(iii) *Revenue and Expenditure.* Details regarding revenue and expenditure for the year 1930 are given in the following table:—

## BENEVOLENT ASYLUMS.—REVENUE AND EXPENDITURE, 1930.(a)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	£	£	£	£	£	£	£
<b>Revenue—</b>							
Government aid ..	144,626	28,446	35,016	9,816	5,133	11,784	234,821
Municipal aid ..	..	1,369	..	..	..	..	1,369
Public subs., legacies, etc.	2,336	18,871	107	1,872	..	..	23,186
Fees ..	34,125	33,044	1,325	17,718	20,164	4,856	111,232
Other ..	8,880	16,630	11,990	747	..	883	39,130
<b>Total ..</b>	<b>189,967</b>	<b>98,360</b>	<b>48,438</b>	<b>30,153</b>	<b>25,297</b>	<b>17,523</b>	<b>409,738</b>
<b>Expenditure—</b>							
Buildings ..	4,907	7,045	229	1,134	..	77	13,392
Maintenance ..	182,142	72,160	47,689	29,116	25,297	13,547	369,951
Other ..	4,464	12,511	825	47	..	3,899	21,746
<b>Total ..</b>	<b>191,513</b>	<b>91,716</b>	<b>48,743</b>	<b>30,297</b>	<b>25,297</b>	<b>17,523</b>	<b>405,089</b>

(a) The figures relate to the years ended as follows:—New South Wales and South Australia—31st December, 1930; Victoria—30th June, 1930; and Queensland, Western Australia and Tasmania—30th June, 1931.

3. *Orphanages, Industrial Schools, etc.*—(i) *General.* The organization of charitable effort varies greatly in regard to orphans and waifs. In many institutions, shelter and some form of industrial training are offered to destitute children of all classes whether orphans or not, while some of those styled orphanages do not confine their relief strictly to orphans. The expenditure on orphanages in 1930 was approximately £220,000.

(ii) *Principal Institutions.* Particulars concerning the principal institutions in each State were published in earlier Year Books (See No. 22, p. 486).

(iii) *Transactions of State Departments.* The following table summarizes the transactions in 1930 of State Departments for the relief of neglected children :—

STATE RELIEF OF NEGLECTED CHILDREN.—SUMMARY, 1930.(a)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Number of children in institutions, boarded out, or on probation—							
Males .. .. .	2,990	3,972	1,338	580	490	356	9,726
Females .. .. .	2,526	3,200	930	515	391	257	7,819
Total .. .. .	5,516	7,172	2,268	1,095	881	613	17,545
Number of children boarded out with their own mothers and female relatives—not included in above figures—							
Males .. .. .	11,117	10,919	2,972	113	27	..	28,114
Females .. .. .			2,850	81	35	..	
Total .. .. .	11,117	10,919	5,822	194	62	..	28,114
Total children under State control .. .. .	16,633	18,091	8,090	1,289	943	613	45,659
Gross cost to State of children's relief .. .. .	£ 537,834	£ 427,239	£ 203,077	£ 51,477	£ 27,746	£ 16,507	£ 1,263,880
Receipts from parents' contributions, etc. .. .. .	27,790	12,496	12,225	4,458	3,771	1,154	61,894
Net cost .. .. .	510,044	414,743	190,852	47,019	23,975	15,353	1,201,986

(a) The figures relate to the years ended as follows :—New South Wales, Victoria and Queensland—31st December, 1930; other States—30th June, 1931.

4. **Leper Hospitals.**—Isolation hospitals for the treatment of lepers have been established in New South Wales (Little Bay); Queensland (Peel Island, near Brisbane), Western Australia (near Cossack); and the Northern Territory (near Darwin). At the end of 1931 there were 20 cases in residence at Little Bay, 56 at Peel Island, none in Western Australia and 49 in the Northern Territory. During the year 1931 a total of 20 cases of leprosy was reported in Australia, of which 2 were recorded in New South Wales, 14 in Queensland, 2 in Western Australia and 2 in the Northern Territory. In 1930 there were 16 deaths from this disease, and in 1931 the number of deaths recorded was 6, 1 in New South Wales, 4 in Queensland and 1 in the Northern Territory.

5. **Hospitals for the Insane.**—(i) *General.* The method of compiling insanity statistics has been fairly uniform throughout the States, but differences in diagnosis of the early stages of the disease introduce an element of uncertainty which considerably affects the value of comparisons.

(ii) *Hospitals, Staff, etc., 1930.* Particulars regarding the number of institutions, medical and nursing staff, and accommodation are given in the appended table for the year 1930 :—

**HOSPITALS FOR THE INSANE.—NUMBER, STAFFS, ACCOMMODATION, 1930.(a)**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>Number of Institutions—</b>							
Government .. .. .	11	8	3	2	5	1	30
Private .. .. .	2	(c) 4	..	..	1	..	7
<b>Total .. .. .</b>	<b>13</b>	<b>12</b>	<b>3</b>	<b>2</b>	<b>6</b>	<b>1</b>	<b>37</b>
<b>Medical Staff—</b>							
Males .. .. .	30	28	6	6	5	2	77
Females .. .. .	4	..	1	..	..	..	5
<b>Total .. .. .</b>	<b>34</b>	<b>28</b>	<b>7</b>	<b>6</b>	<b>5</b>	<b>2</b>	<b>82</b>
<b>Nursing Staff and Attendants—</b>							
Males .. .. .	876	667	258	112	132	64	2,109
Females .. .. .	826	620	190	84	101	71	1,892
<b>Total .. .. .</b>	<b>1,702</b>	<b>1,287</b>	<b>448</b>	<b>196</b>	<b>233</b>	<b>135</b>	<b>4,001</b>
<b>Accommodation—</b>							
Number of dormitories ..	(b)	1,371	638	517	66	419	(b)
Capacity, in cubic feet ..	(b)	4,033,927	2,075,355	1,000,072	783,474	896,680	(b)
Number of beds .. .. .	9,531	6,065	2,665	1,486	(d)1,284	748	21,779
Cubic feet to each bed ..	(b)	665	779	673	1,154	1,199	(b)

(a) The figures relate to years ended as follows :—New South Wales and Queensland—30th June, 1931; other States—31st December, 1930. (b) Not available. (c) Cases at the end of the year numbered 90; other particulars not available. (d) Includes 605 beds on verandahs or out of doors.

(iii) *Patients, 1930.* Information regarding patients treated, deaths, etc., for the year 1930 is given in the table hereunder :—

**HOSPITALS FOR THE INSANE.—PATIENTS, DEATHS, ETC., 1930.(a)**

Particulars.	N.S.W.	Vic. (b)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>Admissions and re-admissions during year—</b>							
Males .. .. .	848	425	257	142	115	53	1,840
Females .. .. .	720	456	190	118	73	46	1,603
<b>Total .. .. .</b>	<b>1,568</b>	<b>881</b>	<b>447</b>	<b>260</b>	<b>188</b>	<b>99</b>	<b>3,443</b>
<b>Discharges—Recovered—</b>							
Males .. .. .	227	90	120	45	22	16	520
Females .. .. .	231	103	82	23	6	20	465
<b>Total .. .. .</b>	<b>458</b>	<b>193</b>	<b>202</b>	<b>68</b>	<b>28</b>	<b>36</b>	<b>985</b>
<b>Relieved and unrelieved—</b>							
Males .. .. .	150	79	6	28	28	6	297
Females .. .. .	130	96	7	26	7	10	276
<b>Total .. .. .</b>	<b>280</b>	<b>175</b>	<b>13</b>	<b>54</b>	<b>35</b>	<b>16</b>	<b>573</b>

(a) See footnote (a) to previous table.

(b) Exclusive of four licensed private houses.

HOSPITALS FOR THE INSANE.—PATIENTS, DEATHS, ETC., 1930(a)—*continued.*

Particulars.	N.S.W.	Vic. (b)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Absconders not retaken—							
Males .. .. .	11	9	..	4	1	..	25
Females .. .. .	1	..	..	..	..	..	1
Total .. .. .	12	9	..	4	1	..	26
Deaths—							
Males .. .. .	312	181	96	51	57	19	716
Females .. .. .	213	185	70	53	45	15	581
Total .. .. .	525	366	166	104	102	34	1,297
Number of patients on books at end of year—							
Males .. .. .	5,325	3,234	1,906	775	854	326	12,420
Females .. .. .	4,345	3,435	1,202	629	420	309	10,340
Total .. .. .	9,670	6,669	3,108	1,404	1,274	635	22,760
Average daily number resident—							
Males .. .. .	5,000	2,804	1,902	775	824	320	11,625
Females .. .. .	3,976	3,023	1,161	618	402	311	9,491
Total .. .. .	8,976	5,827	3,063	1,393	1,226	631	21,116
Number of patients on books at end of year per 1,000 of population—							
Males .. .. .	4.19	3.65	3.79	2.58	3.77	2.98	3.76
Females .. .. .	3.53	3.80	2.70	2.23	2.17	2.78	3.26
Persons .. .. .	3.87	3.72	3.28	2.41	3.03	2.88	3.51
Average number of patients resident in hospitals for insane per 1,000 of mean population—							
Males .. .. .	3.95	3.17	3.82	2.58	3.64	2.98	3.53
Females .. .. .	3.25	3.36	2.63	2.20	2.09	2.85	3.01
Persons .. .. .	3.61	3.26	3.26	2.40	2.93	2.91	3.28

(a) See footnote (a) to previous table.

(b) Exclusive of four licensed private houses.

In some States persons well advanced towards recovery are allowed to leave the institutions and reside with their relatives or friends, but they are under supervision and their names are kept on the books.

(iv) *Revenue and Expenditure, 1930.* The revenue of Government asylums is small in comparison with their cost, and consists chiefly of patients' fees. The proportion of expenditure borne by the State amounts to about 85 per cent.

## HOSPITALS (GOVERNMENT) FOR THE INSANE.—FINANCES, 1930.(a)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Revenue (Exclusive of Government Grants)—							
Fees of Patients .. .. .	107,141	39,828	27,507	17,543	15,649	9,209	216,877
Other .. .. .	2,127	5,815	455	1,606	3,641	405	14,049
Total .. .. .	109,268	45,643	27,962	19,149	19,290	9,614	230,926
Expenditure—							
Salaries .. .. .	426,081	277,657	123,710	53,514	64,058	34,352	979,372
Maintenance .. .. .	199,849	142,387	69,102	42,545	35,916	20,351	510,150
Buildings .. .. .	..	12,595	7,628	5,754	587	..	26,564
Other .. .. .	16,238	5,757	..	423	..	499	22,917
Total .. .. .	642,168	438,396	200,440	102,236	100,561	55,202	1,539,003
Expenditure per Average Daily Resident .. .. .	£71/10/10	£75/4/8	£65/8/9	£73/7/10	£82/0/6	£87/9/8	£72/17/8

(a) The figures relate to years ended as follows:—New South Wales, Victoria, Queensland and Western Australia—30th June, 1931; other States—31st December, 1930.

(v) *Summary for Australia, 1926 to 1930.* The table hereunder gives a summary for hospitals for the insane in Australia for each of the five years 1926 to 1930. The figures for the States cannot be brought to a common year; consequently the following particulars relate to a combination of calendar and financial years. Licensed houses are included in the number of institutions for Victoria, and in all particulars save expenditure for New South Wales. The figures are exclusive of reception houses and observation wards in gaols. In the case of New South Wales the expenditure figures include cost of Broken Hill patients treated in South Australian hospitals:—

## HOSPITALS FOR THE INSANE.—SUMMARY, AUSTRALIA.

Particulars.	1926.	1927.	1928.	1929.	1930.
Number of institutions .. ..	34	34	36	38	37
Number of beds .. ..	18,885	19,474	19,467	20,951	21,779
Admissions .. ..	3,452	3,466	3,537	3,471	3,443
Discharged as recovered, relieved, etc.	1,592	1,576	1,669	1,625	1,558
Deaths .. ..	1,459	1,433	1,429	1,451	1,297
Expenditure—Total .. ..	£1,629,242	1,666,061	1,706,259	1,721,602	1,539,003
„ —Per Average Daily Resident .. ..	£83/9/7	£84/2/3	£84/1/8	£83/11/10	£72/17/8

(vi) *Number of Insane, 1926 to 1930.* The proportion of insane, as well as the total number returned as under treatment, has changed very little during recent years. The next table gives the number of insane under official care in Australia, and the proportion per 1,000 of population for the last five years.

## INSANE PERSONS IN INSTITUTIONS.

State.	1926.	1927.	1928.	1929.	1930.
NUMBER.					
New South Wales .. ..	8,570	8,898	9,104	9,377	9,670
Victoria .. ..	6,329	6,360	6,501	6,531	6,669
Queensland .. ..	3,000	3,017	3,032	3,042	3,108
South Australia .. ..	1,282	1,306	1,350	1,374	1,404
Western Australia .. ..	1,164	1,188	1,229	1,252	1,274
Tasmania .. ..	615	623	615	622	635
Australia .. ..	20,960	21,392	21,831	22,198	22,760

## PER 1,000 OF POPULATION.

New South Wales .. ..	3.64	3.71	3.72	3.78	3.87
Victoria .. ..	3.70	3.65	3.69	3.68	3.72
Queensland .. ..	3.40	3.36	3.31	3.27	3.28
South Australia .. ..	2.26	2.27	2.33	2.37	2.41
Western Australia .. ..	3.07	3.03	3.03	3.00	3.03
Tasmania .. ..	2.86	2.89	2.84	2.84	2.88
Australia .. ..	3.43	3.43	3.45	3.46	3.51

The difference between States in the number of insane persons in institutions per 1,000 of population may be due to a large extent to differences in classification of the insane.

A more rational attitude towards the treatment of mental cases has resulted in a greater willingness in recent years to submit afflicted persons to treatment at an earlier stage, and an increase in the number of recorded cases, therefore, does not necessarily imply an actual increase in insanity.

(vii) *Causes of Insanity.* The general information available respecting the causes of the insanity of persons admitted to institutions is too unsatisfactory to be given in detail. The figures for previous attacks and ascertained hereditary influence and ascertained congenital defect, though not entirely satisfactory, may, however, be mentioned. Of the total admissions and re-admissions during the year 1930, 15 per cent. had been subject to previous attacks of insanity, while "ascertained hereditary influence and ascertained congenital defect" were responsible for 23 per cent. The figure for previous attacks is exclusive of South Australia, for which no particulars are available.

(viii) *Length of Residence in Hospital.* Information concerning the length of residence of persons who died or were discharged was given in earlier Year Books (See No. 22, p. 491).

6. *Care of the Feeble-minded.*—An account of the treatment of the feeble-minded, supplied by the Public Health Department of Tasmania, appeared in Official Year Book No. 19, pp. 477 and 478.

7. *Protection of Aborigines.*—For the protection of the aboriginal Australian race there are institutions, under the supervision of Aborigines Boards, where the blacks are housed and encouraged to work, the children receiving elementary education. The work is usually carried on at mission stations, but many of the natives are nomadic, and receive food and clothing when they call, whilst others but rarely come under the notice of the Boards. The native race is extinct in Tasmania. The expenditure from Consolidated Revenue in 1930–31 was, New South Wales, £37,145; Victoria, £8,216; Queensland, £46,857; South Australia, £24,269; Western Australia, £22,662; Northern Territory, £4,249; total for Australia, £143,398. In New South Wales the number of aboriginals living in supervised camps at the 30th June, 1931, was 3,267, of whom 416 were full-bloods. At the 30th June, 1930, there were 45 full-bloods and 281 three-quarter and half-castes under the care of the Aborigines Protection Board at stations in Victoria. In Queensland in 1930–31 there were 4,777 aborigines permanently resident at the various stations. At the 30th June, 1931, there were 878 inmates, of whom 107 were full-bloods, at mission stations in South Australia, and in Western Australia the aborigines and half-castes supported at similar institutions in the year 1930–31 numbered 702 (including 161 supported by the State), while an average of 1,950 natives was rationed each month by the Aborigines Department. At the mission stations in the Northern Territory 833 full-bloods and 40 half-castes were in residence, but casual assistance and medical attention are given to large numbers of natives every year.

8. *Royal Life Saving Society.*—In each of the State capitals, "centres" of the Royal Life Saving Society have been established, and in some States sub-centres have been established in the larger provincial districts. Saving of life from drowning and other forms of asphyxiation is the object of the Society, and its immediate aims are (a) educative and (b) remedial. The encouragement of swimming and life-saving in schools, colleges, clubs, etc., will bring about a more widespread knowledge of these necessary matters, and there is increasing provision of life-belts, reels, lines, and other first-aid appliances on ocean beaches, wharves, and other suitable places. Upwards of 10,000 certificates of proficiency in various grades are issued annually after examination throughout Australia, the numbers for the individual States for 1931 being New South Wales, 4,782; Victoria, 1,855; Queensland, 1,049; South Australia, 644; Western Australia, 2,253 (1930); and Tasmania, 150.

9. *Royal Humane Society.*—The Royal Humane Society of Australasia has for its objects (a) to grant awards for skill, promptness, and perseverance in life-saving; (b) to provide assistance in cases of danger and apparent death; (c) to restore the apparently drowned; (d) to collect and circulate the latest information regarding approved methods and apparatus for life-saving. Awards of medals and certificates are made numbering about 100 annually. Upwards of 300 lifebuoys have been provided at various places on the coasts, rivers, lakes, and reservoirs in the various States. Swimming is encouraged amongst school children, and awards are made for proficiency.

10. **Other Charitable Institutions.**—Owing to variety of name and function of other charitable institutions it has been found impracticable to give detailed results. The aid given in kind—food, clothing, tools of trade, etc.—is considerable. whilst the shelter and treatment afforded range from a bed for a night for casual callers in establishments ministering minor charity, to indoor treatment over long periods in those that exist for the relief of the aged and the infirm. The institutions not so particularized include asylums for the deaf, dumb, and blind, infant homes, homes of the destitute and aged poor, industrial colonies, night shelters, crèches, homes of hope, rescue homes, free kindergarten and ragged schools, auxiliary medical charities, free dispensaries, benevolent societies and nursing systems, ambulance and health societies, boys' brigades, humane and animals' protection societies, prisoners' aid associations, shipwreck relief societies, bush fires and mining accident relief funds, etc.

11. **Total Expenditure on Charities.**—Issues of the Official Year Book, prior to No. 24, embodied statistics of expenditure on charities. The returns available, however, included a portion only of direct expenditure by Governments, and, in general, there is a want of harmony in the information available for the different States. Pending the result of further inquiry it has been decided to omit this table from the present chapter.



## CHAPTER XIII.

## PUBLIC HYGIENE.

## § 1. Public Health Legislation and Administration.

Reference to the various public health authorities, Commonwealth and State, their functions, and the legislation administered, may be found in earlier issues of the Official Year Book (see No. 22, pp. 493 to 495).

## § 2. Inspection and Sale of Food and Drugs.

Legislation is in force in each State concerning the inspection and sale of food and drugs, the general objects being to secure the wholesomeness, cleanliness, and freedom from contamination or adulteration of any food, drug or article; and the cleanliness of receptacles, places, and vehicles used for their manufacture, storage or carriage. For further particulars in this connexion, and with respect also to the sale and custody of poisons, reference should be made to Official Year Book, No. 22, pp. 495-497.

## § 3. Supervision of Dairies, Milk Supply, etc.

1. **General.**—In earlier issues (see No. 22, pp. 497 to 499), allusion is made to the legislation in force in the various States to ensure the purity of the milk supply and of dairy produce generally.

2. **Number of Dairy Premises Registered.**—The following table shows, so far as the particulars are available, the number of dairy premises registered and the number of cattle thereon. Compulsory registration is not in force throughout the whole area of the various States.

DAIRY PREMISES REGISTERED, AND CATTLE THEREON, 1931.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.
Premises registered ..	24,754	25,970	24,000 <i>a</i>	10,500	(c)	(c)
Cattle thereon ..	1,006,129	337,809	724,323 <i>b</i>	65,240	(c)	(c)

(a) Approximate number of dairies registered.

(b) Figures for 1930.

(c) Not available.

## § 4. Prevention and Control of Infectious and Contagious Diseases.

1. **General.**—The provisions of the various Acts in regard to the compulsory notification of infectious diseases and the precautions to be taken against the spread thereof may be conveniently dealt with under the headings—Quarantine; Notifiable Diseases, including Venereal Diseases; and Vaccination.

2. **Quarantine.**—The Quarantine Act is administered by the Commonwealth Department of Health, and uniformity of procedure has been established in respect of all vessels, persons, and goods arriving from overseas ports or proceeding from one State to another, and in respect of all animals and plants brought from any place outside Australia. In regard to interstate movements of animals and plants, the Act becomes operative only if the Governor-General be of opinion that Federal action is necessary for the protection of any State or States; in the meantime the administration of inter-state quarantine of animals and plants is left in the hands of the States. The Commonwealth possesses stations in each State for the purposes of human and of animal quarantine.

Further information concerning the chief provisions of the Act and its administration is given in some detail in earlier issues (see No. 22, p. 500).



DISEASES NOTIFIABLE IN EACH STATE AND TERRITORY AND NOTIFICATIONS FOR THE YEAR ENDED 26TH DECEMBER, 1931—*continued.*

Disease.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Fed. Cap. Ter.	N.A.
Tetanus .. .. .	*	14	*	*	*	*	*	*
Trichinosis .. .. .	*	*	*	Nil	*	*	*	*
Tuberculosis (g) .. .. .	1,588	1,165	290	403	372	174	9	3
Tuberculosis in Animals .. .. .	*	*	*	Nil	*	*	*	*
Typhoid (h) .. .. .	342	203	159	64	70	22	Nil	Nil
Typhus (k) .. .. .	Nil	Nil	(i)2	(i)2	(i)52	Nil	Nil	Nil
Undulant Fever .. .. .	*	*	*	*	*	*	*	Nil
<b>Venereal Diseases (l)—</b>								
Chancroid .. .. .	22	61	2	(j)*	18	1	*	—
Gleet .. .. .	209	*	*	(j)*	Nil	7	*	*
Gonorrhœa .. .. .	3,557	4,413	639	(j)*	1,366	288	*	—
Gonorrhœal Ophthalmia .. .. .	8	Nil	*	(j)*	3	1	*	*
Infective Granuloma of Pudenda .. .. .	Nil	Nil	2	(j)*	3	*	*	—
Ophthalmia Neonatorum .. .. .	*	Nil	Nil	*	Nil	Nil	*	*
Syphilis .. .. .	1,412	691	62	(j)*	170	26	*	Nil
Venereal Warts .. .. .	17	Nil	Nil	(j)*	Nil	Nil	*	*
Whooping Cough .. .. .	*	*	*	*	*	*	182	1
Yellow Fever .. .. .	Nil	Nil	Nil	495	Nil	Nil	Nil	Nil

(a) Includes Cerebro-Spinal fever. (b) Includes Membranous Croup. (c) Bacillary and Amoebic. (d) Includes Poliomyelitis Anterior Acute, Infantile Paralysis and Poliomyelitis. (e) Includes Puerperal Pyrexia. (f) Includes Scarlatina. (g) Includes all forms except in New South Wales, Western Australia and North Australia where only pulmonary tuberculosis is notifiable. (h) Includes Enteric Fever and Paratyphoid. (i) Includes Brill's disease, Endemic Typhus and Tropical Typhus. (j) Act is not yet in operation and so diseases not yet notifiable. (k) Cases recorded are all of the mild form known as Brill's disease or Endemic Typhus. (l) Notifications for 1931 not yet available. Those given are for year 1930. Figures for North Australia are not available.

**B. Venereal Diseases.—(i) General.** The prevention and control of venereal diseases are undertaken by the States. Each State has a Venereal Diseases Act, or provisions in the Health Act govern the working of the measures taken to combat these diseases. In every State notification has been made compulsory. A list of notifiable forms of venereal complaints is given in the table on the preceding page. Steps have been taken to ensure free treatment by medical practitioners or in subsidized hospitals and clinics. Registered pharmaceutical chemists are allowed to dispense prescriptions only when signed by medical practitioners. Clinics have been established, and, in some cases, beds in public hospitals have been set aside for patients suffering from these diseases.

Penalties may be imposed on a patient who fails to continue under treatment. Clauses are inserted in the Acts which aim at preventing the marriage of any patient or the employment of an infected person in the manufacture and distribution of foodstuffs.

For several years the Commonwealth Government granted a subsidy to each of the States to assist in providing hospital treatment and administrative control of venereal diseases, but this subsidy has been discontinued.

In 1927 a Division of Tuberculosis and Venereal Disease was established in the Commonwealth Department of Health, with a medical officer as Director. This Division ceased to exist in April, 1932.

(ii) *Details by States.* A statement of the provisions in each State, together with certain statistical data, appeared in earlier Year Books (see No. 22, pp. 503 and 504).

**4. Vaccination.—(i) Demand for Vaccine.** In New South Wales there is no statutory provision for compulsory vaccination, though in all the other States such provision has been made. Jennerian vaccine for vaccination against small-pox is prepared at the Commonwealth serum laboratories in Melbourne. A moderate demand exists for the vaccine in Victoria, but in the other States the normal requirements are small.

(ii) *Details by States.* In earlier issues of the Year Book (see No. 22, pp. 504 and 505) information was given concerning the provisions regarding vaccination in each State.

5. **Commonwealth Serum Laboratories.**—The establishment for the preparation of Jennerian vaccine situated at Royal Park, near Melbourne, formerly known as the "Calf Lymph Depot," was in 1918 greatly enlarged by the Commonwealth. The remodelled institution is designated the "Commonwealth Serum Laboratories," and forms an activity of the Commonwealth Department of Health. The list of biological preparations produced by the laboratories has been extended to cover a wide range, thus forming a valuable national provision for the protection of public health.

6. **Health Laboratories.**—The Commonwealth Department of Health has established health laboratories at Rabaul in New Guinea, at Lismore in New South Wales, at Bendigo in Victoria, at Townsville, Toowoomba, Rockhampton and Cairns in Queensland, at Port Pirie in South Australia, at Kalgoorlie in Western Australia, and at Launceston in Tasmania.

The laboratory at Rabaul which until 1930 was carried on in conjunction with the hookworm campaign, and was working in close co-operation with the health organization of the New Guinea Administration, was transferred to the Administration at the beginning of 1930.

The Bendigo Laboratory, which was the first of these laboratories to be established, was opened in 1922. Besides carrying on the ordinary diagnostic and educational work of a health laboratory, it possesses an X-ray equipment, and undertakes the examination, diagnosis, and treatment of persons suffering from miner's disease and tuberculosis.

By arrangements between the Commonwealth and Western Australian Governments a special medical survey of persons engaged in the mining industry in Western Australia was carried out in 1925-26 by the Commonwealth Health Laboratory at Kalgoorlie, when 4,067 mine employees were examined. A further arrangement provided for the re-examination annually of mine employees in the Kalgoorlie district for a period of three years. This work is still being carried out.

7. **Industrial Hygiene.**—The Industrial Hygiene Division of the Commonwealth Department of Health was established in December, 1921. Its objects were the collection of reliable data, the investigation of industrial conditions affecting health, and the issue of advice to employers and employees for the improvement of conditions of work and for the safeguarding of health. Publications were issued dealing with the scope of industrial hygiene, and with health hazards in industry. With a view to the adoption of a concerted scheme of action and a uniform basis for standards and records throughout Australia, conferences of delegates from the State Health and Labour Departments and the Commonwealth Department of Health were held in 1922, 1924, and in 1927. This Division ceased to exist with the re-organization of the Department in April, 1932.

A special article entitled "Industrial Hygiene in Australia" will be found in Official Year Book No. 18, pp. 522 to 555.

8. **Veterinary Hygiene and Plant Quarantine.**—In 1927 Directors were appointed to control divisions of the Commonwealth Department of Health, which have been created to deal with veterinary hygiene and plant quarantine.

## § 5. Tropical Diseases.

1. **General.**—The remarkable development of parasitology in recent years, and the increase in knowledge of the part played by parasites in human and animal diseases, have shown that the difficulties in the way of tropical colonization, in so far as these arise from the prevalence of diseases characteristic of tropical countries, are largely removable by preventive and remedial measures. Malaria and other tropical diseases are coming more and more under control, and the improvements in hygiene and the production of new synthetic drugs for treatment which science has accomplished, have resulted in a new outlook on the question of white settlement in countries formerly regarded as unsuitable for colonization by European races. In Australia, the most important aspect of this matter is at present in relation to such diseases as hookworm, filariasis, dengue fever, and to a lesser extent, malaria, which, although practically unknown in southern Australia, occur in many of the tropical and sub-tropical parts.

A Division of Tropical Hygiene of the Commonwealth Department of Health was established to deal with these diseases and other aspects of tropical hygiene. This Division ceased to exist as such with the re-organization of the Department in April, 1932.

2. **Transmission of Disease by Mosquitoes.**—Information under this heading has appeared in earlier issues (see No. 22, pp. 506 and 507).

3. **Control of Introduced Malaria and Bilharziasis.**—Reference to this subject may be found in earlier Year Books (see No. 22, p. 507).

4. **Hookworm.**—In 1911, attention was drawn to the necessity for an investigation into hookworm infection in Queensland, and the view was expressed that notified cases did not accurately indicate the prevalence of the disease. Researches made subsequently tended to support this view.

An investigation made in Papua in 1917 by an officer of the International Board of Health of the Rockefeller Foundation disclosed the fact that half of all natives examined were infected with hookworm disease. In co-operation with the Government of Queensland and the Australian Institute of Tropical Medicine, the survey was extended to Queensland, and a considerable number of cases of hookworm infection was found in certain northern coastal areas. In October, 1919, the Australian Hookworm Campaign was begun. This campaign was supported jointly by the Commonwealth, the International Health Board of the Rockefeller Foundation, the State of Queensland, and the other States in which work in this direction was undertaken. By the end of 1922, the survey of Australia and its dependencies had been completed. The total number of examinations up to 30th September, 1924, including those in Dr. Waite's survey in Papua and the earlier work in Queensland, was as follows:—

People examined for hookworm disease	..	..	394,578
Found to be infected with hookworms	..	..	62,051 (15.7%)

Endemic hookworm infection was found in intermittent areas along the eastern coast of Australia from Cape York to Macksville in New South Wales. The higher summer rainfall in these areas appears to be chiefly responsible for the localization of the infection. It is also found in the vicinity of Broome and Beagle Bay in Western Australia, in the northern part of the Northern Territory, and along the eastern coast of the Gulf of Carpentaria. In the Territory of Papua, 59.2 per cent. of the natives were found to be infected, and in the Territory of New Guinea, 74.2 per cent. There is no endemic hookworm infection in Victoria, South Australia, Tasmania, the interior of Queensland, New South Wales, except the north-eastern part, and Western Australia except the far north.

Metalliferous mines were examined in Victoria, South Australia, New South Wales, Tasmania, and Western Australia, and were found entirely free from hookworm infection. The examination of metalliferous mines in Queensland showed either no infection or a light infection which may have originated chiefly outside the mines. Coal mines in Victoria, Tasmania, and Western Australia were free from infection. Examinations were made in the coal mines of the Newcastle district, and among 1,226 miners examined in about 25 mines only five infected miners were found. In the Ipswich group of coal mines in Queensland, 31.5 per cent. of the miners were infected, and in the Howard-Torbanlea group (Queensland) 75.8 per cent. were infected. Recommendations were made with regard to the correction of the insanitary conditions responsible for these high infection rates.

Wherever operations are carried on by the hookworm campaign, emphasis is placed on the prevention of hookworm disease, in contrast to temporary relief through the cure of existing cases, and much work has been done to improve methods of night-soil disposal, and to teach the people the danger from soil pollution.

In October, 1924, the International Health Board withdrew from the work which was then continued under the direction of the Division of Tropical Hygiene of the Commonwealth Department of Health. From 1st October, 1924, to 30th September, 1929, under the new administration the field units engaged in the investigation examined 157,998 persons, of whom 13,968, or 8.8 per cent., were found to be infected with hookworm.

In October, 1929, the scheme for hookworm control was revised and modified. In both Queensland and New South Wales there are now committees for control which include the State officers responsible for public health and the health of school children respectively: continuity and co-ordination of programme are provided for by entrusting the chairmanship of each of the committees to the Chief Quarantine Officer of the Commonwealth Department of Health at Brisbane.

In April, 1932, the State Governments having brought into existence local organizations designed to provide effective control of hookworm, the Commonwealth Government withdrew from active participation in the campaign.

In the latter part of 1922, the scope of the hookworm campaign was widened to include a malaria and filaria survey in co-operation with the Commonwealth Department of Health. This work has been carried out as opportunity arose.

Both of the species of hookworm which infest man are found in Australia. They differ in ways important to the practical sanitarian and a method has been evolved and is in use for determining their respective distribution.

Several epidemiological and microbiological problems relating to hookworm and other intestinal parasites in tropical and sub-tropical Australia have been investigated by the Commonwealth Health Laboratories in Queensland in co-operation with the work of the field units, and useful information has been obtained and applied in regard to the control of hookworm among white people in the coastal tropical and sub-tropical regions of Australia.

5. **Australian Institute of Tropical Medicine.**—The Australian Institute of Tropical Medicine was founded at Townsville in January, 1910. From 7th March, 1921, to 3rd March, 1930, when it was merged in the School of Public Health and Tropical Medicine, Sydney University, the Institute was administered by the Commonwealth Department of Health, and a full account of its activities from its foundation up to 1922 will be found in Official Year Book No. 15, pp. 1010-1012.

6. **School of Public Health and Tropical Medicine, Sydney University.**—The Commonwealth Government, under an agreement with the Sydney University, established a School of Public Health and Tropical Medicine at the Sydney University as from 4th March, 1930, for the purpose of training medical graduates and students in the subjects of public health and tropical medicine. The organization of the Australian Institute of Tropical Medicine at Townsville was merged in the new School, and the staff, equipment, and material have been transferred to Sydney.

Since 1922 a number of investigations has been carried out, including the physiology of white population in the tropics, causes of obscure tropical fevers, sociological survey of certain tropical areas of Queensland, the destruction of mosquito larvae and the control of mosquitoes in the larger centres of population, tropical diseases among the aboriginals on Palm Island, leprosy among aboriginals in the Northern Territory, prevalence of filariasis in Cairns, Yarrabah Mission Station, Port Douglas, Mossman and Innisfail, and reputed foci of malaria in tropical Queensland. Courses of instruction in tropical medicine and hygiene commence in May of each year, and continue for four months. Ten publications dealing with various aspects of tropical medicine, etc., have been issued.

7. **Royal Commission on National Health, etc.**—Information concerning the following subjects may be found in previous Year Books (see No. 22, pp. 509 and 510):—(a) Royal Commission on National Health appointed by the Commonwealth Government in 1924; (b) Travelling Study Tours under the League of Nations; (c) International Sanitary Convention; (d) Far Eastern Epidemiological Bureau, Singapore; and (e) International Pacific Health Conference.

## § 6. Organization for the Control of Cancer.

The persistent increase in cancer mortality has led to the development in Australia of a national organization directed towards the control of this disease. Treatment centres, fully equipped to carry out investigation and treatment by all modern methods, have been formed at the principal hospitals. A large amount of radium, purchased in 1928 by the Commonwealth Government for use in treatment and research, has been distributed on loan to the treatment centres. Treatment is available to all requiring it irrespective of ability to pay. The work is co-ordinated by the Commonwealth

Department of Health. Records of treatment and the results obtained are kept by all treatment centres on uniform lines and are collected and analysed. Close co-operation is maintained between research workers, physicists and bio-chemists and the medical men engaged in the clinical investigation and treatment of the disease so that problems are mutually investigated. An annual conference is held at which those actively engaged in the campaign against the disease meet for the discussion of problems and the determination of lines of action. The report of this conference is published by the Commonwealth Department of Health and is widely distributed.

At the Melbourne University the Commonwealth Government maintains a radium laboratory for the purposes of the production of radon for use in treatment, the construction and repair of radium apparatus and the carrying out of research into problems of treatment and protection. During the year 1931 more than 17,000 millicuries of radon were issued by this laboratory and used in the treatment of cancer.

Realizing the essential importance of accuracy in determining the quality of X-rays used in the treatment of cancer and in measuring the dosage of the radiations delivered to a patient under treatment, the Commonwealth Government decided to provide the apparatus necessary for the calibration of dosage meters and voltage meters throughout Australia. This apparatus is being constructed at the Commonwealth Radium Laboratory at the University of Melbourne, and will shortly be available for use. Meantime the cancer treatment centres are equipping themselves with the necessary measuring instruments. Treatment by means of X-rays is thus being placed on a more accurate scientific footing.

## § 7. Medical Inspection of School-Children.

1. **General.**—Medical inspection of school children is carried out in all the States. Medical staffs have been organized, and in some States travelling clinics have been established to deal with dental and ocular defects.

2. **New South Wales.**—A complete system of medical inspection of school children came into operation in this State in 1913. The scheme includes, in country districts, the medical examination of every child at least twice during the compulsory period of school attendance (7–14 years), but, owing to the present need for economy, only one School Medical Officer and Oculist is working in country districts. In the metropolitan area, the scheme provides for the full medical examination of all “entrants” and “leavers” (1st class in Infants’ Departments and children 13 years of age respectively), and the review of all cases found defective between those ages. Parents are notified of the defects found in children, and urged to have them treated. In the metropolitan area, these notices are reinforced by “follow up” work of school nurses, who also arrange hospital and clinic treatment in many cases.

In 1931 the staff comprised 12 medical officers (including one oculist), 9 dental officers, 8 dental assistants, 9 school nurses, and 9 clerical officers. With the exception of the one school oculist working in country areas, the whole of the school medical work is now concentrated in metropolitan schools.

Of the 9 Travelling Dental Clinics (each staffed by a dental officer and dental assistant), 6 work in metropolitan schools and 3 in country districts. One of the metropolitan officers is also engaged half-time at the clinic attached to the Out-patient Department of the Royal Alexandra Hospital for Children.

Special attention is paid to the supervision of the health of High School pupils, both girls and boys, and these schools in the metropolitan, Newcastle, and Wollongong districts are visited by school medical officers once a year for this purpose.

The same health supervision is maintained by a woman medical officer attached whole-time to the Sydney Teachers’ College, and part-time by a woman officer at Armidale Teachers’ College. Every student, on entering the colleges, is medically examined, and any defects found must be remedied before final acceptance. A course of lectures on hygiene, which every student attends, is given by the medical officers.

The medical and psychological examination of delinquent boys brought before the Children's Court is carried out by a male medical officer, and 1,955 boys were examined in 1930 and 1,555 in 1931. The examination of certain girl delinquents is undertaken by a woman medical officer, who also carries out the examination and health supervision of children in residence at the Glenfield Special School for backward children.

The hookworm campaign, which had been under the control of a school medical officer in previous years, was discontinued in 1931.

From time to time, mass investigations are made into the prevalence and distribution of certain abnormal conditions affecting school children, such as goitre, acute rheumatism, trachoma, feeble-mindedness, crippling, left-handedness, etc.

During 1930, 55,604 children were fully examined, 22,704 (40.83 %) were notified for treatment of physical defects, including 9,537 (17.15 %) for defects other than dental. Of those notified for medical and dental defects 10,738 (47.30 %) were treated. In addition 28,752 children were "reviewed", of whom 11,700 (41.01 %) were notified for medical and dental defects, and 5,124 (43.46 %) of those notified were treated.

During 1931, 52,340 children were fully examined, 19,976 (38.17 %) were notified for treatment of physical defects, including 8,790 (16.79 %) for defects other than dental. In addition, 38,513 children were "reviewed", of whom 15,076 (39.15 %) were notified for medical and dental defects. Particulars of treatment obtained as a result of 1931 examinations are not yet available.

3. **Victoria.**—The system adopted provides for the medical examination of each child once every three years during its school life. With the doubling of the medical staff in 1925 the Department concentrated on country work, and medical inspection has been undertaken since that date in country and rural districts, reaching the most remote corners of the State. Medical inspection is now undertaken in all High schools, in practically all country State schools, and in about half of the metropolitan State schools, but in only a few of the registered and institutional schools.

Each school is visited once in every three years, and each child examined. In schools with an attendance of 70 or more, the older boys are examined by a medical man and the older girls by a medical woman. At this inspection every child is first weighed and measured, vision and hearing tested, then undressed to the waist and medically examined as for life assurance, but with a fuller investigation of many hygienic factors, which, at that age, greatly influence the health and growth of the child. Opportunity is also taken to teach the child healthy habits, how to correct faults, and also to get its co-operation for the remedying of defects found.

School nurses employed by the Department are devoted to "follow-up" work, i.e., visiting the homes and getting treatment for children found defective by the school medical officers. Owing to the smallness of the staff their work is confined to the metropolitan area. The result of their work is that the treatment received is much greater than that which is obtained without them.

In addition to the medical examination, each child in those schools visited by the school dentist receives dental treatment on entrance to school (if under 8 years of age), and each year thereafter, until it is 12 years of age, when it is left dentally fit.

The present staff is arranged so that 3 dentists and 4 dental attendants are always on duty at the Melbourne Dental Centre, where children from the infant classes in the inner metropolitan schools are brought by the teacher for dental treatment.

A dentist with a dental attendant and equipment travels along the railway line far enough to give one year's work, using practically every town large enough to provide a day's work as a base. The school committees of the outlying schools are notified of the visit, and the parents are invited to bring to the base all children eligible for treatment, i.e., all children under 8 years of age, and all other children treated by the school dentists on previous visits. This method gives all schools in the district the opportunity for dental treatment.

The time of another dentist is fully occupied treating the children in the three largest country centres, Bendigo, Ballarat, and Geelong. In each of these cities a centre with a dentist, dental attendant, and equipment is established for about three months of the year, where children from the infant classes of the neighbouring schools are brought by the teacher or parents.



Three dentists with dental attendants are in charge of three fully-equipped dental vans, each of which has an itinerary which it completes each year. The advantage in the use of a dental motor van is that it is furnished as a dental surgery. It can be driven into the school yard and, immediately on its arrival, work can be commenced without any delay incidental to unpacking equipment, etc., and to the preparation of a room.

In no case is the same dental officer on the same trip for the whole year; work is distributed so that there is a change over at every school vacation—Christmas, May, and September. Those who have been in the country take a period of duty in the city and vice versa, while those who have been in the van on one trip will probably travel by train the next time, likewise there is constant change between dentist and dental attendants. By doing this it is felt that monotony is relieved, and that the standard of work is maintained at a higher level by the stimulus of change.

The staff of the medical branch consists of 7 full-time medical officers, 8 dentists, 9 dental attendants, and 1 school nurse.

During the year ended 30th June, 1931, 48,607 children and 1,523 teachers were medically examined, and 36,373 children received dental treatment. In addition, 5,134 homes were visited by the school nurse.

4. **Queensland.**—In matters affecting the general administration of the medical branch of the Department of Public Instruction, the Department acts on the advice of its Chief Medical Officer, who, while acting independently in all matters affecting individual schools, is in close touch with the Department of Public Health, and observes the policy of that Department in all matters connected with schools which may have direct bearing upon the health of the State.

Medical inspection of schools and school children is at present carried out by a staff of five medical officers (one part-time). These officers examine all children for cardiac and pulmonary conditions, and in addition, make a thorough examination of all children referred to them by the school nurses; 17,371 were thus medically examined in 1931, and of these 2,554 were notified as suffering from some condition requiring correction.

School nurses now numbering 12 have been appointed from time to time. To each nurse is assigned a group of schools, and she is instructed to make a list at each school of those children whom she considers should be seen by the medical inspector at his next visit. She supervises the sanitation, cleanliness and ventilation of the school and notifies the head teacher of all infectious or verminous children or those suffering from impetigo, scabies, etc., who are then excluded. During the year 1931, school nurses examined 24,416 children. In the metropolitan area, the nurses examine the teeth and report all eligible carious cases to the Dental Hospital for treatment. The work of the school nurse is proving more and more valuable in keeping the standard of sanitation high and in controlling the general health of the children.

The Department has in its employ a staff of fifteen dentists. These officers are each assigned a district, and such district is not changed for three years unless for reasons which the Chief Medical Officer, on the recommendation of the Chief Dental Inspector, considers advisable. During the year 1931, 29,331 children were examined; 43,316 extractions were performed; and there were 40,867 fillings and 17,198 other treatments. Children and parents alike are beginning to realize the very great value of early dental treatment. The former appreciate the fact that, in the early stages of decay, they are not called upon to suffer pain during dental manipulations, and the latter see in the increased health and vigour of their children the practical value of such treatment.

The Medical Branch, under the direction of the Chief Medical Officer, consists of three sections known respectively as the Medical, Dental and Nursing Sections. These combined constitute the School Medical Service of the State.

In addition to the ordinary activities of the Branch, there has recently been added the Wilson Ophthalmic School Hostel for the treatment and education of severe cases of trachoma. Such cases, on the recommendation of the Departmental Ophthalmologist, are admitted from time to time. Beneficial results have already been obtained. The Institution is situated at Eildon Hill, Windsor, and is fully equipped to treat all types of eye case.

A Committee of Hookworm Control to deal with anchylostomiasis duodenale and Necator Americanus infestation throughout the State has now been established, the personnel being as follows:—Chairman—The Chief Quarantine Officer of the Commonwealth Department of Health at Brisbane; Members—The Public Health Commissioner for Queensland, the Chief Medical Officer, Department of Public Instruction, and the Chief Protector of Aborigines for Queensland.

The work of the Committee has resulted in a large reduction of this dangerous menace in the Northern Coastal Belt. The Field Staff consists of a medical officer and two microscopists, three health inspectors and five trained nurses working in various areas.

Following the policy of the Government to give the same medical and dental facilities to the children of the back country as are obtainable by city dwellers, a Rail Dental Clinic has been constructed. This consists of a carriage 21 feet long, divided into—

- (a) Lavatory and shower accommodation.
- (b) Sleeping and living room, fitted with all conveniences, including ice chest and two-burner Gloria cooking-stove. Ample drawer space is provided in dressing table, and under the sleeping berth.
- (c) Dental surgery fitted with all the latest appliances for dental treatment, including Gloria sterilizer and pressure filtered water. The dental engine is electrically driven and foot controlled. Perfect illumination is obtained by a dental spot light which is part of the chair equipment.
- (d) A compartment for waiting patients which also contains the engine and generator and batteries for lighting the car throughout.

A motor car is carried on a railway waggon at the rear, and can be used at each stopping place to visit the surrounding villages served by the rail centre. This unit operates in the distant and roadless parts of the State where there is difficulty in taking the present Road Motor Clinic.

5. **South Australia.**—Medical inspection embraces the examination of all children attending primary, central, high and technical high schools. Each child is examined approximately once in three years. Reports are furnished to parents of defects likely to interfere with educational progress. The staff consists of 1 principal medical officer, 2 medical inspectors, 1 psychologist, 1 trained nurse and 1 dental assistant. City children can now receive dental treatment at the Dental Hospital or at the Children's Hospital, North Adelaide. The medical inspectors meet the parents after the examination of the children, report any defects, and recommend treatment. It has been found that a personal talk is of greater value than a written notice. The psychologist examines mentally retarded children and supervises their work in the opportunity classes which have been established for their benefit.

During the year 1931, 21,937 children were examined by the medical inspectors; of these 656 required notices for defective vision, 148 for defective hearing, and 857 for adenoids and tonsils. Nine hundred and forty-three children received dental treatment in the country districts. Research work in left-handedness and colour blindness is being undertaken.

6. **Western Australia.**—Under the Public Health Act 1911-1922, the medical officers of health appointed by the local authorities became medical officers of schools and school children. In the Health Department there are two full-time and one half-time medical officers for schools, whose duty is to conduct medical examinations, and three school nurses are employed. During 1931, 16,425 (8,381 country and 8,044 metropolitan) children were examined. These figures do not include recalls or specials.

7. **Tasmania.**—Tasmania was the first State in Australia to provide for the medical inspection of State school children, its system of inspection having been initiated in 1906. During the year 1931, however, for financial reasons, medical inspection ceased, dental clinics were closed and the services of all doctors and dentists were terminated. Prior to this date the various municipal health officers were employed as medical inspectors visiting country schools, and, in the case of epidemics, these officers paid special visits when required, while two part-time medical officers conducted

examinations of school children in Hobart and Launceston. There were also four nurses, whose chief duty was to visit the homes to advise the parents as to the treatment of defects disclosed by the medical examination. Country schools were visited by medical officers about once a year. There were four full-time dental officers—two working at dental clinics in Hobart and Launceston, and two visiting the smaller country schools.

8. **Federal Capital Territory.**—By arrangement education facilities are provided by the Education Department of New South Wales. The Commonwealth Department of Health, however, took over from the State in 1930 the medical inspection of school children and carried out examinations of entrants and leavers during 1930. No statistical information is available for that year, but a complete examination of school children was made in 1931. The number of children examined was 1,234, and some evidence of a pathological condition was found in 69.7 per cent. In 47.6 per cent. some pathological condition of the nose or naso-pharynx was found; 38.2 per cent. had defective teeth; in 4.4 per cent. the eye required attention, and in 1.4 per cent. the ear; and in 2 per cent. the heart showed evidence of a departure from normal.

### § 8. Supervision and Care of Infant Life.

1. **General.**—The number of infantile deaths and the rate of infantile mortality for the last five years are given in the following table, which shows that during the period 1927 to 1931 no less than 31,991 children died in Australia (excluding Territories) before reaching their first birthday. With few exceptions, the rate of mortality in the metropolitan area is consistently greater than that for the remainder of the State. Further information regarding infantile mortality will be found in Chapter XVII.—Vital Statistics :—

#### INFANTILE DEATHS AND DEATH RATES.

State.	Metropolitan.					Remainder of State.				
	1927.	1928.	1929.	1930.	1931.	1927.	1928.	1929.	1930.	1931.
NUMBER OF INFANTILE DEATHS.										
New South Wales	1,161	1,047	1,267	1,099	850	1,797	1,954	1,706	1,499	1,225
Victoria	1,118	1,016	855	853	713	848	903	732	691	636
Queensland	365	298	289	227	210	715	603	562	530	444
South Australia	370	292	221	256	167	244	250	215	227	163
Western Australia	210	233	269	218	176	179	186	239	212	179
Tasmania	79	81	59	66	59	177	219	196	176	160
Australia (b)	3,303	2,967	2,960	2,719	2,175	3,960	4,115	3,650	3,335	2,807
RATE OF INFANTILE MORTALITY.(a)										
New South Wales	56.39	49.50	56.68	50.03	44.53	54.04	58.09	56.27	49.70	42.78
Victoria	62.46	56.82	50.69	50.80	47.88	49.38	54.35	43.74	42.30	41.19
Queensland	57.28	48.26	49.58	39.23	40.84	53.12	44.31	44.40	40.30	34.99
South Australia	64.00	49.09	43.81	54.72	40.46	42.72	45.79	38.25	42.78	32.92
Western Australia	57.30	60.74	63.99	51.40	46.10	37.16	38.21	49.31	42.75	37.84
Tasmania	55.71	80.92	56.73	60.61	58.76	51.83	59.35	52.17	47.61	42.58
Australia (b)	59.27	52.99	53.49	49.84	45.25	50.88	52.84	49.37	45.31	39.98

(a) Number of deaths under one year per 1,000 births registered.

(b) Exclusive of Territories.

During recent years greater attention has been paid to the fact that the health of the community depends largely on pre-natal as well as after care in the case of mothers and children. Government and private organizations are, therefore, taking steps to provide instruction and treatment for mothers before and after confinement, while the health and well-being of mother and child are looked after by the institution of baby health-centres, baby clinics, crèches, visitation by qualified midwifery nurses, supervision of milk supply, etc.

2. **Government Activities.**—In all the States Acts have been passed with the object of supervising and ameliorating the conditions of infant life and reducing the rate of mortality. Government Departments control the boarding-out to suitable persons of the wards of the State, and wherever possible the child is boarded-out to its mother or near female relative. Stringent conditions regulate the adoption, nursing and maintenance of children placed in foster-homes by private persons, while special attention is devoted to the welfare of ex-nuptial children. (See also in this connexion Chapter XII.—Public Benevolence.) Under the provisions of the Maternity Allowance Act 1912–1931, a sum of four pounds is payable to the mother in respect of each confinement at which a living or viable child is born, provided the total income of the claimant and her husband for the period of twelve months preceding the date of the birth did not exceed £260. Further particulars regarding Maternity Allowance are given in Chapter VIII.—Public Finance.

3. **Nursing Activities.**—(i) *General.* In several of the States, the Government maintains institutions which provide treatment for mothers and children, while, in addition, subsidies are granted to various associations engaged in welfare work.

(ii) *Details by States.* In earlier issues of the Year Book (see No. 22, pp. 515 and 516) information, with certain statistical data, concerning the activities of institutions in each State may be found.

(iii) *Summary.* The following table gives particulars of the activities of the Baby Health Centres and the Bush Nursing Associations:—

**BABY HEALTH CENTRES AND BUSH NURSING ASSOCIATIONS, 1931.**

Heading.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Federal Capital Territory.	Total.
Baby Health Centres— Metropolitan No.	41	75	5	40	10	2	1	174
Urban-Provincial and Rural No.	47	59	11	5	7	6	..	135
Total No.	88	134	16	45	17	8	1	309
Attendances at Centres .. No.	512,178	332,886	123,702	93,176	58,811	27,097	2,769	1,150,619
Visits paid by Nurses .. No.	83,679	73,347	13,836	33,697	11,490	11,339	953	228,341
Bush Nursing Association, Number of Centres .. ..	37	66	11	(a) 30	(b) 5	16	..	165

(a) District Trained Nursing Society.

(b) Pre-natal auxiliary hostels.

The number of attendances at the Baby Health Centres has increased very considerably in recent years, having practically doubled since 1927. The following are the attendances for the four previous years:—1927, 591,240; 1928, 724,801; 1929, 822,312; and 1930, 919,893.

## CHAPTER XIV.

## DEFENCE.

## § 1. Military Defence.

1. **State Systems.**—A detailed historical account of the Australian defence forces prior to Federation will be found in Official Year Book No. 2, pp. 1075–1080. See also Official Year Book No. 12, p. 999.

The strength of the military forces of the States on the 31st December, 1900 (the eve of Federation) was :—New South Wales, 9,338 ; Victoria, 6,335 ; Queensland, 4,028 ; South Australia, 2,932 ; Western Australia, 2,696 ; Tasmania, 2,024 ; total for Australia, 27,353. This total was exclusive of cadets, reservists, and rifle club members.

2. **Commonwealth System.**—(i) *General.* Under the terms of the Constitution Act 1900, the Commonwealth took over control of defence matters in March, 1901. The growth of the Commonwealth Military Forces may be considered to have taken place in five phases, viz. :—

- (a) The first phase, i.e., the welding together of the military forces of the States into one homogeneous army, was entrusted by the Government in 1902 to Major-General Sir Edward Hutton, K.C.B., K.C.M.G., and a sound foundation was laid, upon which the subsequent organization and training were based.
- (b) The second phase was the introduction of Universal Training in 1911. During the year 1909 a measure providing for universal training was enacted, and the scheme came into force in 1911 after the advice and recommendations of the late Lord Kitchener had been obtained. By the Defence Acts of 1903 and 1904 all male inhabitants between the ages of 18 and 60 years were made liable to serve in Australia with the defence forces *in time of war*. Subsequent legislation made training and service compulsory up to the age of 26 years *in time of peace*. By the Act of 1909 the principle of universal liability to training was made law for the first time in any English-speaking community. More detailed reference to these matters will be found in Official Year Book No. 12, p. 999 *et seq.*
- (c) The third phase, Divisional Organization, came into operation from the 1st May, 1921. Under this system a war organization, evolved from the Australian Imperial Force, is applied to peace conditions, with a minimum of permanent personnel. Numbers of units and formations were altered to correspond with those of the A.I.F. and every effort was made to maintain the traditions established by those units in the Great War.
- (d) The fourth phase, which was initiated by the Government in 1922, entailed the reduction of the Divisional Organization to a nucleus force.
- (e) The fifth phase, the suspension of all compulsory obligations *in time of peace* (under Part XII. of the Defence Act) and the reconstitution of the forces on a basis of voluntary enlistment, was brought into operation as from 1st November, 1929. The Divisional Organization has been retained, but the peace nucleus has been reduced from 48,000 Citizen Forces and 16,000 Senior Cadets to 35,000 Militia Forces and 7,000 Senior Cadets by reductions in the training establishments of units and by ceasing to maintain certain light horse regiments and infantry battalions.

(ii) *Military Population.* In connexion with the numbers available, the figures of male population are of interest. The total number at cadet age, i.e., between 12 and 18, at the Census of 1921 (4th April), was about 300,000 ; at citizen soldier age, i.e., between 18 and 26, 354,000 ; these latter, with 409,000 at ages between 26 and 35, give 763,000 as the total males at the best period for military service. It is estimated that 529,000 of those available between the ages of 18 and 35 were unmarried or widowers without children, and 233,000 were married or widowers with children. In addition, there were about 768,000 between the ages 35 and 60. In connexion with the foregoing figures it should be noted that since the Census of 1921 the total male population of Australia has increased from 2,762,870 to 3,330,070 at the 31st March, 1932.

(iii) *Allotment of Units.* The organization is territorial, and the divisions are based upon infantry units. There are 46 battalions, forming 14 brigades. The areas have approximately equal numbers of males of citizen soldier age, and each furnishes a battalion of infantry, and a proportion of other troops.

ALLOTMENTS OF UNITS TO AREAS, 31st MARCH, 1932.

State.	Military District.	Number of Infantry Brigade Areas.	Battalion Areas.									
			Number of Battalion Areas. (a)	Providing the undermentioned Units—								
				Infantry Battalions.	Light Horse Regiments.	Field Artillery Batteries.	Medium Artillery.		Heavy Artillery.		Artillery Survey.	Anti-aircraft Battery.
							Brigade Head-quarters.	Batteries.	Brigade Head-quarters.	Batteries.		
New South Wales ..	2nd	5	18	16	6	18	1	3	1	4	1	1
Victoria ..	3rd	5	18	16	5	17	1	3	1	2	1	..
Queensland ..	1st	2	8	6	3	6	..	..	..	2	..	..
South Australia ..	4th	1	4	3	3	4	..	..	..	1	..	..
Western Australia ..	5th	1	3	3	1	3	..	..	..	1	..	..
Tasmania ..	6th	..	2	2	1	2	..	..	..	1	..	..
Total ..	..	14	53	46	19	50	2	6	2	12	2	1

State.	Military District.	Battalion Areas.													
		Providing the undermentioned Units—													
		Engineers.		Signals.	Tank Corps.	A.A.S.C.			A.A.M.C.			A.A.O.C. Companies.	A.A.V.C. Sections.		
		Field.	For-tress.	Sections.	Troops.	Tank Section.	Head-quarters Supply Companies.	Head-quarters Horse Transport Companies.	Supply Sections.	Horse Transport Sections.	Field Ambulance.			Field Hygiene Sections.	
Companies.	Troops.	Companies.													
New South Wales	2nd	5	3	2	23	5	1	3	3	7	7	7	3	4	4
Victoria ..	3rd	5	3	1	22	5	..	3	3	7	7	7	3	4	4
Queensland ..	1st	2	1	1	6	1	..	1	1	3	3	3	1	1	1
South Australia ..	4th	1	1	..	3	1	..	..	..	2	2	2	1	1	1
Western Australia ..	5th	1	..	1	4	..	..	..	..	1	1	1	1	1	1
Tasmania ..	6th	1	..	1	4	..	..	..	..	1	1	1	1	1	1
Total ..	..	15	8	6	62	12	1	7	7	21	21	21	10	10	10

(a) Two University battalions are not allotted to any specific battalion area.

(iv) *Strength of Military Forces. (a) Districts.* There was little alteration in the numbers serving in the Australian military forces from the institution of the Commonwealth to the year of the introduction of the compulsory training system. From 1913 to 1918, however, the annual increase was considerable. As a result of the International Conference which met at Washington on the 11th November, 1921, it was decided by the Australian Government in 1922 that the universal training law was to be continued, but its operation was to be restricted to the more populous centres and to certain quotas only. From 1st July, 1922, to 30th June, 1925, training in the Senior Cadets was limited to two quotas instead of four, and in the Citizen Forces to two quotas instead of seven. On 1st July, 1925, Senior Cadet training was reduced to one quota only

while Citizen Force training was increased to three quotas. These conditions remained in force until 1st November, 1929, when the constitution of the forces on a voluntary basis was adopted. During the period last mentioned, Senior Cadet training commenced on 1st July of the year in which Senior Cadets reached the age of 17 years, and on 1st July of the following year they were allotted to the Citizen Forces, in which training continued until the 30th June of the year in which they attained the age of 21 years. Notwithstanding the reduction in training, all males residing within 5 miles of a training centre were required to register during the months of January or February of the year in which they reached the age of 14 years. Junior Cadet training of boys of the ages of 12 and 13 years which was in abeyance during the years 1922-23 and 1923-24, was also supervised by the Defence Department during the period 1st July, 1925, to 31st October, 1929.

Under the voluntary enlistment system now in force men from 18 to 40 years of age may be enlisted. The first period of enlistment is for three years, and on its completion, the member concerned may be re-engaged for successive periods of one year until he reaches the age for retirement (48 years). The normal period of training is 16 days per annum (including 8 days in camp of continuous training).

The Senior Cadet Corps, in which enrolment is voluntary, is organized on the following basis :—(a) Detachments affiliated with Militia Units :—Light Horse, Nil ; Infantry, Signals and A.S.C., 25 per cent. of the establishment of the Militia Unit ; Other Arms, 20 per cent. of the establishment of the Militia Unit ; and (b) Detachments consisting of pupils attending approved educational establishments. The ages for enrolment in the regimental detachments are 16 and 17 years, and in the school detachments over 14 years.

#### TRAINING STRENGTH OF MILITARY FORCES.

(a) District.	1901. (b) 1/3/01.	1913. 30/6/13.	1922. 31/12/22.	1929. 1/2/29.	1930. 30/4/30.	1931. 31/3/31.	1932. 31/3/32.
Army Head-Qrs. (Melbourne) .. ..	..	(c) 277	(c) 499	(c) 197	(c) 166	78	73
1st (Q'ld.) .. ..	4,310	4,625	4,319	5,610	3,325	3,892	3,309
2nd (N.S.W.) .. ..	9,772	12,105	14,561	18,825	10,810	11,524	10,819
3rd (Vict.) .. ..	7,011	10,840	11,117	15,110	8,452	10,339	10,141
4th (S. Aus.) .. ..	2,956	3,228	3,452	4,234	1,946	2,450	2,477
5th (W. Aus.) .. ..	2,283	1,685	2,018	2,600	1,753	1,820	1,715
6th (Tas.) .. ..	2,554	1,777	1,190	1,355	1,002	1,179	1,227
Total .. ..	28,886	34,537	37,156	47,931	27,454	31,282	29,821

(a) Approximately coterminous with boundaries of States. (b) Date of taking over the military forces from States by Commonwealth. (c) Including cadets at Royal Military College of Australia and Staff Corps Officers abroad, unallotted, or training with other Commonwealth Departments.

(b) Various Arms. The numbers of the different arms of the service on the 31st March, 1932, were as follow :—

#### ARMS OF THE AUSTRALIAN MILITARY FORCES, ACTIVE LIST, 31st MARCH, 1932.(a)

Head-quarters Staffs .. ..	115	Fortress Engineers .. ..	270
Staff Corps .. ..	231	Signals .. ..	1,198
Corps of Staff Cadets .. ..	30	Infantry .. ..	12,972
Instructional Corps .. ..	493	Tank Corps .. ..	37
Light Horse .. ..	4,001	Army Service Corps .. ..	1,474
Royal Australian Artillery .. ..	436	Army Medical Corps .. ..	1,098
Field Artillery .. ..	4,180	Army Ordnance Corps (b) .. ..	262
Garrison Artillery .. ..	1,563	Army Veterinary Corps .. ..	109
Royal Australian Engineers .. ..	135	Provost Staff .. ..	11
Survey Corps .. ..	14		
Field Engineers .. ..	1,192	Total .. ..	29,821

(a) Excluding civilian staff.

(b) Includes Ordnance Officers and Artificers.

(c) *Classification of Land Forces.* The following table shows the strength of the land forces in each State, classified according to nature of service, on the 31st March, 1932.

**DISTRIBUTION OF LAND FORCES,(a) ACTIVE AND RESERVE LISTS,  
31st MARCH, 1932.**

Branch of Service.	Army Head-quarters.	1st Military District. (Qld.)	2nd Military District. (N.S.W.)	3rd Military District. (Vic.)	4th Military District. (S. Aus.)	5th Military District. (W.Aus.)	6th Military District. (Tas.)	Total.
Permanent Forces ..	(b) 65	133	595	477	87	116	63	1,536
Militia Forces ..	8	3,236	10,224	9,664	2,390	1,599	1,164	28,285
Engineer and Railway Staff Corps	2	9	10	12	11	9	5	58
Unattached List of Officers	4	56	124	100	14	22	8	328
Reserve of Officers	..	772	2,190	1,945	528	459	211	6,105
Chaplains ..	4	41	81	88	27	24	14	279
<b>Total ..</b>	<b>83</b>	<b>4,247</b>	<b>13,224</b>	<b>12,286</b>	<b>3,057</b>	<b>2,229</b>	<b>1,465</b>	<b>36,591</b>

(a) Excluding civilian staff.

(b) Including cadets at Royal Military College of Australia.

(d) *Militia Forces and Senior Cadets, by Formations.* The following table shows the strength of Militia Forces and Senior Cadets, by formations, at the 31st March, 1932 :—

**STRENGTH OF MILITIA FORCES AND SENIOR CADETS, BY FORMATIONS,  
31st MARCH, 1932.**

State.	Military Formation.	Militia Forces.	Senior Cadets.	
			Regimental Detachments.	Educational Establishments.
Victoria ..	Army Head-quarters ..	8	..	..
Queensland ..	Field Troops, 1st Military District	3,091	373	421
Queensland ..	1st District Base ..	145	11	..
New South Wales ..	1st Cavalry Division ..	1,954	79	68
New South Wales ..	1st Division ..	3,035	416	325
New South Wales ..	2nd Division ..	4,213	645	551
New South Wales ..	2nd District Base ..	1,022	149	..
Victoria ..	2nd Cavalry Division ..	1,633	82	..
Victoria ..	3rd Division ..	4,254	840	450
Victoria ..	4th Division ..	3,026	363	225
Victoria ..	3rd District Base ..	751	123	..
South Australia ..	Field Troops, 4th Military District	2,312	240	286
South Australia ..	4th District Base ..	78	2	..
Western Australia ..	Field Troops, 5th Military District	1,418	185	111
Western Australia ..	5th District Base ..	181	15	..
Tasmania ..	Field Troops, 6th Military District	1,085	90	15
Tasmania ..	6th District Base ..	79	15	..
	<b>Total ..</b>	<b>28,285</b>	<b>3,628</b>	<b>2,452</b>

(e) *Numbers who served under Compulsory Provisions.* In earlier issues of the Year Book (see No. 22, pp. 411-413) tables were published showing the numbers registered and training under the compulsory system, distinguishing Citizen Forces and Senior Cadets.

(v) *Administration and Instruction.* The staff provided for the administration and training of the various arms consists of 231 officers (Staff Corps), 44 quartermasters, and 449 warrant and non-commissioned officers (Australian Instructional Corps).



(vi) *Royal Military College.* This College was established in 1911 at Duntroon in the Federal Capital Territory for the purpose of providing trained officers for the permanent forces. In January, 1931, the College was transferred to Victoria Barracks, Sydney. Admission is by open competitive examination. Twelve Staff Cadets were admitted to the College in February, 1932. Further particulars respecting the College are given on page 915 of Official Year Book No. 15. On the 31st March, 1932, the cadets in training numbered 30.

(vii) *Railways and Defence.* A War Railway Council, consisting of military and railways officers, was instituted in 1911. Its chief duties are to furnish advice and information regarding railway transport for military purposes, and to secure co-operation between the Defence Department and the Railway Departments in regard to concentration and mobilization of troops. To prevent delay in the transport of troops, particularly that caused by the transshipment of baggage and implements of war, the Council has recommended the adoption of a uniform railway gauge on lines linking up the States' capitals. An Engineer and Railway Staff Corps has been instituted, and numbered 58 officers on 31st March, 1932. Fuller details will be found in Official Year Book No. 6, pp. 1070-1.

(viii) *Rifle Clubs.* On the 30th June, 1931, there were 1,177 rifle clubs with a membership of 44,946, and 88 miniature rifle clubs having a membership of 3,018. Members of rifle clubs must fire an annual course of musketry, but do not undergo any systematic drill.

For the purposes of administration the control of rifle club activities reverted from the Secretary for Defence to the Military Board with effect from the 1st March, 1931. Government Grants are made for the construction and maintenance of rifle ranges, etc., and 200 rounds of ammunition are issued free annually to each efficient member.

## § 2. Naval Defence.

1. *State Systems.*—Information regarding naval defence systems prior to 1901 will be found in Official Year Book No. 12, p. 1011, but considerations of space preclude its insertion in the present volume.

2. *The Present System.*—(i) *General.* An outline of the development of Australian naval policy was given in Official Year Book No. 3, pp. 1060-61, and No. 12, p. 1012. Some account of the building of the Australian Fleet, the proposed and modified cost thereof, the compact with the Imperial Government, etc., appears in Official Year Book No. 15, pp. 921 *et seq.* Up to the 30th June, 1931, the expenditure on construction amounted to £13,850,020.

The Washington Conference of 1921 had a marked effect on naval defence schemes, and all warship building and naval base construction were for a time suspended. The Fleet personnel was reduced from 4,843 in 1921 to 3,500 in 1923, and the ships in commission were reduced from 25 to 13. H.M.A.S. *Australia* was sunk in accordance with the provisions of the Washington Treaty on 12th April, 1924.

In 1925 the Commonwealth Government, however, decided to build two cruisers of 10,000 tons (the maximum size allowed for new construction under the Washington Naval Treaties), two ocean-going submarines, and a seaplane-carrier. The two cruisers, which were named *Australia* and *Canberra*, were commissioned in 1928. The two submarines, *Otway* and *Oxley*, which were built in England, arrived at Thursday Island on 25th January, 1929. These latter vessels were paid off on the 9th April, 1931, and re-commissioned as H.M. Ships on the following day. They form part of the Empire quota under the London Naval Treaty of 1930. As their maintenance in the highest state of efficiency was difficult in Australia, where they were a small specialized unit, the British Government, after consultation, agreed to take over the submarines as a free gift and maintain them at its expense. The seaplane-carrier *Albatross*, built at Cockatoo Island Dockyard, Sydney, by the Commonwealth Shipping Board, was commissioned on 23rd January, 1929.

To ensure closer co-operation with the Royal Navy, arrangements have been concluded with the Admiralty for the periodical exchange of a cruiser, thus giving an opportunity for Australian sailors to gain experience in fleet exercises on a large scale.

The British Admiralty have, in addition, lent to the Royal Australian Navy the sloop *Silvio*, which was refitted in England as a surveying ship, and renamed H.M.A.S. *Moresby*. This vessel was principally employed in surveying the Great Barrier Reef, but, owing to the need for economy, was paid off in April, 1930.

In 1926 the Commonwealth Government entered into an agreement with the New South Wales Government whereby the latter, in consideration of the payment of a subsidy of £135,000, constructed at Walsh Island, Newcastle, a floating dock capable of lifting 15,000 tons.

(ii) *Naval College*. A naval college was established at Geelong in 1913, and was transferred in 1915 to Captain's Point, Jervis Bay, Federal Capital Territory, and thence in 1930 to the Flinders Naval Depot, Victoria. The course is similar to that carried out in naval colleges in England. In February, 1932, there were 25 cadet midshipmen under training. A boy who reaches the age of thirteen years during the calendar year in which the entrance examination is held is eligible to compete, provided he is the son of natural-born or naturalized British subjects. From amongst those qualified the selection committee chooses the number required. The Commonwealth Government bears the whole expense of uniforms, victualling, travelling, as well as that of the educational course. Altogether 158 officers who have passed through the college are now serving with the Fleet. Owing to the financial situation and the fact that a number of cadets who recently passed through the college had been retrenched, no examinations for entry to the college were held in 1930 and 1931. Entries will, however, be resumed in September, 1932, from boys who reached the age of thirteen years during 1930 or 1931. The normal entry from boys born in 1919 will be made in January, 1933.

(iii) *Training Establishments*. Recruits from 17 to 21 years of age receive their preliminary training at the Naval Depot, Westernport, where, in addition to the new entry school, instruction is given in Gunnery and Torpedo, Signals and Wireless Telegraphy, Engineering, etc. The entry and training of boys have been suspended.

(iv) *The Naval Station*. A description of the limits of the Australian Naval Station is contained in earlier issues of the Official Year Book (see No. 18, pp. 608-9).

(v) *Vessels*. A list of the vessels of the Royal Australian Navy is given hereunder :—

SHIPS OF THE ROYAL AUSTRALIAN NAVY, MAY, 1932.

Vessel.	Description.	Displacement.	Power.
		Tons.	H. P.
<b>IN COMMISSION—</b>			
<i>Albatross</i> ..	Seaplane Carrier .. ..	5,000	12,000
<i>Australia</i> ..	Cruiser .. ..	10,000	80,000
<i>Canberra</i> ..	" .. ..	10,000	80,000
<i>Cerberus</i> ..	Motor Boat (Flinders Naval Depot)	61	220
<i>Penguin</i> (late <i>Plutus</i> )	Depot Ship, Sydney .. ..	3,455	3,500
<i>Tattoo</i> ..	Destroyer .. ..	905	27,000
<b>IN RESERVE—</b>			
<i>Adelaide</i> ..	Cruiser .. ..	5,100	25,000
<i>Anzac</i> ..	Flotilla Leader .. ..	1,310	36,000
<i>Brisbane</i> ..	Cruiser .. ..	5,120	25,000
<i>Geranium</i> ..	Sloop .. ..	1,175	2,000
<i>Mallow</i> ..	" .. ..	1,165	1,800
<i>Marguerite</i> ..	" .. ..	1,175	2,000
<i>Moresby</i> ..	" .. ..	1,650	2,500
<i>Stalwart</i> ..	Destroyer .. ..	905	27,000
<i>Success</i> ..	" .. ..	905	27,000
<i>Swordsman</i> ..	" .. ..	905	27,000
<i>Tasmania</i> ..	" .. ..	905	27,000
<b>FLEET AUXILIARY—</b>			
<i>Kurumba</i> ..	Fleet Oiler .. ..	7,930	2,000

(vi) *Naval Forces.* Besides the sea-going forces, there is a R.A.N. Reserve, which is composed of Citizen Naval Forces. The personnel of the sea-going forces, which was originally largely composed of Imperial officers and men, is now 98 per cent. Australian. The strength of the naval forces is given hereunder :—

**STRENGTH OF NAVAL FORCES (PERMANENT AND RESERVES),  
15th FEBRUARY, 1932.**

Description of Force.	Numbers Borne.		
	In Training.	Officers.	Men.
Royal Australian Navy (Sea-going) .. .. .	..	341	2,776
Royal Australian Naval Auxiliary Services .. .. .	..	28	103
Cadet Midshipmen undergoing training at R.A.N. College .. .. .	25	..	..
Royal Australian Naval Reserve (Sea-going) .. .. .	..	45	..
Royal Australian Fleet Reserve .. .. .	..	..	209
Royal Australian Naval Reserve .. .. .	..	244	4,910
Royal Australian Naval Volunteer Reserve .. .. .	..	38	..

### § 3. Air Defence.

1. **General.**—A statement in regard to the preliminary steps taken in connexion with the development of air defence will be found in Official Year Book No. 18, p. 610.

The Royal Australian Air Force is administered by a Board consisting of three Air Force members and a Finance member. To this Force is entrusted the air defence of Australia, and the training of personnel for co-operation with the naval and military forces. The present establishment of the Force includes the following units :—(1) Headquarters Royal Australian Air Force, with representation in London; (2) a Flying Training School; (3) an Aircraft Depot; (4) two service landplane squadrons and (5) one service amphibian flight.

2. **Establishment.**—The present approved establishment of the Permanent Air Force is 102 officers and 788 airmen, and of the Citizen Air Force, 48 officers and 260 airmen. Three aerodromes are under the control of the Air Board; all other aerodromes and air routes have been taken over by the Controller of Civil Aviation.

3. **Aerial Routes.**—Aerodromes and alighting sites have been prepared between the capital cities and on certain parts of the coast for service and civil purposes. At the 31st March, 1932, 187 Government aerodromes and emergency landing grounds had been prepared and 90 licensed public aerodromes were also available for use.

4. **Civil Aviation.**—Details regarding the formation and activities of the Civil Aviation Department will be found in Chapter VII., Section D. Aircraft.

### § 4. Expenditure on Defence.

The following table shows defence expenditure, exclusive of war services, in 1901–2 and during each of the last five years. Details of the expenditure of the Defence Department and the cost of the war, repatriation, and war services are given in Chapter VIII.—Public Finance.

## DEFENCE EXPENDITURE (EXCLUDING WAR SERVICES).—AUSTRALIA.

Item.	1901-2.	1927-28.	1928-29.	1929-30.	1930-31.	1931-32. (a)
	£	£	£	£	£	£
Central Administration ..	5,594	26,700	27,901	25,382	24,189	21,080
Naval .. .. .	178,819	2,597,864	2,395,910	2,167,325	1,747,835	1,478,887
Military .. .. .	732,626	1,494,201	1,465,718	1,239,394	1,194,989	1,057,429
Air Services—						
R.A. Air Force .. .. .	..	516,639	549,126	498,366	392,408	343,620
Civil Aviation .. .. .	..	113,368	97,499	102,809	149,812	140,610
Munitions Supply Branch ..	..	461,638	383,324	358,160	248,708	185,622
Rifle Clubs and Associations ..	41,653	47,699	47,851	39,922	33,257	28,498
Special Appropriations—						
Naval Construction .. .. .	..	2,060,586	1,349,819	307,845	30,193	3,000
Survey of Gt. Barrier Reef ..	..	46,217	61,906	39,005	..	..
Reconditioning Equipment and Purchase of Aircraft Equipment .. .. .	..	7,076	115,315	3,323	16,663	2,000
Development of Civil Aviation ..	..	13,722	42,113	104,458	21,015	3,000
	958,692	7,385,710	6,536,482	4,885,989	3,859,069	3,263,746

(a) Estimated.

In addition to the above, expenditure on war services, naval and military only, directly under the control of the Defence Department amounted in 1930-31 to £106,631 from Revenue, while the estimated expenditure in 1931-32 was £24,352 from Revenue.

The total cost of war services including interest, sinking fund, war pensions, repatriation, etc., will be found in Chapter VIII., Section B § 5—Cost of War and Repatriation.

### § 5. Munitions Supply.

1. *General.*—A statement dealing with the powers and functions of the Munitions Supply Board is given on p. 612 of Official Year Book No. 18.

2. *Factories.*—(i) *General.* The Explosives Factories at Maribyrnong, Victoria, which manufacture explosives for cartridges and artillery ammunition, aeroplane dopes, nitro-benzine, and special paints, were established in 1911. The Staff at 30th June, 1931, numbered 134.

The Acetate of Lime Factory, established at Bulimba, Brisbane, in September, 1918, provides acetate of lime (a raw material used in the manufacture of acetone) and is now being held in reserve. Employees at 30th June, 1931, numbered 2.

The Clothing Factory at Melbourne, Victoria, which had a staff of 238 employees on 30th June, 1931, commenced output in July, 1912, and since that date has been able to supply the whole of the uniform clothing required for the Defence forces, and the Postmaster-General's Department. It also supplies clothing required by State Departments and local public bodies.

The Small Arms Factory at Lithgow, New South Wales, which was opened on 1st June, 1912, and delivered the first instalment of Australian arms in May, 1913, had on its pay roll on 30th June, 1931, 245 employees. Rifles and machine guns are being produced, and provision has been made for the manufacture of pistols.

On the 1st January, 1927, the Defence Department entered into possession by purchase of the works of the Colonial Ammunition Company Limited at Footscray, Victoria. As from the 1st July, 1928, this establishment, known as the Small Arms Ammunition Factory, was amalgamated with the Gun Ammunition Factory, and this group is now known as the Ammunition Factories, where in addition to rifle and pistol ammunition, big gun fuses and detonators, and cartridge cases are also produced. Brass and other non-ferrous metals required for munitions manufacture are rolled at this factory. The staff at 30th June, 1931, numbered 270

At the Ordnance Factory, Maribyrnong, Victoria, established in 1924, provision is made for the production of guns, shells, gun carriages and military vehicles. This group includes a well equipped forge and woodworking and electrical shops. The number of employees at 30th June, 1931, was 223.

(ii) *Investment in Factories.* Up to 30th June, 1931, the amount invested in lands, buildings, machinery and plant, factory fittings and furniture in connexion with the factories now in operation was approximately as follows:—Small Arms Factory, £529,305; Explosives Factories, £555,798; Clothing Factory, £7,543; Acetate of Lime Factory, £90,195; Ammunition Factories, £483,009; and Ordnance Factories, £530,270.

### § 6. Remount Depot.

Information in regard to the establishment of this branch of activity is contained in earlier issues of the Official Year Book (see No. 18, p. 613). When war was declared in 1914 little difficulty was experienced by the Remount Service in coping with the enormous task of obtaining and training horses for the mounted units of the A.I.F. and in providing for the shipment of horses to Egypt and India as required.

### § 7. Australian Contingents.

1. *General.*—In earlier issues of the Year Book an account was given of the composition, etc., of the Australian contingents dispatched for service in the New Zealand and Sudan Campaigns, in South Africa, China, and the Great War of 1914–18 (see Official Year Book No. 12, pp. 1019 et seq.).

2. *Australian Troops (Great War).*—Particulars of the enlistments, casualties, honours and decorations won, and engagements of the Australian Imperial Force during the Great War were given in Official Year Book No. 16, pp. 628 et seq.

### § 8. War Gratuity.

Reference was made in earlier Year Books (see No. 15, p. 930) to the bonus payable in accordance with the War Gratuity Acts of 1920 as a war service gratuity to soldiers and sailors who served in the Great War. Owing to limitations of space this information cannot be repeated, but it may be noted that the gratuity was paid in Treasury Bonds, maturing not later than 31st May, 1924, and bearing interest at 5½ per cent. In necessitous cases payment was made in cash when desired by the person entitled. The first gratuities were made available about the beginning of June, 1920. The total amount paid to 30th June, 1931, was £27,492,548.

### § 9. Special Defence Legislation.

Information regarding special defence legislation enacted by the Commonwealth Government during the War was given in Official Year Book No. 15, p. 930. It may be pointed out here that the War Precautions Act Repeal Act of 1920 repealed the Act 1914–18, but a limited number of matters dealt with under the original Act is now provided for under the War Precautions Act Repeal Act of 1920–28 or by regulations made thereunder.

### § 10. Repatriation.

1. *General.*—An outline of the activities leading up to the formation of the Commonwealth Department of Repatriation was given in Official Year Book No. 15, p. 931, but limits of space preclude its repetition in the present volume. Some account was given also in the Year Book referred to, and in subsequent issues, of the policy and activities of the Department generally, while detailed information was incorporated

in regard to such matters as sustenance rates and pensions to soldiers and dependants. (See Official Year Book 17, pp. 598 to 601.) During the year ended 30th June, 1928, sustenance rates were amended to bring them into line with war pensions rates, and the scale of rates in respect to war pensions was amplified by providing for an allowance to the third or subsequent child at such a rate as will provide, together with pension in respect of that child, a sum of 15s. per fortnight.

The main activities of the Repatriation Commission at 30th June, 1931, were confined to the grant, review and assessment of war pensions, medical treatment, the renewal and repair of artificial replacements and surgical appliances, the grant and review of living allowances, and the administration of the Soldiers' Children Education Scheme.

2. *War Pensions.*—(i) *Year ended 30th June, 1931.* Pensions expenditure has progressively increased since 1923-24, and the number of pensioners has grown, year by year, since 1920-21. At the end of the year 1930-31, the annual liability was £7,774,806, with 283,322 participants, the highest yet recorded. The outstanding figures for the year ended 30th June, 1931, are as follows :—

New claims granted during year .. .. .	11,555
Claims rejected during year .. .. .	920
Pensions reviewed during year .. .. .	53,995
Pensions cancelled or discontinued during year .. .. .	6,992
Pensioners died during year .. .. .	2,336
Number of pensions in force at 30th June, 1931 .. .. .	283,322
Annual pension liability on the 30th June, 1931 .. .. .	£7,774,806

At the close of the year special rate pension of £8 per fortnight was being paid to—

Blinded soldiers .. .. .	131
Tubercular soldiers .. .. .	1,064
Totally and permanently incapacitated soldiers .. .. .	1,498

An analysis of the total number of new grants (11,555, during the year reveals the following :—

Members (i.e., ex-soldier pensioners) .. .. .	1,057
Wives of members .. .. .	1,922
Children .. .. .	8,176
Other dependants .. .. .	400
	11,555

(ii) *Pensions in Force at 30th June, 1931.* The following table shows for each class of pensioner the number receiving pensions at the 30th June, 1931 :—

PENSIONS IN FORCE, AUSTRALIA, AT 30th JUNE, 1931.

Category.	Number of Pensioners.
Orphan children .. .. .	5,639
War widows .. .. .	6,743
Soldiers .. .. .	75,316
Children .. .. .	107,775
Wives .. .. .	59,708
Parents .. .. .	26,280
Brothers and sisters .. .. .	694
Others .. .. .	1,167
Total .. .. .	283,322

(iii) *Summary, Years 1921, 1927 to 1931.* The subjoined table shows the numbers of pensions granted, claims rejected, and pensions in force, together with the amount paid in pensions for the year ended 30th June, 1921, and for each of the five years ended 30th June, 1931 :—

## PENSIONS.—SUMMARY, AUSTRALIA.

Year ended 30th June—	Pensions Granted.	Claims Rejected.	Pensions in Force.				Amount paid in Pensions.
			Incapaci- tated Members of the Forces.	Depend- ants of Incapaci- tated Members.	Depend- ants of Deceased Members.	Total.	
1921 ..	25,983	3,388	79,491	93,995	49,051	222,537	£ 7,386,842(a)
1927 ..	13,323	2,518	72,388	147,568	39,865	259,821	7,558,559
1928 ..	13,547	1,826	72,667	155,809	38,194	266,670	7,690,890
1929 ..	12,857	1,044	73,436	163,013	36,182	272,631	7,734,921
1930 ..	13,650	1,257	74,578	170,437	34,270	279,285	7,919,476
1931 ..	11,555	920	75,316	172,389	35,617	283,322	7,996,180

(a) Includes payments made from Trust Fund, War Pensions Account, on behalf of other countries, less recoveries.

During the period in which war pensions have been granted, the annual amount paid has, with one or two exceptions, steadily increased to its maximum in the year 1930-31.

3. *Summary of Other Activities.*—The following is a summary of the work of the Department from 8th April, 1918, to 30th June, 1931 :—

(i) *Employment.* Number of applications, 254,804; number of positions filled, 133,097.

(ii) *Vocational Training.* Number of men completed training, 27,695; number in training, 1.

(iii) *Assistance other than Vocational Training and Employment.* Applications received, 808,344; applications approved, 703,345.

(iv) *Soldiers' Children Education Scheme.* From the inauguration of the scheme in February, 1921, up to 30th June, 1931, 14,608 applications for assistance had been received. Of these 13,339 had been approved, of which 6,169 recipients of the benefits had completed their training, 5,240 were undergoing training, 24 applications were pending, and the remainder had been refused or withdrawn.

Up to 30th June, 1931, the expenditure was £1,236,484.

(v) *Assistance Granted.* The total expenditure incurred during the period from 8th April, 1918, to 30th June, 1931, was £18,192,677, of which £1,675,937 represented loan and £16,516,740 general expenditure. Of the total the largest amounts were absorbed by medical treatment, with £5½ millions, vocational training, with £5 millions, and expenses of providing employment, £2½ millions.

(vi) *Medical Treatment.* At 30th June, 1931, there were 1,487 in-patients and 13,740 out-patients receiving medical treatment. The expenditure to this date was £5,572,822. <sup>1</sup>

4. Expenditure of Department of Repatriation.—The expenditure of the Department during the twelve months ended 30th June, 1931, was £9,006,241. and was applied as follows :—

Repatriation benefits—	£
Loans to soldiers .. .. .	190
Grants to soldiers and general expenditure (including maintenance of training schools, medical institutions, etc.) ..	728,594
Assistance to soldiers in necessitous circumstances .. ..	82
Allowances to dependants of soldiers not provided for under the Act .. .. .	1,272
Medical treatment to Home Service personnel .. .. .	141
	730,279
Capital expenditure—	
Office premises and furniture .. .. .	125
Hostels and other Medical Institutions .. .. .	4,649
Loan Fund, Bundoora Mental Hospital, Victoria .. .. .	10,646
	15,420
War Pensions .. .. .	7,987,038
Administrative costs—	
Salaries .. .. .	189,212
Contingencies .. .. .	84,292
	273,504
Total .. .. .	9,006,241

The total expenditure for the previous year was £8,881,146.

5. Settlement of Soldiers on the Land.—At the Premiers' Conference in Melbourne in 1917, it was agreed that the States should undertake the work of settling on the land returned soldiers and munition and war workers, but that the Commonwealth should finance the States for this purpose.

The original arrangement provided that the Commonwealth should take the responsibility of finding up to £500 per settler as working capital for improvements, implements, seed, etc., an amount which was subsequently increased to £625, together with £375 per settler for resumptions and works incidental to land settlement approved by the Commonwealth. Loans were to be advanced to the settlers by the States at reasonable rates of interest not exceeding 3½ per cent. in the first year, increasing by ½ per cent. each subsequent year to the full rate of interest at which the money had been raised, plus working expenses; the difference between these rates and the cost of the money to the Government to be borne equally by the Commonwealth Government and the State Government. This provision respecting interest loss was not ultimately carried out as passed, the Commonwealth Government assuming responsibility for more than one-half of the interest loss, viz. :—a rebate of interest equal to 2½ per cent. per annum during a period of five years from the date of payment to the State of each instalment of loan money.

In addition to this expected loss of interest other losses have occurred in connexion with soldier settlement, and in 1927 Mr. Justice Pike, of the Land Valuation Court of New South Wales, was commissioned to report, not only on the losses, but on the principles on which financial responsibility should be divided. His report in 1929, to which reference should be made for fuller information, found that in all the negotiations concerning soldier settlement on the land the States insisted on undivided control, and that financial responsibility went along with control except so far as the Commonwealth definitely promised to give assistance. The undertaking of the Commonwealth to share equally with the States the cost of lower interest rates to soldier settlers was made the basis of a practical compromise, and the report recommended that the total loss should be shared equally between the two parties.



The following table from Mr. Justice Pike's report shows the losses as found by him, the amount contributed at that date by the Commonwealth, and the further amount to be written off by the Commonwealth:—

## LOSSES ON SOLDIER SETTLEMENT.

State.	Gross losses as found by Mr. Justice Pike.	Commonwealth half share thereof.	Amount already contributed by Commonwealth.	Further amount to be written off by Commonwealth.
	£	£	£	£
New South Wales ..	7,003,950	3,501,975	2,612,215	889,760
Victoria ..	7,721,891	3,860,945	3,331,193	529,752
Queensland ..	1,853,315	926,657	817,272	109,385
South Australia ..	3,565,829	1,782,914	977,927	804,987
Western Australia ..	2,059,368	1,029,684	1,477,688	Nil
Tasmania ..	1,321,169	660,585	546,688	113,897
Total ..	23,525,522	11,762,760	9,762,983	2,447,781

The report refers to a further small loss in certain States consequent upon providing home maintenance areas. The Commonwealth's share of this loss was subsequently fixed at £150,000.

The report found that the chief loss was in interest on capital cost, which amounted to more than half the total loss. Loss of advances came next, due to inflated values of improvements and stock when settlement was taking place. The loss due to administration expenses was defined as the excess costs above ordinary closer settlement costs and this excess was found to be about £3,000,000, or 12½ per cent. of the total loss.

The following table shows the total advances to the States, repayments made to the Commonwealth, remissions of advances made by the Commonwealth and the loans outstanding at the 30th June, 1932. The remissions which have been agreed upon but still await legislative ratification include an amount of £5,000,000 made by the Commonwealth in 1925, and the Commonwealth's share of losses, other than for interest, as recommended by Mr. Justice Pike (including the £150,000 for home maintenance areas).

## ADVANCES TO STATES FOR SOLDIER SETTLEMENT, AT 30th JUNE, 1932.

State.	Number of Settlers.		Total Advances.	Repayments by States.	Remissions by Commonwealth. (a)	Advances less Repayments and Remissions. (a)
	Originally.	Remaining.				
			£	£	£	£
New South Wales ..	9,302	6,649	9,826,203	20,219	2,274,722	7,531,262
Victoria ..	11,140	9,249	11,968,176	174,101	2,160,960	9,633,115
Queensland ..	6,031	3,617	2,717,697	17,114	612,233	2,088,350
South Australia ..	4,082	2,754	2,857,780	24,775	1,371,988	1,461,017
Western Australia ..	5,030	3,345	5,463,782	32,580	796,000	4,635,202
Tasmania ..	1,976	777	2,168,303	38,740	381,880	1,747,683
Total ..	37,561	26,591	35,001,941	307,529	7,597,783	27,096,629

(a) The remissions shown have been agreed upon but still await legislative ratification.

The figures in the above table relating to the number of settlers, are taken from Mr. Justice Pike's report.

6. **Conspectus of State Laws affecting Settlement of Returned Soldiers on the Land.**—In Official Year Book No. 13, pp. 1018 *et seq.*, will be found a table giving particulars of the laws of the various States relating to returned soldiers' land settlement.

Later modifications have been made with a view to simplifying procedure and liberalizing the conditions under which holdings may be acquired.

**§ 11. War Service Homes.**

The operations of the War Service Homes Commission at 31st March, 1932, may be briefly set out as follows:—Total applications approved, 41,632; expenditure on provision of homes, purchase of land for future use, etc., £28,727,263; 21,220 houses had been completed; and 34 homes had been enlarged.

In addition, the Commission had purchased on behalf of eligible applicants 12,923 already-existing properties, and had taken over mortgages existing on 2,582 dwelling-houses. Homes are insured under a comprehensive policy, the total insurances in force, including cover notes, amounting to £16,830,960. The total receipts received by the Commission to 31st March, 1932, were £17,625,200, of which £6,070,783 was paid to the National Debt Sinking Fund. The percentage of arrears of repayments on the repayments due was 3.18.

The foregoing figures include the operations of the State Bank of South Australia and the State Savings Bank of Victoria, which are now carrying out the provisions of the War Service Homes Act in their respective States, the Commonwealth's obligations being to make available to the Government in each State as a loan the funds required for the purpose.

## CHAPTER XV.

## THE TERRITORIES OF THE COMMONWEALTH.

## GENERAL.

The Territories under the control of the Commonwealth are :—The Northern Territory; the Federal Capital Territory; Papua (formerly British New Guinea); Norfolk Island; the Territory of New Guinea (by Mandate of the League of Nations); Nauru (under joint Mandate of the Commonwealth, Great Britain and New Zealand).

Information regarding forms of government, etc., will be found in Official Year Book No. 22, pages 587–588.

## THE NORTHERN TERRITORY.

## § 1. Area and Population.

1. *Introductory.*—Upon the extension of New South Wales westward to the 129th meridian in 1827, the Northern Territory was incorporated in that colony and in 1863 was annexed by Royal Letters Patent to the province of South Australia. With the adjacent islands, it was transferred to the Commonwealth on 1st January, 1911. The total area is 523,620 square miles, or 335,116,800 acres.

2. *Population.*—(i) *Europeans.* At the census taken in 1881 there were only 670 Europeans in the Territory. The total increased slowly, reaching its maximum in 1919 with 3,767 persons. At the census of 1921 the white population had decreased to 2,459. In 1931 it was about 2,800.

(ii) *Asiatics.* With the exception of a few Japanese, Filipinos and others, the Asiatics in the Northern Territory consist mainly of Chinese. These numbered at one time over 4,000, but have gradually dwindled. In 1931 the total number of coloured persons, exclusive of aboriginals, was about 800. (See Year Book No. 22, p. 589).

(iii) *Total Population.* The highest recorded population of all races, except aboriginals, was 7,533 in 1888. The estimated population for the last five years is given in the following table :—

## NORTHERN TERRITORY.—POPULATION (EXCLUSIVE OF ABORIGINALS).

Year.	Males.	Females.	Total.
1927 .. ..	3,137	1,224	4,361
1928 .. ..	2,739	1,243	3,982
1929 .. ..	2,945	1,525	4,470
1930 .. ..	2,993	1,623	4,616
1931 .. ..	2,803	1,655	4,458

The Census population (4th April, 1921) was 2,821 males, 1,046 females, total 3,867.

(iv) *Movement of Population.* The following is a summary of movement of population in 1931 (excluding overland migration) :—

## NORTHERN TERRITORY.—MOVEMENT OF POPULATION, 1931.

Immigration ..	573	Emigration ..	733	Excess of immigration over emigration ..	—160
Births ..	72	Deaths ..	70	Excess of births over deaths ..	+ 2
Increase ..	645	Decrease ..	803	Net Increase ..	—158

The immigration and emigration figures for the Territory during the five years ending 1931 are shown in the following table:—

NORTHERN TERRITORY.—IMMIGRATION AND EMIGRATION.

Year.	Immigration.	Emigration.
1927 .. .. .	1,163	692
1928 .. .. .	710	1,101
1929 .. .. .	1,079	579
1930 .. .. .	807	655
1931 .. .. .	573	733

(v) *The Aborigines.* A special article contributed by Dr. W. Ramsay-Smith on the subject of the Australian aborigines, was incorporated in Year Book No. 3 (pp. 158–176). The chapter “Population,” in Year Book No. 17, contained information regarding the number and distribution of aborigines and the measures taken by the States (in the case of the Northern Territory, by the Commonwealth) to protect them and to conserve their interests. Large numbers of the aborigines in the Territory are still outside the influence of Europeans. The total number of full-blood and half-caste aborigines at 30th June, 1931, was estimated at 20,400, of whom 2,553 were in regular employment. (See also Chapter XVI.—Population, hereinafter.)

## § 2. Legislation and Administration.

On 1st January, 1911, the Territory was transferred by South Australia to the Commonwealth. The terms were outlined in Year Book No. 15, p. 940. By the *Northern Australia Act* 1926, the Territory was divided into two parts, Central Australia and North Australia, separated by the 20th parallel of south latitude, each administered by a Government Resident. In addition, Advisory Councils and a Development Commission were provided for. The Act of 1926 was superseded by the *Northern Territory Administration Act* 1931. By this Act the provision made for Advisory Councils was cancelled, and the Development Commission abolished. The administration of the Territory was placed in the hands of an Administrator, residing in Darwin, assisted by a Deputy Administrator, residing in Stuart (Alice Springs). The Territory elects a member to the Commonwealth House of Representatives, who may take part in the debates, but may not vote.

## § 3. Physiography.

1. *Tropical Nature of the Country.*—The Territory is within the torrid zone, with the exception of a strip  $2\frac{1}{2}$  degrees wide, which lies south of the Tropic of Capricorn.

2. *Contour and Physical Characteristics.*—The low flat coast-line seldom reaches a height of 100 feet. Sandy beaches and mud flats, thickly fringed with mangroves, prevail. Sandstone, marl, and ironstone form the occasional cliffy headlands. The sea frontage of more than 1,000 miles is indented by bays and inlets and intersected by numerous rivers, many of which are navigable for considerable distances from their estuaries.

The principal features of the coast line are enumerated in Year Book No. 1, p. 66; the rivers in Year Book No. 2, p. 76; the mountains in Year Book No. 3, p. 67; the lakes in Year Book No. 4, p. 77; the islands in Year Book No. 5, pp. 71, 72, and the mineral springs in Year Book No. 6, p. 65.

Inland, the country generally is destitute of conspicuous landmarks. From the coast there is a general rise southwards to the vicinity of the 17th or 18th parallel of south latitude, where the higher lands form the watershed between the rivers that flow northwards to the sea and those that form the scanty supply of the interior systems. Towards the centre of the continent the land over a wide area is of considerable elevation, and there are several mountain ranges, generally with an east and west trend.

## § 4. Climate, Fauna and Flora.

1. *The Seasons.*—There are two main climatic divisions—the wet season, November to April, and the dry season, May to October, with uniform and regular changes of weather. Nearly the whole of the rainfall occurs in the summer months. Fuller particulars will be found in Year Book No. 6, p. 1116.

2. **Fauna.**—The ordinary types of native Australian fauna inhabit the Territory. As elsewhere on the continent, the higher *Theria* are rare, but marsupials, birds, crocodiles, fresh-water tortoises, snakes (mostly non-venomous), and frogs abound. There are many varieties of fresh-water fish and littoral mollusca. Butterflies and beetles are strongly represented. The white ant is a pest, anthills in the Territory sometimes attaining great dimensions. Mosquitoes and sandflies are very troublesome, particularly in the wet season. Native fauna are in some cases protected. Buffalo formerly existed in large herds, but, as pointed out later, their number has been greatly reduced by indiscriminate shooting.

3. **Flora.**—The vegetation is North Australian in type, but a number of the forms belongs to the Malayan and Oceanic regions. The timber trees are not of great commercial value, but in the coastal regions tropical vegetation grows luxuriantly to the water's edge. On the wide expanses of plain country in the interior there is little vegetation, the principal orders represented being:—*Euphorbiaceæ*, *Compositæ*, *Convolvulaceæ*, *Rubiaceæ*, *Goodenoviaceæ*, *Leguminosæ*, *Urticæ*.

Fuller particulars regarding fauna and flora are given in Year Book No. 6, pp. 1116-7.

## § 5. Production.

1. **Agriculture.**—Up to the present agriculture has made little progress in the Territory, although it has been proved that rice, tobacco, coconuts, mangoes, bananas, cotton, various fodder plants, and peanuts can be successfully grown. Expense of harvesting is, at present, an obstacle to the economic production of rice, and until labour-saving machinery is procured it cannot be produced with profit. There is a large stretch of first-class coconut land on the coast, but hitherto planting has not been attempted on a commercial scale. Peanuts have become the principal crop, and the harvest in 1931 realized £9,777. A number of former unemployed have been placed on the land and have engaged in the industry. In 1931, approximately 1,500 acres were under peanuts.

2. **Pastoral Industry.**—The pastoral possibilities of certain parts of the Northern Territory were recognized at an early date, and in 1866 stock was brought into the Macdonnell Range country from South Australia. Six years later cattle were moved from Queensland to the northern parts of the Territory, and in 1879 Mr. Giles reached the Katherine River with 2,000 head of cattle and 12,000 sheep from South Australia. For various reasons sheep-raising did not succeed. The cattle industry progressed and became the mainstay of the Territory, a great impetus being given to it in 1917 by the opening of extensive meat works at Darwin. Unfortunately the works closed down in 1920, and are still standing idle. The number of cattle exported by land from North Australia during the year 1930-31 was about 77,000. In the previous year over 6,000 head of live cattle were shipped to Manila, but there was no export in 1930-31. The cattle industry has been retarded by the ravages of ticks and by the difficulty of travelling stock through waterless country. These difficulties are, however, gradually being overcome, the former by the introduction of the practice of "dipping," and the latter by adding to the number of wells on the various stock-routes and the creation of stock reserves. Buffaloes thrive in the coastal districts, but their number has been greatly reduced by indiscriminate shooting for the sake of the hides.

The estimated number of live stock in the Territory in the last five years is given in the table hereunder:—

### NORTHERN TERRITORY.—LIVE STOCK.

Year.	Horses.	Cattle.	Sheep.	Pigs.	Goats.	Camels.	Donkeys.	Mules.
1926 ..	42,801	863,597	6,407	343	22,318	410	1,062	413
1927 ..	40,108	835,390	9,589	292	20,103	402	1,137	499
1928 ..	37,452	768,751	7,635	407	16,499	603	1,112	496
1929 ..	33,703	711,607	11,803	359	9,247	707	779	492
1930 ..	33,363	720,476	15,838	327	16,757	562	831	523

The stock in 1930 was distributed between North Australia and Central Australia as follows :—

Area.	Horses.	Cattle.	Sheep.	Pigs.	Goats.	Camels.	Donkeys.	Mules.
North Australia ..	25,546	667,644	446	313	10,049	52	456	503
Central Australia ..	7,817	52,832	15,392	14	6,708	510	375	20

3. Mining.—(i) *General.* Alluvial gold-digging in the Northern Territory commenced in 1869, and up to the end of 1880 gold to the value of £79,022 had been produced. In 1881 the gold production reached its maximum, the value for that year being £111,945. During the following years it fluctuated considerably, but as long as the alluvial deposits lasted the output was satisfactory. In the transition period from alluvial to reef mining the industry declined considerably. The production of metals other than gold has suffered from vagaries of prices, and from the disadvantages of high cost of transport and of white labour.

(ii) *Mineral Production.* The following table shows the value of the total mineral production for the last five years :—

#### NORTHERN TERRITORY.—MINERAL PRODUCTION.

Year.	Gold.	Tin Ore.	Silver- Lead Ore.	Copper Ore.	Mica.	Wolfram.	Tantalite.	Total Value all Minerals.
	£	£	£	£	£	£	£	£
1926-27 ..	468	18,754	379	..	2,596	..	8	22,205
1927-28 ..	431	10,828	22	..	3,280	..	65	14,626
1928-29 ..	553	6,958	79	..	10,548	..	207	18,345
1929-30 ..	57	3,345	1,684	589	6,099	3,867	1,013	16,654
1930-31 ..	2,445	2,331	160	25	5,531	384	450	11,326

(iii) *Coal and Mineral Oil.* Two licences for mineral oil and coal were in existence in 1930-31, covering an aggregate area of 2,000 square miles. No prospecting for oil was carried on during the year.

4. Pearl, Trepang, and Other Fisheries.—In 1884 mother-of-pearl shell was discovered in the harbour of Port Darwin. Difficulty in working, principally through heavy tides and muddy water, retarded the development of the industry for many years. During the first half of the financial year 1930-31, 32 boats were operating, employing 248 indentured workmen. By Ordinance, gazetted in March, 1931, a limit was set to the output of shell, and the pearling fleet was, consequently, reduced to eighteen boats with 164 employees. The year's output was 673 tons of saleable shell valued at £81,520, compared with 600 tons in the previous year. The territorial waters teem with fish, but the hope of establishing a salt and dried fish trade has not materialized. In the procuring of trepang, three boats and four persons, beside aboriginals, were engaged.

## § 6. Land Tenure.

A description of the system of land tenure in force in the Territory will be found in Chapter V.—Land Tenure and Settlement, Official Year Book No. 22.

### § 7. Commerce and Shipping.

1. **Trade.**—No record is kept of the direction of trade between the Commonwealth States and Territories. The value of the direct oversea trade for 1901 and for each of the years 1926–27 to 1930–31 is given hereunder:—

#### NORTHERN TERRITORY.—VALUE OF DIRECT OVERSEA TRADE.

Items.	1901.	1926–27.	1927–28.	1928–29.	1929–30.	1930–31.
	£	£	£	£	£	£
Imports .. ..	37,539	36,814	30,387	32,069	37,874	9,266
Exports .. ..	29,191	29,786	29,265	53,720	58,471	14,956
<b>Total .. ..</b>	<b>66,730</b>	<b>66,600</b>	<b>59,652</b>	<b>85,789</b>	<b>96,345</b>	<b>24,222</b>

The sharp decline in the export figures for 1930–31 is due mainly to the cessation of the trade in live cattle with the Philippines, which amounted in 1929–30 to £22,209, and a fall in the value of pearl-shell exported to £10,685 as compared with £27,837 in the previous year.

2. **Shipping.**—The Territory is dependent for its shipping facilities chiefly on the services of vessels trading between Sydney and Singapore. Other vessels make occasional visits, while a sixty-days' service between Fremantle and Darwin is carried out by the "Koolinda," belonging to the West Australian State Shipping Service.

#### NORTHERN TERRITORY.—SHIPPING.

Period.	Arrivals.		Departures.	
	No. of Vessels.	Tonnage.	No. of Vessels.	Tonnage.
1926–27 .. ..	50	126,765	50	126,999
1927–28 .. ..	54	125,533	45	121,451
1928–29 .. ..	61	129,997	48	129,218
1929–30 .. ..	52	126,004	47	125,925
1930–31 .. ..	39	111,144	39	111,453

The foregoing figures are exclusive of particulars of coastwise shipping. During 1930–31, 26 vessels of 522 tons net were entered as coastwise.

### § 8. Internal Communication.

1. **Railways.**—Under the agreement ratified by the Act, the Commonwealth is to construct the Northern Territory portion of the transcontinental railway line (connecting Adelaide and Darwin, via Port Augusta).

The Northern line from Adelaide terminated at Oodnadatta, about 100 miles south of the southern boundary of the Territory, but has recently been extended to Alice Springs, an addition of 292 miles. The line from Darwin to Katherine River, about 200 miles, has been extended as far as Birdum, 316 miles from Darwin. The completion of the remainder of the gap would permit of the development of the broad belts of pastoral and mineral country towards the centre of Australia. The Commonwealth also acquired on 1st January, 1911, the property in the line from Port Augusta to Oodnadatta (478 miles), and on 1st January, 1926, the control of the line was transferred to the Commonwealth Railways Commissioner. (See under Federal Railways.)

2. **Posts.**—Postal communication is maintained by vessels belonging to Burns, Philp and Co., which carry on a monthly service between the Territory and the Eastern States. In addition, the vessels belonging to the State Steamship Service of Western Australia give a service once every 60 days between Fremantle and Darwin. Inland, the northern part of the Territory receives its mail via Darwin, while the southern districts are served via Adelaide.

3. **Telegraphs.**—The transcontinental telegraph line, covering a length of 2,230 miles, was completed on the 22nd August, 1872, at a cost of nearly half-a-million sterling. The line runs in a northerly direction from Adelaide to Darwin, whence telegraphic communication is provided with Asia and Europe, via Banjoewangie (Java), Singapore, and Madras. Between Darwin and Banjoewangie the submarine cable is duplicated.

High-power wireless stations have been constructed by the Federal Government at Wave Hill in the Territory, and at Camooweal, just over the eastern boundary, in Queensland.

### § 9. Finance.

1. **Revenue and Expenditure, 1930-31.**—In the Commonwealth finance statements separate accounts are given for Northern Territory administration. Receipts and expenditure for 1930-31 are given below :—

#### REVENUE AND EXPENDITURE.—NORTHERN TERRITORY, 1930-31.

REVENUE.	£	EXPENDITURE.	£
Customs and Excise ..	11,060	Administrative Staff ..	87,089
Postal, Telegraph, and Telephone ..	11,039	Northern Territory Railways	212,682
Darwin-Katherine River Railway ..	28,985	Interest and Sinking Fund, Northern Territory Loans ..	428,594
Central Australia Railway ..	86,360	New Works, Artesian Bores, Roads, etc. ..	11,558
Territorial ..	4,189	North Australia Commission	49,605
Land and Income Tax ..	7,517	Miscellaneous ..	55,256
Lighthouses and Light Dues ..	471		
North Australia Commission ..	28,287		
Sales Tax ..	668		
Miscellaneous ..	18,857		
Deficiency on year's transactions ..	647,351		
<b>Total .. ..</b>	<b>844,784</b>	<b>Total .. ..</b>	<b>844,784</b>

2. **Northern Territory Debt.**—The items making up the total debt of the Territory as at 30th June, 1931, are as follow :—

	£	£
Debt at date of transfer to the Commonwealth, 1st January, 1911 ..	..	3,931,086
Redeemed under Commonwealth Loan Acts ..	3,108,312	} 3,569,062
Redeemed from Consolidated Revenue ..	460,625	
Redeemed from Sinking Fund ..	125	

Balance, 30th June, 1931 .. .. . 362,024

In addition, the balance of the Port Augusta—Oodnadatta Railway Loans taken over from South Australia amounted at 30th June, 1931, to £921,046, making a total of £1,283,070.

### THE FEDERAL CAPITAL TERRITORY.

1. **Introductory.**—In Year Books Nos. 4 and 5, information was given in Section XXXI., in regard to the events leading to the selection of the Federal Capital Territory and the necessary legislation and the progress of operations in connexion with the establishment of the capital city. The physiography of the Territory was dealt with *in extenso*, and topographical and contour maps accompanied the letterpress, as well as reproductions of the premiated designs for the laying out of the city. Considerations of space, however, preclude the repetition of this information. On the 12th March, 1913, the official ceremony to mark the initiation of operations in connexion with the establishment of the Seat of Government was carried out. At this ceremony the selection of "Canberra" as the name of the capital city was announced. (A special article contributed by Dr. F. Watson, entitled "Canberra Past and Present", appeared on page 454 of Year Book No. 24.)



2. **Transfer of Parliament.**—On 9th May, 1927, Parliament House at Canberra was officially opened by His Royal Highness Albert, Duke of York, the occasion being the 26th anniversary of the opening of the first Parliament of the Commonwealth at Melbourne by His Royal Highness George, Duke of Cornwall and York—now His Majesty the King—on the 9th May, 1901. (For particulars of the opening ceremony see Year Book No. 21, page 604.)

3. **Administration.**—In Year Book No. 18, a summary was given of the development of the administration prior to the taking over of the control of the Territory by the Federal Capital Commission, and in Year Book No. 22, a summary was given of the administrative activities of the Federal Capital Commission.

The administration of the Territory by the Federal Capital Commission was continued until the 30th April, 1930, when the Seat of Government (Administration) Act 1924-1929 was repealed, and the powers and functions of the Commission reverted to the Government. The new Administration provided for the general control of the Territory by the Minister for Home Affairs, with the assistance of the Department of Public Health in health matters, the Department of Works in the operation of the engineering services and in the construction of works, and the Attorney-General's Department in the administration of the Courts, Police and Probate, and the Registration of Titles.

An Advisory Council to advise the Minister on matters of local concern was established on the 1st May, 1930, by Ordinance under the Act, and a Civic Administrator was appointed under the Ordinance as Chairman of the Advisory Council and to carry on the general administration of the Territory under the Minister and subject to the specific services being undertaken by the other Commonwealth Departments mentioned.

The Advisory Council consisted of the Secretary, Department of Home Affairs; the Director-General of Health; the Secretary, Department of Works; the Civic Administrator; and three residents elected for two years under a system of adult franchise.

On the 12th April, 1932, the Departments of Home Affairs and Works were abolished and the Department of the Interior was established in lieu thereof. The office of Civic Administrator was abolished, and the constitution of the Advisory Council was altered to provide that the nominated members of the Council should consist of the Director-General of Health, and three officers of the Department of the Interior, namely, the Assistant Secretary (Works and Services); the Assistant Secretary (Property and Survey); and the Assistant Secretary (Civic Representative).

Under the new administration, the general control of the Territory is exercised by the Minister for the Interior, but the specific services undertaken by the Department of Health and the Attorney-General's Department are being continued by those Departments.

4. **Progress of Work.**—The general progress of the work of construction up to the time the Territory was taken over by the Commission was outlined in Year Book No. 18. Later progress made under the Commission is described in Year Book No. 22.

Structures completed after the commencement of the Departmental form of administration comprised the Australian Institute of Anatomy with laboratories and accommodation for a museum of Australian fauna; laboratories of the divisions of Economic Entomology and Plant Industry of the Institute of Scientific and Industrial Research; a public swimming pool equipped with a modern chlorination plant; a small number of additional residential buildings; and improvements and extensions of the various engineering services.

The programme of new development has been restricted recently owing to financial stringency. Nevertheless, all development of the City has proceeded according to the approved plan, and the extensive planting scheme in the parks, plantations and public gardens throughout the city has been continued.

In addition to works in the City Area, the scheme of afforestation in the rural districts is being carried on, and the afforested areas at the latest available date covered 5,500 acres.

5. Lands.—(i) *In the Federal Capital Territory.* Reference has been made in previous issues of the Official Year Book to the general conditions of land tenure in the Territory for the Seat of Government and to the area of alienated and leased land.

As considerable portions of the Territory lands are not required in connexion with the establishment of the city, large areas have been leased under special improvement conditions in regard to the extermination of noxious weeds and the destruction of rabbits and other noxious animals. The lands are classified into three grades of agriculture and three grades of grazing land. About 280,964 acres, comprising 424 leases are at present held under lease for periods varying from quarterly tenure to 25 years.

Regarding auction sales of city leaseholds see Year Book No. 22, p. 599.

Eight leases for church purposes have been granted under the *Church Lands Leases Ordinance 1924-1932*, which require the lessees to submit a definite building programme within a specified period, and a further eight leases have been granted for church and scholastic purposes under the *Leases (Special Purposes) Ordinance 1925-1932*.

The total number of leases granted under the *City Area Leases Ordinance*, not including surrendered leases, at the end of the financial year 1930-31, was 304, representing a capital value of £164,373. During the year ten new leases were granted. The number of business and residential blocks surrendered to or determined by the Commonwealth to the end of the year was 201.

Under the terms of the *City Area Leases Ordinance 1924-1929*, each block is leased for a period of 99 years at a rental of £5 per centum per annum of the unimproved capital value as assessed by the Commonwealth or bid at auction.

(ii) *Land at Jervis Bay.* The Commonwealth has acquired from the State of New South Wales sovereign rights over the area comprising about 28 square miles of land and water at Jervis Bay for possible use as a port in connexion with the Federal Capital. The Royal Australian Naval College was established in this area on a site known as Captain's Point, but was removed in 1930 to Flinders Naval Base. Nearly all of the remaining lands have been leased.

A scheme for the use by tourists of the residences and other buildings at Jervis Bay has been put into operation, and it has proved a considerable attraction, affording a seaside resort for the Territory as well as for visitors from other places.

6. Railways.—Canberra is connected with the railway system of New South Wales by a line  $4\frac{3}{4}$  miles long to Queanbeyan. This line was opened for goods traffic on the 25th May, 1914, and for passenger traffic on the 15th October, 1923, and is being worked by the New South Wales Railways Commissioners for, and on behalf of, the Commonwealth.

The railway terminus is situated in the area known as Kingston.

A direct and convenient passenger service is in operation connecting Canberra with Sydney and Melbourne, and trains leave both cities for Canberra daily except Saturdays. Improved facilities for goods traffic have also been provided.

A trial survey of the Canberra—Jervis Bay line has been completed, and plans prepared to enable an estimate of the cost of the line to be obtained, but no action in regard to this project is contemplated at present.

Under the provisions of the *Seat of Government Surrender Act 1909* of New South Wales, and the *Seat of Government (Acceptance) Act 1909* of the Commonwealth, an agreement exists between the Commonwealth and the State of New South Wales in relation to the construction of a railway from Canberra to Yass—a distance of, approximately, 43 miles, of which about 32 miles extend through New South Wales. The State is required to construct its portion of the line as soon as the Commonwealth builds a line to the boundary of the Territory.

7. Population.—The census return of population on the 30th June, 1932, was 8,221 in the Federal Capital Territory and 165 in Jervis Bay Territory, or a total of 8,386 persons.

8. Live Stock.—The live stock, according to the latest return, comprised :—Horses, 923, Cattle, 5,217, Sheep, 208,647.

9. **Educational Facilities.**—Arrangements have been made with the New South Wales Education Department to continue for the time being the administration of education in the Territory, the expenditure involved being refunded annually to the State. There are twelve schools in the Territory, including one at Jervis Bay. The largest of these is Telopea Park Intermediate High School, which is situated on the south side of the city area. It has accommodation for 1,000 scholars, and its curriculum provides a standard of education comparable in range of subjects with that provided at the best of the Government High Schools in New South Wales, thus permitting scholars to qualify for entrance to the Universities.

The School also provides for Junior Technical, Commercial, and Trades School Branches, as well as Evening Commercial and Matriculation Classes.

The Trades School, which is excellently equipped, supplies the necessary training for apprentices and journeymen who are desirous of improving their respective trade qualifications.

Provision at the School has also been made for Domestic Science and Dressmaking Sections.

An Infants' School, to accommodate 450 children, has been erected on the north side of the city, where for the present scholars of the primary standard on the north side of the river are being catered for. Apart from two other smaller schools in the temporary section of the city settlement, the balance are small rural schools serving the needs of leaseholders settled in the Territory.

Reference to the establishment of a University College at Canberra will be found in Chapter X., Education, herein.

There are at present three private schools in the Territory. The Canberra Grammar School for Boys, St. Gabriel's Church of England Grammar School for Girls, and St. Christopher's Convent—all of which provide for primary and secondary education.

10. **Finance.**—(i) *Financial Year 1931-32.* Receipts and Expenditure for the financial year 1931-32 are given in the table hereunder.

#### FEDERAL CAPITAL TERRITORY.—RECEIPTS AND EXPENDITURE 1931-32.

Receipts.		Expenditure.				
Items.	Amount.	Items.	Capital.	Main-tenance.	Other.	Total.
	£		£	£	£	£
Rents .. ..	81,049	Cottages, Buildings, etc. ..	11,367	14,765	..	26,132
Rates .. ..	7,978	Public Utilities—				
Electricity ..	42,565	General .. ..	42,005	63,781	..	105,786
Motor Registration and Fees .. ..	7,433	Other .. ..	17,576	35,987	..	53,563
Water Charges ..	3,174	Advances under Housing Ordinances .. ..	215	..	..	215
Hotels .. ..	87,268	Alleviation of Distress and Unemployment Relief ..	11,961	52,217	..	64,178
Transport and Bus Service .. ..	31,892	(a) .. ..		(b) (c)		
Hospital .. ..	2,157	Education .. ..	..	..	10,351	10,351
Sales of Goods and Manuf. Products ..	77,396	Hotels—Working Expenses ..	..	..	87,370	87,370
Miscellaneous ..	21,027	Transport and City Bus Service .. ..	..	..	31,351	31,351
		Factories, Stores, etc., Working Expenses .. ..	..	..	59,448	59,448
		Hospital .. ..	..	..	13,365	13,365
		Interest and Sinking Fund ..	..	..	362,834	362,834
		Administrative .. ..	..	..	49,043	49,043
		Miscellaneous—Police, Fire Brigade, etc. .. ..	..	..	43,679	43,679
		(d)			(d)	
<b>Total Receipts</b>	<b>361,939</b>	<b>Total Expenditure</b> ..	<b>83,124</b>	<b>166,750</b>	<b>665,441</b>	<b>915,315</b>

(a) Voted under Special Appropriation Act No. 49 of 1931. (b) Includes £15,000 paid to credit of Trust Fund Unemployment Relief Account and unexpended at 30th June, 1932. (c) Includes expenditure of a capital nature. (d) Includes £20,000 paid to credit of Trust Fund Melbourne Officers' Homes Account and unexpended at 30th June, 1932.

(ii) *From Date of Selection of Site to 30th June, 1931.*—The total receipts and expenditure from the date of selection of site to the 30th June, 1931, were as follows :—

FEDERAL CAPITAL TERRITORY.—RECEIPTS AND EXPENDITURE TO 30th JUNE, 1931.

Receipts.		Expenditure.	
Items.	Amount.	Items.	Amount.
	£.		£
Loans and Advances .. .. .	6,220,299	Lands .. .. .	901,133
Rents .. .. .	1,950,845	Engineering Works .. .. .	3,591,441
Hotel and Liquor Receipts .. .. .	601,410	Architectural Works .. .. .	3,595,581
Revenue from Local Government and State undertakings .. .. .	571,478	Other Capital Expenditure .. .. .	301,608
Receipts from Sundry Debtors, Sale of Goods, Transport, etc. .. .. .	764,082	Maintenance and Administration .. .. .	3,821,057*
		Other .. .. .	12,588
<b>Total Receipts .. .. .</b>	<b>9,208,114</b>	<b>Total Expenditure .. .. .</b>	<b>12,223,408</b>

\* Does not include accumulated interest, approximately £1,966,000.

The sources from which the expenditure has been made are shown in the statement hereunder :—

	£
Receipts as above .. .. .	9,208,114
Initial liability of the Federal Capital Commission .. .. .	2,966,600
Expenditure on Parliament House and Railways at 31st December, 1924, not taken over by Commission .. .. .	177,438
Expenditure, May and June, 1930, from Loan Fund .. .. .	39,007
Expenditure, 1st July, 1930, to 30th June, 1931, from £	
Loan Fund .. .. .	113,077
<i>Less</i> Advances under the Housing Ordinance, 1928-30 .. .. .	42,203
	70,874
Expenditure over Receipts, May and June, 1930, from Consolidated Revenue .. .. .	9,324
Expenditure over Receipts, 1st July, 1930, to 30th June, 1931, from Consolidated Revenue .. .. .	£ 470,497
	£
<i>Less</i> Interest payment .. .. .	352,777
Amount paid to credit of Trust Fund, F.C.T.	
Transport .. .. .	500
	353,277
	117,220
	12,588,577
<i>Less</i> credit in Trust Funds at 30th June, 1931 .. .. .	350
Interest paid to Treasury but subsequently taken as a repayment of advances .. .. .	190,621
Adjustment of Housing Ordinance 1928-30 Loans advanced by Treasury .. .. .	174,198
	<u>Cr. 365,169</u>
	<u>12,223,408</u>

## NORFOLK ISLAND.

1. **Area, Location, etc.**—Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude  $29^{\circ} 3' 45''$  south, longitude  $167^{\circ} 58' 6''$  east. Its total area is 8,528 acres, the island being about 5 miles long and 3 miles wide. From Sydney it is distant 930 miles, and from New Zealand 400 miles. The coast line is 20 miles, and its form that of an irregular ellipse. Except on the south-west, inaccessible cliffs rise from the water's edge. The climate is equable, the temperature ranging between  $56^{\circ}$  and  $82^{\circ}$ , with a mean of  $68^{\circ}$ . The average annual rainfall is 55 inches. It has been said that the salubrious climate, coupled with the beauty of its land and sea scapes, should combine to render Norfolk Island "the Madeira of the Pacific." At present the island is visited annually by a fair number of tourists, but with improved shipping facilities the traffic would considerably increase.

2. **Settlement.**—The first colonization, in 1788, was by Lieutenant King, who in H.M.S. *Supply* established a small penal station as a branch settlement of that at Port Jackson. The settlement was abandoned in 1813, and for 13 years thereafter its chief use was as a whaling station and place of call for British warships.

From 1826 to 1855 it was again made a penal station. In 1844 it was annexed to Van Diemen's Land (Tasmania).

The descendants of the *Bounty* mutineers, having become too numerous to subsist on Pitcairn Island, were removed thence to Norfolk Island in 1856. The new community numbered 94 males and 100 females—and were the descendants of British sailors and Tahitian women. Five of these were still alive at the 75th anniversary of the transfer, celebrated in June, 1931.

3. **Administration.**—In 1856 the island was created a distinct and separate settlement under the jurisdiction of New South Wales. In 1896 it was made a dependency under the Governor of that Colony. In 1913, however, the Federal Parliament provided for the taking over of the island as a territory of the Commonwealth. From July, 1914, until 1st January, 1929, Norfolk Island was administered by the Department of Home and Territories, through an Administrator and Chief Magistrate, but it is now administered by the Prime Minister's Department. (See also Official Year Book No. 22, p. 604.)

4. **Population.**—The population on 30th June, 1931, was estimated at 992, consisting of 545 males and 447 females. In the year 1930-31, 24 births, 16 deaths, and 19 marriages were recorded.

5. **Live Stock.**—The latest returns of live stock show that in 1929 there were on the island 1,590 cattle, 645 horses, 279 sheep, and 65 pigs. In addition, there were 5,772 head of poultry. The quality of the live stock, generally speaking, is poor, but efforts are being made to improve it.

6. **Production, Trade, etc.**—The soil throughout is rich, and is specially suitable for the cultivation of citrus fruits, bananas, and (in parts) coffee. The banana industry is making progress and about 31,700 cases were shipped in 1930-31, as compared with about 25,700 cases during the preceding year. Various other sub-tropical fruits thrive well. During 1930-31, the export of oranges was 1,270 cases; passion fruit and pulp, 436 cases; lemon juice, 14 casks; and lemon peel, 4 cases; mixed fruit, 685 cases; potatoes, 465 cases. There are many thousands of lemon trees and guavas growing wild throughout the island.

Large numbers of whales pass the island throughout the season, but whaling has now practically ceased. The preserved fish industry which was established some years ago has been abandoned; although such fish as trevalla, kingfish, schnapper, and many others, are plentiful. The "all-red" cable from Great Britain via Vancouver, Fanning Island, and Fiji, bifurcates at Norfolk Island, one line connecting with New Zealand, the other with Brisbane. A monthly steamship service between Norfolk Island and Sydney is carried on by Burns, Philp and Co. The regular steamship service with Auckland, previously maintained by the New Zealand Government, was terminated in 1930; and the island in consequence lost a convenient market for some of its produce, as well as the income derived from tourists from the Dominion. This difficulty has now been overcome through an arrangement whereby Burns, Philp and Co.'s steamers have made Auckland a port of call.

Imports and exports for the last five years are given hereunder :—

NORFOLK ISLAND.—IMPORTS AND EXPORTS.

Heading.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Imports .. ..	27,869	42,756	55,894	46,776	43,370
Exports .. ..	13,578	19,254	33,027	32,255	21,908
Total .. ..	41,447	62,010	88,921	79,031	65,278

7. **Social Condition.**—Education is free and compulsory up to the age of fourteen years. The school conforms to the Australian standard of public education, ranging from kindergarten to the intermediate certificate, with a two years' superprimary course according to the requirements of a High School of the Rural Science type. The headmaster and two assistant teachers are lent by the New South Wales Education Department, but they are paid by the Norfolk Island Administration. The number of scholars enrolled in 1931 was 165.

The Magistrates' Court has criminal jurisdiction in all crimes except capital offences, civil jurisdiction in all matters, and authority to grant probate and letters of administration.

8. **Finances.**—The receipts and expenditure for the year 1930-31 were as follows :—

NORFOLK ISLAND.—RECEIPTS AND EXPENDITURE, 1930-31.

Heading.	Receipts.	Heading.	Expenditure.
	£		£
Brought forward ..	4,955	Salaries .. ..	4,078
Commonwealth Subsidy ..	4,000	Miscellaneous .. ..	2,945
Tariff Collections in Sydney ..	5,235	Purchase of Liquor ..	3,004
Sale of Liquor .. ..	3,572	Balance carried forward ..	8,226
Miscellaneous .. ..	491		
Total .. ..	18,253	Total .. ..	18,253

PAPUA.

§ 1. General Description.

1. **Early Administration.**—Particulars of the early administration of Papua were given in Official Year Book No. 19, p. 576.

2. **Administration by Commonwealth of Australia.**—The Territory was placed under the authority of the Commonwealth on 1st September, 1906, by proclamation issued in pursuance of Letters Patent of the 18th March, 1902, and was accepted by the Commonwealth by the Papua Act 1905, which came into force by virtue of the proclamation aforesaid. The transfer was made under the authority of section 122 of the Constitution. The Territory is now under the administration of the Commonwealth, but not included within it, and is divided into magisterial districts.

3. **Area, etc.**—Papua lies wholly within the tropics. The northernmost point touches 5° S. latitude; its southernmost portion, comprising Sudest and Rossel Islands, lies between 11° S. and 12° S. latitude. It is separated from Australia by Torres Strait. The length of Papua from east to west is upwards of 800 miles; towards either end the breadth from north to south is about 200 miles, but about the centre it is considerably narrower. The Territory comprises also the islands of the Trobriand, Woodlark,

D'Entrecasteaux and Louisiade groups. The length of coast-line is estimated at 3,664 miles—1,728 on the mainland, and 1,936 on the islands. The total area is about 90,540 square miles, of which 87,786 are on the mainland, and 2,754 on the islands. A reference to the physical characteristics of the Territory appears in previous issues of the Official Year Book (see No. 18, p. 633).

## § 2. Population.

The white population of Papua on 4th April, 1921, was 1,343, made up of 961 males and 382 females. Included in these figures were 79 persons, who were passengers and crew of the s.s. *Marsina*, which was at Samarai at the taking of the Census. The following table gives the white population in each of the last five years:—

### WHITE POPULATION OF PAPUA.

YEAR ENDED 30TH JUNE.

1927.	1928.	1929.	1930.	1931.
1,366	1,428	1,523	1,525	1,128

The chief occupations of the non-indigenous population at the taking of the Census were:—Government officials and employees, 132; commercial pursuits, 150; shipping, 124; tropical agriculture, 266; missionary work, 144; mining, 159.

It is not possible to give exact data regarding the number of natives, because a large area of the interior is not yet under Government control. The official estimate is 275,000. Such censuses of the native population as have been taken during recent years point to a slight increase. The coloured population, other than Papuans, numbered on 4th April, 1921, 577, and included many mission teachers from Samoa, Fiji, and other Pacific Islands. On the same date, half-castes, with one of the parents a European, totalled 158. An Immigration Restriction Ordinance prohibits the immigration of persons who fail to pass the dictation test, or who are of bad character, or likely to become a charge upon the public. Exemptions may, however, be granted by the Lieutenant-Governor to persons of special skill required for employment as overseers or foremen.

## § 3. Native Labour, Taxation, Health, etc.

1. **Native Labour.**—Information regarding the conditions connected with the employment of native labour will be found in Official Year Book No. 22, p. 607.

Owing to the present economic depression, the number of indentured native labourers has considerably declined and only about 6,000 natives were employed under contract in 1931, compared with 7,274 in 1930. Wages paid under contract of service decreased from £57,263 in 1930 to £48,328 in 1931. The number of unindentured labourers rose from 1,379 in 1930 to 2,183 in 1931.

2. **Native Taxes.**—Under the Native Taxes Ordinance, passed in 1918, a tax not exceeding £1 may be imposed on natives, excepting native constables, mission teachers, natives unfit for work, and those who have not less than four living children. The proceeds of the tax must be expended on native education, or devoted to purposes directly benefiting the natives, as may be prescribed.

The taxes collected in 1930–31 amounted to £14,437, of which £2,492 was transferred to the Native Education Fund, and £9,519 to the Native Benefit Fund. The Native Education Fund during the year 1930–31 disbursed to primary and technical education £5,649, and to agricultural education £1,222, leaving a credit balance of £24,315. From the Benefit Fund the expenditure included:—Anthropology £1,438, health £6,033, village improvements £433, family bonuses £1,157.

3. **Care of Half-caste Children.**—An Ordinance was passed in 1922 to provide for the care and maintenance of neglected half-caste children. The Ordinance provides that a sum of £26 per annum shall be paid to the Commissioner for Native Affairs by the adjudged father of the child until the child, if a boy, shall reach the age of 16 years, or, if a girl, 18 years.

4. **Health.**—The two principal native hospitals are in Port Moresby and Samarai ; but minor hospitals are attached to the out-stations and conducted by the various mission societies and plantation companies. The mission societies employ two qualified doctors and a number of trained nurses. Two travelling medical officers and several European medical assistants are employed by the Government. Natives are also being trained as medical assistants. The chief complaints treated are yaws, ulcers, lung affections, hookworm, venereal and skin diseases. The death rate amongst native labourers in 1931 was below one per cent.

**§ 4. Land Tenure.**

1. **Method of Obtaining Land.**—Information under this heading is given in Official Year Book No. 22, p. 608.

2. **Holdings.**—On the 30th June, 1930, the lands of the Territory were held as follows :—

**PAPUA.—HOLDINGS, 1930.**

Description.	Area.
	Acres.
Land held by the natives .. .. .	56,926,407
Crown land .. .. .	814,598
Freehold land .. .. .	22,934
Leasehold land .. .. .	181,661
Area of Territory .. .. .	57,945,600

Private sales of land in the Territory have now practically ceased. The Government buys from the natives, and then leases to planters, who are forbidden to have direct dealings in land with Papuans.

Of the total area of 181,661 acres shown above, agricultural leases accounted for 164,842, pastoral leases for 15,070, special leases for 866 and mission leases for 531.

Particulars for 1931 are not available.

The area of land acquired by the Crown in 1930–31 was 8,154 acres.

The total area surveyed in the Territory is 21,695 acres of freehold, and 299,391 acres of leasehold.

**§ 5. Production.**

1. **General.**—The products of the Territory are obtained from its agricultural, forestal, fishing, mining, and manufacturing industries. For many years gold-mining yielded the largest returns, but the production has dwindled considerably owing to the exhaustion of the alluvial deposits. There is a possibility of obtaining petroleum in marketable quantities. Amongst plantation products, copra occupies the foremost place; but little coconut planting has been done in recent years. Portions of the Territory appear well suited for cotton cultivation.

2. **Agriculture.**—(i) *Soil and Rainfall.* Rich soils at varying elevations, and heavy and evenly distributed rainfall favour the cultivation of a variety of tropical products including sugar cane, coconuts, sago palm, bread fruit, dyewoods, spices, ginger, nutmegs, bananas, and other fruits. There are large areas of rich alluvial and volcanic soils along the coast, and fertile land is found at elevations up to 6,000 feet. Heavy rainfalls occur, except over a belt of country which runs back from the coast to the hills, and which has its dry season from May to November. This “dry” area is admirably suited for the production of tobacco, fibres, cotton, etc. There are 22 meteorological stations throughout the Territory, and an economic museum and agricultural library have been established.



(ii) *Plantations.* On 31st December, 1930, there were 338 plantations. Agricultural settlement has been mostly in the Central and Eastern Divisions, and the area planted was 58,904 acres, as against 59,487 in 1929. The principal plantation crops are coconuts, rubber, and sisal hemp. There is also some cultivation of bowstring hemp, kapok, coffee, tobacco, cotton, vanilla, cocoa, tapioca, cinnamon, tea, rice, and maize. The natives are compelled by an ordinance to plant coconuts for food supply. In addition to the coconuts in these plantations, many more are planted over small and widely scattered areas by the older natives in accordance with custom. The Native Plantations Ordinance provides for the establishment of plantations in which half of the proceeds is paid to the natives entitled thereto, and the remaining half paid into the Native Education Fund. The following table shows the areas under the different cultures at the end of December, 1930 :—

PAPUA.—AREA OF PLANTATIONS, 1930.

Description.	Area.
	Acres.
Coconuts .. .. .	47,838
Rubber .. .. .	9,075
Hemp .. .. .	750
Kapok .. .. .	310
Coffee .. .. .	348
Cotton .. .. .	14
Other cultures (including fruit trees) .. .. .	569
<b>Total .. .. .</b>	<b>58,904</b>

The quantities of copra and rubber exported during the year ended 30th June, 1931, were :—Copra, 9,436 tons ; rubber, 785 tons. Compared with the year 1929 there was an increase in the acreage under rubber, sisal hemp, kapok, and coffee, and a decline in that of coconuts, cotton and “other cultures”. The acreage under hemp shows a considerable increase.

(iii) *Government Plantations.* There are two Government plantations, the Orangerie Bay coconut plantation and the Kemp Welch rubber plantation. The profits from these and from various minor plantations in 1930–31 were £3,582, as against £8,290 in 1929–30.

3. *Forestry.*—According to the Commonwealth Forestry Adviser the principal softwood timber is known as “ilimo,” while among satisfactory timbers of the lowlands are “nara,” “medobi,” and “melila.” There is a large number of woods, varying from the softest to the hardest, including beautiful cabinet woods, but research is necessary to determine their usefulness. The development of a coniferous belt at the higher altitudes offers great possibilities. It is believed that teak and sandalwood are well suited for cultivation.

4. *Live Stock.*—At 31st December, 1929 (the latest date for which particulars are available), the live stock in the Territory consisted of 709 horses, 6,754 head of cattle, 136 mules, 16 donkeys, 3,135 goats, and 655 pigs. A Government stud-farm established for the breeding of horses has been closed. The introduction of rabbits, foxes, hares, and monkeys is prohibited.

5. *Fisheries.*—Pearl-shell fishing occupies an important place in the industries of Papua. A considerable number of luggers is licensed, but the returns are mostly credited to Queensland, whose boundary approaches to within a few miles of the Papuan coast. The species of tortoise which supplies the commercial tortoise-shell is also a native of the Territory. Bêche-de-mer and trochus are found along the shores and reefs, and form valuable articles of export.

6. Mining.—(i) *Variety of Minerals.* Minerals have been found over a wide range of country. Those discovered so far are—gold, copper, tin, lead, zinc, cinnabar, iron, osmiridium, gypsum, manganese, sulphur, graphite, chromite, lignite, and petroleum. The existence of petroleum has been traced at scattered intervals over a large area.

Of precious stones, only the topaz and beryl have been obtained. Large beds of apparently good coal also exist.

(ii) *Gold.* Gold was discovered in 1888 and the search gradually spread over every division, finds being reported wherever the explorers went. The total quantity in fine ounces and the value as returned of the gold yield for the last five years are given below :—

PAPUA.—GOLD YIELD.

1926-27.		1927-28.		1928-29.		1929-30.		1930-31.	
Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
fine ozs.	£	fine ozs.	£	fine ozs.	£	fine ozs.	£	fine ozs.	£
6,150	26,124	1,704	7,240	1,625	6,901	2,368	10,059	5,283	22,440

Most of the rivers, with the exception of those flowing into the Gulf of Papua, have been declared open to gold-dredging, and good yields have been obtained. The total value of gold won to 30th June, 1931, was £1,775,832.

(iii) *Copper.* Owing to the very low prices ruling for copper in the world's market, the copper mines in Papua have suspended operations. The total value of the copper exported to the 30th June, 1931, was £366,683.

(iv) *Osmiridium.* The existence of osmiridium had been known for several years, but for some time no serious attempt was made to collect it, the alluvial gold miner formerly picking out the larger slugs of the metal from his gold parcel and throwing them away. The production in 1930-31 amounted to 47 ozs., valued at £700.

(v) *Other Minerals.* Some good samples of galena (sulphide of lead) have been obtained, while cinnabar (sulphide of mercury), graphite (or plumbago), zinc-blende, native sulphur, and other minerals are known to exist. In 1924 a deposit of lignite was discovered on Smoky Creek, a tributary of the Era River.

A mineral laboratory and museum have been fitted up, and are available to prospectors and others interested.

7. *Water Power.*—Most of the rivers in Papua carry a large volume of water from a great height over a relatively short distance, thereby offering opportunities for the installation of hydro-electric power plants. It is estimated that there are at least 10,000,000 h.p. available for this purpose.

§ 6. Finance, Trade, Postal and Shipping.

1. *Finance.*—The principal sources of revenue were as follow :—Commonwealth Grant, £45,000; Customs and Excise, £35,051, Government Plantations, £3,582; Fees of Office, £5,282; Land Revenue, £5,199; Post Office, £6,647; Port and Wharfage Dues, £2,494; and Miscellaneous, £19,903.

Returns of revenue and expenditure for the last five years, exclusive of Commonwealth grants, are given hereunder :—

PAPUA.—LOCAL REVENUE AND EXPENDITURE.

Item.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Revenue .. ..	111,508	107,052	93,751	107,266	89,918
Expenditure .. ..	167,727	158,964	152,949	151,874	134,986

2. **Trade.**—The value of imports and exports for the last five years is shown in the table below :—

PAPUA.—IMPORTS AND EXPORTS.

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Imports .. ..	455,904	403,561	361,271	373,918	240,074
Exports .. ..	454,462	350,363	337,365	324,775	274,354
Total Trade .. ..	910,366	753,924	698,636	698,693	514,428

The decrease in the value of exports is mainly due to a fall in prices for copra, pearls and pearl-shell, and copper.

As in all new countries, the imports consist chiefly of articles necessary for the primal needs of the community, such as agricultural products and groceries, drapery, machinery, tobacco, oils, paints, beverages, wood, wicker and cane, drugs, etc. The chief items of export during the last five years are as follow :—

PAPUA.—PRINCIPAL EXPORTS.

Article.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Bêche-de-Mer .. ..	16,193	14,907	11,833	6,381	5,549
Copper Ore .. ..	35,799	208	..	194	..
Copra .. ..	186,837	194,019	214,051	176,485	93,710
Cotton .. ..	824	59	415	167	28
Gold .. ..	29,115	6,364	6,767	10,632	22,440
Hemp .. ..	33	..	..	3	271
Osmiridium .. ..	430	550	375	500	700
Pearls .. ..	8,968	827	1,861	11,422	123
Pearl Shell and Trochus Shell .. ..	7,576	12,086	9,058	10,975	7,606
Rubber .. ..	156,274	102,158	46,816	50,640	47,036
Natural History Specimens .. ..	..	14	776	64	64

3. **Shipping.**—The following table shows the number and tonnage of oversea vessels entered and cleared at ports during the years 1926-27 to 1930-31. All the vessels except 21 were of British nationality.

PAPUA.—OVERSEA SHIPPING.

Year.	Vessels.	Tonnage.
1926-27 .. ..	143	226,948
1927-28 .. ..	159	226,784
1928-29 .. ..	171	184,946
1929-30 .. ..	180	228,391
1930-31 .. ..	194	220,399

Throughout, the figures are exclusive of ships of war and Government vessels.

### § 7. Progress of Papua.

As already stated (§ 1, *supra*) the Territory was placed under the Commonwealth control on 1st September, 1906. The following table indicates the progress that has been made since that date :—

#### PAPUA.—STATISTICAL SUMMARY.

Items.	Year ended 30th June—	
	1907.	1931.
White population .. .. .	690	1,128
Native labourers employed .. .. .	2,000	6,015
Territorial revenue .. .. .	£21,813	89,918
Territorial expenditure .. .. .	£45,335	134,986
Value of imports .. .. .	£87,776	240,074
Value of exports .. .. .	£63,756	274,354
Area of plantations .. .. . acres	1,467	58,904
Meteorological stations established .. .. .	3	22
Gold yield .. .. . fine ounces	12,439	5,283

### THE TERRITORY OF NEW GUINEA.

#### § 1. General Description.

The present Territory of New Guinea comprises that portion of the German New Guinea Protectorate which lay south of the equator (excepting only the island of Nauru), and known in German times as the "Old Protectorate." The principal islands (with their German names if these differ from those now in use) and their approximate areas are as follow :—

#### AREA OF TERRITORY OF NEW GUINEA.

Particulars.	Approximate Area.
	Square Miles.
North-East New Guinea (Kaiser Wilhelm's Land) .. .. .	70,000
Bismarck Archipelago—	
New Britain (Neu Pommern) .. .. .	13,000
New Ireland (Neu Mecklenburg) .. .. .	3,000
Lavongai (New Hanover or Neu Hannover) .. .. .	600
Admiralty Islands and North-Western Islands .. .. .	1,000
Solomon Islands—	
Bougainville .. .. .	3,200
Buka .. .. .	200
<b>Total .. .. .</b>	<b>91,000</b>

Information regarding physiography and climate will be found in Official Year Book No. 22, p. 613. A map of the territory was published in Year Book No. 16, p. 665.

#### § 2. Government.

1. **The Military Occupation.**—On the 17th September, 1914, the Acting Governor of German New Guinea signed terms of capitulation with the officer commanding a Naval and Military Expedition sent from Australia, and thereafter the Territory was under military administration until the establishment of Civil Government in May, 1921.

2. **Mandate.**—The Mandate in accordance with which the Territory of New Guinea is administered by the Commonwealth was issued by the League of Nations in December, 1920. The terms of the Mandate appear in Official Year Book No. 16, p. 662-3.

3. **New Guinea Act.**—In anticipation of the issuing of the Mandate, the Commonwealth Parliament had already, in September, 1920, passed the New Guinea Act 1920, by which the Governor-General was authorized to accept the Mandate when issued. The Territory was, by the Act, declared to be a Territory under the authority of the Commonwealth, with the name of the Territory of New Guinea.

The Act provided for an Administrator, while power to legislate for the Territory was to be exercised by the Governor-General, and provision was made for the observance of safeguards in the interests of the natives as set out in the Mandate.

4. **Establishment of Civil Government.**—Official Year Book No. 19, p. 586, contains an account of the establishment of Civil Government in the Territory.

5. **Expropriation.**—The Treaty of Peace provided that German nationals resident in her former colonies might be repatriated, and that the property rights and interests of German nationals in former colonies might be retained and liquidated by the Allies, the proceeds being credited to Germany in part payment of the reparation payable by her under the Treaty. In pursuance of these powers, in September, 1920, the property of the principal German companies in the Territory, and in March, 1921, that of a large number of German planters, was vested in the Public Trustee. (See Year Book No. 17, p. 631.) In 1926 and 1927 these plantations were transferred to private owners.

6. **Departments and Districts.**—The Administration is organized in seven Departments—Government Secretary; Treasury; Native Affairs; Public Health; Customs and Shipping; Lands, Mines, Surveys, and Forestry; and Agriculture.

For administrative purposes the Territory is divided into eight Districts. They are as follow:—New Britain, comprising New Britain and adjacent islands; on the Mainland—Morobe, Madang, Aitape, and Sepik; New Ireland, comprising New Ireland, Lavongai and adjacent islands; Manus, comprising the Admiralty Group; and Kieta, the former German portion of the Solomon Islands. Each district is under a District Officer, assisted by a small staff.

7. **Statute Law.**—The Acts of the Commonwealth Parliament do not (unless expressly so stated) extend to the Territory, but the *Laws Repeal and Adopting Ordinance* 1921 provided that certain Acts and Ordinances should be applied thereto. (See Year Book No. 17, p. 631.)

8. **Reports to the League of Nations.**—Eleven reports have been rendered to the League of Nations in compliance with Article 6 of the Mandate, the latest being for the year ended 30th June, 1931.

### § 3. Population.

1. **White Population.**—The increase in the white population at various intervals since 1885 is shown in the appended tabulation. At the census of 1921, the population was 1,288, of whom about 250 were missionaries, and 262 were persons engaged in administration, 715 were British subjects, and nearly all the remainder were nationals of former enemy countries. On 30th June, 1931, the number of Europeans was about 2,900.

#### TERRITORY OF NEW GUINEA.—WHITE POPULATION.

Year.	Number.	Year.	Number.
1885	64	1930	2,850
1928	2,400	1931..	2,900
1929	2,600		

2. **Asiatic Population.**—Malays seem to have been the first Asiatics brought by the Germans to German New Guinea; 37 of them were recorded on the mainland in 1885. About 1889 the New Guinea Company began to bring Chinese, Malays, and Javanese in growing numbers from Singapore and Java to work on the plantations; by 1892 there were about 1,800 on the mainland. By 1898 the number had decreased to 300 or 400. The number of Chinese in the Mandated Territory reached its highest peak in 1921, with 1,424. Since then it has declined, and in 1931 the total was returned at 1,179.

The Japanese at present number about 40. The total Asiatic population, which in 1914 was 1,681, had increased in 1921 to 1,778. The Chinese provide the skilled artisans of the Territory, and many of them are small traders. Most of the Japanese residents are employed on the plantations, or in shipyards and stores.

3. **Native Population.**—As a large portion of the Territory is not under Government influence it is not possible to obtain reliable figures in regard to the number of the natives.

The following table shows the number enumerated in 1929–30. The complete figures for the native census in 1931 are not at present available.

**TERRITORY OF NEW GUINEA.—NATIVE POPULATION, ENUMERATED IN 1929–30  
(EXCLUSIVE OF INDENTURED LABOURERS).**

District.	Children.			Adults.			Total.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
Aitape ..	12,701	9,662	22,363	20,458	19,028	39,486	33,159	28,690	61,849
Kieta ..	8,490	6,761	15,251	11,322	12,314	23,636	19,812	19,075	38,887
Madang ..	10,885	8,540	19,425	18,242	16,933	35,175	29,127	25,473	54,600
Manus ..	3,001	2,850	5,851	3,893	4,323	8,216	6,894	7,173	14,067
Morobe ..	12,135	10,163	22,298	17,428	18,800	36,228	29,503	28,903	58,526
New Britain ..	17,602	14,985	32,587	24,642	24,358	49,000	42,244	39,343	81,587
New Ireland ..	8,273	6,509	14,782	11,202	12,432	23,634	19,475	18,941	38,416
Seplk ..	3,702	3,146	6,848	7,087	8,138	15,225	10,789	11,284	22,073
Total ..	76,789	62,616	139,405	114,274	116,326	230,600	191,063	178,942	370,005

The total native population in the Territory is estimated roughly at about 520,000. Whether the number is increasing or decreasing cannot be ascertained with certainty. The number of natives indentured as labourers, mostly for plantation work, on 30th June, 1931, was 27,765, compared with 30,130 in the previous year.

#### § 4. The Natives.

1. **General.**—A brief description of the native inhabitants of the Territory was included in Year Book No. 16, p. 670. It may be noted here that the natives are divided into two main groups—Melanesian and Papuan—the former, with a few exceptions, constituting the population of the Bismarck Archipelago, the Solomon Islands, and the coastal districts of the New Guinea mainland, while the latter inhabit the interior of the mainland. Odd tribes of Negritos are known to exist in the mountains of New Guinea. In the Admiralty Islanders there is a strain of Papuan, and, possibly, of Polynesian blood, while the Western Islanders and the inhabitants of the small islands east and south-east of New Ireland are Micronesians.

2. **Land Tenure.**—Native customs in regard to the ownership and use of land may be briefly outlined as follows:—The ownership and use of the land are generally individual, although, in some rare cases, particularly in North Bougainville, the communal system exists. In districts where a great many coconut-bearing palms are growing on native lands it is often found that the land is the property of a chief or of one of the old men of the tribe, and that the coconut palms growing thereon are divided into small groves, and are the property of several members of the tribe. Customs with regard to the use of unoccupied forest lands vary. Right of inheritance to land is almost invariably through the maternal branch. (See Year Book No. 17, p. 634.)

3. **Research Work.**—During the German occupation of the Territory a certain amount of research work was carried out, partly by scientific expeditions, and partly by missionaries and by a local resident. An anthropologist has been appointed by the Commonwealth Government to consolidate the work already done, and to extend it to parts of the Territory which have not yet been covered. The results of his work appear in special reports.

4. **Education.**—The education of the natives was provided for in the "Education Ordinance of 1922" under which the Administrator was authorized to establish schools, grant money therefor, prescribe instruction, and arrange for the training of teachers and other matters. Simultaneously a Native Education Trust Fund was inaugurated, over which the Administrator was given control, and for the benefit of which he was empowered, within certain limits, to levy taxes on the natives and on employers of native labour. The expenditure on native education in 1930-31 was £6,949. Though the natives are liable to pay education tax, none has been collected since 1922-23, whereas a considerable sum annually is obtained from a tax levied on employers of native labour.

In 1929 the Under-Secretary for Education, in Queensland visited the Territory to advise regarding educational matters, and his reports have been accepted as the basis of future educational policy. The European teachers have been seconded from the Education Department of Queensland. During the year ended 30th June, 1931, the following schools were maintained by the Administration :—Native elementary schools, Rabaul and Kavieng; native technical school, Rabaul; native agricultural school, Keravat. In addition there is a school for Europeans at Rabaul. (See Year Book No. 17, p. 635.)

A considerable amount of educational work is carried out by the missions, the schools maintained being of three classes—(a) elementary schools in villages; (b) intermediate boarding schools at headquarters; and (c) high schools and technical schools. At the end of June, 1931, the various missions maintained 49 training centres, 27 high and technical schools, 61 elementary schools, and, 1,327 village schools. The pupils numbered 38,545.

The missions also conduct schools for Chinese children in Rabaul and Kavieng.

The granting of assistance to mission schools is authorized by the Education Ordinance, but no grants have hitherto been made.

5. **Health of Natives.**—In a report dealing with the health of the natives in New Britain submitted before the war, it was stated that "the natives in the districts examined are not degenerate; but they are sick." The same qualification undoubtedly applies to the native population throughout the Territory.

The diseases taking the greatest toll of native life—directly, or through lowering vitality—are :—Malaria, respiratory diseases, dysentery, frambœsia, yaws, tropical ulcer, hookworm, filariasis, and beriberi. Further reference to this subject will be found in Official Year Book No. 18, p. 647.

The Health Department in Rabaul possesses :—(i) a staff of medical officers and orderlies, including travelling doctors; (ii) Native Hospitals at Government stations and sub-stations (its staff also supervises hospitals on plantations); (iii) a laboratory; (iv) training system for natives as medical orderlies; (v) scheme of distribution of medical necessities; (vi) two leper-stations; and undertakes the general oversight of sanitary conditions. The first Infant Welfare Centre in the Territory was opened in Malabunga in May, 1931.

6. **Missions.**—Several mission societies are operating in the Territory. The Society of the Sacred Heart of Jesus works in the Bismarck Archipelago, the Society of the Holy Ghost along the coast of North-East New Guinea from Sek to the Dutch border, the Marists in Buka and Bougainville. These are Roman Catholic Missions. The Protestant Missions are the Australian Methodist Mission in New Britain and New Ireland, the New Zealand Methodist Mission in Bougainville, the Liebenzell Mission in the Admiralty Group, the Lutheran Mission (supported and staffed by the Lutheran Churches in Australia and America), which work along the coast of North-East New Guinea from Sek to the Papuan border, the Melanesian Mission (Anglican), in New Britain, and the Seventh Day Adventist Mission, in Bougainville and New Britain. All these societies combine teaching and planting with their missionary work.

## § 5. Land Policy.

1. **Acquisition of Land.**—A short account of the modes of acquiring land appears in Official Year Book No. 19, p. 590, but considerations of space preclude its repetition herein.

2. **Land Policy of the Present Administration.**—The land Ordinance 1922-28 provides for sale as well as leasing of land belonging to the Crown. The divergence

from the policy usually adopted by the British in the Pacific (including Papua), which provides for leasehold only, was made with a view to disposing by sale of the freehold properties taken over from Germans, and which until 1927 were controlled by the Expropriation Board. Reference to the leasehold system in force will be found in Official Year Book 18, page 648.

A total area of 272,375 hectares (about 673,065 acres) had been alienated up to the 30th June, 1931. The area alienated in 1930-31 was 4,988 hectares (about 12,326 acres).

3. Registration of Titles.—Under German law there was a system of registration of titles in a "Ground Book," but registration did not confer an indefeasible title. The German system has been replaced by one modelled on the Torrens plan, embodied in an Ordinance entitled the "Lands Registration Ordinance," 1924-1929.

## § 6. Production.

1. General.—The natives have been described as a people of peasant proprietors, practising a crude form of agriculture. Their gardens and groves furnish but a small amount of produce for oversea trade, and the exports of the Protectorate grew only as European plantations were made, and natives were employed to work them. In recent years scientific methods of cultivation have been adopted, and production is being greatly accelerated thereby.

2. Agriculture.—(i) *General.* Under the supervision of the Director of Agriculture, soil analyses have been undertaken in different parts of the Territory, experimental stations have been founded, and an agricultural school has been established, where natives are being trained in tropical agriculture. A laboratory and a herbarium have been established, an entomologist engaged, and travelling inspectors appointed for the purpose of combating plant pests. Experiments are being carried on with a variety of crops; these, in conjunction with the *Papua and New Guinea Bounties Act* 1926, and the preference given by the Commonwealth Tariff to certain produce grown in the Territories, have greatly stimulated tropical agriculture.

(a) *Coconuts.* Coconut-growing is by far the most important industry in the Territory, but the low price of copra has temporarily checked expansion. The desiccated coconut industry is progressing, and there are now three factories operating.

(b) *Tobacco.* This crop has been cultivated with success at Astrolabe Bay in North-East New Guinea, and in the Bismarck Archipelago. Tobacco of high quality, rivalling the best Sumatra leaf, has been produced.

(c) *Cotton.* In 1924-25 the Government obtained 1,615 lb. of cotton seed, and cultivation was tried at the experimental stations as well as by private planters, including a few natives; but little progress has been made.

(d) *Sisal Hemp.* There was a steady although small export of sisal hemp in German times. The quantity exported in 1913 was 10 tons, but there was no export later.

(e) *Cocoa.* Cocoa has been successfully grown, principally at Vitu (French Islands); in 1913, 137 tons were exported. The export in 1930-31 amounted to 64 tons.

(f) *Coffee.* The cultivation of coffee for export has been commenced, and about 225 acres were planted in 1930-31.

(g) *Rubber.* On the mainland a small area has been planted with *Ficus elastica*, but in consequence of the low price of the inferior rubber produced from this source the trees are not being tapped.

(h) *Other Crops.* The climate and soil of the Territory are suitable for the cultivation of rice, Manila hemp, cinchona, nutmeg, vanilla, peanuts, kapok and maize, but hitherto their cultivation has either not advanced beyond the experimental stage or has been attempted on a small scale only. Sugar-cane of many varieties flourishes, and the natives cultivate extensive areas for their own use; other indigenous food-producing plants include the sago palm and the cassava.

(i) *Plants Yielding Power Alcohol.* It seems probable that alcohol for power purposes will be obtainable economically from the Territory. The sago palm and nipa palm yield as much as 60 gallons a ton, and in places are very abundant.



(ii) *Area of Plantations.* The area of plantations and the principal crops grown thereon are shown in the table hereunder for the year ended 30th June, 1931. The figures are exclusive of native plantations. (One hectare equals 2.4711 acres).

TERRITORY OF NEW GUINEA.—PLANTATIONS, 30th JUNE, 1931.

Particulars.	Government. Plantations.	Privately owned Plantations.	Total.
Area of Holdings .. .. . hectares	1,628	177,118	178,746
Area Cleared .. .. . "	937	88,633	89,570
Area Cleared and Planted .. .. . "	841	85,151	85,992
Coconuts—			
Area Planted .. .. . hectares	788	81,800	82,588
Area Bearing .. .. . "	671	64,442	65,113
Cocoa—			
Area Planted .. .. . hectares	..	800	800
Area Bearing .. .. . "	..	402	402
Coffee—			
Area Planted .. .. . hectares	10	81	91
Area Bearing .. .. . "	5	5	10
Kapok—			
Area Planted .. .. . hectares	2	43	45
Area Bearing .. .. . "	..	2	2
Native Food (a) .. .. . hectares	50	2,454	2,504
Other Crops .. .. . "	16	1,461	1,477

(a) Native food of all kinds is mostly grown between young coconut palms not yet in bearing.

The area of plantations at various periods from 1885 to 1931 is shown hereunder. As in the case of the previous table, the figures are exclusive of native plantations :—

TERRITORY OF NEW GUINEA.—PLANTATIONS.

Year.	Total Area.	Area under Coconuts (including Area not in Bearing).
	Acres.	Acres.
1885 .. .. .	148	(a)
1895 .. .. .	2,152	(a)
1911 .. .. .	58,837	51,510
1914 .. .. .	84,941	76,845
1924 .. .. .	179,163	172,373
1930 .. .. .	204,555	198,051
1931 .. .. .	212,495	204,083

(a) Not recorded.

3. *Live Stock.*—There is little natural pasture in the Territory, but the coconut plantations are now of a sufficient area to maintain numerous live stock, the stock being depastured on the indigenous grasses growing between the rows of trees. In 1931 there were 999 horses, 15,457 cattle, 1,197 sheep, 7,668 goats, and 6,640 pigs (exclusive of the large number of pigs kept by the natives). (See also Official Year Book No. 16, page 677.)

4. *Timber.*—An investigation of the timber resources of the Territory has been made by the Commonwealth Forestry Adviser, and a report in connexion therewith was published in 1926. According to this report, while offering no prospects of immediate

gain to large saw-milling interests, the Territory possesses forest potentialities of a high order. The timber required for house and shipbuilding and for other purposes is mostly obtained locally. In North-East New Guinea the Neuendettelsauer Mission and the Holy Ghost Mission both possess up-to-date saw-milling plants, while most of the timber required in the Archipelago is supplied by the Sacred Heart Mission's saw-mill, and by a privately owned mill, both at the eastern end of New Britain. On the gold-fields, sawmills are operating at Edie Creek and Central Bulolo.

The Timber Ordinance 1922 provides for the issue of permits and licences to cut timber. Timber growing on native lands cannot be acquired by private purchasers directly from the natives, but must be obtained through the Administration. A royalty is paid on all timber exported.

5. Fisheries.—The wealth of the waters of the Territory has so far been little exploited. Fish is caught at many places along the coast to supply the small local demand of the natives and of the few resident Europeans. Pearl-shell is exported in fair quantities, while trepang, trochus-shell, and tortoise-shell also figure amongst the exports. The value of marine products exported in 1930-31 was £29,719, compared with £24,848 in the previous year.

6. Mining.\*—Except for gold there has been little mining in the Territory, and knowledge of the mineral resources is as yet but scanty. Gold has been discovered on the Waria, the Ramu, the Francisco, and the Markham Rivers, etc. Rich gold was discovered in the Morobe District in 1926: the field is not very extensive and is situated 60 miles inland. Communication has been established with the coast by a regular aeroplane service. Osmiridium is reported to have been found on the upper tributaries of the Ramu, and platinum on the Kabenau River. Copper has been discovered in the form of chalcopyrite and malachite in the Baining District. Iron occurs as magnesite and hæmatite in the Baining District, apparently in large quantities. Sulphur occurs in several localities in the volcanic regions of the Territory. Phosphates suitable for use in the making of manures are found in the Purdy Islands. Brown coal has been found on the mainland in the vicinity of Astrolabe Bay, and in the southern portion of New Ireland.

The following table shows the quantity of gold exported and its value during the last five financial years:—

TERRITORY OF NEW GUINEA.—EXPORTS OF GOLD.

Year.				Quantity.	Value.
				Oz.	£
1926-27	..	..	..	84,760	195,428
1927-28	..	..	..	113,874	256,216
1928-29	..	..	..	79,748	179,433
1929-30	..	..	..	42,819	96,338
1930-31	..	..	..	57,874	132,239

By the Mining Ordinance of 1923, private companies incorporated or registered in the Territory, two-thirds of whose shares are held by British subjects, became eligible to engage in prospecting and mining for mineral oil and coal. On the 30th June, 1931, 2 licences to search for mineral oil were in force.

\* Fuller details in regard to minerals in the Territory will be found in E. R. Stanley's Report on Salient Geological Features and Natural Resources of the Territory (printed as Appendix B. to the Report for 1921-22).

## § 7. Trade.

1. Total Trade.—The value of the imports, exports, and total trade at various periods since 1887, and during each of the last five years, is given in the table hereunder:—

## TERRITORY OF NEW GUINEA.—TRADE.

Year.	Imports.	Exports.	Total.
	£	£	£
1887 .. .. .	17,133	19,580	36,713
1897 .. .. .	36,713	31,352	68,065
1907 .. .. .	166,585	97,563	264,148
1926-27 .. .. .	660,753	1,079,855	1,740,608
1927-28 .. .. .	811,832	1,471,026	2,282,858
1928-29 .. .. .	869,514	1,146,112	2,015,626
1929-30 .. .. .	878,450	997,335	1,875,785
1930-31 .. .. .	750,130	919,431	1,669,561

The import values are exclusive of money and Government stores. In 1930-31 the imports were distributed as follows:—From Australia, £253,038; United Kingdom, £104,762; America, £87,995; China, £33,205; Germany, £103,850; Japan, £25,904; India, £28,814; Burma, £47,916; Dutch East Indies, £16,336; other countries, £48,310.

2. Principal Items of Imports.—From Australia the principal items of imports are foodstuffs and beverages, tobacco, apparel, foot-wear, textiles, machinery, hardware, building material, coal, etc.; from the United Kingdom textiles, apparel, machinery and hardware, whisky; from America petrol, kerosene, motor vehicles and lubricating oil, tobacco; from India rice and sacks; from Burma rice; from China rice and textiles; from Germany textiles, aeroplanes, machinery and hardware, beverages, fancy goods, wood and wicker manufactures, motor vehicles and sewing machines; from Japan, textiles and cement.

3. Principal Items of Export.—Values of the principal items of export for the last five years are shown hereunder:—

## TERRITORY OF NEW GUINEA.—VALUE OF PRINCIPAL EXPORTS.

Commodity.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Copra .. .. .	849,852	1,176,940	933,769	864,358	716,543
Cocoa .. .. .	3,500	3,859	3,816	3,074	3,200
Stone and Ivory Nuts .. .. .	152	..	153	77	75
Trepang .. .. .	13,750	11,259	4,440	6,360	7,530
Shell .. .. .	17,000	23,436	22,695	18,410	22,075
Tortoise Shell.. .. .	173	216	350	78	114
Gold .. .. .	195,428	256,216	179,433	96,338	132,239
Desiccated Coconut .. .. .	..	..	1,456	8,640	37,640
Miscellaneous .. .. .	..	..	..	..	15
Total .. .. .	1,079,855	1,471,026	1,146,112	997,335	919,431

4. Exports of Copra and Cocoa.—The next table shows the respective quantities of copra and cocoa exported during the last five years:—

## TERRITORY OF NEW GUINEA.—EXPORTS OF COPRA AND COCOA.

Commodity.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	Tons.	Tons.	Tons.	Tons.	Tons.
Copra .. .. .	47,613	65,285	60,435	63,832	62,303
Cocoa .. .. .	65	73	72	58	64

Most of the copra is shipped direct to European and American ports.

5. **Banks.**—There are two banks operating in the Territory, the Commonwealth Bank of Australia, and the Bank of New South Wales.

### § 8. Shipping and Communication.

1. **General.**—A subsidized mail service between the Territory and Australia is maintained by Burns, Philp and Co. Ltd. The vessels of the Eastern and Australian Steamship Co. which maintains a regular monthly service between Australia, China and Japan, have included Rabaul as a port of call. A Norwegian shipping line trading with Australia also visits the port. Shipping within the Territory is regulated by the *Coastal Vessels Regulations 1920*, and the *Wharfage and Berthage Regulations* made during the Military Administration of the Territory.

2. **Oversea Tonnage in 1930-31.**—The number and net tonnage of oversea vessels which entered and cleared the Territory during the year 1930-31 are shown hereunder:—

#### TERRITORY OF NEW GUINEA.—SHIPPING 1930-31.

Nationality.	Vessels Entered.		Vessels Cleared.		Total.	
	Number.	Tonnage.	Number.	Tonnage.	Number.	Tonnage.
American .. ..	4	7,852	4	7,852	8	15,704
British .. ..	59	124,100	55	123,802	114	247,902
Chinese .. ..	1	1,625	1	1,625	2	3,250
Dutch .. ..	4	8,240	4	8,240	8	16,480
French .. ..	2	5,289	2	5,289	4	10,578
German .. ..	7	6,496	7	6,496	14	12,992
Japanese .. ..	6	14,312	6	14,312	12	28,624
Norwegian .. ..	8	28,004	8	28,004	16	56,008
<b>Total .. ..</b>	<b>91</b>	<b>195,918</b>	<b>87</b>	<b>195,620</b>	<b>178</b>	<b>391,538</b>

Country from which Entered or for which Cleared.	Vessels Entered.		Vessels Cleared.		Total.	
	Number.	Tonnage.	Number.	Tonnage.	Number.	Tonnage.
Australia .. ..	41	94,054	35	90,421	76	184,475
British Solomon Islands .. ..	7	3,843	7	3,233	14	7,076
Caroline Islands .. ..	3	801	3	801	6	1,602
China .. ..	7	6,496	7	6,496	14	12,992
Fiji .. ..	2	2,908	..	..	2	2,908
France .. ..	2	5,289	11	33,895	13	39,184
Japan .. ..	11	42,139	7	26,313	18	68,452
Malay States .. ..	..	..	6	14,074	6	14,074
Philippine Islands .. ..	1	1,625	2	2,195	3	3,820
New Hebrides .. ..	5	13,347	1	2,597	6	15,944
New Zealand .. ..	1	2,624	..	..	1	2,624
Papua .. ..	7	13,872	1	45	8	13,917
United Kingdom .. ..	2	5,449	..	..	2	5,449
United States of America .. ..	2	3,471	7	15,550	9	19,021
<b>Total .. ..</b>	<b>91</b>	<b>195,918</b>	<b>87</b>	<b>195,620</b>	<b>178</b>	<b>391,538</b>

3. **Local Shipping.**—A service between Rabaul and the various outports not visited by the mail steamers is maintained by small steamers and motor craft.

4. **Land Communication.**—Means of communication on land are scanty. There are no railways. Roads lead from Rabaul to places within 30 or 40 miles, and there is a road 170 miles long in New Ireland. Elsewhere there are few roads outside plantations and the stations of the District Officers. The large rivers of the mainland are as yet but little used.

There is a high power wireless station at Bita Paka near Rabaul, and low power installations at the out-stations.

5. **Communication by Air.**—The discovery of gold in New Guinea has resulted in great aviation activity in the vicinity of the gold-fields. On account of the mountainous country and dense undergrowth between the coast and the gold-fields the task of transporting food and stores to the fields and of bringing the gold to the seaboard by land is an irksome and costly process. The fields are situated about 60 miles inland from Salamaua, and whereas aircraft cover the distance in approximately an hour, the nature of the country is such that a journey by other means occupies more than a week.

### § 9. Revenue and Expenditure.

1. **Revenue.**—Details of the revenue collected from various sources during each of the last two years are given hereunder :—

#### TERRITORY OF NEW GUINEA.—REVENUE.

Heading.	1929-30.	1930-31.
	£	£
Revenue from Taxation (direct and indirect) . . . .	222,687	212,598
Revenue from Public Services and undertakings ..	38,305	31,601
Other receipts .. .. .	75,654	46,034
Grant by Commonwealth Government .. .. .	2,996	..
	339,642	290,233

2. **Expenditure.**—The expenditure for the financial year 1930-31 was distributed as follows :—

#### TERRITORY OF NEW GUINEA.—EXPENDITURE, 1930-31.

	£		£
Secretary and Central Adminis- tration .. .. .	14,377	Trade and Customs .. .. .	14,596
Justice .. .. .	3,736	Agriculture .. .. .	10,957
Treasury .. .. .	21,686	Public Health .. .. .	62,815
Audit .. .. .	4,190	District Services .. .. .	94,279
Lands and Survey .. .. .	27,570	Miscellaneous .. .. .	1,616
Native Affairs, Police, and Prisons .. .. .	15,206		
Public Works .. .. .	22,350	Total .. .. .	293,378

### NAURU.

1. **General.**—Nauru is an oval-shaped atoll about 12 miles in circumference having an area of about 5,400 acres, of which approximately four-fifths is phosphate-bearing. It is situated in long. 166° E., and is 26 miles south of the Equator. Portion of the island between the sandy beach and the coral cliffs is fertile, and it is there that the

Nauruans reside. With the exception of a small fringe round an inland lagoon, the plateau which contains the phosphate deposits possesses few food plants and is uninhabited, but portion of the area has been planted with fruit trees. The system of land tenure is governed by old custom, and, with the exception of small allotments held by the Government, the British Phosphate Commissioners and Missions, the whole of the island is owned by individual natives. A comprehensive survey is in progress. The average shade temperature ranges between 72 and 95° F., and the average humidity between 70 and 80. The average rainfall is 85 inches, but droughts occasionally occur, and in 1916 and 1917 only 40 inches were received for the two years. In 1930 the rainfall amounted to 181 inches.

2. **History.**—The island, discovered by Captain Fearn in 1798, was annexed by Germany in 1888, and prior to 1914 was part of the protectorate of German New Guinea.

In November, 1914, Nauru was occupied by a detachment from the Australian Naval and Military Expedition at Rabaul, and it was included in the cession of colonies made by Germany in 1919 to the Allied and Associated Powers, whose representatives agreed that a mandate for its administration should be conferred upon His Britannic Majesty. The mandate, which is in similar terms to that for the Territory of New Guinea, was confirmed by the Council of the League of Nations on the 17th December, 1920. On 2nd July, 1919, the British, Commonwealth, and New Zealand Governments agreed that the administration of the island (which, since 1915, had been in charge of an official appointed by the British Colonial Office) should be vested in an Administrator who entered on duty in June, 1921. The first Administrator was appointed for a term of five years by the Australian Government; his term of service having expired, it was extended for another five years, but he resigned in 1927. The second Administrator was appointed in June, 1927. The Agreement between the three Governments was approved by the Commonwealth Parliament in the Nauru Island Agreement Act 1919, and is printed in the Schedule to that Act.

3. **Administration.**—The Administrator has all the powers of government—administrative, legislative, and judicial—in the island. All expenses of administration are met from local revenue. Native industries such as canoe-building, fishing, mat-making, etc., are encouraged by the provision of prizes at annual competitions. An agency of the Commonwealth Savings Bank has been established. There is a co-operative store managed by the natives themselves, the books, however, being audited by Government officers. Natives are not allowed to carry or be in possession of firearms, and the use by them of intoxicating liquors and deleterious drugs is prohibited.

4. **Population.**—Figures for population on 1st April in each of the years from 1928 to 1932 are given hereunder:—

NAURU.—POPULATION.

Population.	1928.	1929	1930.	1931.	1932.
Europeans .. ..	131	134	147	147	141
Chinese .. ..	1,051	1,099	1,110	1,105	696
Nauruans (a) .. ..	1,297	1,365	1,411	1,426	1,475
Other Pacific Islanders ..	20	16	16	14	4

(a) The natives of Nauru are Micronesians.

Births in 1931 numbered 67 (Nauruans, 64; Europeans, 3). There were 21 marriages (Nauruan), and 26 deaths (24 Nauruans, 1 Chinese, 1 other Pacific Islander).

5. **Health.**—Cases of the usual diseases known in the Pacific occur. Venereal disease is rare, but filariasis is common, and elephantiasis is occasionally met with. An area has been set apart for the segregation of lepers, and the latest methods of treatment are applied to cope with the disease. On the 1st January, 1932, there were 95 lepers (57 males and 38 females) in segregation. Two hospitals are maintained on the island,

one by the Administration for Nauruans, and one by the British Phosphate Commission for its employees, and the treatment and control of leprosy have been very successful. In common with other natives, the Nauruans are very susceptible to tuberculosis and influenza, and in 1921 an influenza epidemic caused the deaths of 230 Islanders. Dysentery, both amœbic and bacillary, is endemic. A regular anti-mosquito campaign is conducted. The usual steps have been taken by the authorities to improve the water supply and to provide efficient sanitation generally. Every Nauruan is required to undergo a medical examination once a month. Baby clinics have been established to give help and advice to Nauruan mothers in regard to infant nurture.

6. **Education.**—On the 1st October, 1923, the Administration took over the education of the Nauruans and other native children, and native schools were established in five districts and at the leper station. Previously education had been looked after by the Missions subsidized by the Government. A school for European children is presided over by a teacher on loan from the Education Department of Victoria who also supervises educational matters generally. The curriculum is similar to that of corresponding schools in Australia, and the teaching is, as far as possible, wholly in English. Education is compulsory between the ages of six and sixteen. After the termination of ordinary school attendance, twelve months are devoted to technical training. The children in attendance at school in 1931 numbered 13 Europeans and 341 Nauruans. The schools are closed on two afternoons a week in order that the children may attend the classes in religious instruction conducted at the Mission churches. Educational classes for adults have been inaugurated. Units of the Boy Scouts and Girl Guides (Nauruan) have been established on the island.

7. **Judiciary.**—The judicial power is vested in the Administrator in a Central Court and a District Court. The right of appeal is provided for.

8. **Religion.**—The London Missionary Society (Protestant) and the Sacred Heart of Jesus Mission (Roman Catholic) operate in Nauru.

9. **Phosphate Deposits.**—(i) *General.* From 1906 to 1919 the deposits were worked by the Pacific Phosphate Company, which also worked the deposits on Ocean Island (about 165 miles east of Nauru and part of the Gilbert and Ellice Islands Colony, administered by the Colonial Office). The quantity on Nauru has been estimated at not less than 50,000,000 tons, and the phosphate, as shipped, averages 85 per cent. to 88 per cent. of tricalcium phosphate.

The interests of the Pacific Phosphate Company in the two islands (though not in other islands in the Pacific in which it has workings) were bought by the British, Commonwealth, and New Zealand Governments in 1919 for £3,500,000, the purchase money being contributed in the proportions of 42, 42, and 16 per cent. respectively. The Agreement of 2nd July, 1919, provides for the working of the deposits by the British Phosphate Commission of three members, one appointed by each Government; and the three countries are to receive the output in the same proportions of 42, 42, and 16 per cent.

(ii) *Nauru and Ocean Island Phosphate Industry.*—The following table gives particulars regarding exports of phosphate during the last five years:—

**NAURU AND OCEAN ISLAND.—EXPORTS OF PHOSPHATE.**

Year.	Total.	To Australia.	To New Zealand.
	Tons.	Per cent.	Per cent.
1926-27 .. ..	594,825	77.96	22.04
1927-28 .. ..	501,908	75.20	24.80
1928-29 .. ..	575,390	75.38	24.62
1929-30 .. ..	499,456	74.74	25.26
1930-31 .. ..	392,939	68.19	31.81

From Nauru alone, during the calendar year 1931, the export was 245 165 tons, of which 156,380 tons went to Australia, and 88,785 tons to New Zealand.

(iii) *Accounts of Commission.* A statement for the five years ended June, 1931, is given hereunder.

NAURU AND OCEAN ISLAND.—SALES OF PHOSPHATE.

Receipts from Sales of Phosphate, etc.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Receipts from Sales, etc. . .	780,070	666,992	736,420	648,165	584,738
F.o.b. cost, including interest on capital, sinking fund, etc.	720,439	659,122	698,056	645,987	584,244

The amount due by the British Phosphate Commission to the partner Governments for purchase money and other capital sums was £3,666,457 on 30th June, 1921, and at 30th June, 1931, this had been reduced to £3,349,392. The contribution to the sinking fund paid by the Commission provides for interest at 6 per cent. and extinction of the capital sum in 50 years from 1st July, 1920.

(iv) *Employees.* Apart from a limited number of Europeans and a few Pacific Islanders, the employees are Chinese engaged under a three years' contract. A few Nauruans are from time to time employed, but they are not partial to sustained labour of any kind.

10. *Trade.*—Information regarding imports and exports for years 1927 to 1931 is appended herewith :—

NAURU.—IMPORTS AND EXPORTS.

Heading.	1927.	1928.	1929.	1930.	1931.
	£	£	£	£	£
Imports .. ..	82,650	240,229	101,692	143,416	108,729
Exports—	tons.	tons.	tons.	tons.	tons.
Phosphate .. ..	318,185	318,845	326,125	271,255	245,165
Copra .. ..	263	181	..	..	..

11. *Revenue and Expenditure.*—The revenue and expenditure of the Administration during the years 1927 to 1931 were as follows :—

NAURU.—REVENUE AND EXPENDITURE.

Heading.	1927.	1928.	1929.	1930.	1931.
	£	£	£	£	£
Revenue .. ..	17,041	19,903	19,936	18,992	16,440
Expenditure .. ..	17,243	18,267	17,860	15,532	16,903

Of the revenue in 1931, £5,989 was royalty on phosphate, £3,983 consisted of Customs receipts, £1,281 of capitation taxes, and £381 of harbour dues and shipping fees. The total credit balance on the 31st December, 1931, amounted to £20,868.



## CHAPTER XVI.

### POPULATION.

#### § 1. Enumerations and Estimates.

The nature of the early "musters" of the population and the subsequent Census enumerations which have been conducted in Australia were reviewed in Official Year Book, Number 15, pp. 1083-5. This review was accompanied by a tabular statement showing the dates on which the various enumerations were made, and the numbers counted on such occasions.

#### § 2. Accuracy of Estimates of Population.

Throughout this Chapter there appear various estimates of population, e.g., at Census dates; at intercensal periods in respect of both States and Commonwealth; metropolitan and certain incorporated areas. It must be constantly borne in mind that the same degree of accuracy does not attach to the various estimates.

The results obtained at the Census attain a very high degree of accuracy and may be accepted without reservation. Inasmuch as the factors causing variation, e.g., births, deaths, and migration are subject to accurate record, estimates for total persons for the Commonwealth at the end of calendar years are substantially correct, while those for the sexes separately are subject to a slightly larger error. Equal accuracy cannot however, be claimed for the estimates in respect of States, as there is no record kept of interstate movements by land other than by rail.

As regards population estimates for portions of States, e.g., metropolitan and incorporated areas, the figures given must be accepted with caution as it is impossible to collect the data necessary for accuracy of a high order.

It will also be obvious that in all cases, the greater the interval from the last Census the less accurate is the estimate.

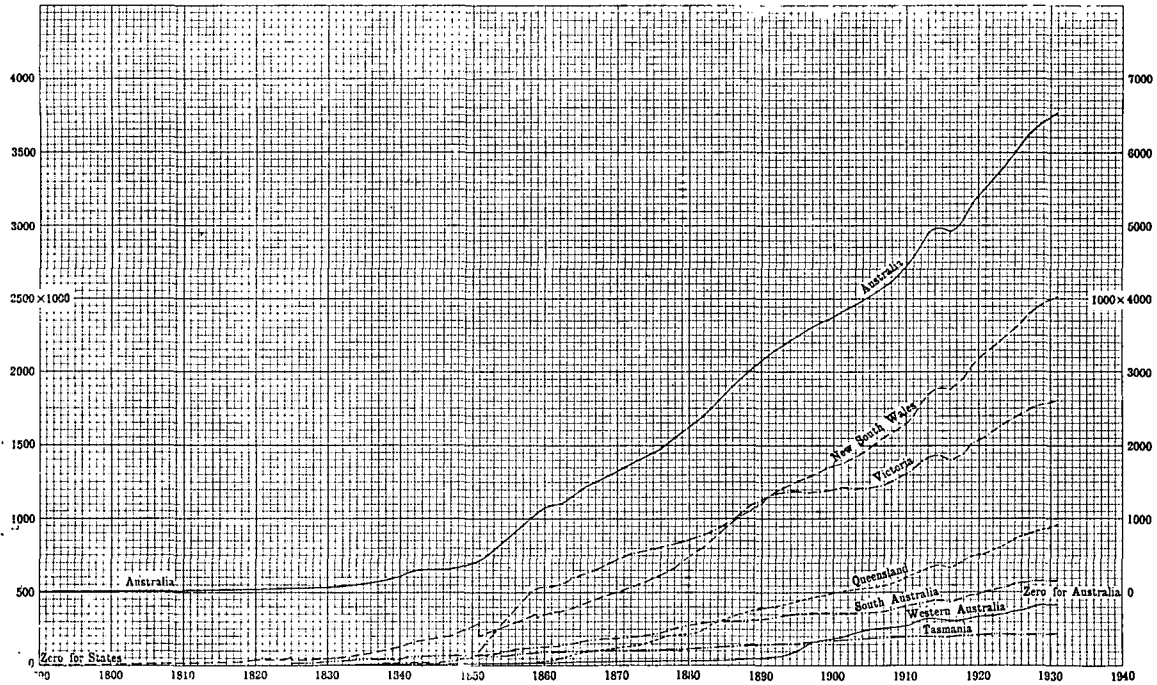
#### § 3. Census of 1933.

In accordance with the provisions of the Census and Statistics Acts 1905-20, the third Commonwealth Census would have been taken in 1931. Owing to the necessity for economy in government expenditure, however, it was decided to defer this Census until 30th June, 1933, and the preliminary work in connexion therewith is now well in hand.

#### § 4. Censuses, 1881 to 1921.

1. Census of 1921.—The Census for the whole of Australia was taken as for the night between the 3rd and the 4th of April, 1921, and was the second Census under the provisions of the Commonwealth Census and Statistics Act 1905-20, which provides

TOTAL POPULATION, 1788 TO 1931.

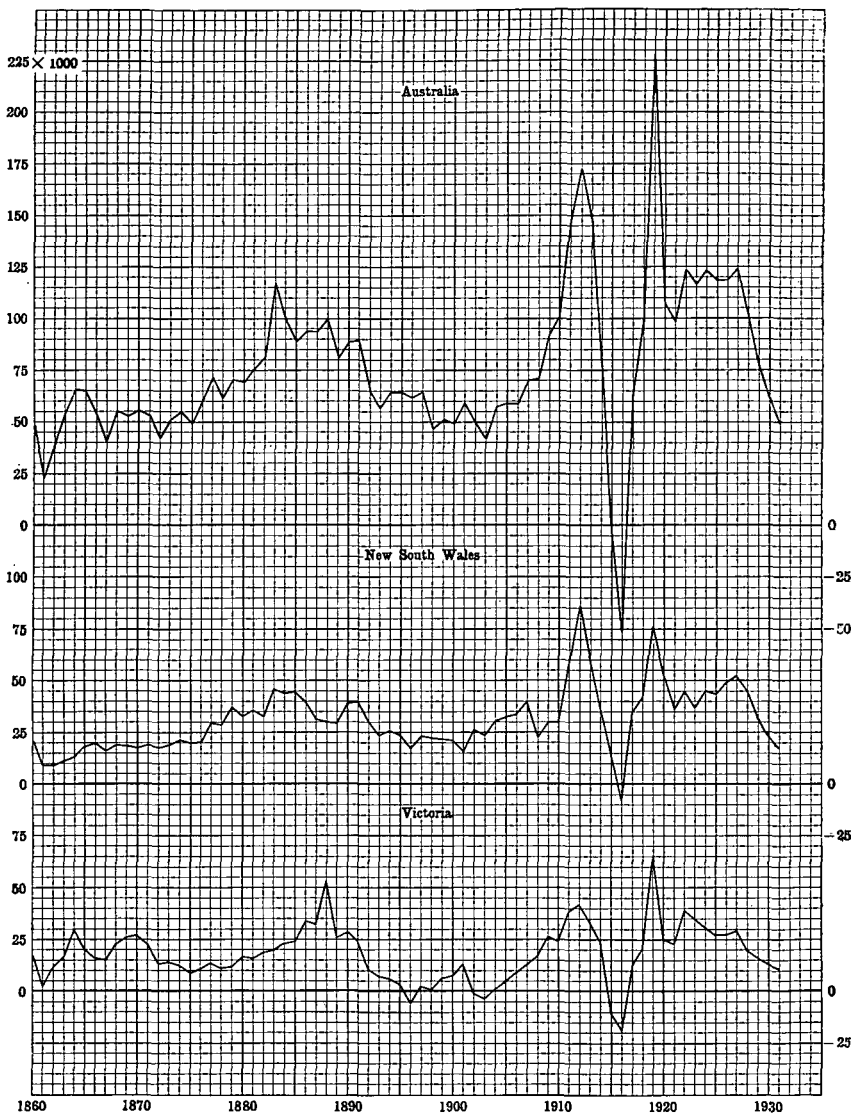


(See page 474.)

EXPLANATION.—The base of each small square represents one year's interval for the States and Australia, and the vertical height for the States 50,000 persons, and for Australia 100,000 persons.

Where the population falls suddenly, the fall denotes the creation of a new colony, *e.g.*, New South Wales in 1825 lost the whole population of Tasmania.

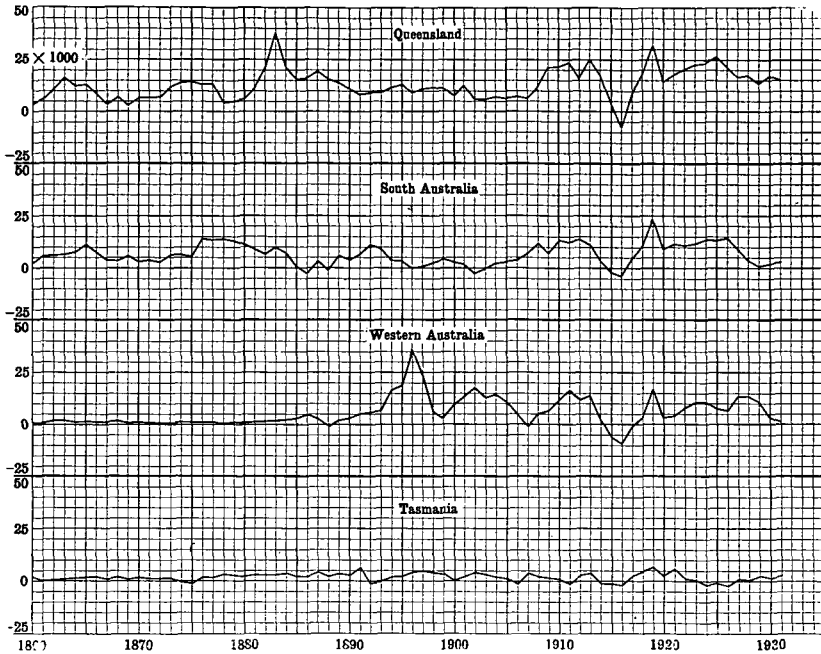
TOTAL INCREASE OF POPULATION—AUSTRALIA, AND NEW SOUTH WALES AND VICTORIA, 1860 TO 1931.



EXPLANATION.—The base for each small square represents an interval of a year for both States and Australia; the vertical height represents 5,000 persons. In the first graph three zero lines are taken (i) for Australia, (ii) for New South Wales, and (iii) for Victoria. In the second graph (on page 471) four zero lines are taken (i) for Queensland, (ii) for South Australia, (iii) for Western Australia, and (iv) for Tasmania.

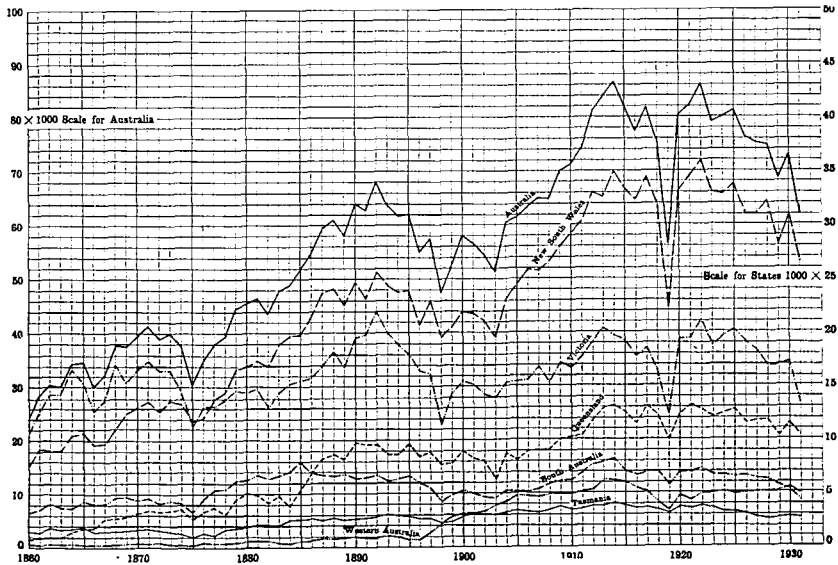
DECREASES in population are shown by carrying the curve in such cases below the zero line, the distance below the zero line indicating the extent of the decrease.

TOTAL INCREASE OF POPULATION—QUEENSLAND, SOUTH AUSTRALIA, WESTERN AUSTRALIA, AND TASMANIA, 1860 TO 1931.



(For explanation see previous page.)

NATURAL INCREASE OF POPULATION, 1860 TO 1931.

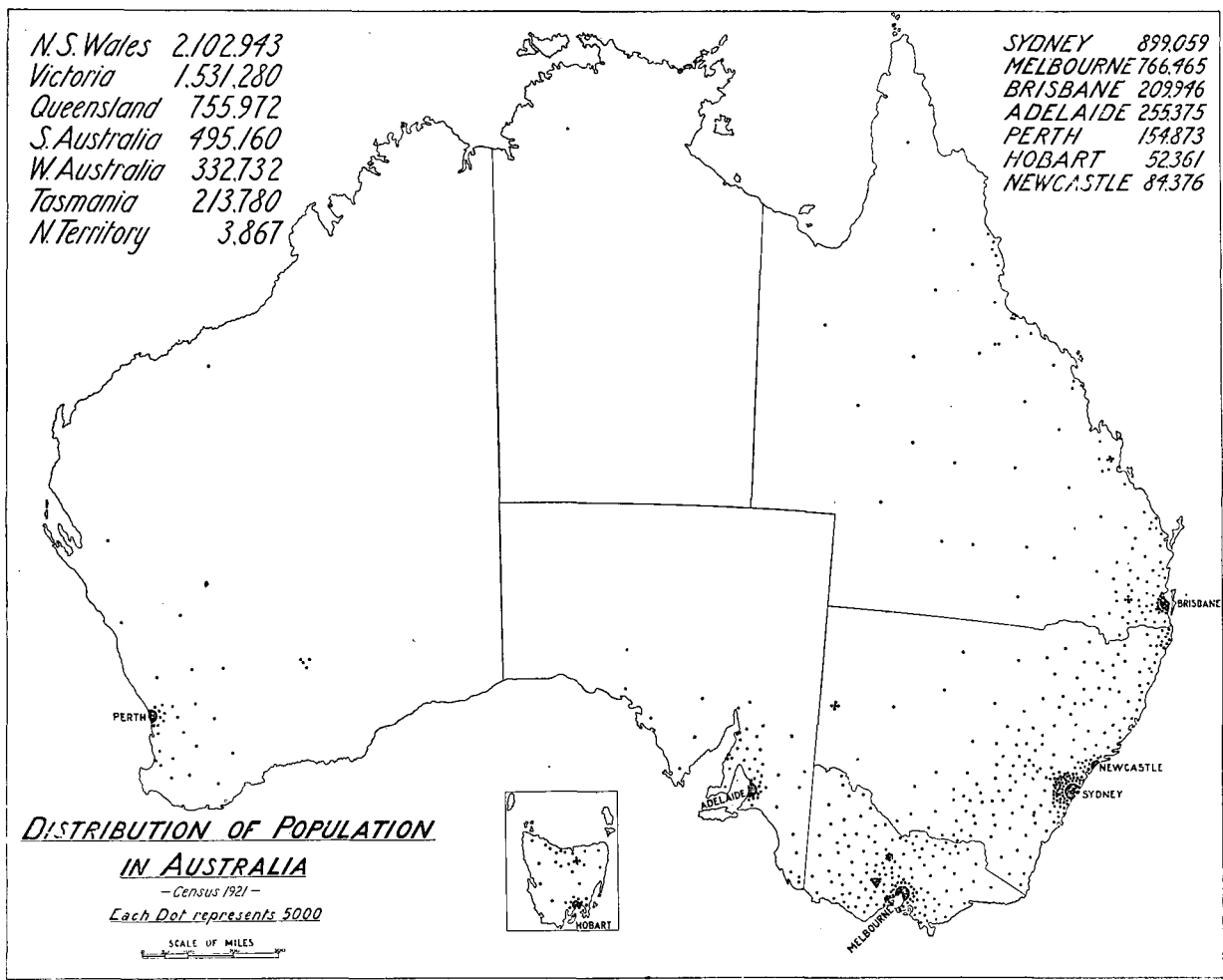


EXPLANATION.—The base of each small square represents one year for both States and Australia, and the vertical height 1,000 persons for the States and 2,000 persons for Australia.

The distances upward from the zero line, marked 0 for both Australia and States, denote the excess of births over deaths. The scale on the left relates to Australia, and that on the right to the States.

*N.S. Wales* 2,102,943  
*Victoria* 1,531,280  
*Queensland* 755,972  
*S. Australia* 495,160  
*W. Australia* 332,732  
*Tasmania* 213,780  
*N. Territory* 3,867

*SYDNEY* 899,059  
*MELBOURNE* 766,465  
*BRISBANE* 209,946  
*ADELAIDE* 255,375  
*PERTH* 154,873  
*HOBART* 52,361  
*NEWCASTLE* 84,376



***DISTRIBUTION OF POPULATION  
 IN AUSTRALIA***

- Census 1921 -  
 Each Dot represents 50,000

SCALE OF MILES  
 0 100

for the enumeration being dealt with from one centre, instead of each State being responsible for its own count as on previous occasions. The numbers recorded in the several States and Territories were as follow :—

**POPULATION.—4th APRIL, 1921.**  
(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

States and Territories.	Males.	Females.	Persons.
<b>States—</b>			
New South Wales ..	1,071,501	1,028,870	2,100,371
Victoria .. ..	754,724	776,556	1,531,280
Queensland .. ..	398,969	357,003	755,972
South Australia ..	248,267	246,893	495,160
Western Australia ..	177,278	155,454	332,732
Tasmania .. ..	107,743	106,037	213,780
<b>Territories—</b>			
Northern .. ..	2,821	1,046	3,867
Federal Capital ..	1,567	1,005	2,572
<b>Australia .. ..</b>	<b>2,762,870</b>	<b>2,672,864</b>	<b>5,435,734</b>

2. Increase since Census of 1881.—(i) *Australia.* The increase of population between the Census of 3rd April, 1911, and that of 4th April, 1921, was 980,729, of which 449,835 were males and 530,894 were females, as compared with an increase of 681,204, comprising 335,107 males and 346,097 females, for the preceding ten years. The population of each sex enumerated at the Censuses of 3rd April, 1881, 5th April, 1891, 31st March, 1901, 3rd April, 1911, and 4th April, 1921, was as follows :—

**POPULATION.—AUSTRALIA, LAST FIVE CENSUSES.**  
(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Date of Census.	Males.	Females.	Persons.	(a) Masculinity.
3rd April, 1881 .. ..	1,214,913	1,035,281	2,250,194	117.35
5th April, 1891 .. ..	1,704,039	1,470,353	3,174,392	115.89
31st March, 1901 .. ..	1,977,928	1,795,873	3,773,801	110.14
3rd April, 1911 .. ..	2,313,035	2,141,970	4,455,005	107.99
4th April, 1921 .. ..	2,762,870	2,672,864	5,435,734	103.36

(a) Number of males to each 100 females.

(ii) *States and Territories.* The increases in the population of the several States and Territories during the past four intercensal periods have been as follow :—

**POPULATION.—STATES, ETC., INTERCENSAL INCREASES.**

State or Territory.	1881-1891.		1891-1901.		1901-1911.		1911-1921.	
	Numerical.	Per cent.	Numerical.	Per cent.	Numerical.	Per cent.	Numerical.	Per cent.
N.S. Wales ..	(a) 374,129	49.90	(a) 230,892	20.54	(a) 293,602	21.67	453,637	27.55
Victoria ..	278,274	32.30	61,230	5.37	114,481	9.53	215,729	16.40
Queensland ..	180,193	84.39	104,411	26.52	107,684	21.62	150,159	24.79
South Australia ..	39,119	14.15	42,813	13.57	50,212	14.01	86,602	21.20
Western Australia ..	20,074	67.57	134,342	269.86	97,990	53.22	50,618	17.94
Tasmania ..	30,962	26.76	25,808	17.60	18,736	10.86	22,569	11.80
N. Territory ..	1,447	41.93	(b)-87	(b)-1.78	(b)-1,501	b-31.80	557	16.83
Fed. Cap. Ter. ..	..	..	..	..	..	..	858	50.06
<b>Australia ..</b>	<b>924,198</b>	<b>41.07</b>	<b>599,409</b>	<b>18.88</b>	<b>681,204</b>	<b>18.05</b>	<b>980,729</b>	<b>22.01</b>

(a) Including Federal Capital Territory.

(b) Decrease.

For Australia as a whole, the increase during the period 1911-1921 was greater by 299,525 than that for the period 1901-1911, the rate of increase being 22.01 per cent. for 1911-1921, as against 18.05 for 1901-1911. During the earlier period the increase corresponds to 1.67 per cent. per annum, and in the latter, to 2.01 per cent. per annum.

For the reasons given in § 3 *ante*, a Census was not taken in 1931. On 1st April, 1931, however, the estimated population was 6,488,705, which was an increase of 1,052,971, or 19.37 per cent., since the Census of 1921.

### § 5. Distribution and Fluctuation of Population.

1. **Present Number.**—The population of Australia on the 31st December, 1931, was estimated at 6,525,920 persons, of whom 3,324,287, or 50.94 per cent., were males and 3,201,633, or 49.06 per cent., were females. The increase during the year 1931 was 49,888, equal to 0.77 per cent., males having increased by 20,196, or 0.61 per cent., and females by 29,692, or 0.94 per cent. Of the increase referred to, 61,949 was due to the excess of births over deaths. There was, however, a loss by migration of 12,061, which reduced the total gain in population to 49,888, the smallest, excepting the war period, since 1903.

2. **Growth and Distribution.**—In issues of the Year Book up to No. 15, the male and female populations of Australia as a whole were given at quinquennial periods from 1788, but it is considered that the abridged table presented herewith will suffice for general purposes.

#### GROWTH OF POPULATION.

Year.	Estimated Population at end of Year.								Australia.
	States.					Territories.			
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern.		

#### MALES.

(a)1800	3,780	..	..	..	..	..	..	..	..	3,780
1810	7,585	..	..	..	..	..	..	..	..	7,585
1820	23,784	..	..	..	..	..	..	..	..	23,784
1830	33,900	..	..	..	..	877	(b)18,108	..	..	52,885
1840	85,560	..	..	8,272	1,434	32,040	..	..	..	127,306
1850	154,976	..	..	35,902	3,576	44,229	..	..	..	238,683
1860	197,851	(b)330,302	(b)16,817	64,340	9,597	49,653	..	..	..	668,560
1870	272,121	397,230	69,221	94,894	15,511	53,517	..	..	..	902,494
1880	404,952	450,558	124,013	147,438	16,985	60,568	..	..	..	1,204,514
1890	602,704	595,919	223,252	166,049	28,854	76,453	..	..	..	1,692,891
1900	716,047	601,773	274,684	180,349	110,088	89,763	(c)4,288	..	..	1,976,992
1910	858,181	646,482	325,513	206,557	157,971	98,866	2,738	..	..	2,296,308
1920	1,067,945	753,803	396,555	245,300	176,895	107,259	2,911	(b)1,062	..	2,751,730
1921	1,084,399	764,905	404,907	252,144	178,500	110,026	2,718	1,128	..	2,798,727
1922	1,107,095	788,626	415,802	257,475	183,386	109,494	2,540	1,443	..	2,866,461
1923	1,127,195	806,546	428,312	265,340	189,429	109,546	2,527	1,407	..	2,930,302
1924	1,150,759	824,182	440,115	273,701	195,341	108,569	2,538	1,643	..	2,996,848
1925	1,171,590	838,693	454,819	282,790	199,596	108,047	2,550	2,230	..	3,060,315
1926	1,196,559	852,399	465,644	292,846	203,210	106,330	2,773	2,820	..	3,122,581
1927	1,223,976	867,409	475,147	298,262	211,628	107,036	3,137	3,228	..	3,189,823
1928	1,246,234	875,449	485,290	299,679	220,209	107,371	2,739	4,564	..	3,241,535
1929	1,261,133	881,650	493,030	299,641	225,861	108,473	2,945	4,619	..	3,277,352
1930	1,270,524	886,662	502,719	300,506	226,713	109,368	2,993	4,606	..	3,304,091
1931	1,277,666	889,644	511,145	301,989	225,586	110,696	2,803	4,758	..	3,324,287

(a) Details as to sex not available for earlier decennial dates.  
New South Wales.

(c) Previously included with South Australia.

(b) Previously included with

GROWTH OF POPULATION.—*continued.*

Year.	Estimated Population at end of Year.								
	States.						Territories.		Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern.	Federal Capital.	
(a)1800	1,437	..	..	..	..	..	..	..	1,437
1810	3,981	..	..	..	..	..	..	..	3,981
1820	9,759	..	..	..	..	..	..	..	9,759
1830	10,688	..	..	..	295	(b) 6,171	..	..	17,154
1840	41,908	..	..	6,358	877	13,959	..	..	63,102
1850	111,924	..	..	27,798	2,310	24,641	..	..	166,673
1860	150,695	(b) 207,932	(b) 11,239	61,242	5,749	40,168	..	..	477,025
1870	225,871	326,695	46,051	89,652	9,624	47,369	..	..	745,262
1880	336,190	408,047	87,027	128,955	12,576	54,222	..	..	1,027,017
1890	510,571	538,209	168,864	152,898	19,648	68,334	..	..	1,458,524
1900	644,258	594,440	219,163	176,901	69,879	83,137	(c) 569	..	2,659,567
1910	785,674	654,926	273,593	200,311	118,861	94,937	563	..	2,128,775
1920	1,023,777	774,106	354,069	245,706	154,428	105,493	1,078	(b) 910	2,766,820
1921	1,043,517	785,781	363,324	250,267	157,215	108,290	1,016	936	2,710,346
1922	1,065,237	801,599	372,488	255,719	160,222	109,430	1,011	1,114	2,766,820
1923	1,082,250	818,834	382,856	259,408	164,386	109,528	1,028	1,215	2,819,505
1924	1,103,691	832,913	394,779	264,805	168,783	109,270	1,059	1,355	2,876,655
1925	1,126,852	845,324	406,366	268,843	172,587	108,985	1,106	1,706	2,931,769
1926	1,151,222	859,428	416,549	273,548	175,536	108,424	1,125	2,101	2,987,933
1927	1,176,290	873,981	424,029	277,509	180,664	108,826	1,224	2,508	3,045,031
1928	1,199,046	885,515	431,399	270,669	185,664	109,192	1,243	3,523	3,095,251
1929	1,216,452	895,415	437,841	280,630	190,902	110,592	1,525	3,603	3,171,920
1930	1,229,962	904,155	445,476	281,621	193,893	111,276	1,623	3,935	3,171,920
1931	1,240,092	911,650	452,566	282,979	196,023	112,694	1,655	3,974	3,201,633

FEMALES.

PERSONS.

1788	859	..	..	..	..	..	..	..	859
1790	2,056	..	..	..	..	..	..	..	2,056
1800	5,217	..	..	..	..	..	..	..	5,217
1810	11,566	..	..	..	..	..	..	..	11,566
1820	33,543	..	..	..	..	..	..	..	33,543
1830	44,588	..	..	..	1,172	(b)24,279	..	..	70,309
1840	127,468	..	..	14,630	63,700	45,999	..	..	190,408
1850	266,900	..	..	63,700	5,886	68,879	..	..	405,356
1860	348,546	(b)538,234	(b)28,056	125,582	15,346	89,821	..	..	1,145,585
1870	497,992	723,925	115,272	184,546	25,135	100,886	..	..	1,647,756
1880	741,142	858,605	211,040	276,393	29,561	114,790	..	..	2,231,531
1890	1,113,275	1,133,728	392,116	318,947	48,502	144,787	..	..	3,151,355
1900	1,360,305	1,196,213	493,847	357,250	179,967	174,900	(c)4,857	..	3,765,339
1910	1,643,855	1,301,408	599,016	406,868	276,832	193,803	3,301	..	4,425,083
1920	2,001,722	1,527,909	759,624	491,006	331,323	212,752	3,989	(b)1,972	5,411,297
1921	2,127,016	1,550,686	768,231	502,411	335,715	218,316	3,734	2,064	5,509,073
1922	2,172,932	1,590,225	788,290	513,194	343,608	218,924	3,551	2,557	5,633,281
1923	2,209,445	1,625,380	811,168	524,748	353,815	219,074	3,555	2,622	5,749,807
1924	2,254,450	1,657,095	834,894	538,506	364,124	217,839	3,597	2,998	5,873,503
1925	2,298,442	1,684,017	861,185	551,633	372,183	217,032	3,656	3,936	5,992,084
1926	2,347,781	1,711,827	882,193	566,394	378,746	214,754	3,808	4,921	6,110,514
1927	2,400,266	1,741,390	899,176	575,771	392,292	215,862	4,361	5,736	6,234,854
1928	2,445,280	1,760,964	916,689	579,348	405,873	216,563	4,982	8,087	6,336,786
1929	2,477,585	1,777,065	930,871	580,271	416,763	219,065	3,770	8,282	6,414,372
1930	2,500,486	1,790,817	948,195	582,127	420,606	220,644	4,616	8,541	6,476,932
1931	2,517,758	1,801,294	963,711	584,968	421,609	223,390	4,458	8,732	6,525,920

(a) Details as to sex not available for earlier decennial dates. (b) Previously included with New South Wales. (c) Previously included with South Australia.

A comparison of annual rates of growth of population of Australia and other countries will be found in § 6, par. 4 of this chapter.

The growth of the population of Australia and of each State thereof, is illustrated by the graphs accompanying this chapter.



3. **Mean Population.**—The following table shows the mean population for each State and Territory for the years 1922 to 1931 :—

**MEAN POPULATION, EXCLUSIVE OF FULL-BLOOD ABORIGINALS.**

Year.	States.						Territories.		Australia.
	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern.	Fed. Cap.	
1922 ..	2,149,349	1,570,824	781,022	506,036	339,649	214,777	3,653	2,815	5,568,125
1923 ..	2,190,410	1,607,773	802,748	517,445	348,275	215,327	3,610	3,315	5,688,903
1924 ..	2,228,337	1,641,852	825,151	529,691	359,521	214,687	3,603	3,848	5,806,690
1925 ..	2,274,247	1,671,467	851,419	543,986	368,194	213,469	3,681	4,721	5,931,184
1926 ..	2,320,288	1,696,670	875,187	558,883	374,996	211,216	3,765	6,106	6,047,111
1927 ..	2,372,643	1,727,413	891,908	571,098	385,011	209,994	4,234	7,342	6,169,643
1928 ..	2,424,695	1,751,340	909,141	577,328	399,386	211,943	4,207	8,054	6,286,094
1929 ..	2,462,922	1,769,126	924,864	579,503	411,438	213,762	4,178	8,384	6,374,177
1930 ..	2,488,101	1,784,711	940,455	580,751	418,627	216,493	4,650	8,789	6,442,574
1931 ..	2,508,537	1,797,185	957,559	583,504	420,794	219,946	4,592	8,617	6,500,734

4. **Area, Population, Masculinity, and Density—States, 1931.**—A previous table showed the estimated number of persons on the 31st December, 1931, in each of the States and Territories. In the following table the proportions of the total area, and of the total population represented by each State or Territory, are given, together with the masculinity and the density of population :—

**AREA, POPULATION, MASCULINITY, AND DENSITY.—STATES, 1931.**

State or Territory.	Percentage on Total Area.	Per Cent. Estimated Population 31st December, 1931.			Masculinity (a)	Density (b)
		Males.	Females.	Persons.		
New South Wales ..	10.40	38.44	38.73	38.58	103.03	8.14
Victoria ..	2.96	26.76	28.48	27.60	97.59	20.50
Queensland ..	22.54	15.38	14.14	14.77	112.94	1.44
South Australia ..	12.78	9.08	8.84	8.96	106.72	1.54
Western Australia ..	32.81	6.79	6.12	6.46	115.08	0.43
Tasmania ..	0.88	3.33	3.52	3.42	98.23	8.52
Northern Territory ..	17.60	0.08	0.05	0.07	169.37	0.01
Federal Capital Territory ..	0.03	0.14	0.12	0.14	119.73	9.28
<b>Australia ..</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>103.83</b>	<b>2.19</b>

(a) Number of males to each 100 females.

(b) Number of persons per square mile.

Additional information regarding masculinity and density of population appears in later sections of this chapter.

5. **Urban and Rural Distribution.**—At the Census of 4th April, 1921, information was obtained regarding the distribution of the population amongst urban and rural areas. The metropolitan divisions include the capital city and the adjoining urban areas; the urban provincial districts cover those cities and towns which are not adjacent to the metropolitan areas, and which are incorporated for local government purposes; while those persons classed as migratory were mostly on board ships in Australian ports.

The results show that of the 5,435,734 persons recorded at the Census, 2,338,079, or 43.01 per cent., resided in the metropolitan divisions; 1,037,468, or 19.09 per cent., in urban provincial areas; 2,030,422 persons, or 37.35 per cent., in rural areas; and the remainder 29,765, or 0.55 per cent., were classed as migratory. More detailed information in connexion with this matter will be found in Official Year Book, No. 22, p. 890.

6. **Metropolitan Population—Australia and Other Countries.**—The abnormal concentration of population in the capitals of the States of Australia, as compared with other countries, may be readily seen from the following table. It may be mentioned, however, that, in many of the other countries, the capital is not the most populous of the great cities, whereas, in Australia, the capital is invariably the most populous city, and in some States is the only one of important magnitude.

METROPOLITAN POPULATION.—AUSTRALIA AND OTHER COUNTRIES.

State or Country.	Metropolis.	Year.	Population.	Percentage on Total of State or Country.
Australia ..	Canberra ..	} 31st Dec., 1931	7,100	0.11
New South Wales ..	Sydney ..		1,256,230	49.89
Victoria ..	Melbourne ..		1,030,750	57.60
Queensland ..	Brisbane ..		317,150	32.91
South Australia ..	Adelaide ..		324,337	55.45
Western Australia ..	Perth ..		209,729	49.74
Tasmania ..	Hobart ..		58,270	26.30
Australia ..	(7 Cities) ..		3,203,566	49.09
New Zealand ..	Wellington ..		1.4. 1932	150,190
New York State ..	New York (a) ..	1930	6,930,446	55.06
Northern Ireland ..	Belfast ..	1929	415,000	33.20
Austria ..	Vienna ..	1930	1,865,780	24.16
Denmark ..	Copenhagen ..	1930	771,168	21.72
Irish Free State ..	Dublin ..	1931	412,400	13.95
England ..	London (b) ..	1931	4,396,821	11.01
Belgium ..	Brussels ..	1930	839,581	10.38
Netherlands ..	Amsterdam ..	1930	759,286	9.59
Scotland ..	Edinburgh ..	1931	438,998	9.07
Norway ..	Oslo ..	1930	249,688	8.89
Sweden ..	Stockholm ..	1930	502,207	8.17
France ..	Paris ..	1931	2,891,020	6.91
Germany ..	Berlin ..	1925	4,024,165	6.37
Spain ..	Madrid ..	1930	834,103	3.64
Japan ..	Tokio ..	1930	2,070,529	3.21
Italy ..	Rome ..	1931	958,100	2.33
Canada ..	Ottawa ..	1931	124,988	1.20
Russia (European) ..	Leningrad ..	1926	1,614,008	1.10
United States ..	Washington ..	1930	486,869	0.40

(a) Albany, the capital of New York State, had, in 1930, a population of 127,412, a percentage of 1.01 on total of State. (b) Population of Greater London in 1931 was 8,192,240.

7. Principal Urban Centres.—The following table gives particulars of the population of the principal urban incorporated areas in each State at the 31st December, 1931:—

POPULATION OF PRINCIPAL URBAN INCORPORATED AREAS.—AUSTRALIA, 31st DECEMBER, 1931.

Town.	Population.	Town.	Population.
<b>New South Wales—</b>		<b>Queensland—continued.</b>	
Sydney and Suburbs ..	1,256,230	Maryborough ..	12,000
Newcastle and Suburbs ..	103,700	Bundaberg ..	11,250
Broken Hill ..	22,950	Cairns ..	10,500
Lithgow ..	15,050	Gympie ..	9,592
Holroyd ..	14,990	Mackay ..	9,230
Cessnock ..	13,860	Charters Towers ..	9,200
Goulburn ..	12,570	Warwick ..	7,500
Wollongong ..	10,800	Southport ..	5,800
Lismore ..	10,510	<b>South Australia—</b>	
Bathurst ..	10,050	Adelaide and Suburbs ..	324,337
Albury ..	9,770	Port Pirie ..	9,466
Katoomba ..	9,580	Mount Gambier ..	3,978
Wagga Wagga ..	9,110	Murray Bridge ..	3,569
Orange ..	8,640	Victor Harbour ..	3,478
Tamworth ..	7,990	Wallaroo ..	3,097
West Maitland ..	7,920	<b>Western Australia—</b>	
Armidale ..	6,960	Perth and Suburbs ..	209,729
<b>Victoria—</b>		Boulder ..	6,000
Melbourne and Suburbs ..	1,030,750	Kalgoorlie ..	5,800
Geelong and Suburbs ..	42,760	Bunbury ..	5,120
Ballarat and Suburbs ..	41,750	Northam ..	4,950
Bendigo and Suburbs ..	33,720	Geraldton ..	4,622
Warrnambool ..	8,200	Albany ..	3,980
Wonthaggi ..	7,330	Collie ..	3,500
Castlemaine and Suburbs ..	6,670	Narrogin ..	3,250
Mildura ..	6,000	<b>Tasmania—</b>	
<b>Queensland—</b>		Hobart and Suburbs ..	58,270
Brisbane and Suburbs ..	317,150	Launceston and Suburbs ..	31,210
Townsville ..	32,050	Devonport ..	5,500
Rockhampton ..	30,000	Burnie ..	4,200
Toowoomba ..	26,439	Queenstown ..	3,500
Ipswich ..	26,253	Ulverstone ..	2,850

## § 6. Elements of Increase.

**I. Natural Increase.**—(i) *General.* The two factors which contribute to the growth of a population are the "natural increase" by excess of births over deaths, and the "net immigration," i.e., the excess of arrivals over departures. In earlier issues of the Official Year Book particulars of the natural increase from 1861 were given for each sex and State (See No. 22, page 899.) In the following table the last five years only are given for each sex, but from 1901 for persons. The natural increase for Australia from 1861 to 1931 inclusive was 4,090,097, consisting of 1,899,417 males and 2,190,680 females, and represented 76.02 per cent. of the total increase in population. During the present century, the rate of natural increase grew until the period 1911-15, since when it has declined steadily. A graph showing the natural increase to the population of each State and of Australia, from year to year since 1861, accompanies this chapter.

## POPULATION.—NATURAL INCREASE. (a)

Period.	States.						Territories.		Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North-ern.	Fed. Cap.	
<b>MALES.</b>									
1927 ..	14,825	9,086	5,351	3,092	2,251	1,441	-37	13	36,022
1928 ..	15,505	8,421	5,499	3,045	2,264	1,263	-27	37	36,007
1929 ..	13,046	8,263	4,430	2,725	2,076	1,334	-25	56	31,905
1930 ..	14,507	8,548	5,255	2,491	2,479	1,419	-25	61	34,735
1931 ..	12,654	6,442	4,650	1,978	2,052	1,410	-25	64	29,225
<b>FEMALES.</b>									
1927 ..	16,265	9,215	6,404	3,272	2,838	1,359	29	12	39,394
1928 ..	16,629	8,369	6,308	3,216	2,800	1,296	39	36	38,693
1929 ..	15,043	8,624	5,747	2,901	3,045	1,287	13	58	36,718
1930 ..	16,386	8,620	6,229	2,642	2,947	1,419	19	71	38,333
1931 ..	13,797	6,857	5,658	2,213	2,816	1,295	27	61	32,724
<b>PERSONS.</b>									
1901-05 ..	110,342	74,163	39,538	24,850	19,751	15,982	-195	(b)	284,431
1906-10 ..	135,424	81,577	47,463	29,254	24,116	17,225	-231	(b)	334,828
1911-15 ..	164,144	96,418	60,960	37,991	28,992	18,990	-139	156	407,512
1916-20 ..	153,829	84,274	59,167	33,238	22,972	17,494	10	147	371,131
1921-25 ..	170,298	98,939	63,230	34,316	24,123	17,380	59	119	408,464
1926-30 ..	153,163	88,173	56,773	29,990	25,651	13,894	5	378	368,017
1927 ..	31,090	18,301	11,755	6,364	5,089	2,800	8	25	75,416
1928 ..	32,134	16,790	11,807	6,261	5,064	2,559	12	73	74,700
1929 ..	28,089	16,887	10,177	5,626	5,121	2,621	12	114	68,623
1930 ..	30,893	17,168	11,484	5,133	5,426	2,838	6	132	73,068
1931 ..	26,451	13,299	10,308	4,191	4,868	2,705	2	125	61,949

(a) Excess of births over deaths. (b) Part of New South Wales prior to 1911.  
NOTE.—Minus sign (—) denotes excess of deaths over births.

POPULATION.—NATURAL INCREASE (a)—*continued.*

Period.	States.						Territories.		Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North-ern.	Fed. Cap.	
RATE OF NATURAL INCREASE (b)—PERSONS.									
1901-05..	15.59	12.31	15.34	13.92	18.07	17.85	- 8.8	(c)	14.60
1906-10..	17.25	13.11	16.99	15.44	18.52	18.37	-12.6	(c)	15.93
1911-15..	18.27	13.91	18.61	17.55	18.76	19.63	- 7.6	13.71	17.05
1916-20..	15.69	11.65	16.74	14.51	14.56	17.46	0.43	12.23	14.57
1921-25..	15.55	12.32	15.72	13.23	13.79	16.22	3.20	6.93	14.36
1926-30..	12.69	10.10	12.50	10.46	12.90	13.07	- 0.24	9.77	11.75
1927 ..	13.10	10.59	13.18	11.14	13.22	13.33	- 1.89	3.41	12.22
1928 ..	13.26	9.59	12.99	10.84	12.68	12.07	2.85	9.06	11.88
1929 ..	11.41	9.55	11.01	9.70	12.45	12.26	- 2.87	13.60	10.76
1930 ..	12.42	9.62	12.21	8.84	12.96	13.11	- 1.29	15.02	11.34
1931 ..	10.54	7.40	10.76	7.18	11.57	12.30	0.44	14.50	9.53

(a) Excess of births over deaths. (b) Excess of births over deaths per 1,000 mean annual population. (c) Part of New South Wales prior to 1911.

NOTE.—Minus sign (-) denotes excess of births over deaths.

(ii) *Comparison with other Countries.* Notwithstanding its comparatively low birth-rate, Australia has a high rate of natural increase, owing to the fact that its death-rate is very low. The following table gives a comparison between the average rates per annum of natural increase for some of the principal countries of the world for which such information is available, and those for the several States of Australia and the Dominion of New Zealand. Rates for the period 1909-1913 have been added for purposes of comparison:—

## NATURAL INCREASE PER ANNUM PER 1,000 OF MEAN POPULATION.

(VARIOUS COUNTRIES.)

Country.	1909-13.	1927-31.	Country.	1909-13.	1927-31.
<b>Australasia—</b>			<b>Europe—<i>continued.</i></b>		
Tasmania ..	18.8	12.6	Scotland ..	10.7	5.9
Western Australia	18.1	12.6	Irish Free State ..	6.3	5.4
New South Wales	18.0	12.1	Switzerland ..	9.3	(a) 5.2
Queensland ..	17.9	12.0	Belgium ..	7.8	(a) 4.7
Australia ..	16.7	11.1	England and Wales	10.7	4.1
New Zealand ..	17.1	10.7	Sweden ..	10.4	(a) 3.5
South Australia ..	16.8	9.5	France ..	0.8	(a) 1.3
Victoria..	13.6	9.3			
<b>Europe—</b>			<b>Asia—</b>		
Soviet Republics ..	15.8	(b) 22.3	Japan ..	13.1	(a) 13.6
Netherlands ..	15.1	(a) 13.2			
Spain ..	9.3	(a) 11.1	<b>Africa—</b>		
Italy ..	12.8	10.7	Union of South		
Denmark ..	13.9	(a) 8.0	Africa (whites only)	(c)	(a) 16.3
Norway..	12.4	(a) 6.6			
Germany ..	12.8	(a) 6.3	<b>America—</b>		
Northern Ireland..	6.3	6.2	Canada ..	(c)	(a) 13.2
			United States ..	(c)	7.8

(a) 1927-30. (b) 1926-27. (c) Not available.

Graphs of natural increase for each of the States, as well as for Australia, accompany this chapter.

2. **Net Immigration.\***—The other factor of increase in the population, viz., the excess of arrivals over departures, known as “net immigration” is, from its nature, much more subject to variations than is the factor of “natural increase.” These variations are due to numerous causes, some of which are referred to in Official Year Book No. 22, pp. 906-7.

Information is given below for the last five years in the case of males and females, and for quinquennial periods from 1901 to 1930 in the case of all persons.

POPULATION.—INCREASE BY NET IMMIGRATION.

Period.	States.						Territories.		Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North-ern.	Fed. Cap.	

MALES.

1927 ..	12,592	5,924	4,152	2,324	6,167	735	401	395	31,220
1928 ..	6,753	3,811	4,644	1,628	6,317	928	371	1,299	15,705
1929 ..	1,853	2,062	3,310	2,763	3,576	232	231	1	3,912
1930 ..	5,116	3,536	4,434	1,626	1,627	524	73	74	7,996
1931 ..	5,512	3,460	3,776	495	3,179	82	165	88	9,029

FEMALES.

1927 ..	8,803	5,338	1,076	689	2,290	957	70	395	17,704
1928 ..	6,127	3,165	1,062	1,056	2,200	930	20	979	11,527
1929 ..	2,363	1,276	695	1,940	2,193	113	269	82	5,051
1930 ..	2,876	120	1,406	1,651	44	735	79	201	3,412
1931 ..	3,667	638	1,432	855	686	123	5	22	3,032

PERSONS.

1901-05 ..	17,237	59,955	1,903	19,479	50,420	2,497	616	(a)	16,793
1906-10 ..	20,547	9,410	20,071	14,993	2,578	9,807	514	(a)	57,278
1911-15 ..	87,095	26,619	25,091	1,132	10,839	15,257	1,315	28	136,862
1916-20 ..	44,444	19,190	6,390	11,783	8,312	2,278	504	4	70,709
1921-25 ..	36,422	57,169	47,331	26,311	16,737	13,100	392	1,845	172,323
1926-30 ..	48,881	18,627	30,237	504	22,772	10,282	965	4,227	115,931
1927 ..	21,395	11,262	5,228	3,013	8,457	1,692	471	790	48,924
1928 ..	12,880	2,784	5,706	2,684	8,517	1,858	391	2,278	27,232
1929 ..	4,216	786	4,005	4,703	5,769	119	500	81	8,963
1930 ..	7,992	3,416	5,840	3,277	1,583	1,259	152	127	11,408
1931 ..	9,179	2,822	5,208	1,350	3,865	41	160	66	12,061

(a) Part of New South Wales prior to 1911.

NOTE.—Minus sign (—) indicates the excess of departures over arrivals.

\* The subject of immigration is dealt with at some length later in this chapter.

From 1861 to 1931 the increment to the population arising from net immigration amounted to 1,290,238, or 23.98 per cent. of the total increase in population. During the 31 years of the present century the total increase to the population was made up of 2,236,332 or 81.01 per cent. by natural increase, and 524,249 or 18.99 per cent. by net immigration.

3. **Total Increase.**—The total increase of the population is obtained by the combination of the natural increase with the net immigration.

The total increase in each decade from 1861 to 1920 and for the years 1921 to 1928 was given in Year Book No. 22, p. 902. The results for the last five years only are shown below for males and females, but quinquennial figures from 1901 to 1930 are added for persons. A graph showing the increase in the population in each State and Territory, and of Australia from 1860, accompanies this chapter.

## POPULATION.—TOTAL INCREASE.

Period.	States.						Territories.		Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North-ern.	Fed. Cap.	

## MALES.

1927 ..	27,417	15,010	9,503	5,416	8,418	706	364	408	67,242
1928 ..	22,258	8,040	10,143	1,417	8,581	335	398	1,336	51,712
1929 ..	14,899	6,201	7,740	38	5,652	1,102	206	55	35,817
1930 ..	9,391	5,012	9,689	865	852	895	48	13	26,739
1931 ..	7,142	2,982	8,426	1,483	1,127	1,328	190	152	20,196

## FEMALES.

1927 ..	25,068	14,553	7,480	3,961	5,128	402	99	407	57,098
1928 ..	22,756	11,534	7,370	2,160	5,000	366	19	1,015	50,220
1929 ..	17,406	9,900	6,442	961	5,238	1,100	232	140	41,769
1930 ..	13,510	8,740	7,635	991	2,991	684	98	272	34,921
1931 ..	10,130	7,495	7,090	1,358	2,130	1,418	32	39	29,692

## PERSONS.

1901-05..	127,579	14,208	37,635	5,371	70,171	13,485	— 811	(a)	267,638
1906-10..	155,971	90,987	67,534	44,247	26,694	7,418	— 745	(a)	392,106
1911-15..	251,239	123,037	86,051	39,123	39,831	3,733	1,176	184	544,374
1916-20..	198,273	103,464	65,557	45,021	14,660	15,216	— 494	143	441,840
1921-25..	206,720	156,108	110,561	60,627	40,860	4,280	— 333	1,964	580,787
1926-30..	202,044	106,800	87,010	30,494	48,423	3,612	960	4,605	483,948
1927 ..	52,485	29,563	16,983	9,377	13,546	1,108	463	815	124,340
1928 ..	45,014	19,574	17,513	3,577	13,581	701	— 379	2,351	101,932
1929 ..	32,305	16,101	14,182	923	10,890	2,502	488	195	77,586
1930 ..	22,901	13,752	17,324	1,856	3,843	1,579	146	259	61,660
1931 ..	17,272	10,477	15,516	2,841	1,003	2,746	— 158	191	49,888

(a) Part of New South Wales prior to 1911.

NOTE.—Minus sign (—) denotes decrease.

4. Rates of Increase.—(i) *For Various Countries.* The table hereunder gives approximate rates of increase in population for Australia, and its component States, and for other countries:—

POPULATION.—RATES OF INCREASE (VARIOUS COUNTRIES).

Countries.	Annual Rate of Increase in Population during period—							
	1891 to 1896.	1896 to 1901.	1901 to 1906.	1906 to 1911.	1911 to 1916.	1916 to 1921.	1921 to 1926.	1926 to 1931.
<b>AUSTRALASIA—</b>	%	%	%	%	%	%	%	%
Australia ..	1.86	1.49	1.38	2.03	1.95	1.99	2.09	1.32
New South Wales a	1.99	1.57	1.99	2.03	2.61	2.17	2.01	1.44
Victoria ..	0.37	0.52	0.18	2.17	1.38	1.68	2.00	1.02
Queensland ..	2.49	2.25	1.35	2.76	2.20	2.21	2.81	1.78
South Australia b	1.63	0.77	0.27	2.46	1.52	2.34	2.27	0.65
Western Australia	20.81	7.25	6.22	2.43	1.76	1.27	2.44	2.17
Tasmania ..	1.06	1.83	1.33	0.65	0.58	1.84	-0.33	0.79
New Zealand ..	2.41	1.98	2.86	2.56	1.61	2.32	1.95	1.25
<b>EUROPE—</b>								
England and Wales	1.15	1.15	1.04	1.04	-0.95	1.89	0.62	0.47
Scotland ..	1.06	1.06	0.55	0.56	0.31	0.24	0.09	-0.21
Ireland ..	-0.60	-0.43	-0.22	-0.06	-0.21	0.58	-0.60	-0.12
Belgium ..	1.15	0.92	1.26	0.69	0.54	-0.56	1.03	(c)0.68
Denmark ..	0.99	1.32	1.12	1.26	1.20	2.13	1.01	(c)0.65
France ..	0.09	0.24	0.15	0.06	-0.72	0.55	0.76	0.53
Germany ..	1.17	1.51	1.46	1.36	0.71	-1.62	0.73	(c)0.56
Italy ..	0.68	0.61	0.52	0.80	1.16	0.22	0.91	(c)0.88
Netherlands ..	1.28	1.30	1.53	1.22	1.72	1.16	1.53	(c)1.39
Norway ..	0.96	1.31	0.52	0.66	1.00	1.14	0.90	(c)0.38
Spain ..	0.45	0.45	0.52	0.87	0.66	0.82	0.65	(c)0.72
Sweden ..	0.61	0.86	0.61	0.84	0.70	0.64	0.40	(c)0.30
Switzerland ..	1.22	1.10	1.28	1.17	0.81	0.01	0.38	(c)0.77
<b>ASIA—</b>								
Ceylon ..	1.41	2.03	1.62	1.20	1.71	1.28	2.30	(c)2.27
Japan ..	0.96	1.25	1.29	1.08	1.42	0.37	1.42	(c)1.48
<b>AMERICA—</b>								
Canada ..	0.97	1.19	2.99	2.99	2.20	1.81	1.33	1.97
United States ..	1.93	2.02	2.00	1.82	1.67	1.21	1.67	1.26

(a) Including Federal Capital Territory. (b) Including Northern Territory. (c) 1926 to 1930.

NOTE.—The minus sign (—) denotes decrease.

(ii) *Variations in the Rates.* The fluctuations in the rates of increase in the population of Australia are, for the greater part, due to variations in the volume of immigration.

## § 7. Seasonal Variations of Population.

1. *Variations in Natural Increase.*—The following table shows the natural increase to the population, during each quarter of the year, based on the experience of the ten years 1922-1931. For Australia as a whole, the rate of natural increase was greatest in the quarter ended 31st March, and least in the quarter ending 30th September, the difference between the rates of increase for these two periods being equal to 35 persons for every 100,000 of the population. In New South Wales, Victoria, Queensland, South Australia, and Western Australia the March quarter was the most favourable, and in Tasmania the December quarter. The natural increase was lowest in New South Wales, Victoria, and South Australia in the September quarter, in Queensland and Western Australia in the December quarter, and in Tasmania in the June quarter. The difference between the least favourable and the most favourable quarters ranged from 8 per 100,000 of the population in Tasmania to 42 per 100,000 in Victoria.

## POPULATION.—AVERAGE QUARTERLY NATURAL INCREASE.

State or Territory.	Average Natural Increase for Quarter ended on last day of—								Average Natural Increase per Annum, 1922-1931.	
	March.		June.		September.		December.			
	Persons.	°/°	Persons.	°/°	Persons.	°/°	Persons.	°/°	Persons.	°/°
N.S.W.	8,358	3.57	7,884	3.37	7,508	3.20	7,780	3.32	31,530	13.46
Victoria	4,925	2.89	4,496	2.64	4,207	2.47	4,470	2.63	18,098	10.63
Q'land.	3,070	3.50	3,046	3.48	2,817	3.22	2,779	3.17	11,712	13.37
S. Aust.	1,658	2.99	1,576	2.84	1,442	2.60	1,475	2.66	6,151	11.09
W. Aust.	1,306	3.41	1,298	3.39	1,224	3.20	1,204	3.15	5,032	13.15
Tas. . .	766	3.58	749	3.50	760	3.55	767	3.58	3,042	14.21
N. Ter.	4	1.00	1	0.24	3	0.75	2	-0.50	6	1.49
F.C. Ter.	14	2.26	15	2.42	17	2.74	14	2.26	60	9.68
Total	20,101	3.31	19,065	3.13	17,978	2.96	18,487	3.04	75,631	12.44

NOTE.—The minus sign (-) indicates an excess of deaths over births, and °/° denotes "per thousand."

2. **Variations in Net Immigration.**—In the following table the figures relating to the separate States and Territories include interstate migrants, but so far as these persons are concerned, the arrivals into any State are departures from some other State, so that they do not affect the figures shown for Australia as a whole, which, therefore, represent the oversea arrivals and departures. For the decade under review the December quarter showed the greatest rate of increase from migration.

The greatest gains in New South Wales have on the average occurred in the September quarter; in Victoria in the March quarter; in Queensland and Western Australia in the June quarter, and in South Australia and Tasmania in the December quarter. The gain to the southern States in the December quarter is due to oversea traffic and to tourists and sugar workers returning from Queensland, which loses heavily during the December quarter, but gains in the June quarter by tourists seeking the warmer climate. The June quarter has been most favourable to Queensland and Western Australia. The increase to Tasmania during the December quarter is from the influx of tourists from the mainland, but this is unfortunately more than counterbalanced by the consistent losses during each of the other quarters.

## POPULATION.—AVERAGE QUARTERLY NET IMMIGRATION.

State or Territory.	Quarter ended on last day of—								Average Net Immigration per Annum—1922-31.	
	March.		June.		September.		December.			
	Persons.	°/°	Persons.	°/°	Persons.	°/°	Persons.	°/°	Persons.	°/°
N.S.W.	1,349	0.58	1,047	-0.45	3,683	1.57	3,469	1.48	7,454	3.18
Victoria	3,594	2.11	1,262	-0.74	2,047	1.20	2,583	1.52	6,962	4.09
Q'land.	1,718	1.96	6,721	7.67	1,244	1.42	-1,847	-2.10	7,836	8.95
S. Aust.	14	0.03	259	-0.47	485	0.87	1,865	3.36	2,105	3.79
W. Aust.	590	1.54	1,178	3.08	924	2.42	866	2.26	3,558	9.30
Tas. . .	-4,101	-19.15	-2,482	-11.59	-889	-4.15	4,937	23.05	-2,535	-11.84
N. Ter.	28	6.97	83	20.66	..	..	44	10.95	67	16.68
F.C. Ter.	1,276	205.84	26	4.19	205	33.07	900	-145.18	607	97.92
Total	4,468	0.73	2,958	0.48	7,699	1.27	10,929	1.80	26,054	4.28

NOTE.—The minus sign (-) denotes excess of departures over arrivals, and °/° denotes "per thousand" of population.

## § 8. Influences affecting Increase and Distribution.

In previous issues of the Official Year Book the influence of the various factors influencing the growth and distribution of population was traced. Detailed information on this subject will be found in Year Book No. 22, pp. 906 and 907.



## § 9. Density.

1. *General.*—From certain aspects population may be less significant in respect of its absolute amount than in its relation to the area of the country. Australia, with an area of 2,974,581 square miles, and a population on 31st December, 1931, of 6,585,920 including aboriginals, has a density of only 2.19 persons to the square mile, and is, therefore, the most sparsely populated of the civilized countries of the world. For the other continents the densities are approximately as follow:—Europe, 129; Asia, 65; Africa, 12; North and Central America, 20; and South America, 11. The population of Australia has thus about 26 per cent. of the density of South America; about 24 per cent. of that of Africa; about 15 per cent. of that of North and Central America; about 4 per cent. of that of Asia; and about 2 per cent. of that of Europe.

On account of the enormous area of Australia, the density of population must necessarily increase slowly. In Australia as a whole, the figure has increased from 1.29 per square mile in 1901, to 2.21 in 1931. Victoria's density, however, has grown from 13.77 to 20.50, and that of New South Wales from 4.43 to 8.14 in the same period.

A map showing the density of population throughout Australia at the Census of 1921 accompanies this chapter.

Particulars concerning the number and density of the population of the most important countries of the world at the latest dates for which such information is available are given in the following table. These figures have in the main been taken from the 1932 issue of the "Statesman's Year Book," and in some instances, more particularly in the cases of Asia and Africa, must be considered as rough approximations only, complete data not being obtainable.

## POPULATION, WORLD'S.—NUMBER AND DENSITY.

Country.	Population.	Density. (a)	Country.	Population.	Density. (a)
<b>EUROPE.</b>			<b>AFRICA—continued.</b>		
Russia .. .. .	119,400,000	67.49	Abyssinia .. .. .	10,000,000	28.57
Germany .. .. .	63,180,649	347.68	Belgian Congo .. .. .	8,828,601	9.62
Great Britain and North- ern Ireland .. .. .	45,936,000	485.41	Union of South Africa .. .. .	7,777,583	16.48
France .. .. .	41,834,923	196.72	Anglo-Egyptian Sudan .. .. .	5,605,848	5.56
Italy .. .. .	41,220,434	344.34	Algeria .. .. .	6,553,451	7.73
Poland .. .. .	31,927,773	228.12	Total Africa .. .. .	138,501,943	12.31
Spain (including Canary and Balearic Islands) .. .. .	22,940,152	116.68	<b>NORTH AND CENTRAL AMERICA.</b>		
Rumania .. .. .	18,025,037	147.41	United States of America .. .. .	122,775,046	40.56
Czechoslovakia .. .. .	14,726,158	271.67	Mexico .. .. .	16,404,030	21.38
Yugoslavia .. .. .	13,930,918	145.10	Canada .. .. .	10,374,196	2.81
Hungary .. .. .	8,683,740	242.06	Cuba .. .. .	3,638,174	82.38
Belgium .. .. .	8,092,004	688.39	Total North and Central America .. .. .	167,082,247	19.53
Netherlands .. .. .	7,920,388	599.12	<b>SOUTH AMERICA.</b>		
Austria .. .. .	6,722,395	207.68	Brazil .. .. .	40,272,650	12.30
Portugal .. .. .	6,654,815	187.51	Argentine Republic .. .. .	11,441,920	9.92
Greece .. .. .	6,315,000	125.65	Colombia .. .. .	7,851,000	17.54
Sweden .. .. .	6,141,577	35.47	Peru .. .. .	6,147,000	11.55
Bulgaria .. .. .	6,006,000	150.85	Chile .. .. .	4,287,445	15.04
Total Europe .. .. .	495,381,847	128.74	Total South America .. .. .	82,396,239	11.40
<b>ASIA.</b>			<b>OCEANIA, ETC.</b>		
China and Dependencies	438,933,373	102.61	Australia .. .. .	(b) 6,585,920	2.21
British India .. .. .	247,003,293	225.72	New Zealand .. .. .	1,521,888	14.65
Japan and Dependencies	90,395,698	346.82	Territory of New Guinea .. .. .	404,135	4.35
Feudatory Independent States .. .. .	71,939,187	101.18	Hawaii .. .. .	368,336	57.49
Dutch East Indies .. .. .	60,731,025	82.82	Papua .. .. .	276,128	3.03
Russia in Asia .. .. .	39,000,000	6.02	Fiji .. .. .	182,576	25.78
Turkey, including Armenia and Kurdistan .. .. .	12,621,499	44.23	Total Oceania, &c. .. .. .	9,824,007	2.97
Philippine Islands .. .. .	12,204,100	106.68	<b>SUMMARY.</b>		
Siam .. .. .	11,684,000	58.35	Europe .. .. .	495,381,847	128.74
Afghanistan .. .. .	11,000,000	44.90	Asia .. .. .	1,061,345,839	64.67
Persia .. .. .	10,000,000	15.92	Africa .. .. .	138,501,943	12.31
Tonking .. .. .	8,182,962	201.90	America, North and Central America, South .. .. .	167,082,247	19.53
Arabia .. .. .	7,000,000	7.00	Oceania, etc. .. .. .	82,396,239	11.40
Nepal .. .. .	5,600,000	103.70	Total .. .. .	1,954,532,122	38.63
Ceylon .. .. .	5,312,548	209.72			
Annam .. .. .	4,820,000	121.23			
Total Asia .. .. .	1,061,345,839	64.67			
<b>AFRICA.</b>					
Nigeria and Protectorate	20,762,083	55.69			
Egypt .. .. .	14,217,864	37.12			
French West Africa .. .. .	13,541,611	9.40			

(a) Number of persons per square mile.

(b) Including 60,000 aboriginals.

2. Position of the British Empire.—The approximate relationship of the British Empire to the world as a whole in regard to its area and population is given hereunder :—

BRITISH EMPIRE IN RELATION TO THE WORLD.

Particulars.	The World.	British Empire.
Area in square miles (exclusive of Polar Circles) ..	50,598,313	13,178,274
Population .. .. .	1,954,532,122	463,509,069
Population per square mile .. .. .	38.63	35.17

§ 10. General Characteristics.

1. Sex Distribution.—(i) *General*. Detailed information respecting the distribution of the sexes in the population of Australia will be found in previous issues of the Official Year Book, but limitations of space preclude its retention in the present issue. (See No. 22 ; page 910.)

(ii) *Masculinity*. On pages 163 to 165 in the second issue of this publication a table was included showing the masculinity of the population of each of the States for each year from 1796 to 1907. In the fifth issue, on page 123, the figures in this table for the years 1901 to 1907 were modified in accordance with the results of the Census of 3rd April, 1911.

The number of males to each hundred females, expressed as a percentage, has been adopted as the "masculinity" of the population. The figures for 1931 will be found on page 476 of this issue, as well as in the comparative table for various countries which follows.

The figures for earlier years referred to above disclose an almost continuous decline until 1921 in the preponderance of males in the population, broken only during the war years. In 1900, the masculinity was 110.55 ; in 1910, 107.87 and in 1920, 103.47. Since 1921, however, the masculinity has tended to rise.

The difference between young and old countries in the masculinity of their populations is clearly illustrated by the comparisons furnished in the following table, which are based on the latest statistics available.

POPULATION OF VARIOUS COUNTRIES.—MASCULINITY.

Country.	Year.	Number of Males to each 100 Females.	Country.	Year.	Number of Males to each 100 Females.
Argentine Republic ..	1928	114.1	Sweden .. ..	1930	97.0
Ceylon .. ..	1921	112.5	Yugoslavia .. ..	1921	96.3
Canada .. ..	1921	106.4	Hungary .. ..	1930	95.7
India (Feudatory States)	1931	106.3	Denmark .. ..	1930	95.7
British India .. ..	1931	106.1	Norway .. ..	1930	94.9
New Zealand .. ..	1931	104.0	Spain .. ..	1920	94.0
<b>Australia</b> .. ..	<b>1931</b>	<b>103.8</b>	German Empire ..	1925	93.7
Union of South Africa(a)	1931	103.7	Northern Ireland ..	1929	93.5
Irish Free State .. ..	1928	103.0	Russia .. ..	1926	93.5
United States of America	1930	102.5	Poland .. ..	1921	93.4
Japan .. ..	1930	102.0	Scotland .. ..	1931	92.4
Netherlands .. ..	1930	98.8	France .. ..	1931	92.3
Belgium .. ..	1928	97.9	England and Wales ..	1931	92.0
Italy .. ..	1921	97.3			

(a) White population only.

2. *Age Distribution.*—The age distribution of the population is obtained only at a Census, the last of which was taken in 1921. The data then collected have been included in preceding issues of the Year Book. (See No. 22, p. 912.)

An estimate has, however, been made of the age distribution of Australia at 30th June, 1931, and is given hereunder in quinquennial age groups for males, females and persons. Since no record is kept of the ages of inter-State migrants an accurate estimate of the age distribution for each State cannot be made.

**ESTIMATED POPULATION OF AUSTRALIA IN AGE GROUPS AT 31st DÉCEMBER, 1931.**

Age Group.	Males.	Females.	Persons.
Under 5 years .. .. .	312,635	300,935	613,570
5 and under 10 .. .. .	322,805	313,085	635,890
10 " " 15 .. .. .	305,110	295,880	600,990
15 " " 20 .. .. .	313,700	302,525	616,225
20 " " 25 .. .. .	290,410	269,100	559,510
25 " " 30 .. .. .	266,965	240,405	507,370
30 " " 35 .. .. .	242,665	239,865	482,530
35 " " 40 .. .. .	237,925	241,395	479,320
40 " " 45 .. .. .	229,710	221,620	451,330
45 " " 50 .. .. .	195,595	187,640	383,235
50 " " 55 .. .. .	161,845	156,375	318,220
55 " " 60 .. .. .	132,800	128,870	261,670
60 " " 65 .. .. .	114,635	108,110	222,745
65 " " 70 .. .. .	90,540	86,005	176,545
70 " " 75 .. .. .	60,360	59,045	119,405
75 " " 80 .. .. .	30,125	30,385	60,510
80 " " 85 .. .. .	11,565	13,750	25,315
85 " " 90 .. .. .	3,790	5,225	9,015
90 " " 95 .. .. .	937	1,230	2,167
95 " " 100 .. .. .	150	172	322
100 and over .. .. .	20	16	36
Total .. .. .	3,324,287	3,201,633	6,525,920

3. *Race and Nationality.*—(i) *General.* With regard to its racial characteristics the population of Australia may be divided into two main groups, one comprising the aboriginal natives, and the other consisting of the various immigrant races which have made the country their home. (It will of course be understood that full-blood aboriginals are not counted in the population.) The term "immigrant races" naturally covers not only those residents of Australia who were born in other countries, but includes their descendants who were born in Australia.

(ii) *Aboriginals.* At a Census of aboriginals taken on 30th June, 1931, 58,901 full-bloods were enumerated, of whom 37,837 were described as nomadic, 12,136 were in regular employment, and 16,837 were living in supervised camps. There were at the same date 19,014 half-castes. The aboriginals are scattered over the whole of the mainland, but the majority are concentrated chiefly in Western Australia, Queensland and the Northern Territory.

A special article dealing with the number and distribution of aboriginals in Australia at the time of its first settlement was included in Official Year Book No. 23, pp. 687 to 696.

(iii) *Immigrant Races.* The immigrant races consist mainly of natives of the British Isles and their descendants. Of the total population (5,435,734) enumerated at the Census of 1921, 5,387,143, or 99.11 per cent., were of European race. Of the remainder,

30,975, or 0.57 per cent., were full-blood, and 17,616, or 0.32 per cent., were half-caste non-Europeans. Of 28,215 full-blood Asiatics, 17,157 were Chinese, 2,881 Hindus, 2,892 Syrians, 2,740 Japanese, and 1,087 Malays.

More detailed information under this heading will be found in previous issues of this book. (See No. 22, p. 916.)

(iv) *Nationality.* Prior to the Census of 1921 no attempt had been made to ascertain the allegiance of the people, except in so far as a person was or was not a British subject. At the last Census all persons were asked to state their nationality, and the results which are given in Year Book No. 22, show that of a population of 5,435,734, as many as 5,387,205, or over 99 per cent., were definitely stated to be British subjects. Of the foreign element, the Chinese were the most numerous, representing 30 per cent. of the foreign inhabitants and 2.56 in every 1,000 of the total population. Italians, with 0.90 per 1,000 of total population, were the next in numbers. (See Year Book No. 22, p. 917, for further information.)

(v) *Birthplaces.* The proportion of native-born in the Australian population has increased rapidly in recent years. At the Census of 1921 the Australian-born numbered 4,581,663 persons, or 84.51 per cent. of a total population of 5,421,242 persons whose birthplaces were specified. Of the remainder, 676,387, or 12.48 per cent., were natives of the British Isles, and 38,611, or 0.71 per cent., were natives of New Zealand, so that 97.70 of the total population at that time had been born either in Australasia or in the British Isles. Excluding these, the following countries are the most important recorded as the birthplaces of persons in Australia at the Census of 1921 :—

Germany, 22,396 (0.41 per cent.); China, 15,224 (0.28 per cent.); Scandinavia (comprising Sweden, Norway, and Denmark), 14,341 (0.26 per cent.); Italy, 8,135 (0.15 per cent.); British India, 6,918 (0.13 per cent.); United States of America, 6,604 (0.12 per cent.); Union of South Africa, 5,408 (0.10 per cent.); Canada, 3,550 (0.07 per cent.).

(vi) *Length of Residence of Immigrants.* At the Census of 1921 the population of Australia included 839,579 persons who were classed as immigrants. A table showing the number of years during which these people had resided in Australia will be found in Official Year Book, No. 22, p. 919.

4. *Education.*—Of the 5,435,734 persons who comprised the population of Australia on the 4th April, 1921, there were 805,798, of whom 600,206, or 74.5 per cent., were under five years of age, and many of the remaining 25.5 per cent. were also children, who were definitely shown to be unable to read, and there were 86,641 persons whose ability in this direction was not stated. Allowing for those persons whose ability to read and write was unspecified, it may be said that over 95 per cent. of the population over five years of age can read and write, and of those over ten years of age more than 98 per cent. can read and write.

5. *Religions.*—At the Census of the 4th April, 1921, of a total population of 5,435,734, 5,267,641, or 99.33 per cent. of those who stated their religion, were definitely stated to be Christians, and 35,405 were stated to be Non Christians. Of the total Christians, 2,372,995, or 45.04 per cent., belonged to the Church of England; 1,134,002, or 21.53 per cent., to the Roman Catholic Church; 636,974, or 12.09 per cent., to the Presbyterian Church; and 632,629, or 12.01 per cent., were Methodists. The numbers belonging to other denominations will be found in Year Book No. 22, p. 921.

6. *Conjugal Condition.*—The number of persons whose conjugal condition was definitely stated at the Census of 4th April, 1921, was 5,421,191, of whom 2,753,740 were males and 2,667,451 were females. Of the 5,421,191 persons referred to, 1,998,662, or 36.86 per cent., were married, as compared with 33 per cent. in 1911; 237,821, or 4.39 per cent., were widowed; 8,528, or 0.15 per cent., were divorced; and 3,176,180 or 58.60 per cent., had never married. Of those who had never married, 1,725,004, or 54.31 per cent., were under 15 years of age.

7. **Occupations.**—Detailed information regarding the grouping of the population into occupations at the Census of 1921 will be found in previous issues of the Official Year Book. (See No. 22, p. 922.) A brief summary only is included here.

**CENSUS POPULATION.—OCCUPATION AND PERCENTAGES OF EACH CLASS ON TOTAL BREADWINNERS, AUSTRALIA.**

Occupations.	Persons.			Percentage on Total Breadwinners.		
	1901.	1911.	1921.	1901.	1911.	1921.
				%	%	%
I. Professional ..	112,356	146,608	201,887	6.8	7.3	8.7
II. Domestic ..	202,216	202,925	210,362	12.2	10.1	9.1
III. Commercial ..	224,028	291,366	355,767	13.6	14.5	15.3
IV. Transport and Communication	122,702	158,854	208,222	7.4	8.0	9.0
V. Industrial ..	429,012	569,132	725,816	26.1	28.4	31.2
VI. Primary Producers	535,766	608,843	599,750	32.5	30.4	25.8
VII. Independent ..	22,430	26,402	20,667	1.4	1.3	0.9
Total Breadwinners ..	1,648,510	2,004,130	2,322,471	100.0	100.0	100.0
VIII. Dependants ..	2,125,291	2,450,875	3,113,263			
Total ..	3,773,801	4,455,005	5,435,734			

8. **Grade of Employment.**—The term “grade of employment” indicates the capacity in which persons are employed in the various branches of industry. The grades recorded and the numbers of the population at the Census of 1921 in each grade were as follow :—  
(a) Employer (141,570), (b) Working on own account (347,250), (c) Assisting but not receiving wages or salary (34,983), (d) Receiving wages or salary (1,519,036), and (e) Unemployed (160,956). In addition to these categories, provision is made for (f) Grade not applicable (3,231,939)—which consists mainly of dependants and of persons of independent means not engaged in gainful occupations.

9. **Unemployment.**—(i) *Causes.* At the Census of the 4th April, 1921, there were in Australia 1,679,992 wage or salary earners, of whom 160,956 were unemployed. In 79,338 cases, or approximately 50 per cent. of the total, the unemployment was due to scarcity of work; in 46,912 cases, or 29 per cent., to illness or accident; in 4,818 cases, or 3 per cent., to industrial disputes; in 2,276 cases, or 1.5 per cent., to old age; and in 27,612 cases, or 17 per cent., to other causes.

(ii) *Duration.* At the Census of 1921, persons who were unemployed on Saturday, 2nd April, 1921, were asked to state the number of working days during which they had been out of work. The results of the inquiry show that approximately 46 per cent. were unemployed under five weeks, 17.2 per cent. from five to ten weeks, 10.6 per cent. from ten to fifteen weeks, and 26.2 per cent. above fifteen weeks.

## § 11. Dwellings.

Information regarding the number, ownership, rental value, number of rooms, and inmates of dwellings recorded in Australia at the Census of 1921 will be found in Year Book No. 22, p. 926. More detailed information is given in the Census of 1921—Parts Nos. XVIII.—XXV.

## § 12. Oversea Migration.

1. Oversea Migration during Present Century.—Earlier issues of The Official Year Book contained in summary form tables showing the increase of population by net migration from 1861 to the latest date, while the Demography Bulletins issued by this Bureau give this information in respect of the individual years. In earlier pages of this Chapter a summary will be found of the increase of population by net migration—from 1901 to 1925—in quinquennial groups and in single years to date. The following table shows the arrivals and departures as well as the net immigration since 1901 :—

## OVERSEA MIGRATION.—AUSTRALIA.

Period.	Arrivals.			Departures.			Net Immigration.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
1901-05	196,993	84,167	281,160	204,170	93,783	297,953	-7,177	-9,616	-16,793
1906-10	251,482	119,552	371,034	213,483	100,273	313,756	37,999	19,279	57,278
1911-15	422,927	209,893	632,820	382,552	113,406	495,958	40,375	96,487	136,862
1916-20	438,721	100,764	539,485	390,202	78,574	468,776	48,519	22,190	70,709
1921-25	289,695	188,357	478,052	175,682	130,047	305,729	114,013	58,310	172,323
1926-30	266,593	203,887	470,480	197,521	157,028	354,549	69,072	46,859	115,931
1926 ..	62,743	45,181	107,924	36,512	29,192	65,704	26,231	15,989	42,220
1927 ..	69,540	47,883	117,423	38,320	30,179	68,499	31,220	17,704	48,924
1928 ..	55,921	43,871	99,792	49,216	32,344	72,560	15,705	11,527	27,232
1929 ..	44,508	37,740	82,248	40,596	32,689	73,285	3,912	5,051	8,963
1930 ..	33,881	29,212	63,093	41,877	32,624	74,501	-7,996	-3,412	-11,408
1931 ..	21,986	18,428	40,414	31,015	21,460	52,475	-9,029	-3,032	-12,061

NOTE.—(-) Minus sign indicates an excess of departures over arrivals.

The net immigration has varied greatly during the above periods, reaching a maximum in the five years 1921-25. The Great War naturally was responsible for a very large increase in the departures during the periods 1911-15 and 1916-20. Immigration increased rapidly from 1910 to 1912, the gain during the latter year being the greatest in any one year in the present century (with the exception of 1919 when the troops were returning to Australia).

Although the last quinquennium as a whole resulted in the considerable gain of 115,931 persons, the figures for the individual years show the decline which set in after 1927 and which resulted in an actual loss of population in 1930 and 1931. Later figures indicate that the drain by emigration is diminishing.

The influence of the Commonwealth immigration policy is clearly reflected in the above figures. The average annual number of nominated and selected immigrants arriving in Australia during the periods specified was as follows :—

Period.	Number.	Period.	Number.
1901-05 .. ..	Not available	1926 .. ..	31,260
1906-10 .. ..	7,945	1927 .. ..	30,123
1911-15 .. ..	30,111	1928 .. ..	22,394
1916-20 .. ..	2,326	1929 .. ..	12,943
1921-25 .. ..	23,090	1930 .. ..	2,683
1926-30 .. ..	19,881	1931 .. ..	275

The number of arrivals reached its peak in 1926, and has since diminished each year until only 275 were received in 1931.

At present, assistance is confined to nominees whose migration involves the reunion of a family.

2. **Country of Embarkation and Destination.**—The countries from which the migrants arrived or to which they departed are shown hereunder.

**COUNTRY OF EMBARKATION OR DESTINATION.—AUSTRALIA.**

Country.	Arrivals.		Recorded Departures.		Net Migration.	
	1925-29.(a)	1931.	1925-29.(a)	1931.	1925-29.(a)	1931.
Great Britain ..	34,522	3,782	7,433	10,728	27,089	-6,946
New Zealand ..	2,804	883	2,770	2,581	34	-1,698
Other British Possessions ..	5,217	2,497	5,537	4,124	-320	-1,627
<b>Total British Countries</b>	<b>42,543</b>	<b>7,162</b>	<b>15,740</b>	<b>17,433</b>	<b>26,803</b>	<b>-10,271</b>
France ..	1,418	419	726	865	692	-446
Italy ..	5,276	1,013	771	1,663	4,505	-650
United States ..	535	216	551	374	-16	-158
Other Foreign Countries ..	2,818	631	991	1,530	1,827	-899
<b>Total Foreign Countries</b>	<b>10,047</b>	<b>2,279</b>	<b>3,039</b>	<b>4,432</b>	<b>7,008</b>	<b>-2,153</b>
<b>Total</b>	<b>52,590</b>	<b>9,441</b>	<b>18,779</b>	<b>21,865</b>	<b>33,811</b>	<b>-12,424</b>

(a) Annual average. Minus sign (-) indicates excess of departures.

The outstanding feature in the table is the remarkable decrease in arrivals in 1931, which, taken in conjunction with an increase in departures resulted in a large loss of population by migration in this year. Emigration increased to all countries except New Zealand, "Other British Possessions" and United States. Australia lost population to all the countries listed in the table.

The figures in respect of departures and net migration in the above and subsequent tables differ from those appearing in the first table in this section. It is found necessary in compiling estimates of population to make an allowance for "unrecorded departures," and naturally particulars as to country, age, occupation, etc., are not available in respect of this class.

3. **Nationality or Race.**—The great preponderance of migrants to and from Australia is of British nationality, while only a small proportion is of non-European race.

The number of arrivals and departures of migrants since 1921 classified according to nationality or race is shown in the next table.

## NATIONALITY OR RACE OF ARRIVALS AND DEPARTURES.—AUSTRALIA.

Nationality or Race.	Arrivals.			Recorded Departures.		
	1921-25.	1926-30.	1931.	1921-25.	1926-30.	1931.
British .. ..	404,792	386,669	32,868	252,502	285,780	40,023
French .. ..	2,738	3,394	652	2,319	3,341	696
German .. ..	1,052	3,172	298	858	1,988	294
Greek .. ..	4,247	3,842	163	856	2,068	584
Italian .. ..	17,092	19,170	973	3,510	8,724	2,073
Yugoslav .. ..	(a) 950	4,426	270	(a) 538	2,310	571
United States ..	6,875	8,916	774	4,143	8,225	1,013
Other European ..	12,659	15,355	776	5,043	7,061	1,298
<b>Total European ..</b>	<b>450,405</b>	<b>444,944</b>	<b>36,774</b>	<b>269,769</b>	<b>319,497</b>	<b>46,552</b>
Chinese .. ..	17,133	15,649	2,308	18,568	17,726	2,809
Japanese .. ..	2,256	1,762	178	2,748	2,029	677
India and Ceylon ..	2,150	2,790	520	2,176	2,119	426
Other Non-European	6,108	5,335	634	5,123	4,459	780
<b>Total Non-European</b>	<b>27,647</b>	<b>25,536</b>	<b>3,640</b>	<b>28,615</b>	<b>26,333</b>	<b>4,692</b>
<b>Total .. ..</b>	<b>478,052</b>	<b>470,480</b>	<b>40,414</b>	<b>298,384</b>	<b>345,830</b>	<b>51,244</b>

(a) 1925 only.

During the above periods there was a considerable influx of Greeks, Italians and Yugoslav settlers, so that although there was also much concurrent emigration of these nationalities they provided a large permanent addition to the population of the Commonwealth. Arrivals of Non-Europeans each year reach large proportions, but there is always a larger number of departures, so that in the net result the Non-European population decreases each year. The net gain or loss according to nationality or race for the same periods and the percentage is given below.

## NET GAIN OR LOSS.—NATIONALITY OR RACE.—AUSTRALIA.

Nationality or Race.	Net Gain or Loss.			Proportion.		
	1921-25.	1926-30.	1931.	1921-25.	1926-30.	1931.
British .. ..	152,290	100,889	-7,155	Per cent. 84.76	Per cent. 80.94	Per cent. -66.07
French .. ..	419	53	-44	0.23	0.04	-0.41
German .. ..	194	1,184	4	0.11	0.95	0.05
Greek .. ..	3,391	1,774	-421	1.89	1.42	-3.89
Italian .. ..	13,582	10,446	-1,100	7.56	8.38	-10.16
Yugoslav .. ..	412	2,116	-301	0.23	1.70	-2.78
United States ..	2,732	691	-239	1.52	0.55	-2.21
Other European ..	7,616	8,294	-522	4.24	6.66	-4.82
<b>Total European ..</b>	<b>180,636</b>	<b>125,447</b>	<b>-9,778</b>	<b>100.54</b>	<b>100.64</b>	<b>-90.29</b>
Chinese .. ..	-1,435	-2,077	-501	-0.80	-1.67	-4.63
Japanese .. ..	-492	-267	-499	-0.27	-0.21	-4.61
India and Ceylon ..	-26	671	94	-0.01	0.54	0.87
Other Non-European	985	876	-146	0.54	0.70	-1.34
<b>Total Non-European</b>	<b>-968</b>	<b>-797</b>	<b>-1,052</b>	<b>-0.54</b>	<b>-0.64</b>	<b>-9.71</b>
<b>Total .. ..</b>	<b>179,668</b>	<b>124,650</b>	<b>-10,830</b>	<b>100</b>	<b>100</b>	<b>100</b>



Owing to the depressed conditions in Australia the gain by immigration decreased considerably in the successive periods in the table, and the year 1931 showed a recorded net loss of 10,830 persons. Germany and India and Ceylon were the only countries showing net immigration in 1931, and in those cases it was of very small extent. Moreover, while over 80 per cent. of the net immigration in 1921-1930 consisted of persons of British nationality, only 66 per cent. of the loss in 1931 was contributed by British subjects. In 1921-30 Non-Europeans contributed less than 1 per cent. of the net gain, but in 1931, emigrants of this race represented nearly 10 per cent. of the net loss of population.

4. Classes of Arrivals and Departures.—(i) *General*. Since 1st July, 1924, the recorded arrivals and departures have been classified according to the recorded intention of the migrant. The figures for the seven complete years are as follows :—

MIGRANTS CLASSIFIED ACCORDING TO INTENDED PERMANENT RESIDENCE.—  
AUSTRALIA.

Classification.	1925.	1926.	1927.	1928.	1929.	1930.	1931.	Total, 1925-31.
Permanent new arrivals ..	56,477	59,464	67,078	48,233	31,698	17,537	9,441	289,928
Australian residents returning from abroad ..	20,332	23,657	23,883	24,834	25,652	23,369	13,357	155,084
Temporary visitors ..	23,236	24,793	26,435	26,721	24,892	22,186	17,616	165,881
Not stated ..	30	8	27	4	6	1	..	76
<b>Total Arrivals ..</b>	<b>100,075</b>	<b>107,924</b>	<b>117,423</b>	<b>99,792</b>	<b>82,248</b>	<b>63,093</b>	<b>40,414</b>	<b>610,969</b>
Australian residents departing permanently ..	16,957	17,433	17,932	19,648	21,925	27,765	21,865	143,525
Departing temporarily ..	20,666	22,051	22,523	24,045	24,459	20,347	10,345	144,446
Temporary visitors ..	23,504	24,560	26,351	27,060	25,084	24,569	19,029	170,157
Not stated ..	36	42	14	15	7	..	5	109
<b>Total Departures ..</b>	<b>61,163</b>	<b>64,086</b>	<b>66,820</b>	<b>70,768</b>	<b>71,475</b>	<b>72,681</b>	<b>51,244</b>	<b>458,237</b>

Permanent new arrivals have decreased very considerably in recent years, the number for 1931 being only one-seventh of that of 1927. On the other hand, permanent departures were far more numerous in the latter than in the earlier years of the period. Up to and including 1929 there was a considerable gain of permanent residents, but during 1930 and 1931 there was a heavy loss.

Altogether Australia gained 169,055 permanent residents during the first five years, but lost 22,652 during 1930 and 1931, the net result being a gain of 146,403 during the seven years.

Arrivals and departures of temporary visitors were comparatively even until 1929, when local conditions apparently were responsible for the preponderance of departures.

The figures in the table above are based on the information supplied by travellers at the time of arrival or departure. For various reasons the intentions of travellers are subject to subsequent modification, and the figures quoted in the table must therefore be accepted as a record of intention only.

(ii) *Nationality or Race.* The nationality or race of the net permanent addition to the population since 1925, and the percentage of each nationality or race on the total, are given hereunder :—

NET GAIN OR LOSS OF PERSONS INTENDING PERMANENT RESIDENCE IN AUSTRALIA.

Nationality or Race.	1925-29.	1930.	1931.	1925-29.	1930.	1931.
				Per cent.	Per cent.	Per cent.
British .. ..	26,310	-9,936	-9,347	77.81	-97.14	-75.23
French .. ..	68	-18	-53	0.20	-0.18	-0.43
German .. ..	258	61	43	0.76	0.60	0.34
Greek .. ..	584	-131	-362	1.73	-1.28	-2.91
Italian .. ..	3,713	521	-735	10.98	5.09	-5.92
Yugoslav .. ..	727	-53	-260	2.15	-0.52	-2.09
United States ..	21	-11	-160	0.06	-0.11	-1.29
Other European ..	2,135	151	-418	6.32	1.48	-3.36
Total European ..	33,816	-9,416	-11,292	100.01	-92.06	-90.89
Chinese .. ..	-381	-561	-465	-1.13	-5.49	-3.74
Japanese .. ..	-33	-171	-522	-0.10	-1.67	-4.20
India and Ceylon ..	26	32	12	0.08	0.31	0.09
Other Non-European	383	-112	-157	1.13	-1.09	-1.26
Total Non-European	-5	-812	-1,132	-0.02	-7.94	-9.11
Total .. ..	33,811	-10,228	-12,424	100	-100	-100

The net gain of permanent residents changed from 33,811 in 1925-29 to a loss of 12,424 in 1931. British nationals contributed 26,310 or 77.81 per cent. of the gain in 1925-29 and 9,347 or 75.23 per cent. of the loss in 1931. Italian immigration also declined until there was a loss of 735 during 1931. In the case of Non-European migrants there is a considerable influx of Chinese intending permanent residence in Australia, but, on the other hand, a greater number of Chinese depart permanently, with the result that the Chinese population of Australia is constantly diminishing. Similar conditions apply in regard to the Japanese, particularly in 1931, when the excess of departures represented 4.20 per cent. of the total loss by migration.

The total Non-European population has diminished by migration since 1925, the average for 1925-29 being five, increasing to 1,132 in 1931.

(iii) *Ages.* The ages of all persons who arrive in or depart from Australia have been obtained during recent years. The following table sets out the data for the period 1925 to 1931 and shows the ages of persons intending permanent residence and of persons departing permanently.

**AGES OF PERMANENT NEW ARRIVALS OR PERMANENT DEPARTURES.—  
AUSTRALIA.**

Ages.	Permanent New Arrivals.		Permanent Departures.		Gain or Loss.		
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	
Under 15	1925-29(a)	9,539	18.14	2,242	11.94	7,297	21.58
	1930	2,835	16.17	3,722	13.41	-887	-8.67
	1931	1,552	16.44	3,021	13.82	-1,469	-11.83
15 and under 45	1925-29(a)	35,525	67.55	11,034	58.76	24,491	72.43
	1930	10,398	59.29	17,032	61.34	-6,634	-64.86
	1931	5,004	53.00	14,136	64.65	-9,132	-73.50
45 and over and not stated	1925-29(a)	7,526	14.31	5,503	29.30	2,023	5.99
	1930	4,304	24.54	7,011	25.25	-2,707	-26.47
	1931	2,885	30.56	4,708	21.53	-1,823	-14.67

(a) Annual average. Minus sign (-) indicates loss by migration.

The table indicates a change in arrivals from the lower to the higher ages. Whereas in the earlier period young and middle-aged persons accounted for more than two-thirds of the arrivals, in 1931 they were little more than half. Concurrently the proportion of older people increased from one in seven to almost one in three.

A reverse movement was in progress in the departures, in which the proportion of persons under 45 years of age increased. The depression has prompted the departure of many persons in the age group 15-45 with children to other lands in search of employment, while the same causes have probably caused many males in the older age groups who might have intended to return to their native land in later life to postpone their departure to a more favourable occasion. Owing to the fact that conditions grew steadily worse since 1928, the changes recorded in the table above are less remarkable than if information had been available in respect of an earlier quinquennium, uninfluenced by depression.

(iv) *Occupations.* The occupations of permanent male arrivals, and of Australian residents departing permanently are as follows:—

**OCCUPATIONS OF PERMANENT NEW ARRIVALS OR PERMANENT DEPARTURES.—AUSTRALIA.**

Occupations.	Permanent Arrivals.			Permanent Departures.			Net Gain or Loss.		
	1925-29. (a)	1930.	1931.	1925-29. (a)	1930.	1931.	1925-29. (a)	1930.	1931.
Professional ..	1,636	873	616	1,185	1,338	936	451	-465	-320
Domestic ..	482	209	120	332	437	290	150	-228	-170
Commercial ..	3,207	1,240	757	1,702	2,127	1,550	1,505	-887	-793
Transport and Communication ..	1,270	366	163	444	730	462	826	-364	-299
Industrial ..	7,091	1,560	705	3,045	6,331	5,712	4,046	-4,771	-5,007
Primary Pro- ducers ..	12,924	3,768	1,663	3,282	3,790	3,304	9,642	-22	-1,641
Independent ..	63	13	14	77	88	62	-14	-75	-48
Dependants and Not Stated ..	5,392	1,696	929	1,407	2,245	1,868	3,985	-549	-939
<b>Total ..</b>	<b>32,065</b>	<b>9,725</b>	<b>4,967</b>	<b>11,474</b>	<b>17,086</b>	<b>14,184</b>	<b>20,591</b>	<b>-7,361</b>	<b>-9,217</b>

(a) Annual average. Minus sign (-) indicates loss.

The table shows that there were very large numbers of departures in the industrial class in 1930 and 1931, while primary producers departing in 1931 were almost twice as numerous as the arrivals. The excess of departures over arrivals in the industrial class accounts for over 50 per cent. of the whole, the loss of primary producers representing only 17 per cent. Dependants and "not stated" were less than 10 per cent.

### § 13. Immigration.

#### (A) The Encouragement of Immigration into Australia.

1. **Joint Commonwealth and States' Immigration Scheme.**—An outline of the arrangements made between the Commonwealth and State Governments to regulate immigration into Australia will be found in Official Year Book No. 22, p. 929.

Owing to financial and industrial depression, the Commonwealth Government, early in 1930, decided to reduce the flow of assisted migrants by limiting the assisted passage concession to boys for farm work, young women for household employment, and to nominees, mainly wives and children of husbands in Australia.

The Governments of the various States have since cancelled all requisitions for boys and household workers, so that assisted passages are now confined to persons whose migration involves the reunion of a family.

2. **Assisted Passages.**—The British and Commonwealth Governments jointly donate the following contributions towards the passages of approved settlers for Australia from the United Kingdom:—Children under 12 years, £16 10s. (representing the full fare at half rate); juveniles 12 and under 17 years, £27 10s.; juveniles 17 years and under 19 years, £22; married couples, including widowers or widows, and wives nominated by husbands, with at least one child under 19 years, £22 per parent (children at rate according to age); household workers, £22; others, including children 19 years of age and over, £16 10s. Allowing for this financial assistance, children under 12 years will be carried free; juveniles 12 years of age and under 17 years, who are ordinarily charged for by the shipping companies as adult passengers, will merely require to pay £5 10s. each; juveniles 17 years and under 19 years, £11 each; married couples, including widowers or widows, and wives nominated by husbands, with at least one child under 19 years, £11 per parent (children at rate according to age); household workers, £11; others, including children 19 years and over, £16 10s. each. Persons who have previously resided in the Commonwealth are not eligible for assistance. In addition to these contributions, loans of the balance of the passage money are in special cases granted by the Governments concerned. Persons entitled to assisted passages are divided into two classes—"Selected" and "Nominated." "Selected" immigrants are those such as boy farm learners and household workers who were originally recruited abroad by the Commonwealth Government. "Nominated" immigrants are those nominated by persons resident in Australia, and the nominators, who must submit their applications through the officers in charge of the State Immigration Offices in the various capital cities, are held responsible for their nominees upon arrival, so that they shall not become a burden upon the State.

Intending settlers or immigrants may, on application, obtain full information from the Official Secretary, High Commissioner's Office, Australia House, Strand, London, W.C.2; or from the Secretary, Department of the Interior, Canberra, F.C.T.

3. **Results of Assisted Immigration.**—The number of assisted immigrants for the years 1929 to 1931 and the total from the earliest years up to the end of 1931 are given in the following table:—

#### ASSISTED IMMIGRATION.—NUMBERS.

Persons.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	F.C. Terr.	Total.
No. Assisted during 1929	5,431	2,604	1,292	526	2,976	101	13	12,943
" " " 1930	1,174	468	484	61	471	20	5	2,683
" " " 1931	76	45	43	6	99	5	1	275
Total from earliest years to end of 1931	345,786	255,302	235,969	115,817	86,084	24,952	67	1,063,977

Particulars of occupations of the number of selected and nominated immigrants during 1931 are shown below :—

**ASSISTED IMMIGRATION.—SEXES AND INDUSTRIAL GROUPS. AUSTRALIA, 1931.**

Industrial Group.	Selected.			Nominated.		
	Males.	Females.	Total.	Males.	Females.	Total.
I. Wood, Furniture, etc. . . . .	..	..	..	..	1	1
II. Engineering, Metal Works, etc. . . . .	..	..	..	..	..	..
III. Food, Drink, Tobacco, etc. . . . .	..	..	..	1	..	1
IV. Clothing, Hats, Boots, etc. . . . .	..	..	..	..	4	4
V. Books, Printing, etc. . . . .	..	..	..	..	..	..
VI. Other Manufacturing . . . . .	..	..	..	1	..	1
VII. Building . . . . .	..	..	..	1	..	1
VIII. Mining . . . . .	..	..	..	2	..	2
IX. Rail and Tramway Services . . . . .	..	..	..	..	1	1
X. Other Land Transport . . . . .	..	..	..	..	..	..
XI. Shipping, Wharf Labour, etc. . . . .	..	..	..	..	..	..
XII. Pastoral, Agricultural, etc. . . . .	40	13	53	5	..	5
XIII. Domestic, Hotels, etc. . . . .	..	26	26	..	17	17
XIV. General Labour and Miscellaneous . . . . .	..	..	..	8	5	13
Dependants . . . . .	..	..	..	54	96	150
Total . . . . .	40	39	79	72	124	196

**(B) The Regulation of Immigration into Australia.**

1. Powers and Legislation of the Commonwealth.—(i) *Constitutional*. Under Part V., Sec. 51, xxvii. and xxviii. of the Commonwealth Constitution Act, the Parliament of the Commonwealth is empowered to make laws with respect to immigration and emigration and the influx of criminals.

(ii) *Legislation*. A summary of the provisions of the Immigration Act 1901-1925 and the Contract Immigrants Act 1905 (excepting the provisions of the Amending Immigration Acts of 1920, 1924 and 1925, which will be found in Official Year Book, No. 21, p. 927), containing particulars regarding the admission of immigrants, prohibited immigrants, the liabilities of shipmasters and others, and kindred matters will be found in preceding Year Books (see Year Book, No. 12, pp. 1166 to 1168).

*The Immigration Act 1930*.—Under this Act it is provided that Section 5, subsection (1), of the Immigration Act 1901-1925, applies to any person who, since the commencement of the Immigration Restriction Act 1901, evaded an officer when entering the Commonwealth, or gained admission or re-admission by fraudulent means. Steps can be taken to deal with such persons as prohibited immigrants at any time after they have landed in Australia.

*The Immigration Act 1932*.—This Act provides (a) that any alien who fails to satisfy an officer that he holds a landing permit, or that his admission has been authorized, may be prohibited from landing; (b) for the increase of the period during which a person may be declared a prohibited immigrant from three to five years; (c) that a person not a British subject and who has been convicted of a crime of violence against the person may be deported pursuant to an order of the Minister without his being subjected to a dictation test; (d) for the deportation of a person who has been convicted of a criminal offence or who has become an inmate of an insane asylum or public charitable institution within five years from the date of arrival instead of three years as hitherto; and (e) that where the wife of a person whom it is proposed to deport so desires, her name and the names of her dependent children may be included in her husband's deportation order. This would of course apply only to wives and children who were themselves immigrants.

2. Conditions of Immigration into Australia.—(i) *Immigration of Non-European or Coloured Persons*. In pursuance of the "White Australia" policy, the general practice is not to permit Asiatics or other coloured immigrants to enter Australia for the purpose of settling permanently.

There are special arrangements with India, Japan, and China under which facilities are afforded for subjects of those countries who are bona fide merchants, students, or tourists to enter and remain in Australia under exemption whilst they retain their status.

(ii) *Immigration of White Aliens.* Owing to economic conditions in Australia, it has been found necessary to continue to restrict alien immigration to persons who obtain landing permits or special authority for admission from the Department of the Interior. Such authority, as a rule, is being confined to very close dependent relatives of persons already settled in Australia, but cases having special features are considered on their merits, and provision has also been made for the temporary admission of bona fide visitors who may wish to enter the Commonwealth for purposes of business or pleasure.

Aliens seeking to enter Australia are also required to hold valid national passports visaed by a British Consul for travel to Australia except in cases where visa requirements have been abolished by reciprocal arrangements to which the Commonwealth Government of Australia is a party. The exemptions so far apply to nationals of the following countries, viz. :—Belgium, Denmark, France, Italy, Liechtenstein, Norway, Sweden, Switzerland, Holland, Germany and Austria.

(iii) *General Information.* General information as to conditions of entry into Australia may be obtained from the following offices :—

(a) In Australia : The Secretary, Department of the Interior, Canberra, F.C.T., Australia ; (b) In Great Britain : The Official Secretary, Australia House, Strand, London, England ; (c) In the United States of America : The Official Secretary, Commissioner for Australia in the United States of America, "Cunard Building," 25 Broadway, New York City, U.S.A.

3. *Persons Admitted Without Dictation Test.*—The following table shows the number and nationality of persons admitted during the year 1931 without passing the dictation test :—

PERSONS ADMITTED WITHOUT DICTATION TEST.—NATIONALITIES,  
AUSTRALIA, 1931.

Nationality or Race.	1931.	Nationality or Race.	1931.
Albanian .. .. .	3	American Negroes .. .. .	2
Austrian .. .. .	24		
Belgian .. .. .	53	ASIATICS—	
British .. .. .	32,868	Arabs .. .. .	1
Bulgarian .. .. .	2	Chinese .. .. .	916
Danish .. .. .	65	Filipinos .. .. .	9
Dutch .. .. .	84	Japanese .. .. .	155
Estonian .. .. .	20	Javanese .. .. .	1
Finnish .. .. .	17	Malays .. .. .	11
French .. .. .	652	Natives of India and Ceylon	98
German .. .. .	298	Palestinians .. .. .	9
Greek .. .. .	163	Syrians .. .. .	31
Italian .. .. .	973		
Maltese (British) .. .. .	36	OTHER RACES—	
Norwegian and Swedish	88	Pacific Islanders .. .. .	23
Polish .. .. .	104	Papuans .. .. .	238
Russian .. .. .	85	Unspecified .. .. .	209
Spanish .. .. .	32		
Swiss .. .. .	96		
Yugoslavian .. .. .	270		
United States of America	774		
Other Whites .. .. .	67	Total .. .. .	38,477

4. *Departures of Persons of Non-European Races.*—The number of persons of non-European races who left Australia during the year 1931 was 2,736, distributed among the various nationalities as follows :—American Negroes, 3 ; Arabs, 2 ; Chinese, 1,447 ; Filipinos, 6 ; Natives of India and Ceylon, 112 ; Japanese, 615 ; Javanese, 1 ; Koepangers, 119 ; Malays, 41 ; Pacific Islanders, 19 ; Papuans, 343 ; West Indians, 12 ; and others, 16.

**(C) Passports.**

Provision is made in the Immigration Act 1920 for the production of passports by all persons over 16 years of age who desire to enter Australia. Similarly, the Passports Act 1920 provides that no person over the age of 16 years shall leave Australia unless—

- (a) he is the holder of a passport or other document authorizing his departure; and
- (b) his passport has been visaed or indorsed in the prescribed manner for that journey, and the visa or indorsement has not been cancelled.

Among the exceptions to this requirement are natural-born British subjects leaving for New Zealand, Papua, or Norfolk Island; members of the crew of any vessel who sign on in Australia for an oversea voyage and who satisfy an authorized officer that they are by occupation seafaring men; aboriginal natives of Asia, or of any island in the East Indies, or in the Indian or Pacific Oceans. The charge for a Commonwealth passport is 10s., for an ordinary visa 8s., and for a transit visa 2s.

With regard to (b), the Commonwealth Government has agreed to the inclusion of Australia in reciprocal arrangements for the abolition of visa requirements made by the British Government with the respective Governments of the following countries, viz :— France, Switzerland, Liechtenstein, Italy, Belgium, Denmark, Sweden, Norway, Holland, Germany and Austria.

**§ 14. Naturalization.**

1. **Commonwealth Legislation.**—Naturalization in Australia is governed by the Nationality Act 1920–1930. The qualifications necessary for naturalization are :— (a) Residence in Australia continuously for not less than one year immediately preceding application for naturalization, and previous residence, either in Australia or in some other part of His Majesty's dominions, for a period of four years within the last eight years before the application; (b) good character and an adequate knowledge of the English language; and (c) intention to settle in the British Empire.

The amending Act of 1930 provided for the charge of a prescribed fee for a Certificate of Naturalization. The fee is £3, except in the case of a certificate granted to a woman who was a British subject prior to her marriage to an alien, in which case the amount is 5s.

A summary of the main provisions of the Principal Act will be found in Official Year Book No. 22, pp. 934–935.

2. **Certificates Granted.**—(i) *Australia.* Particulars regarding the previous nationalities of the recipients of certificates of naturalization issued under the Act during the year 1931, and the countries from which such recipients had come, are given in the following table :—

**NATURALIZATION.—COMMONWEALTH CERTIFICATES GRANTED, 1931.**

Previous Nationalities of Recipients.	No. of Certificates Granted.	Previous Nationalities of Recipients.	No. of Certificates Granted.	Countries from which Recipients of Commonwealth Certificates had come.	No. of Certificates Granted.	Countries from which Recipients of Commonwealth Certificates had come.	No. of Certificates Granted.
Italian ..	1,070	Portuguese ..	2	Great Britain ..	111	Belgium ..	3
Swedish ..	39	Austrian ..	3	Italy ..	1,070	New Zealand ..	8
Danish ..	29	Syrian ..	28	Germany ..	53	Switzerland ..	16
Russian ..	105	Polish ..	60	America (North) ..	27	Spain ..	10
German ..	74	Finnish ..	47	Sweden ..	16	Palestine ..	20
Norwegian ..	25	Yugoslavs ..	180	Denmark ..	11	Poland ..	30
Greek ..	195	Estonians ..	16	Norway ..	18	Syria ..	26
American (North) ..	13	Czechoslovakians ..	9	Greece ..	146	Finland ..	22
Dutch ..	9	Albanians ..	9	France ..	45	Yugoslavia ..	148
Swiss ..	23	Latvians ..	8	Egypt ..	33	China ..	68
French ..	14	Others ..	20	America (South) ..	7	Other Countries ..	64
Spanish ..	14			Holland ..	11		
Belgian ..	1			Russia ..	26		
Rumanian ..	4	Total ..	1,997	South Africa ..	8	Total ..	1,997

(ii) *States.* The certificates of naturalization granted in 1931 were issued in the various States as follows :—New South Wales, 441; Victoria, 320; Queensland, 779; South Australia, 87; Western Australia, 360; Tasmania, 7; Northern Territory, 1; and 2 in the Federal Capital Territory.

### § 15. Population of Territories.

At the Census of the 4th April, 1921, special arrangements were made to obtain complete and uniform information concerning each of the five Territories of the Commonwealth, viz. :—(1) Northern Territory; (2) Federal Capital Territory; (3) Norfolk Island; (4) Papua; and (5) Territory of New Guinea. Later estimates will be found in Chapter XV.

A summary of the population and number of dwellings in each Territory at the Census of 1921 is given in the following table :—

#### POPULATION AND DWELLINGS.—TERRITORIES, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS IN THE NORTHERN AND FEDERAL CAPITAL TERRITORIES AND OF THE INDIGENOUS POPULATION OF PAPUA AND NEW GUINEA.)

Territory.	Population.			Dwellings.			Total.
	Males.	Females.	Persons.	Occu- pied.	Unoccu- pied.	Being Built.	
Northern Territory ..	2,821	1,046	3,867	1,074	138	1	1,213
Federal Capital Territory ..	1,567	1,005	2,572	526	29	..	555
Norfolk Island .. ..	339	378	717	168	22	3	193
Papua .. ..	1,408	670	2,078	672	43	4	719
Territory of New Guinea ..	2,502	671	3,173	1,056	18	..	1,074

### § 16. The Aboriginal Population.

In Official Year Book No. 17, pp. 951 to 961, a brief account was given of the Australian aboriginal population, its origin, its numbers as estimated from time to time, and the steps taken for its protection. Page 486 of this issue contains a statement showing the numbers of full-blood and half-caste aboriginals in Australia, and pages 914 to 916 in Official Year Book No. 22 give particulars for each of the States and Territories of Australia at successive periods, while a special article dealing with the estimated number and distribution of the native population at the date of first settlement of the white race in the Continent appeared on pages 687-696 of Official Year Book No. 23.

### § 17. The Chinese in Australia.

In Official Year Book No. 18, pp. 951 to 956, a brief historical sketch was given regarding "The Chinese in Australia."

### § 18. The Pacific Islanders in Australia.

In Official Year Book No. 19, pp. 902-3, a brief account was given of the introduction of Kanakas into Australia.



## CHAPTER XVII.

### VITAL STATISTICS.

#### § 1. Births.

1. Births, 1931.—The number of male and female births and the total births registered in Australia during the year are shown in the tables hereunder. The numerical relation which these births bear to the population, and various other associated features, are given in later tables.

#### BIRTHS, 1931.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Ter.	Fed. Cap. Ter.	Australia.
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#### MALE BIRTHS.

Single births	24,021	15,287	9,018	4,530	4,343	2,451	37	86	59,773
Twins ..	520	337	154	86	82	49	..	..	1,228
Triplets ..	3	8	3	..	..	3	3	..	20
<b>Total ..</b>	<b>24,544</b>	<b>15,632</b>	<b>9,175</b>	<b>4,616</b>	<b>4,428</b>	<b>2,503</b>	<b>37</b>	<b>86</b>	<b>61,021</b>

#### FEMALE BIRTHS.

Single births	22,675	14,352	8,492	4,363	4,013	2,209	35	75	56,214
Twins ..	499	347	166	100	102	50	..	..	1,264
Triplets ..	3	1	..	..	6	..	..	..	10
<b>Total ..</b>	<b>23,177</b>	<b>14,700</b>	<b>8,658</b>	<b>4,463</b>	<b>4,121</b>	<b>2,259</b>	<b>35</b>	<b>75</b>	<b>57,488</b>

#### TOTAL BIRTHS.

Single births	46,696	29,639	17,510	8,893	8,356	4,660	72	161	115,987
Twins ..	(a) 1,019	(b) 684	(c) 320	186	(d) 184	(e) 99	..	..	(f) 2,492
Triplets ..	6	9	3	..	9	3	..	..	30
<b>Total ..</b>	<b>47,721</b>	<b>30,332</b>	<b>17,833</b>	<b>9,079</b>	<b>8,549</b>	<b>4,762</b>	<b>72</b>	<b>161</b>	<b>118,509</b>

#### TOTAL CONFINEMENTS.

Nuptial Mothers ..	44,691	28,585	16,747	8,689	8,088	4,468	54	158	111,480
Ex-nuptial Mothers ..	2,525	1,400	927	297	365	243	18	3	5,778
<b>Total Mothers</b>	<b>47,216</b>	<b>29,985</b>	<b>17,674</b>	<b>8,986</b>	<b>8,453</b>	<b>4,711</b>	<b>72</b>	<b>161</b>	<b>117,258</b>

(a) Seventeen stillborn twins not included. (b) Two stillborn twins not included. (c) Six stillborn twins not included. (d) Four stillborn twins not included. (e) One stillborn twin not included. (f) Thirty stillborn twins not included.

2. Birth Rates.—The next table gives the crude birth rates from 1901 to 1931.

## CRUDE BIRTH RATE.(a)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	Northern Territory.	Federal-Capital Territory.	Australia.
1901 ..	27.78	25.77	28.52	25.41	30.39	28.58	6.72	(b)	27.16
1911 ..	28.58	25.01	27.63	28.86	28.22	28.60	9.36	16.84	27.20
1921 ..	25.93	23.16	26.64	24.08	23.39	26.98	20.23	10.87	24.95
1927 ..	22.69	20.30	22.24	20.12	22.03	23.01	16.06	10.49	21.67
1928 ..	22.60	19.70	21.76	19.76	21.79	22.13	19.73	14.90	21.33
1929 ..	21.39	18.99	19.99	18.40	22.00	22.44	12.69	18.25	20.31
1930 ..	20.95	18.56	20.14	17.19	21.98	22.11	15.27	18.66	19.93
1931 ..	19.02	16.88	18.62	15.56	20.32	21.65	15.68	18.68	18.23

(a) Number of births per 1,000 of the mean annual population.

(b) Part of New South Wales.

The preceding table shows a progressive reduction from 1901 to 1931, broken only by a slight rise in 1911 in some of the States and in Australia as a whole. The rate for Australia for 1931 represents only 67 per cent. of that for 1901 and is the lowest yet recorded.

The principal factor in determining the crude birth rate is the proportion of married women of child-bearing age in the community, but as the fecundity of women varies with age, the birth rate per 1,000 married women will vary according to the age composition of the group, and, other things being equal, the rate generally should be highest where the average age of married women is lowest. For the purposes of the following table the child-bearing age has been taken as from 15-44 years inclusive, and all births of which the mothers were stated to be over 45 years have been counted in the group 40-44. Exact information in respect of ages in this table is only available at census dates. An estimate based on a projection of data obtained at the Census of 1921 has, however, been made of married and unmarried women for the period 1929-1931, and the accompanying rates have been calculated thereon.

## BIRTH RATES, AND FACTORS AFFECTING THEM.

Particulars.	1920-22. (Age Distribution at Census of 1921.)							1929-1931.
	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia.	Australia.
Crude birth rate per 1,000 persons	25.99	23.54	26.72	24.23	24.14	26.99	25.15	19.48
Birth rate per 100 women 15-44 inclusive	11.04	9.79	11.83	10.25	11.05	11.91	10.74	8.41
Birth rate per 100 married women 15-44 incl. (a)	19.39	19.29	21.26	18.71	19.62	21.83	19.65	15.41
Birth rate per 100 married women 15-44 incl. (corrected for age variation)	19.14	19.44	20.77	18.99	20.44	21.24	19.65	15.41
Ex-nuptial births—per cent. on all births	4.82	4.84	5.00	3.28	4.02	5.11	4.69	4.75
Ex-nuptial births per 100 unmarried women 15-44 incl.	1.16	0.92	1.26	0.72	0.92	1.26	1.05	0.83
Women 15-44 incl.—per cent. all persons	23.54	24.02	22.57	23.65	21.83	22.67	23.41	23.16
Average age of all women 15-44 incl.	28.67	28.61	28.09	28.73	28.45	28.10	28.54	29.17
Married women 15-44 incl.—per cent. on all persons	12.75	11.61	11.93	12.53	11.81	11.73	12.20	12.05
Average age of married women 15-44 incl.	32.24	32.74	32.16	32.67	33.02	32.16	32.48	33.20b

(a) Nuptial births only.

(b) Approximate.

The following figures give a comparison for Australia, based on data obtained at Census periods, of the total births per 1,000 women (married and unmarried) and of the nuptial births per 1,000 married women of ages 15 to 44 inclusive :—

Particulars.	1880-82.	1890-92.	1900-02.	1910-12.	1920-22.	1929-31.
Births per 1,000 women aged 15-44 ..	169.7	158.8	117.3	117.2	107.4	84.1
Nuptial births per 1,000 married women 15-44	321.0	332.0	235.8	236.0	196.5	154.1

3. Birth Rates of Various Countries.—(i) *Crude Rates.* A comparison with other countries shows that the Australian States occupy a midway position, which is, however, counterbalanced by a still lower position in regard to their death rates, as evidenced in the table hereinafter in the section dealing with "Deaths." The rates for the pre-war period 1908-1913 have been added for purposes of comparison.

#### CRUDE BIRTH RATES.(a)—VARIOUS COUNTRIES.

Country.	1908 to 1913.	1931.	Country.	1908 to 1913.	1931.
Egypt .. ..	43.6	44.4(e)	Irish Free State ..	23.1	19.3
Soviet Republics ..	45.6	42.7(d)	New South Wales ..	28.2	19.0
Ceylon .. ..	36.9	39.0(f)	Scotland .. ..	26.2	19.0
Rumania .. ..	43.1	35.0(f)	U.S. of America(b) ..	(c)	18.9(f)
Japan .. ..	32.9	32.4(f)	Denmark .. ..	27.1	18.7(f)
Poland .. ..	37.4	30.5	Belgium .. ..	23.4	18.7(f)
Portugal .. ..	34.6	30.5	Queensland .. ..	28.2	18.6
Argentina .. ..	37.1	30.1(e)	New Zealand .. ..	26.5	18.4
Spain .. ..	32.1	28.2(f)	Australia .. ..	27.4	18.2
Union of South Africa			France .. ..	19.5	17.4
(whites) .. ..	(c)	25.5	Victoria .. ..	25.3	16.9
Italy .. ..	32.4	24.9	Norway .. ..	26.0	16.7
Canada .. ..	(c)	23.9(f)	Switzerland .. ..	24.7	16.7
Netherlands .. ..	29.1	22.2	Great Britain and		
Finland .. ..	29.5	22.2(f)	Ireland .. ..	24.6	16.3
Tasmania .. ..	29.6	21.7	Germany .. ..	29.5	16.0
Czechoslovakia .. ..	31.1	21.5	England and Wales..	24.9	15.8
Northern Ireland ..	23.1	20.7	South Australia ..	27.1	15.6
Western Australia ..	28.9	20.3	Sweden .. ..	24.4	15.4(f)

(a) Number of births per 1,000 of the mean population. (b) Figures for "existing birth-registration area." (c) Not available. (d) For 1928. (e) For 1929. (f) For 1930.

(ii) *Nuptial Birth Rates at Child-bearing Ages.* The wide discrepancies between the crude birth rates of the various countries are, to some extent, due to differences in sex and age constitution and in conjugal condition. If the birth rates be calculated per 1,000 women of child-bearing ages, the comparison gives more reliable results. A table of results so calculated appeared in Year Book No. 22, p. 941, and showed that Australia, with a rate of 198 nuptial births per 1,000 married women aged 15 to 49 years, was midway between the maximum and minimum of the countries for which these rates were obtained.

4. *Masculinity of Births.*—(i) *General.* The masculinity of births, i.e., the number of males per 100 females registered, varies considerably from State to State and from year to year. For 1931 the figures ranged from 103.43 in South Australia to 110.80 in Tasmania. Greater variations are recorded among ex-nuptial births. The following table shows the results at intervals since 1901 :—

MASCULINITY<sup>(a)</sup> OF BIRTHS REGISTERED, AUSTRALIA.

Particulars.	1901.	1911.	1921.	1927.	1928.	1929.	1930.	1931.
Total Births ..	104.11	104.73	105.86	106.27	106.51	105.99	105.39	106.15
Ex-nuptial Births ..	105.50	103.10	106.09	107.63	105.29	105.61	105.15	102.60

(a) Number of male per 100 female births.

(ii) *Masculinity of Nuptial and Ex-nuptial Births—Various Countries.* A table showing the masculinity of nuptial and ex-nuptial births for various countries appeared on p. 942 of Official Year Book No. 22.

5. *Ex-nuptial Births.*—(i) *General.* The number of ex-nuptial births reached its maximum, 7,438, in 1913, but it has since fallen considerably. On the average of the five years 1910–14, the number of ex-nuptial births in Australia was 7,171, while for the period 1927–31 it was only 6,097, a decline of 15.0 per cent., whereas the annual average total births for the same period declined by only 1 per cent.; hence a comparison between the results for these two periods shows that the proportion of ex-nuptial births has fallen from 5.55 to 4.73 per cent. of all births.

The numbers of births and the rates from 1901 to 1931 are shown below:—

## EX-NUPTIAL BIRTHS AND BIRTH RATE.

Particulars.	1901.	1911.	1921.	1927.	1928.	1929.	1930.	1931.
Number ..	6,165	7,074	6,463	6,289	6,331	6,088	5,935	5,841
Percentage on Total Births ..	5.99	5.79	4.75	4.70	4.72	4.70	4.62	4.93

It is, of course, possible that the number of ex-nuptial births is somewhat understated, owing to diffidence in proclaiming the fact of ex-nuptiality, and it is not unlikely that the majority of unregistered births are ex-nuptial.

The variations of the ex-nuptial birth rates as between the individual States and Territories for 1931 are as follow:—

## EX-NUPTIAL BIRTHS AND BIRTH RATE, 1931.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Capital Territory.	Australia.
Number ..	2,553	1,418	933	302	368	246	18	3	5,841
Percentage on Total Births	5.35	4.68	5.23	3.33	4.30	5.17	25.00	1.86	4.93

(ii) *Rate of Ex-nuptiality.* A better comparison than that given in the preceding paragraphs is obtained by calculating the number of ex-nuptial births per thousand of the single and widowed female population between the ages of 15 and 45. The number of ex-nuptial births per 1,000 unmarried women of ages 15 to 45 has been found to be as follows :—Years 1880–82, 14.49; years 1890–92, 15.93; years 1900–02, 13.30; years 1910–12, 12.53; and years 1920–22, 10.50. The estimated number for the years 1929–31 was 8.32. The comparative results for various countries given on p. 944 of Official Year Book No. 22 were taken from the *Annuaire International de Statistique*, Vols. II. and V., and showed that ex-nuptial births varied from 38 per 1,000 unmarried women aged 15 to 49 years in Hungary to 4 in Ireland and Bulgaria. The rate for Australia was 12 per thousand.

(iii) *Comparison of Rates.* The following table showing the relative proportions of ex-nuptial and nuptial births to the total population discloses a much greater proportional reduction in the ex-nuptial birth rate than in the nuptial rate.

**CRUDE EX-NUPTIAL, NUPTIAL, AND TOTAL BIRTH RATES.(a)—AUSTRALIA.**

Rates.	1901.	1911.	1921.	1927.	1928.	1929.	1930.	1931.
Ex-nuptial ..	1.62	1.57	1.18	1.02	1.01	0.95	0.93	0.90
Nuptial ..	25.52	25.64	23.77	20.65	20.32	19.36	19.00	17.33
Total ..	27.14	27.21	24.95	21.67	21.33	20.31	19.93	18.23

(a) Number of births per 1,000 of mean population.

6. *Legitimations.*—In the several States Acts have been passed to legitimize children born before the marriage of their parents, provided that no legal impediment to the marriage existed at the time of birth. On registration in accordance with the provisions of the Legitimation Acts, any child who comes within the scope of their intentions, born before or after the passing thereof, is deemed to be legitimized from birth by the post-natal union of its parents, and entitled to the status of offspring born in wedlock. (During 1931, 815 children were legitimized in Australia.)

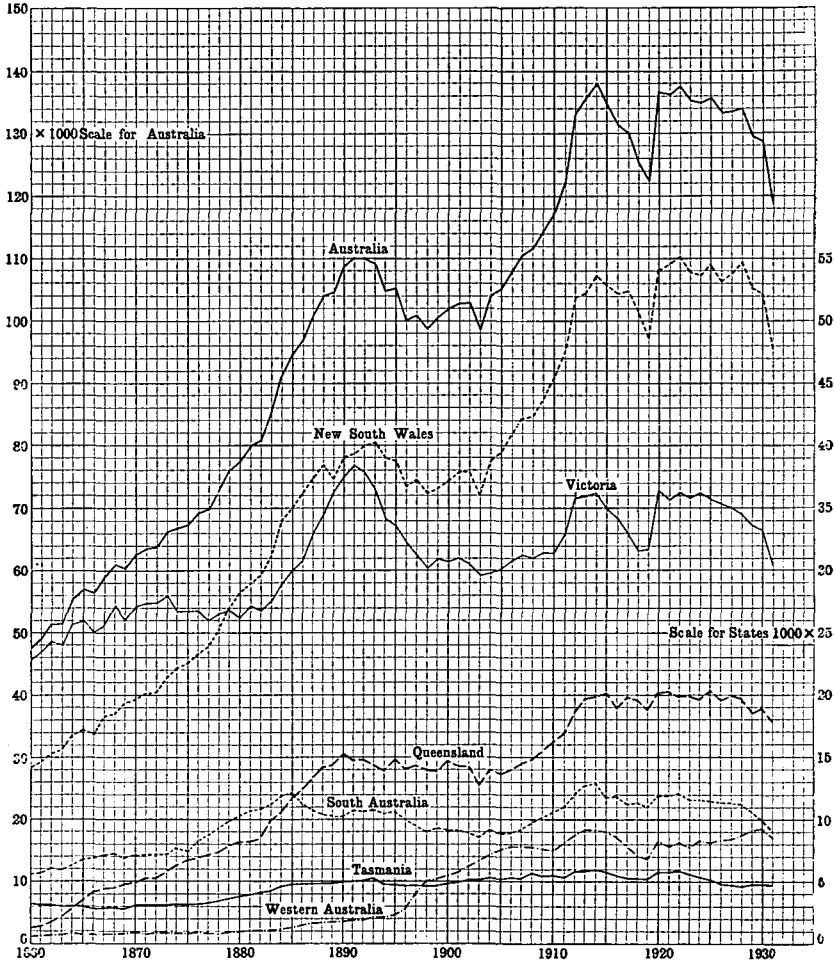
7. *Multiple Births.*—Among the total number of 118,509 births registered in Australia in 1931, there were 115,987 single births, 2,492 twins, 30 triplets. The number of cases of twins was 1,261, there being 30 stillbirths, and there were 10 cases of triplets. The total number of mothers was, therefore, 117,258; the proportion of mothers of twins being one in every 93, of mothers of triplets one in every 11,726, and of mothers of all multiple births one in every 92 mothers. Multiple births occurred in 1.08 per cent. of confinements.

The proportion of multiple births to total births does not vary greatly from year to year and exhibits no constant tendency towards increase or decrease.

**MULTIPLE BIRTHS—AUSTRALIA.**

Heading.	1911.	1921.	1927.	1928.	1929.	1930.	1931.
Total Multiple Births ..	1,236	1,465	1,472	1,423	1,320	1,439	1,271
Percentage on Total Mothers	1.02	1.09	1.11	1.07	1.03	1.13	1.08
Number of Mothers to each Multiple Birth ..	98	92	90	93	97	88	92

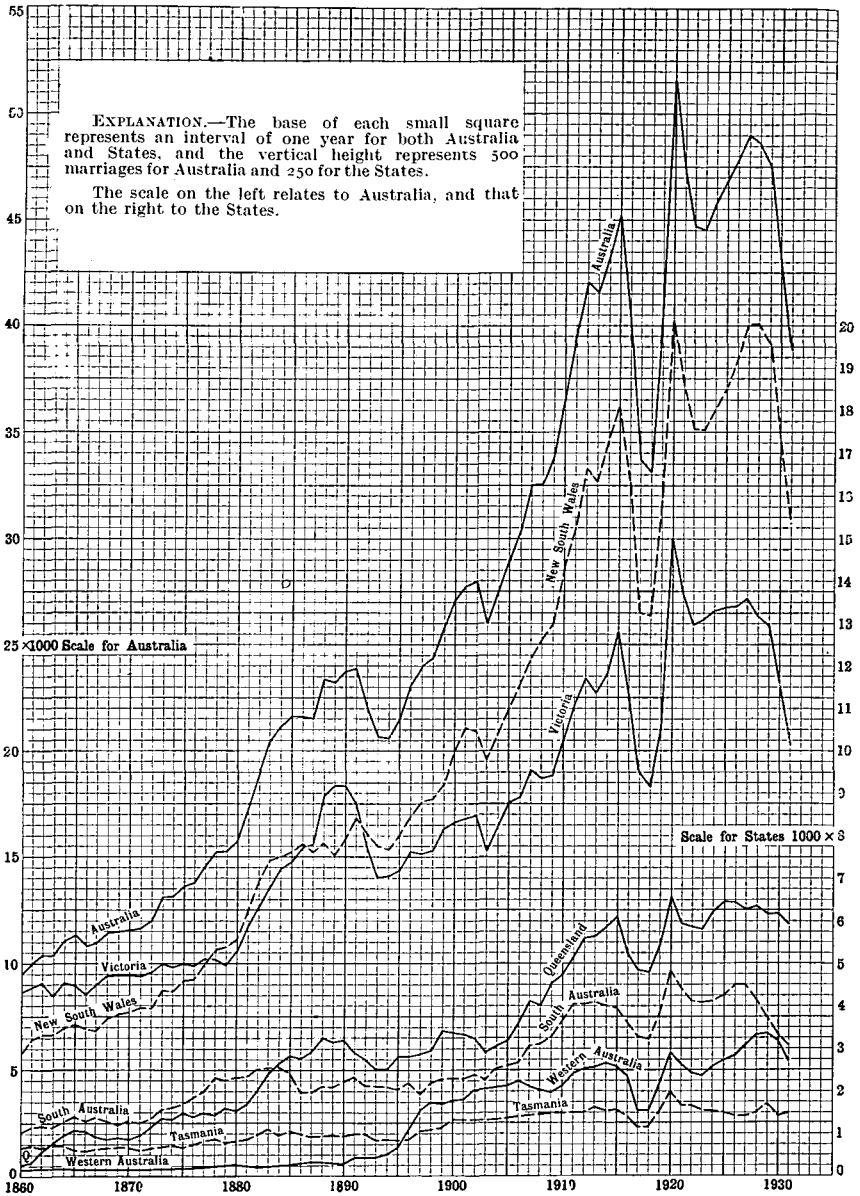
## BIRTHS—1860 TO 1931.



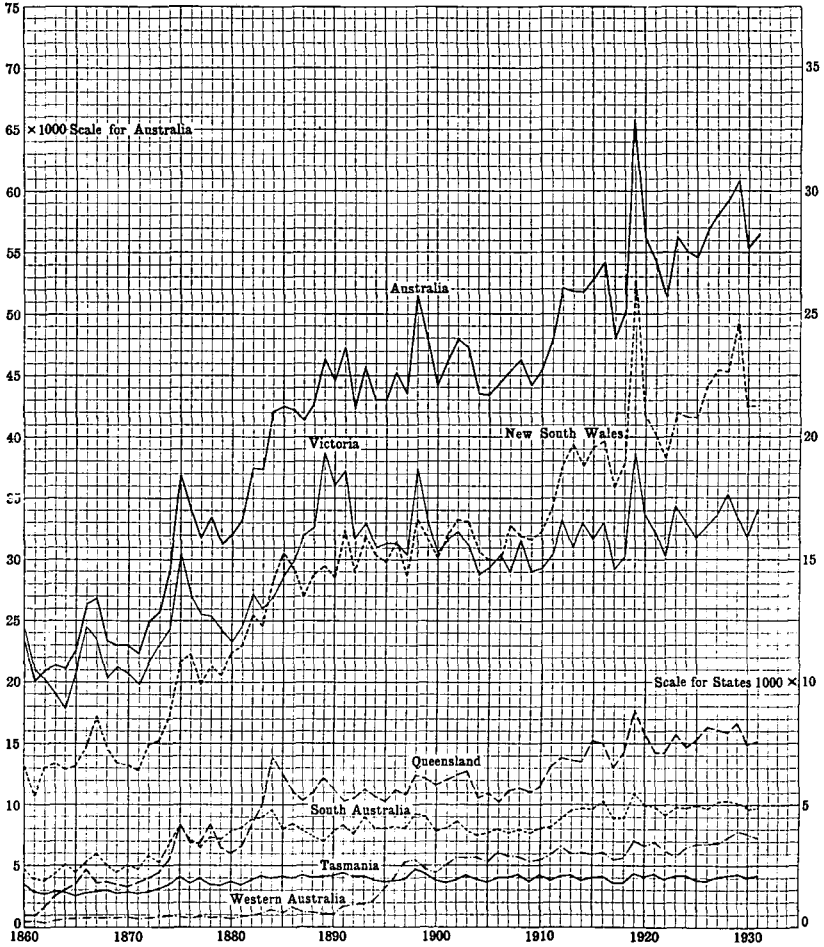
EXPLANATION.—The base of each small square represents an interval of one year for both Australia and States, and the vertical height represents 2,000 persons for Australia and 1,000 for the States.

The scale on the left relates to Australia and that on the right to the States.

MARRIAGES, 1860 TO 1931.



DEATHS, 1860 TO 1931.

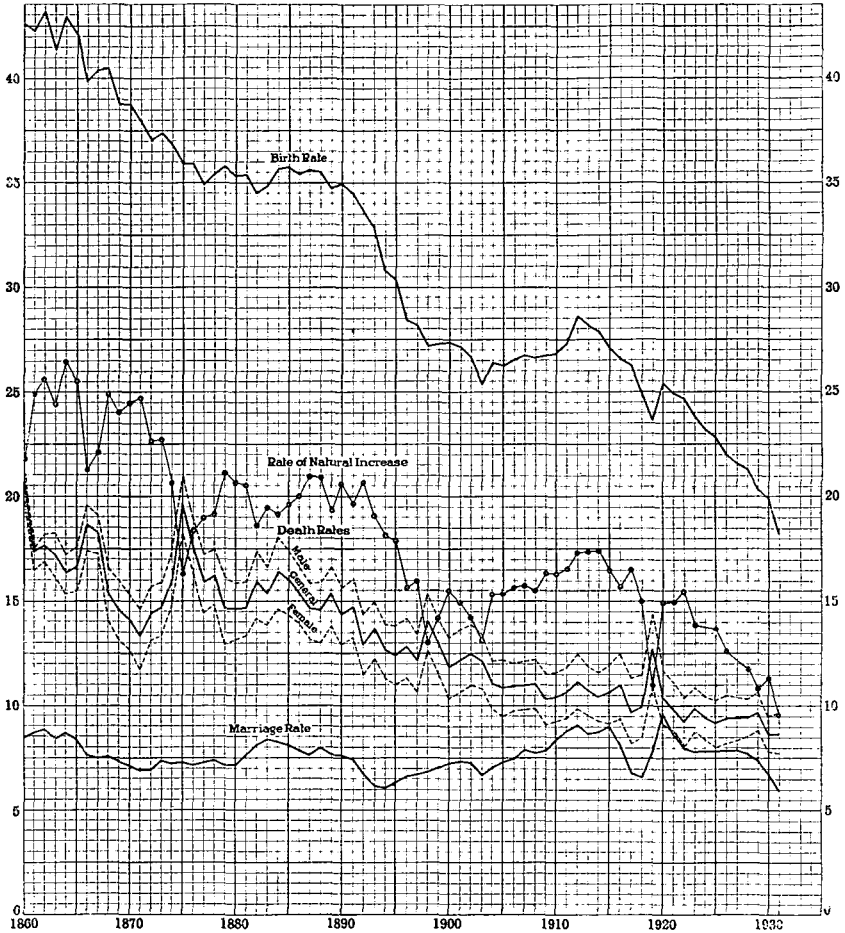


EXPLANATION.—The base of each small square represents an interval of one year for both Australia and States, and the vertical height represents 1,000 persons for Australia and 500 for the States.

The scale on the left relates to Australia, and that on the right to the States.



RATES--BIRTH, NATURAL INCREASE, DEATH (MALE GENERAL AND FEMALE) AND MARRIAGE--AUSTRALIA 1860 TO 1931.



EXPLANATION.—The base of each small square represents one year's interval, and the vertical height one-half per thousand of the population.

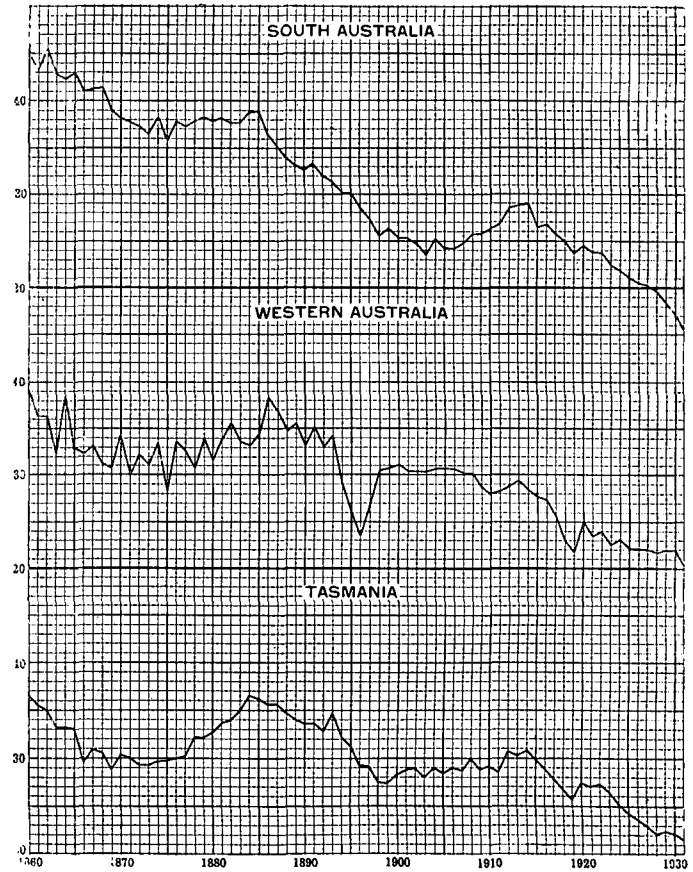
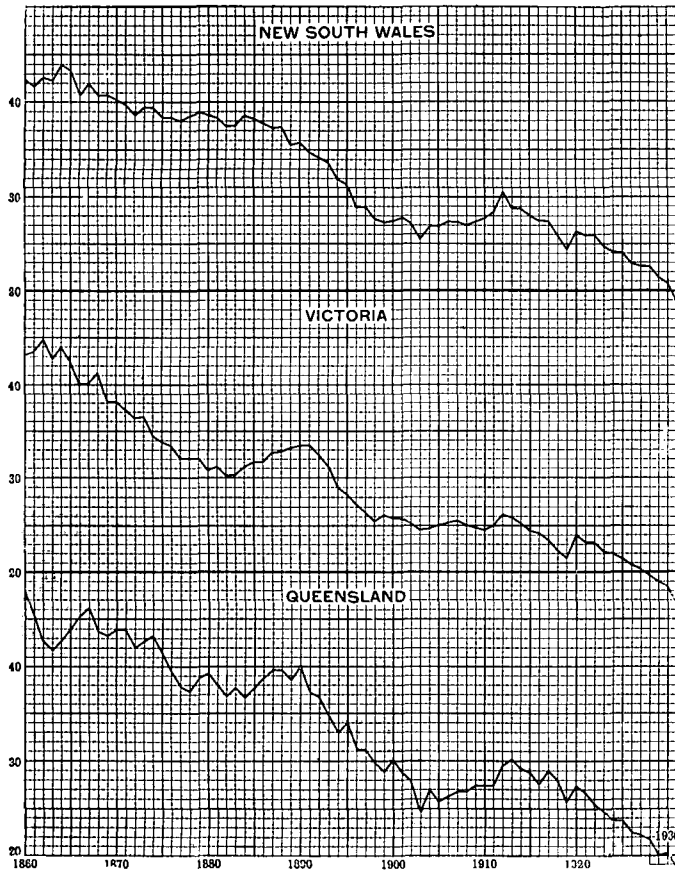
STATE BIRTH-RATE GRAPHS. (See page 509.)

EXPLANATION.—The base of each small square represents one year's interval, and the vertical height one birth per thousand of the population—the basic line for each State being twenty per thousand of the population.

STATE DEATH-RATE GRAPHS. (See page 510.)

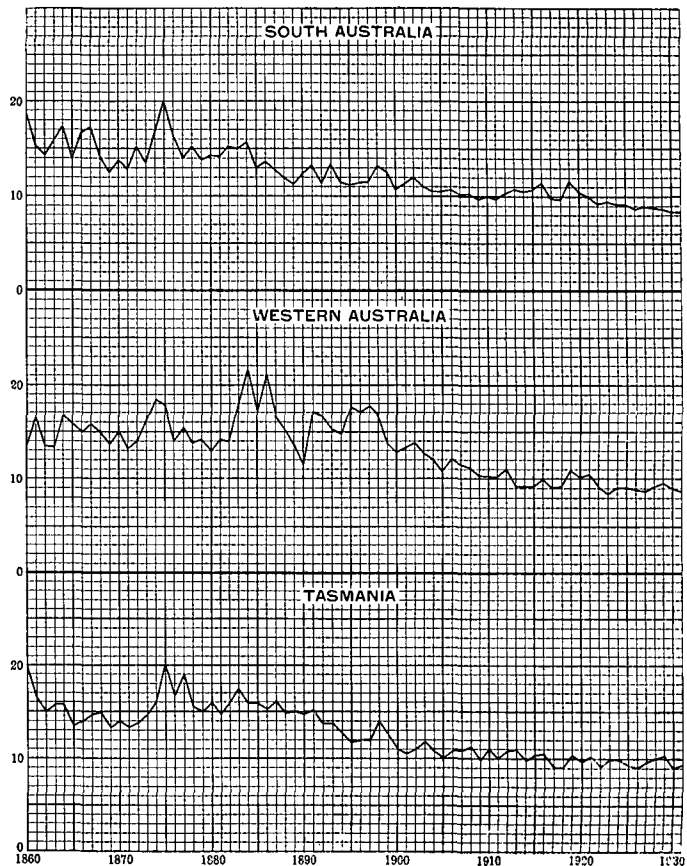
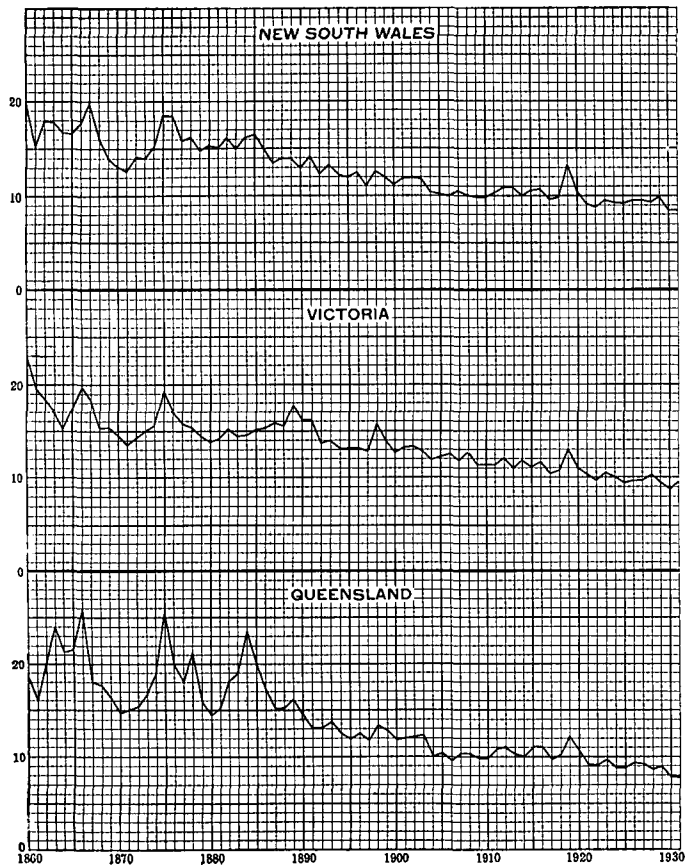
EXPLANATION.—The base of each small square represents one year's interval, and the vertical height one-death per thousand of the population. The zero for each State is shown by a thickened line.

BIRTH RATES—STATES, 1860-1931.



For explanation of above graph see page 508.

DEATH RATES—STATES, 1860-1931.



For explanation of above graph see page 508.

8. Ages of Parents.—The relative ages of the parents of children registered in 1931 have been tabulated separately for male and female births, twins and triplets being distinguished from single births. For total births and for multiple births the relative single ages of parents are shown in the Bulletin of "Australian Demography," No. 49, published by this Bureau. In the present work the exigencies of space allow the insertion of a table showing the relative ages of parents of all births in groups of five years only.

AGES OF PARENTS—ALL BIRTHS.—AUSTRALIA, 1931.

Ages of Fathers and Type of Birth.	Total Births.	Ages of Mothers.									
		Under 15.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 and upwards.	Un-specified.	
Under 20	Single	814	1	595	208	8	1	1	..	..	..
	Twins	4	..	3	1	..	..	..	..	..	..
20 to 24	Single	14,395	3	3,730	9,064	1,453	126	17	2	..	..
	Twins	111	..	21	83	6	1	..	..	..	..
	Triplets	3	..	..	3	..	..	..	..	..	..
25 to 29	Single	29,309	1	1,509	12,536	12,671	2,278	294	20	..	..
	Twins	253	..	9	104	118	21	1	..	..	..
	Triplets	1	..	..	..	..	1	..	..	..	..
30 to 34	Single	26,778	1	347	4,375	10,732	9,624	1,554	139	6	..
	Twins	312	..	4	27	130	130	19	2	..	..
	Triplets	1	..	..	..	..	1	..	..	..	..
35 to 39	Single	19,041	..	80	1,113	3,903	7,318	5,931	675	21	..
	Twins	251	..	..	8	36	99	101	7	..	..
	Triplets	..	..	..	..	..	..	..	..	..	..
40 to 44	Single	11,983	..	29	370	7,299	3,085	4,662	2,455	83	..
	Twins	167	..	..	6	11	48	69	31	2	..
	Triplets	4	..	..	..	..	1	3	..	..	..
45 to 49	Single	5,136	..	18	84	417	888	1,942	1,559	228	..
	Twins	67	..	..	..	4	22	26	15	..	..
	Triplets	..	..	..	..	..	..	..	..	..	..
50 to 54	Single	1,877	..	5	47	116	285	626	665	133	..
	Twins	22	..	..	1	..	2	11	7	1	..
	Triplets	1	..	..	..	..	..	..	1	..	..
55 to 59	Single	623	..	2	15	42	87	221	200	56	..
	Twins	6	..	..	..	..	..	1	5	..	..
	Triplets	..	..	..	..	..	..	..	..	..	..
60 to 64	Single	222	..	..	5	17	42	68	70	20	..
	Twins	2	..	..	..	..	..	1	1	..	..
	Triplets	..	..	..	..	..	..	..	..	..	..
65 and upwards	Single	95	..	2	1	8	26	39	17	2	..
	Twins	1	..	..	..	..	1	..	..	..	..
	Triplets	..	..	..	..	..	..	..	..	..	..
Un-specified	Single	1	..	..	..	..	1	..	..	..	..
	Twins	..	..	..	..	..	..	..	..	..	..
Mothers of nuptial children	Single	110,274	6	6,317	27,818	30,666	23,761	15,355	5,802	549	..
	Twins	1,196	..	37	230	305	324	229	68	3	..
	Triplets	10	..	..	3	..	3	3	1	..	..
	Total	111,480	6	6,354	28,051	30,971	24,088	15,587	5,871	552	..
Mothers of ex-nuptial children	Single	5,713	33	1,819	1,948	781	527	418	165	18	4
	Twins	65	..	19	19	4	11	7	5	..	..
	Total	5,778	33	1,838	1,967	785	538	425	170	18	4
Total Mothers	Single	115,987	39	8,136	29,766	31,447	24,288	15,773	5,967	567	4
	Twins	1,201	..	56	249	309	335	236	73	3	..
	Triplets	10	..	..	3	..	3	3	1	..	..
Total	117,258	39	8,192	30,018	31,756	24,626	16,012	6,041	570	4	

9. Birthplaces of Parents.—The relative birthplaces of the parents of children whose births were registered during the year 1931 will be found in the Bulletin of "Australian Demography," published by this Bureau. A summary of the results of the tabulation with the addition of the corresponding figures for 1911 follows.

## BIRTHPLACES OF PARENTS.—AUSTRALIA.

Birthplaces.	Fathers.		Mothers of Nuptial Children.		Mothers of Ex-nuptial Children.	
	1911.	1931.	1911.	1931.	1911.	1931.
<b>AUSTRALASIA—</b>						
Australia .. ..	94,834	93,613	102,073	97,217	6,570	5,263
New Zealand .. ..	1,257	750	1,201	653	68	50
<b>EUROPE—</b>						
England and Wales .. ..	9,849	10,057	6,067	8,364	210	276
Scotland .. ..	2,289	2,753	1,486	2,385	46	106
Ireland .. ..	2,138	1,123	1,374	761	46	36
Other British Possessions .. ..	49	183	20	120	1	2
Western Europe .. ..	607	308	165	85	9	2
Central Europe .. ..	1,185	393	606	207	8	4
Southern Europe .. ..	360	1,234	203	950	6	12
Eastern Europe .. ..	168	150	81	93	..	3
<b>ASIA—</b>						
British Possessions .. ..	217	172	114	98	2	1
Foreign Countries .. ..	317	197	139	117	3	5
<b>AFRICA—</b>						
British Possessions .. ..	111	186	116	194	2	4
Foreign Countries .. ..	11	17	13	9	..	..
<b>AMERICA—</b>						
Canada .. ..	59	82	34	40	3	2
Other British Possessions .. ..	8	4	5	5	..	1
United States of America .. ..	182	148	87	103	3	1
Other Foreign Countries .. ..	70	38	19	25	1	1
<b>POLYNESIA—</b>						
British .. ..	30	25	21	24	1	3
Foreign .. ..	39	25	13	15	6	..
Indefinite .. ..	159	22	102	15	33	6
<b>Total .. ..</b>	<b>113,939</b>	<b>111,480</b>	<b>113,939</b>	<b>111,480</b>	<b>7,018</b>	<b>5,778</b>

10. Occupations of Fathers.—A summary of the main groups of occupations of the fathers of all nuptial children whose births were registered in 1911, 1921, and 1931 and the percentage of each class on the total are given in the following table:—

## OCCUPATIONS OF FATHERS OF NUPTIAL CHILDREN.—AUSTRALIA.

Occupation Class.	Number of Fathers.			Percentage on Total.		
	1911.	1921.	1931.	1911.	1921.	1931.
Professional .. ..	5,292	6,204	5,991	4.64	4.84	5.37
Domestic .. ..	2,418	2,319	2,146	2.12	1.81	1.93
Commercial .. ..	15,345	18,298	16,030	13.47	14.26	14.38
Transport and Communication .. ..	12,360	15,351	12,302	10.85	11.96	11.04
Industrial .. ..	45,149	53,567	49,902	39.63	41.74	44.76
Agricultural, Pastoral, Mining, etc. .. ..	33,229	32,405	24,760	29.16	25.25	22.21
Indefinite .. ..	146	182	349	0.13	0.14	0.31
<b>Total .. ..</b>	<b>113,939</b>	<b>128,326</b>	<b>111,480</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

The outstanding feature of the above table is the rapid decline of the agricultural etc., class as disclosed in both sections of the table. The domestic class also shows a smaller percentage in 1931 than in 1911. On the other hand the industrial class has increased rapidly, while the remaining groups have also grown, but at a slower rate.

II. *Mother's Age, Duration of Marriage, and Issue.*—(i) *General.* The total number of nuptial confinements in 1931 was 111,480, viz., 110,274 single births, 1,196 cases of twins, and 10 cases of triplets, but in 5 cases the necessary information was lacking, and the following series of tables refers therefore, to 111,475 nuptial confinements. Ex-nuptial children—previous issue by the same father—are included as previous issue, but children by former marriages, and stillborn children are excluded. The tables cannot be given *in extenso*, but the following are their most salient features. More complete tabulations are shown in "Australian Demography," Bulletin No. 49, issued by this Bureau.

(ii) *Duration of Marriage and Issue of Mothers.* The following table shows that the duration of marriage of mothers of nuptial children ranged from less than one year up to between 32 and 33 years, and that the average family increased fairly regularly with the duration of marriage. The average number of children of all marriages was 2.95, the corresponding figures for 1930 being 2.92; for 1929, 2.96; for 1928, 2.99; for 1927, 3.03.

#### DURATION OF MARRIAGE AND ISSUE OF MOTHERS.—AUSTRALIA, 1931.

Duration of Marriage.	Total Mothers.	Total Issue.	Average Number of Children.	Duration of Marriage.	Total Mothers.	Total Issue.	Average Number of Children.
Years.				Years.			
0-1 ..	17,788	18,010	1.01	18-19 ..	1,193	8,644	7.25
1-2 ..	12,364	16,001	1.29	19-20 ..	1,020	7,695	7.54
2-3 ..	11,418	20,238	1.77	20-21 ..	792	6,420	8.11
3-4 ..	9,770	20,700	2.12	21-22 ..	569	4,798	8.43
4-5 ..	8,621	21,339	2.48	22-23 ..	375	3,345	8.92
5-6 ..	7,117	19,769	2.78	23-24 ..	249	2,304	9.25
6-7 ..	6,241	19,612	3.14	24-25 ..	186	1,772	9.53
7-8 ..	5,263	18,022	3.42	25-26 ..	125	1,219	9.75
8-9 ..	4,726	17,828	3.77	26-27 ..	62	631	10.18
9-10 ..	4,218	17,230	4.08	27-28 ..	35	379	10.83
10-11 ..	4,164	18,401	4.42	28-29 ..	17	188	11.06
11-12 ..	3,566	16,946	4.75	29-30 ..	11	130	11.82
12-13 ..	2,667	13,632	5.11	30-31 ..	4	44	11.00
13-14 ..	2,034	10,708	5.26	31-32 ..	1	12	12.00
14-15 ..	1,844	10,422	5.65	32-33 ..	2	20	10.00
15-16 ..	1,882	11,249	5.98				
16-17 ..	1,681	10,755	6.40				
17-18 ..	1,470	10,141	6.90				
				Total ..	111,475	328,604	2.95

(iii) *Ages of Mothers and Issue.* The ages of mothers and average family are given in the following table, which shows that the average family increased fairly regularly to a maximum in the age-group 45 years and over.

The average number of children for the two youngest age groups has remained fairly constant over the period. In all the other groups, however, there has been a substantial decrease in the average, ranging from 0.18 in mothers 25 to 29 years to 1.04 in mothers 45 years and over. The average for all ages shows a decline of 0.39 children since 1911.

## AGES AND ISSUE OF MOTHERS.—AUSTRALIA, 1931.

Ages of Mothers.	Average Number of Children.			Ages of Mothers.	Average Number of Children.		
	1911.	1921.	1931.		1911.	1921.	1931.
Under 20 years ..	1.18	1.16	1.21	40-44 years ..	6.97	6.27	6.00
20-24 years ..	1.77	1.64	1.74	45 years and over ..	8.52	8.04	7.48
25-29 „ ..	2.64	2.44	2.46				
30-34 „ ..	3.82	3.57	3.44				
35-39 „ ..	5.28	4.95	4.71	All ages ..	3.34	3.08	2.95

(iv) *Previous Issue of Mothers, Various Ages.* The previous issue, according to the age of the mother, is given in the following table.

## PREVIOUS ISSUE OF MOTHERS OF VARIOUS AGES.—AUSTRALIA, 1931.

Previous Issue.	Mothers' Ages.							Total
	Under 20 Years.	20-24 Years.	25-29 Years.	30-34 Years.	35-39 Years.	40-44 Years.	45 Years and Over.	
0	5,129	14,162	9,464	3,872	1,432	400	27	34,486
1	1,105	8,740	9,016	5,198	2,077	430	25	26,591
2	118	3,714	6,002	4,880	2,375	550	28	17,667
3	6	1,120	3,484	3,741	2,303	690	39	11,383
4	2	255	1,817	2,649	1,983	694	43	7,443
5	..	48	807	1,812	1,682	685	60	5,094
6	..	10	258	1,050	1,307	593	57	3,275
7	..	1	92	547	970	535	64	2,209
8	..	..	20	218	655	454	44	1,391
9	..	1	6	83	378	323	42	833
10	..	..	1	18	244	204	44	511
11	..	..	1	13	105	171	33	323
12	..	..	..	5	47	78	23	153
13	..	..	1	..	16	40	15	72
14	..	..	..	..	11	9	6	26
15	..	..	..	..	2	12	1	15
16	..	..	..	..	..	1	1	2
19	..	..	..	..	..	1	..	1
Total Mothers	6,360	28,051	30,969	24,086	15,587	5,870	552	111,475

(v) *Previous Issue of Mothers of Twins and Triplets.* Figures regarding the previous issue of mothers of twins and triplets show that 291 mothers had twins at their first confinement; 261 at their second; 199 at their third; 140 at their fourth; 93 at their fifth; 77 at their sixth; 51 at their seventh; 33 at their eighth; 20 at their ninth; 15 at their tenth; 10 at their eleventh; 2 at their twelfth; 2 at their thirteenth; 1 at her fourteenth; and 1 at her fifteenth.

Of the 10 cases of triplets registered during 1931, 3 were first confinements, and there was 1 each for second, third, fifth, sixth, seventh, eighth and tenth confinements.

12. Interval between Marriage and First Birth.—(i) *Interval.* The following table shows the interval between marriage and first birth for the years 1911, 1921, and 1931 respectively. Twins, triplets and quadruplets are included, the eldest born only being enumerated :—

INTERVAL BETWEEN MARRIAGE AND FIRST BIRTH.—AUSTRALIA.

Interval.	Number of First Children.			Percentage on Total.		
	1911.	1921.	1931.	1911.	1921.	1931.
Under 1 month .. ..	562	437	395	1.81	1.07	1.15
1 month .. ..	608	538	523	1.96	1.31	1.52
2 months .. ..	817	735	750	2.63	1.79	2.17
3 " .. ..	1,125	1,017	1,135	3.63	2.48	3.29
4 " .. ..	1,299	1,336	1,409	4.19	3.26	4.09
5 " .. ..	1,651	1,781	1,968	5.33	4.34	5.71
6 " .. ..	2,089	2,420	2,517	6.74	5.90	7.30
7 " .. ..	1,602	2,231	2,022	5.17	5.44	5.86
8 " .. ..	1,529	1,950	1,139	4.93	4.75	3.30
9 " .. ..	3,361	4,222	2,272	10.84	10.29	6.59
10 " .. ..	2,623	3,630	1,859	8.46	8.85	5.39
11 " .. ..	1,893	2,645	1,636	6.11	6.45	4.74
Total under 1 year .. ..	19,159	22,942	17,625	61.80	55.93	51.11
1-2 years .. ..	7,400	11,149	8,888	23.87	27.18	25.77
2-3 " .. ..	2,101	2,923	3,441	6.78	7.13	9.98
3-4 " .. ..	908	1,413	1,823	2.93	3.45	5.29
4-5 " .. ..	471	837	967	1.52	2.04	2.80
5-9 " .. ..	762	1,473	1,424	2.46	3.59	4.13
10-14 " .. ..	159	223	262	0.51	0.54	0.76
15-19 " .. ..	31	54	50	0.10	0.13	0.14
20 and over .. ..	9	4	6	0.03	0.01	0.02
Total .. ..	31,000	41,018	34,486	100.00	100.00	100.00

The masculinity of first births was 107.26 as compared with 106.15 for total births.

(ii) *Ages of Mothers and Interval.* The previous issue of mothers of ex-nuptial children is not recorded, but for the purposes of the following table all ex-nuptial births have been assumed to be first births. The table shows in a condensed form the ages of mothers in cases of ex-nuptial first births, of nuptial first births occurring less than nine months after marriage, and of nuptial first births occurring nine months or more after marriage. A comparison of the combined total of the first two columns with the total of nuptial children born nine months or more after marriage shows that for all ages the ratio was more than 2 to 3. At all ages up to and including 21, however, there was a great preponderance of ex-nuptial births and of births following on ante-nuptial conception. It must, of course, be understood that a certain number of premature births is necessarily included among the births which occurred less than nine months after marriage, but information in connexion therewith is not available, and the figures in the table must be accepted with this reservation. The tabulation in single ages of mothers appears in Demography Bulletin No. 49, published by this Bureau.

The last three columns show the percentage of births following ante-nuptial conception on the total nuptial first births and ex-nuptial births. These columns disclose the remarkable fact that the percentage of births due to ante-nuptial conception diminishes rapidly from 80 per cent. among mothers under 20 years of age to a minimum among mothers 30 to 34 years and then rises rapidly to mothers 45 years and over. In 1931 the minimum was among mothers 25 to 29 years. There was a very slight increase for the group 30-34 years and a rapid rise thereafter.



**AGES OF MOTHERS AND INTERVAL BETWEEN MARRIAGE AND FIRST BIRTH, ETC.—AUSTRALIA.**

Age of Mother at Birth of Child.	1931.				Percentage Column III. on Column IV.		
	Ex-nuptial Births.	Nuptial Births less than nine months after Marriage.	Total of two preceding columns.	Nuptial First Births and Ex-nuptial Births.	1911.	1921.	1931.
	I.	II.	III.	IV.			
Under 20 years	1,871	3,911	5,782	7,000	83.12	79.23	82.60
20 to 24 years	1,967	5,844	7,811	16,129	53.91	45.82	48.43
25 to 29 "	785	1,458	2,243	10,249	32.50	25.60	21.89
30 to 34 "	538	441	979	4,410	28.06	23.05	22.20
35 to 39 "	425	148	573	1,857	32.64	29.43	30.86
40 to 44 "	170	52	222	570	36.56	35.31	38.95
45 and over	18	4	22	45	60.47	54.84	48.89
Total ..	5,774	11,858	17,632	40,260	48.14	39.74	43.80

13. *Interval between Birth and Registration of Birth.*—Information was obtained for the years 1911 to 1921 regarding the period which elapsed between birth and registration. A detailed table giving the results for 1921 is contained in Demography Bulletin No. 39, issued by this Bureau. The law relating to maternity allowances has tended to accelerate the registration of births; and during the year under review it was found that approximately 35 per cent. were registered in the first week.

Since the granting of the maternity allowance, the weighted average interval between the dates of birth and registration has been found to be about 13 days for all children.

## § 2. Marriages.

1. *Marriages, 1931.*—The number of marriages registered in Australia during 1931 was 38,882, giving a rate of 5.98 per 1,000 of the mean population for the year. The number of marriages in each State, together with the corresponding crude marriage rate for 1931 and several previous years are given hereunder:—

### MARRIAGES.

	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North Terr.	Fed. Cap. Terr.	Australia.
No. 1931 ..	15,377	10,182	5,951	3,069	2,741	1,501	25	36	38,882
Crude Rate—(a)									
1901 ..	7.73	6.99	6.66	6.45	9.68	7.76	1.05	..	7.32
1911 ..	9.19	8.40	8.41	9.80	8.44	7.77	3.02	2.81	8.79
1921 ..	8.78	8.90	7.82	8.82	7.96	7.82	3.84	0.81	8.59
1927 ..	8.45	7.88	7.04	7.88	8.07	6.82	6.14	3.95	7.95
1928 ..	8.28	7.52	6.95	7.18	8.39	7.09	5.47	3.60	7.73
1929 ..	7.93	7.31	6.67	6.42	8.18	8.01	4.79	5.13	6.71
1930 ..	6.99	6.52	6.59	5.70	7.66	6.70	6.67	3.87	6.71
1931 ..	6.13	5.67	6.21	5.26	6.51	6.82	5.44	4.13	5.98

(a) Number of marriages (not persons married) per 1,000 of mean annual population.

As in some international tabulations the marriage rates are calculated per 1,000 of the unmarried population of 15 years and over, the corresponding rates have been worked out for Australia for the last four Census periods for which the particulars are available. The figures comprise in each case the Census year with the year immediately preceding and the year immediately following, and are as follow:—Years 1880–82, 48.98; years 1890–92, 45.74; years 1900–02, 42.14; years 1910–12, 50.44; and years 1920–22, 56.02. For years 1929–31 the figure is estimated at 42.86. These rates refer, of course, to persons married and not to marriages, as is the case in the preceding table.

2. **Marriage Rates in Various Countries.**—The following table shows the marriage rate for Australia in comparison with the rates for various other countries:—

**CRUDE MARRIAGE RATES (a).—VARIOUS COUNTRIES.**

Country.	1908 to 1913.	1931.	Country.	1908 to 1913.	1931.
Soviet Republics ..	8.6	10.6(g)	Argentina ..	6.8	7.3(f)
United States (b) ..	(e)	9.2(f)	Sweden ..	6.0	7.1(f)
Union of South Africa(c)	(e)	9.2(f)	Canada ..	(e)	7.0(f)
Rumania ..	9.5	9.2(f)	Scotland ..	6.7	6.9(f)
Belgium ..	7.9	8.9(f)	New Zealand ..	8.5	6.8
Czechoslovakia ..	7.7	8.7	Tasmania ..	7.9	6.8
Poland ..	7.0	8.6	Portugal ..	6.9	6.7
Denmark ..	7.3	8.2(f)	Italy ..	7.7	6.7
Germany ..	7.8	8.0	Western Australia ..	8.1	6.5
Japan ..	9.3	7.9(f)	Norway ..	6.2	6.3
Switzerland ..	7.3	7.9	Queensland ..	8.2	6.2
France ..	7.9	7.8	New South Wales ..	8.8	6.1
England and Wales ..	7.6	7.8	Northern Ireland ..	5.2	6.1(f)
Great Britain and Ireland ..	7.3	7.6	<b>Australia</b> ..	<b>8.4</b>	<b>6.0</b>
Netherlands ..	7.5	7.5	Victoria ..	8.0	5.7
Spain ..	7.0	7.4(f)	South Australia ..	9.1	5.3
Finland ..	6.1	7.3(f)	Ceylon ..	5.2	5.0
			Irish Free State ..	5.2	4.5

(a) Number of marriages per 1,000 of mean population. (b) Registration area. (c) White population only. (e) Not available. (f) For 1930. (g) For 1929.

3. **Ages and Conjugal Condition at Marriage.**—(i) *General.* The ages at marriage of bridegrooms and brides will be found in "Australian Demography," Bulletin No. 49, published by this Bureau. A summary in age groups is given in the table hereunder, which also shows the previous conjugal condition of the contracting parties. There were 2,727 males who were less than twenty-one years of age married during 1931, while the corresponding number of females was 10,213. At the other extreme there were 65 men of sixty-five years and upwards who described themselves as bachelors, and nineteen spinsters of corresponding age.

The information regarding the percentage distribution of bridegrooms and brides is shown in the last three lines of the table for the years 1911, 1921, and 1931.

**AGES AND CONJUGAL CONDITION OF PERSONS MARRIED.—AUSTRALIA, 1931.**

Ages at Marriage.	Bridegrooms.				Brides.			
	Bachelors.	Widowers.	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
Under 20..	1,335	..	..	1,335	7,335	3	1	7,339
20-24 years	13,332	25	5	13,362	17,011	46	33	17,090
25-29 "	12,286	141	57	12,484	7,661	161	186	8,008
30-34 "	5,000	235	146	5,381	2,466	200	237	2,903
35-39 "	1,953	340	181	2,474	1,092	255	159	1,506
40-44 "	973	377	138	1,488	492	268	109	869
45-49 "	447	326	94	867	230	217	54	501
50-54 "	220	242	60	522	107	139	18	264
55-59 "	102	223	30	355	60	111	10	181
60-64 "	75	176	12	263	34	93	2	129
65 years and over ..	65	282	4	351	19	70	3	92
Unspecified	..	..	..	..	..	..	..	..
<b>Total ..</b>	<b>35,788</b>	<b>2,367</b>	<b>727</b>	<b>38,882</b>	<b>36,507</b>	<b>1,563</b>	<b>812</b>	<b>38,882</b>
<b>Percentage on Total</b>								
1911 ..	93.70	5.84	0.46	100.00	94.60	4.68	0.72	100.00
1921 ..	92.43	6.37	1.20	100.00	92.85	5.91	1.24	100.00
1931 ..	92.04	6.99	1.87	100.00	93.89	4.02	2.09	100.00

(ii) *Relative Ages, Bridegrooms and Brides.* The relative ages of bridegrooms and brides are shown for single years in "Australian Demography," Bulletin No. 49; a condensation into age-groups of five years is given below:—

RELATIVE AGES OF PERSONS MARRIED.—AUSTRALIA, 1931.

Ages.	Total Bride- grooms.	Ages of Brides.								Not stated.	
		Under 15.	15 to 19.	20 to 25.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 and upwards.		
Ages of Bridegrooms.	Under 20 years..	1,335	4	980	333	15	2	..	1	..	..
	20 to 24 " ..	13,362	15	4,335	7,711	1,154	113	21	9	4	..
	25 to 29 " ..	12,484	6	1,489	6,446	3,790	607	110	25	11	..
	30 to 34 " ..	5,391	1	355	1,843	1,865	1,000	256	46	15	..
	35 to 39 " ..	2,474	..	108	478	714	581	410	142	41	..
	40 to 44 " ..	1,488	..	26	177	302	335	320	228	100	..
	45 to 49 " ..	867	..	12	54	109	150	210	160	172	..
	50 to 54 " ..	522	..	4	27	38	59	83	111	200	..
	55 to 59 " ..	355	..	1	11	14	26	38	82	183	..
	60 to 64 " ..	263	..	1	6	3	19	34	41	159	..
	65 years and over	351	..	2	4	4	11	24	24	282	..
	Not stated ..	..	..	..	..	..	..	..	..	..	..
Total Brides ..	38,882	26	7,313	17,090	8,008	2,903	1,506	869	1,167	..	

(iii) *Average Ages, Bridegrooms and Brides.* The age at marriage of brides has declined slightly during recent years to an average of about 25½ years. The figures for the five years are:—1927, 25.72; 1928, 25.67; 1929, 25.62; 1930, 25.49; and 1931, 25.30. For the five years 1907–11 the average age was 25.70 years, compared with 25.92 years for the five years 1912–16, 26.07 years for the five years 1917–21, and 25.76 years for the five years 1925–29. The average age of bridegrooms in 1927 was 29.19 years; in 1928, 29.18; in 1929, 29.18; in 1930, 29.20; and in 1931, 28.99 years. It follows, therefore, that brides are, generally speaking, three and one-half years younger than the bridegrooms.

4. *Previous Conjugal Condition.*—The number of bachelors and spinsters, widowed and divorced persons, who were married during the year 1931 has already been given. The following table shows the conjugal condition of the contracting parties:—

PREVIOUS CONJUGAL CONDITION OF PERSONS MARRIED.—AUSTRALIA, 1931.

Conjugal Condition.	Total Bridegrooms.	Brides.			
		Spinsters.	Widows.	Divorced.	
Bridegrooms {	Bachelors ..	35,788	34,353	856	579
	Widowers ..	2,367	1,591	622	154
	Divorced ..	727	563	85	79
Total Brides ..	38,882	36,507	1,563	812	

5. Birthplaces of Persons Married.—The following table shows the birthplaces of persons who were married in 1911, 1921 and 1931. In "Australian Demography," Bulletin No. 49, the relative birthplaces of bridegrooms and brides married in 1931 will be found tabulated in full detail.

## BIRTHPLACES OF PERSONS MARRIED.—AUSTRALIA.

Birthplace.	Bridegrooms.			Brides.		
	1911.	1921.	1931.	1911.	1921.	1931.
<b>AUSTRALASIA—</b>						
Australia .. ..	31,298	37,925	31,932	33,922	40,137	34,162
New Zealand .. ..	450	405	402	303	280	314
<b>EUROPE—</b>						
England and Wales .. ..	3,023	3,590	3,975	1,675	2,488	2,784
Scotland .. ..	739	867	1,080	460	656	803
Ireland .. ..	494	470	399	363	281	250
Other British Possessions .. ..	16	30	39	9	14	23
Western Europe .. ..	205	175	125	45	45	37
Central Europe .. ..	311	149	171	92	61	92
Southern Europe .. ..	62	139	300	21	56	135
Eastern Europe .. ..	47	83	74	18	21	42
<b>ASIA—</b>						
British Possessions .. ..	59	59	77	27	24	35
Foreign Countries .. ..	83	57	45	16	12	21
<b>AFRICA—</b>						
British Possessions .. ..	42	58	88	20	39	86
Foreign Countries .. ..	1	3	8	2	5	1
<b>AMERICA—</b>						
Canada .. ..	44	45	49	6	11	17
Other British Possessions .. ..	6	8	3	..	5	1
United States of America .. ..	58	90	85	16	25	34
Other Foreign Countries .. ..	44	11	8	15	10	9
<b>POLYNESIA—</b>						
British .. ..	13	9	10	7	11	12
Foreign .. ..	25	18	4	7	13	9
Indefinite .. ..	41	22	8	37	19	15
<b>Total .. ..</b>	<b>37,061</b>	<b>44,213</b>	<b>38,882</b>	<b>37,061</b>	<b>44,213</b>	<b>38,882</b>

6. Occupations and Ages of Bridegrooms.—A tabulation has been made of the occupations and ages of all males married in Australia during 1931, an abridgment of which is given in the following table. The average ages of the persons falling under the twenty-eight subdivisions were determined, and it appears that, apart from the "Indefinite class," which consists chiefly of persons who have retired from business and who are living on income from investments, and who may be expected to have reached a comparatively high age before attaining a position of financial independence, the average age for 1931 ranges from 27.30 years for those engaged in the manufacture of food and drinks, to 32.59 years in the class engaged in providing board and lodging. A line showing the corresponding average ages for 1921 has been added to the table. On the experience of 1931, the average ages at marriage of bridegrooms in the larger classes of occupations were as follow:—Professional, 30.01 years; Domestic, 30.47 years; Commercial, 29.20 years; Transport, 28.71 years; Industrial, 28.08 years; and Primary Producers, 30.15 years.

## OCCUPATIONS AND AGES OF BRIDEGROOMS.—AUSTRALIA, 1931.

Ages at Marriage.	Pro-fessional.		Domestic.		Commercial.						Transport and Communication.				
	Government, Defence, and Law.	Others.	Board and Lodging.	Others.	Property and Finance.	Art. Mechanic, and Textile Products.	Food and Drinks.	Animal and Vegetable Substances.	Fuel, Light and Metals.	Merchants and Dealers.	Others.	Railways.	Roads and Trams.	Sea and Rivers.	Others.
Under 20 ..	5	17	8	19	3	1	80	2	4	36	79	31	55	10	25
20 to 24 ..	276	471	102	166	109	84	715	41	24	295	1,081	322	682	134	238
25 ,, 29 ..	418	720	124	102	259	104	511	49	29	307	1,317	266	645	141	172
30 ,, 34 ..	177	315	76	60	115	58	175	27	14	136	579	133	225	63	70
35 ,, 39 ..	73	104	45	38	44	24	78	12	9	72	253	70	103	42	49
40 ,, 44 ..	37	57	22	14	29	17	39	9	5	58	146	43	54	17	26
45 ,, 49 ..	23	39	14	10	9	7	25	5	5	29	81	26	30	15	12
50 and over	54	75	22	27	30	14	33	10	5	55	109	46	39	28	16
Not stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	1,063	1,798	413	436	598	309	1,656	155	95	988	3,645	931	1,833	453	608
Average age—															
year 1931	30.35	29.81	31.31	29.68	30.91	30.46	27.17	31.22	31.26	30.39	29.27	29.54	27.86	30.84	28.42
1921	29.93	31.02	32.48	30.14	30.94	31.21	28.84	32.25	32.00	32.19	29.45	29.12	28.19	31.27	28.48

Ages at Marriage.	Manufacturing.							Primary Producers.					
	Art and Mechanic Productions.	Textiles and Fibrous Materials.	Food and Drinks.	Animal and Vegetable Substances.	Metals and Minerals.	Fuel, Light and Energy.	Building and Construction.	Others.	Agri-cultural.	Pastoral.	Mining and Quarrying.	Others.	Indefinite.
Under 20 ..	78	41	51	8	53	14	58	510	94	27	11	13	2
20 to 24 ..	897	272	304	76	282	158	693	3,758	1,460	343	88	277	14
25 ,, 29 ..	745	211	225	61	215	172	450	3,698	1,822	447	68	197	9
30 ,, 34 ..	266	71	85	11	66	66	167	1,154	910	237	34	80	11
35 ,, 39 ..	106	45	30	10	35	25	93	522	410	113	17	40	12
40 ,, 44 ..	67	30	22	4	23	9	79	310	227	83	13	36	10
45 ,, 49 ..	37	12	7	3	17	5	52	292	124	50	3	18	9
50 and over	64	27	24	4	25	10	88	282	237	61	8	40	58
Not stated	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	2,260	709	748	177	718	459	1,680	9,437	5,284	1,361	242	701	125
Average age—													
year 1931	27.88	28.33	27.40	27.05	27.84	28.02	29.17	28.01	30.13	30.80	29.52	28.79	45.67
1921	28.58	28.81	28.56	28.19	27.96	27.54	29.63	29.20	30.49	32.66	30.42	29.35	41.63

7. **Fertility of Marriages.**—The quotient obtained by division of the nuptial births registered, e.g., during the five years 1927 to 1931, by the number of marriages registered during the five years 1922 to 1926, i.e., the period antecedent by five years to the period of the births, has been called the "fertility of marriages." The quotient for this period is 2.80—in other words, the number of children to be expected from every marriage in Australia is about three. This method, while not absolutely accurate, generally furnishes results which agree fairly well with those found by more elaborate and careful investigation. For the following five-yearly periods the results were:—1922–26, 3.14; 1923–27, 2.79; 1924–28, 2.81; 1925–29, 2.84; 1926–30, 2.88; and 1927–31, 2.80.

8. **Registration of Marriages.**—In all the States marriages may be celebrated either by ministers of religion whose names are registered for that purpose with the Registrar-General, or by certain civil officers—in most cases district registrars. Most of the marriages are celebrated by ministers of religion. The proportions so celebrated in 1931 were:—New South Wales, 90.31 per cent.; Victoria, 88.77 per cent.; Queensland

95.98 per cent. ; South Australia, 88.82 per cent. ; Western Australia, 82.12 per cent. ; and Tasmania, 89.47 per cent.—the percentage for Australia being 90.03. The registered ministers in 1931 belonged to more than forty different denominations, some of which, however, can hardly be regarded as having any valid existence. A number of these have been omitted from the tabulation and are bracketed under the heading "Other Christian." The figures for 1931 are shown in the following table :—

## MARRIAGES IN EACH DENOMINATION.—AUSTRALIA, 1931.

Denomination.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Nor. Terr.	Fed. Cap. Terr.	Australia.	
									No.	Per. Cent.
Church of England	6,157	2,840	1,753	647	1,013	529	2	13	12,954	33.32
Roman Catholic ..	3,238	1,806	1,325	373	466	222	6	11	7,447	19.15
Methodist ..	1,693	1,316	878	897	373	276	2	5	5,440	13.99
Presbyterian ..	1,955	1,680	944	126	195	112	..	2	5,014	12.90
Baptist ..	227	494	170	137	34	56	..	2	1,120	2.88
Congregational ..	292	217	104	155	71	63	..	..	902	2.32
Church of Christ ..	72	226	52	151	41	40	5	..	587	1.51
Lutheran ..	40	90	185	155	5	..	..	..	475	1.22
Salvation Army ..	73	53	56	34	23	11	..	..	250	0.64
Seventh-Day Adventist ..	38	11	12	6	10	6	..	..	83	0.21
Greek Catholic ..	21	8	10	6	4	..	1	..	50	0.13
Unitarian ..	3	4	..	9	..	..	..	..	16	0.04
Other Christian ..	41	228	216	29	8	28	..	..	550	1.41
Hebrew ..	37	66	7	1	8	..	..	..	119	0.31
Registrar's Office..	1,490	1,143	239	343	490	158	9	3	3,875	9.97
<b>Total ..</b>	<b>15,377</b>	<b>10,182</b>	<b>5,951</b>	<b>3,069</b>	<b>2,741</b>	<b>1,501</b>	<b>25</b>	<b>36</b>	<b>38,882</b>	<b>100.00</b>

## § 3. Deaths.

1. Deaths, 1931.—The following table shows the number of deaths, male and female, registered in each State during the year :—

## DEATHS, 1931.

Sex.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Australia.
Males ..	11,890	9,190	4,525	2,638	2,376	1,093	62	22	31,796
Females ..	9,380	7,843	3,000	2,250	1,305	964	8	14	24,764
<b>Total ..</b>	<b>21,270</b>	<b>17,033</b>	<b>7,525</b>	<b>4,888</b>	<b>3,681</b>	<b>2,057</b>	<b>70</b>	<b>36</b>	<b>56,560</b>

2. *Crude Death Rates.*—The crude death rates for the period 1901 to 1931 show a gratifying decrease in the later years.

CRUDE DEATH RATES.(a)

Year and Sex.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Australia.
1901 ..	11.75	13.22	11.98	11.12	13.39	10.51	19.10	(b)	12.22
1911 ..	10.31	11.52	10.65	9.81	10.19	10.14	19.63	5.61	10.66
1921 ..	9.50	10.52	9.36	10.02	10.43	10.30	20.48	1.61	9.91
1927 ..	9.59	9.71	9.06	8.98	8.81	9.68	17.95	7.08	9.45
1928 ..	9.34	10.11	8.77	8.92	9.11	10.06	16.88	5.84	9.45
1929 ..	9.98	9.45	8.98	8.70	9.55	10.18	15.56	4.65	9.55
1930 ..	8.53	8.94	7.93	8.35	9.02	9.00	16.56	3.64	8.59
1931—									
Males ..	9.33	10.34	8.91	8.76	10.52	10.03	21.28	4.71	9.60
Females ..	7.60	8.63	6.67	7.97	6.69	8.69	4.77	3.55	7.70
Total ..	8.48	9.48	7.86	8.38	8.75	9.35	15.24	4.18	8.70

(a) Number of deaths per 1,000 of annual mean population. (b) Part of New South Wales prior to 1911.

3. *Index of Mortality.*—(i) *General.* The death rates quoted above are crude rates, i.e., they simply show the number of deaths per thousand of mean population without taking the age constitution into consideration. Other conditions being equal, however, the death rate of a country will be lower if it contains a large percentage of young people (not infants). In order to obtain a comparison of the mortality of various countries on a uniform basis so far as sex and age constitution are concerned, the standard population compiled by the International Institute of Statistics, according to age distribution (eleven age-groups) of the population of nineteen European countries at their censuses nearest to the year 1900 is used in the computation of the "Index of Mortality" as distinguished from the crude death rate. Full details of the "Standard Population" will be found in Year Book No. 22, page 962.

(ii) *Comparison of Rates.* For the year 1931, on the basis of the crude rates, there is a range of 1.62 per 1,000 persons between the lowest rate in Queensland (7.86) and the highest rate in Victoria (9.48), whereas the standardized rates increase the range to 2.39 per 1,000, i.e., between 8.69 in South Australia and 10.99 in Western Australia. In its application to the figures for 1931 the process of adjustment slightly altered the relative positions of all States, with the exception of New South Wales and Tasmania, from those determined by the crude rates. The principal changes were that Queensland and South Australia which were first and second respectively in the crude rates have changed places, as have also Western Australia and Victoria which occupied fourth and sixth positions respectively. The index of mortality for each State for 1931 and previous years is shown in the following table:—

INDEX OF MORTALITY.

Year.	States.						Territories.		Australia.
	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern.	Federal Capital.	
1921	10.36	10.79	10.23	10.38	11.89	10.84	13.74	1.89	10.58
1927	10.64	10.02	10.20	9.30	10.71	10.43	12.58	8.45	10.43
1928	10.40	10.46	9.92	9.21	11.14	10.76	11.15	6.06	10.44
1929	11.14	9.78	10.21	8.97	11.69	10.98	14.78	5.37	10.39
1930	9.54	9.31	9.03	8.69	11.16	9.66	14.10	4.52	9.38
1931	9.59	9.88	9.04	8.69	10.99	10.14	15.02	4.67	9.56

4. **Crude Death Rates of Various Countries.**—The following table gives particulars of the crude death rates of various countries for a pre-war period and the latest available year :—

**CRUDE DEATH RATES.(a)—VARIOUS COUNTRIES.**

Country.	1908-13.	1931.	Country.	1908-13.	1931.
Queensland ..	10.3	7.9	England and Wales ..	14.1	12.3
New Zealand ..	9.3	8.3	Great Britain and		
South Australia ..	10.1	8.4	Ireland ..	14.5	12.5
New South Wales ..	10.3	8.5	Scotland ..	15.5	13.3
<b>Australia</b> ..	10.7	8.7	Belgium ..	15.7	13.3(f)
Western Australia ..	10.3	8.8	Argentina ..	17.5	13.6(e)
Tasmania ..	10.7	9.4	Italy ..	20.4	14.3
Victoria ..	11.7	9.5	Finland ..	16.4	14.3(f)
Union of South Africa			Czechoslovakia ..	21.0	14.4
(Whites) ..	(c)	9.5	Northern Ireland ..	16.9	14.5
Netherlands ..	13.9	9.7	Irish Free State ..	16.9	14.5
Norway ..	13.6	10.7	Poland ..	21.0	15.5
Canada (including			France ..	18.6	16.3
Quebec) ..	(c)	10.7(f)	Spain ..	22.8	16.8(f)
Denmark ..	13.2	10.8(f)	Japan ..	20.5	18.2(f)
Germany ..	16.5	11.2	Soviet Republics ..	28.9	18.8(d)
United States (b)	(c)	11.3(f)	Rumania ..	24.7	19.4(f)
Sweden ..	14.0	11.7(f)	Ceylon ..	31.4	22.1
Switzerland ..	15.2	12.1	Egypt ..	25.8	27.7(e)

(a) Number of deaths per 1,000 of mean population. (b) Registration area. (c) Not available. (d) For year 1928. (e) For year 1929. (f) For year 1930.

5. **Infantile Deaths and Death Rate.**—(i) *Australia, 1901 to 1931.* The universal experience that during the first few years of life the higher death rate of male infants tends to counteract the excess of male births is confirmed by the fact that out of 331,559 male infants born from 1927 to 1931, 18,286 (55.15 per 1,000) died during their first year of life, while of 312,605 female infants only 13,773 (44.06 per 1,000) died during the first year.

**INFANTILE DEATHS AND DEATH RATES.—AUSTRALIA.**

Year.	Registered deaths under one year.			Rate of Infantile Mortality. (a)		
	Males.	Females.	Total.	Males.	Females.	Total.
1901 ..	5,888	4,778	10,666	112.13	94.73	103.61
1911 ..	4,745	3,624	8,369	75.91	60.72	68.49
1921 ..	5,111	3,841	8,952	72.97	58.06	65.73
1927 ..	4,102	3,181	7,283	59.55	49.08	54.47
1928 ..	4,003	3,090	7,101	57.89	47.72	52.96
1929 ..	3,873	2,743	6,616	58.13	43.64	51.10
1930 ..	3,419	2,646	6,065	51.90	42.33	47.24
1931 ..	2,809	2,105	4,994	47.34	36.62	42.14

(a) Number of deaths under 1 year per 1,000 live births registered.



(ii) *States, 1901 to 1931.* For the States and Territories the rates of infantile mortality during the period 1901-31 were as follow :—

INFANTILE MORTALITY RATES.(a)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Australia.
1901-05..	97.02	95.91	94.35	86.60	124.79	90.00	149.35	(c)	96.91
1906-10..	77.30	79.90	71.27	68.38	89.80	83.18	143.79	(c)	77.61
1911-15..	71.05	72.23	65.68	67.26	72.43	70.91	85.11	32.56	70.32
1916-20..	64.82	67.18	63.04	61.93	61.73	63.84	67.15	40.40	64.67
1921-25..	58.11	61.93	50.99	54.19	59.14	60.44	40.82	60.24	57.88
1927 ..	54.94	56.05	54.45	53.43	45.86	52.97	102.94	142.85 <sup>b</sup>	54.47
1928 ..	54.77	55.63	45.54	47.51	48.14	63.95	60.24	83.33 <sup>b</sup>	52.96
1929 ..	56.44	47.23	46.03	40.88	56.13	53.16	18.87	19.61 <sup>b</sup>	51.10
1930 ..	49.84	46.61	39.97	48.38	46.74	50.56	70.42	24.39 <sup>b</sup>	47.24
1931 ..	43.48	44.47	36.67	36.35	41.53	45.90	83.33	37.27 <sup>b</sup>	42.14

(a) Number of deaths under 1 year per 1,000 live births registered. (b) Based on deaths of infants born in the Federal Capital Territory. (c) Part of New South Wales prior to 1911.

INFANTILE MORTALITY RATES—UNDER ONE MONTH AND UNDER ONE YEAR.

State.	Under one month.			One month and under one year.		
	1911-15.	1921-25.	1931.	1911-15.	1921-25.	1931.
New South Wales ..	31.75	29.97	26.57	39.30	28.14	16.91
Victoria ..	33.07	32.19	28.58	39.16	29.74	15.89
Queensland ..	30.73	27.44	25.57	34.95	23.55	11.10
South Australia ..	29.07	27.83	23.57	38.19	26.36	12.78
Western Australia ..	30.87	27.56	24.92	41.56	31.58	16.61
Tasmania ..	32.68	31.73	32.34	38.23	28.71	13.65
Australia..	31.69	29.91	26.82	38.63	27.97	15.32

Examination of these tables discloses the striking decrease in infantile mortality, the rate for 1931 being less than half that of 1901-05. The second table reveals the fact that relatively little improvement has taken place in the first month of life, but that the principal decrease has occurred among the older children and has been due to the decline in preventable diseases.

The deaths of infants under one year of age during 1931 numbered 4,994, the mortality rate being 42.14, which is the lowest recorded in Australia. Among the States in 1931 South Australia had the lowest and Tasmania the highest rate.

(iii) *Districts.* The total number of births and of deaths of children under one year of age for 1931 are shown in Australian Demography Bulletin, No. 49, Tables 15 and 74, for each of the sixty-four districts for which the vital statistics have been tabulated.

(iv) *Various Countries and Cities.* Compared with other countries, the States of Australia occupy a very favourable position, being surpassed by New Zealand only. Among cities, however, the best of the Australian cities, Adelaide, has the fifth place only, whereas New Zealand has the first three cities, Auckland, Wellington and Christchurch, in the list presented on the next page. A study of the respective rates shows that a high birth rate is often, though not invariably, accompanied by a high infantile death rate.

## INFANTILE MORTALITY RATES. (a)—VARIOUS COUNTRIES.

Country.	Infantile Mortality Rate.(a)		Crude Birth Rate.(b) 1931.	Country.	Infantile Mortality Rate.(a)		Crude Birth Rate.(b) 1931.
	1906-15.	1931.			1906-15.	1931.	
New Zealand ..	61	32	18.4	Great Britain and Ireland ..	..	68	16.3
South Australia ..	68	36	15.6	Northern Ireland ..	92	73	20.7
Queensland ..	68	37	18.6	France ..	122	76	17.4
Australia ..	74	42	18.2	Scotland ..	113	82	19.0
Western Australia	81	42	20.3	Denmark ..	103	83(d)	18.7(e)
New South Wales	74	43	19.0	Germany ..	168	83	16.0
Victoria ..	76	44	16.9	Canada (including Quebec) ..	(e)	89(e)	23.9(e)
Norway ..	68	46(e)	16.7	Belgium ..	139	93(e)	18.7(e)
Tasmania ..	77	46	21.7	Spain ..	156	117(e)	28.2(e)
Switzerland ..	108	49	16.7	Japan ..	151	124(e)	32.4(e)
Netherlands ..	115	50	22.2	Italy ..	144	125(d)	24.9
Sweden ..	74	54(e)	15.4	Czechoslovakia ..	(c)	137(e)	21.5
United States (Registration Area)	(c)	64(e)	18.9(e)	Ceylon ..	(c)	158	37.0
Union of South Africa (Whites)	(c)	65	25.5	Egypt ..	(c)	159(d)	44.4(d)
England and Wales ..	113	66	15.8	Hungary ..	205	163	23.2
Irish Free State ..	92	68	19.3	Rumania ..	(c)	197(d)	35.0(e)

(a) Number of deaths under 1 year per 1,000 births registered. (b) Number of births per 1,000 of mean population. (c) Not available. (d) For year 1929. (e) For year 1930.

## INFANTILE MORTALITY RATES.(a)—VARIOUS CITIES.

City.	Rate of Infantile Mortality.(a)		City.	Rate of Infantile Mortality.(a)	
	1921.	1931.		1921	1931.
Auckland ..	54	30	Birmingham ..	82	68
Wellington ..	61	30	Berlin ..	135	69
Christchurch ..	54	31	Edinburgh ..	96	69
Amsterdam ..	54	35	Hamburg ..	95	70
San Francisco ..	50	40	Leeds ..	98	72
Adelaide ..	74	40	Washington ..	83	72
Oslo ..	54	41	Dresden ..	115	80
Brisbane ..	62	41	Toronto ..	91	80
Stockholm ..	61	41	Munich ..	126	81
Sydney ..	62	45	Johannesburg ..	101	81
Perth ..	81	46	Paris ..	95	82
Newcastle, N.S.W. ..	70	47	Cologne ..	140	85
Melbourne ..	74	48	Manchester ..	94	89
Chicago ..	84	50	Leipzig ..	136	89
Copenhagen ..	67	51	Aberdeen ..	108	90
New York City ..	72	56	Belfast ..	115	90
Detroit ..	83	56	Breslau ..	170	91
Los Angeles ..	68	57	Liverpool ..	105	92
Hobart ..	75	59	Dublin ..	123	95
London ..	80	60	Glasgow ..	106	104
Antwerp ..	98	60	Montreal ..	158	112
Philadelphia ..	78	61	Madras ..	281	245
Sheffield ..	99	67	Bombay ..	402	272
Cape Town ..	82	67			

(a) Number of deaths under 1 year per 1,000 births registered.

(v) Causes of Deaths of Children under one Year. The following table gives for twenty-six causes the a es of all children who died under one year of age during 1931. The infantile mortality rates for 1911, 1921 and 1931 have been added for all births, and for 1925 and 1931 for ex-nuptial births. Particulars for males and females may be found in Bulletin No. 49 of "Australian Demography."

CAUSES OF DEATHS OF CHILDREN UNDER ONE YEAR.—AUSTRALIA, 1931.

Age at Death.	Measles.	Whooping Cough.	Diphtheria.	Erysipelas.	Meningococcal Meningitis.	Pulmonary Tuberculosis.	Tubercular Meningitis.	Tuberculosis, other forms.	Syphilis.	Meningitis.	Convulsions.	Acute Bronchitis.
Under 1 week ..	..	..	1	..	..	..	..	..	5	2	27	2
1 week and under 2 weeks	..	2	1	..	..	..	..	..	1	1	6	2
2 weeks " 3 "	..	1	1	..	1	..	..	..	..	1	..	..
3 " " 1 month	3	2	3	1	..	..	..	..	..	..	1	6
1 month " 2 months	1	31	2	4	..	..	1	..	5	4	1	4
2 months " 3 "	1	25	1	1	1	..	..	..	1	3	5	7
3 " " 4 "	..	19	..	2	..	..	..	..	2	1	2	4
4 " " 5 "	..	23	1	1	1	..	..	..	1	2	..	..
5 " " 6 "	1	17	2	..	1	1	3	1	3	5	1	3
6 " " 7 "	..	10	2	1	..	..	1	..	1	3	..	4
7 " " 8 "	2	13	2	1	..	..	5	..	1	2	1	..
8 " " 9 "	1	15	3	1	3	1	5	..	1	3	1	3
9 " " 10 "	..	9	4	1	..	..	2	..	1	1	..	..
10 " " 11 "	1	7	5	..	..	1	4	..	1	5	1	2
11 " " 1 year	2	13	3	..	2	1	3	3	1	5	..	1
Total under 1 year ..	12	187	30	13	9	4	26	5	24	38	46	38
Infantile Mortality (a)—												
1911 ..	0.34	1.57	0.25	0.16	..	0.08	0.31	0.22	0.85	1.83	2.55	2.34
1921 ..	0.15	1.97	0.59	0.24	0.05	0.07	0.18	0.08	0.56	1.10	1.45	1.50
1931 ..	0.10	1.58	0.25	0.11	0.08	0.03	0.22	0.04	0.20	0.32	0.39	0.32
Ex-nuptial deaths under 1 year included in above ..	3	10	2	..	1	..	2	..	3	..	3	5
Infantile Mortality (b)—												
1925 ..	0.16	2.06	0.32	0.16	0.48	..	0.32	..	1.27	0.32	2.38	0.48
1931 ..	0.51	1.71	0.34	..	0.17	..	0.34	..	0.51	..	0.51	0.86

Age at Death.	Broncho-Pneumonia.	Pneumonia.	Other Diseases of Stomach.	Diarrhoea and Enteritis.	Hernia and Intestinal Obstruction.	Malformation.	Congenital Debility, Icterus and Sclerema.	Premature Birth.	Injury at Birth.	Other Diseases peculiar to Early Infancy.	Other Causes.	Total.
Under 1 week ..	16	6	2	3	3	255	170	1,412	294	313	77	2,588
1 week and under 2 weeks	17	9	..	3	3	46	34	99	29	33	26	310
2 weeks " 3 "	19	7	..	3	..	27	11	56	7	12	15	166
3 " " 1 month	10	8	1	6	1	15	9	32	..	7	9	114
1 month " 2 months	47	17	3	22	2	51	23	45	1	15	32	311
2 months " 3 "	29	13	3	26	2	29	15	9	2	5	23	200
3 " " 4 "	25	10	1	33	2	23	16	..	..	2	22	177
4 " " 5 "	33	18	2	42	9	8	4	3	..	1	16	166
5 " " 6 "	18	16	2	45	6	13	6	..	..	2	23	169
6 " " 7 "	26	20	2	54	7	12	4	1	..	..	19	167
7 " " 8 "	13	13	..	31	6	5	3	..	..	..	25	123
8 " " 9 "	31	9	..	30	1	7	2	..	..	..	23	140
9 " " 10 "	14	15	1	24	4	5	3	..	..	..	25	109
10 " " 11 "	15	19	..	33	1	5	6	..	..	..	26	132
11 " " 1 year	21	12	..	22	1	1	2	..	..	..	29	122
Total under 1 year ..	334	192	16	386	48	501	308	1,664	333	390	390	4,994
Infantile Mortality (a)—												
1911 ..	2.86	1.90	0.47	16.99	0.72	2.99	..	22.41	..	4.07	5.58	68.49
1921 ..	3.08	2.08	0.71	15.01	0.57	3.74	7.64	15.29	..	5.53	4.16	65.73
1931 ..	2.82	1.62	0.13	3.26	0.41	4.23	2.60	14.04	2.81	3.29	3.29	42.14
Ex-nuptial deaths under 1 year included in above ..	31	20	2	49	1	25	42	128	18	22	34	401
Infantile Mortality (b)—												
1925 ..	8.09	2.38	1.11	19.18	0.47	3.64	9.51	20.93	1.90	2.69	6.08	84.83
1931 ..	5.31	3.43	0.34	8.30	0.17	4.28	7.19	21.92	3.08	3.77	15.82	68.65

(a) Rate per 1,000 total births.

(b) Rate per 1,000 ex-nuptial births.

Pre-natal influences, such as malformation, congenital debility, and premature birth, together with injuries at birth, accounted for 2,806, or 56 per cent. of all deaths under one year; and of these 2,806 deaths, 2,131, or 76 per cent., occurred within a week of birth. Among the survivors of the first week, diarrhoea and enteritis caused the greatest number of deaths. These diseases were responsible for 386 deaths, representing 8 per cent. of all deaths under one year, or 3.26 per 1,000 births. Broncho-pneumonia was next, with 334 deaths representing 7 per cent. of all deaths under one year, or 2.82 per 1,000 births.

(vi) *Deaths of Ex-nuptial Children under one Year.* The deaths of ex-nuptial children were tabulated by this Bureau for the first time in 1925. The causes of death of these children in 1931 and the rates in respect of 1925 and 1931 are shown as an addendum to the preceding table.

Pre-natal influences such as malformation, congenital debility, premature birth, and injuries at birth accounted for 213, or 53 per cent., and diarrhoea and enteritis for 49, or 12 per cent., of the total deaths.

6. *Deaths in Age-Groups.*—A distribution into age-groups has been made of the 290,408 deaths which occurred in Australia from 1927 to 1931, and the results have been tabulated for each State. It is, however, sufficient to show here the results for Australia as a whole, which are as follow.

A table giving the corresponding percentages for earlier periods has been added to show the movement over a long term. The most striking change is the substantial decrease in the group "under 1 year". At the other end of the table, the group "65 years and over" has increased by an almost similar amount.

## DEATHS IN AGE GROUPS.—AUSTRALIA, 1927 TO 1931.

Age-Group.	Males.	Females.	Total.	Percentage on Total Males.	Percentage on Total Females.	Percentage on Total.
Under 1 year ..	18,286	13,773	32,059	11.17	10.87	11.04
1 year and under 5 ..	6,350	5,340	11,690	3.88	4.21	4.02
5 years and under 20 ..	7,688	5,686	13,374	4.70	4.49	4.61
20 years and under 40 ..	17,229	16,140	33,369	10.53	12.73	11.49
40 years and under 60 ..	35,296	24,278	59,574	21.57	19.16	20.51
60 years and under 65 ..	14,482	9,524	24,006	8.85	7.51	8.27
65 years and over ..	64,181	51,985	116,166	39.21	41.02	40.00
Age unspecified ..	153	17	170	0.09	0.01	0.06
<b>Total ..</b>	<b>163,665</b>	<b>126,743</b>	<b>290,408</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

## DEATHS IN AGE GROUPS.—AUSTRALIA, 1901 TO 1920.

Age-Group.	1901-1910.			1916-1920.		
	Percentage on Total Males.	Percentage on Total Females.	Percentage on Total.	Percentage on Total Males.	Percentage on Total Females.	Percentage on Total.
Under 1 year ..	19.80	21.47	20.51	15.16	15.27	15.20
1 year and under 5 ..	5.84	7.28	6.45	5.61	6.58	6.03
5 years and under 20 ..	5.84	7.08	6.37	5.18	5.73	5.42
20 years and under 40 ..	13.85	16.54	14.99	13.57	16.34	14.76
40 years and under 60 ..	19.70	15.67	17.99	22.55	18.41	20.77
60 years and under 65 ..	5.71	4.77	5.31	7.58	5.86	6.84
65 years and over ..	29.08	27.15	28.26	30.18	31.77	30.86
Age unspecified ..	0.18	0.04	0.12	0.17	0.04	0.12
Total ..	100.00	100.00	100.00	100.00	100.00	100.00

7. Deaths at Single Ages and in Age-Groups.—(i) *General.* The 56,560 deaths registered in Australia in the year 1931 will be found tabulated in groups of five years for each State and Territory in Bulletin No. 49 "Australian Demography, 1931." The deaths during the first two years of life have been tabulated in shorter periods. A summary for Australia is given in the following table :—

## DEATHS AT SINGLE AGES AND IN AGE-GROUPS.—AUSTRALIA, 1931.

Ages.	Males.	Females.	Total.	Ages.	Males.	Females.	Total.
Under 1 week ..	1,516	1,072	2,588	Total 5-9 years ..	522	351	873
1 week and under 2 ..	164	146	310	" 10-14 " ..	417	245	662
2 weeks and under 3 ..	98	68	166	" 15-19 " ..	558	417	975
3 weeks and under 1 month ..	72	42	114	" 20-24 " ..	651	628	1,279
Total under 1 month ..	1,850	1,328	3,178	" 25-29 " ..	714	699	1,413
1 month and under 3 ..	299	212	511	" 30-34 " ..	801	777	1,578
3 months and under 6 ..	289	223	512	" 35-39 " ..	953	903	1,856
6 months and under 12 ..	451	342	793	" 40-44 " ..	1,254	976	2,230
Total under 1 year ..	2,889	2,105	4,994	" 45-49 " ..	1,477	1,108	2,585
1 year and under 2 ..	439	397	836	" 50-54 " ..	1,836	1,242	3,078
2 years ..	267	189	456	" 55-59 " ..	2,192	1,436	3,628
3 ..	175	151	326	" 60-64 " ..	2,786	1,934	4,720
4 ..	125	97	222	" 65-69 " ..	3,563	2,461	6,024
Total under 5 years ..	3,895	2,939	6,834	" 70-74 " ..	3,815	2,767	6,582
				" 75-79 " ..	3,041	2,365	5,406
				" 80-84 " ..	1,885	1,818	3,703
				" 85-89 " ..	1,005	1,132	2,137
				" 90-94 " ..	325	417	742
				" 95-99 " ..	75	133	208
				" 100 and over ..	15	13	28
				Age Unspecified ..	16	3	19
Total All Ages ..	31,796	24,764	56,560				

(ii) *Rates.* The death rate per 1,000 living at each age in each State for the three years 1920, 1921, and 1922, i.e., the Census year 1921, and the years immediately preceding and following, may be found in Official Year Book No. 22, page 975.

8. Deaths of Centenarians.—Particulars concerning the twenty-eight persons—fifteen males and thirteen females—who died in 1931 aged 100 years and upwards, are given in the following table. While the Registrars-General of the various States verify the figures as far as possible, absolute reliance cannot be placed on their accuracy, owing to the well-known tendency of very old people to overstate their ages. In connexion with this question it may be noted that while parish registers in the United Kingdom often date very far back, compulsory registration of births dates practically from 1874 only, the Act of 1836 having left many loopholes for those unwilling to register the births of their children.

## DEATHS OF CENTENARIANS.—AUSTRALIA, 1931.

Age.	Locality where Death occurred.	State.	Cause of Death.	Occupation.	Birthplace.	Length of Residence in Australia.	Conjugal Condition.
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## MALES.

110	Cardwell ..	Queensland	Senile Decay	Labourer..	Aden ..	56 years ..	Single
106	Cowra ..	N.S.W. ..	Auricular Fibrillation	Station Hand	N.S.W. ..	Native ..	"
105	Woollahra	N.S.W. ..	Senility ..	General Merchant	Poland ..	40 years ..	"
104	Northcote..	Victoria	Bronchitis ..	Not stated	Unknown	Unknown	"
104	Brisbane ..	Queensland	Senility ..	Miner ..	France ..	60 years ..	"
103	Ararat ..	Victoria	"	Farmer ..	Ireland ..	67 years ..	Married
102	Beechworth	"	"	Miner ..	N.S.W. ..	Native ..	"
102	Wangaratta	"	Broncho-Pneumonia	"	Unknown	Unknown	Single
101	Tumut ..	N.S.W. ..	Hypostatic Congestion of Lung	Gardener..	Ireland ..	73 years ..	"
101	Saddleworth	Sth. Aust.	Senility ..	Farmer ..	"	80 years ..	Married
100	Freeling ..	"	"	Teacher ..	Belgium ..	73 years ..	"
100	Tenterfield	N.S.W. ..	"	Grazier ..	Scotland	87 years ..	Single
100	Yaes ..	"	Acute Bronchitis	Unknown	N.S.W. ..	Native ..	"
100	Brunswick	Victoria ..	Senility ..	Labourer..	England ..	Unknown	Unknown
100	Brisbane ..	Queensland	Fracture, Neck of Femur	Not stated	N.S.W. ..	Native ..	Single

## FEMALES.

111	East Maitland	N.S.W. ..	Bronchitis ..	..	Ireland ..	71 years ..	Married
108	Newton ..	"	Myocarditis..	..	England ..	90 years ..	Single
104	Goornong ..	Victoria	Myocardial Degeneration	..	Germany..	79 years ..	Married
103	Hobart ..	Tasmania	Senility ..	..	Tasmania	Native ..	"
103	Maryborough	Queensland	"	..	Scotland ..	44 years ..	"
103	Broadford	Victoria ..	Epithelioma of Face	..	Ireland ..	91 years ..	"
103	Oberon ..	N.S.W. ..	Senility ..	..	"	79 years ..	"
102	Brunswick	Victoria ..	"	..	England ..	Unknown	Unknown
101	Malmesbury	"	"	..	"	80 years ..	Married
101	Gunnedah	N.S.W. ..	Chronic Colitis	..	N.S.W. ..	Native ..	"
100	Burrowa ..	"	Senility ..	..	Ireland ..	68 years ..	"
100	Kensington	Victoria ..	Chronic Myocarditis	..	"	86 years	"
100	Mosman ..	N.S.W. ..	Cerebral Hæmorrhage	..	England ..	97 years ..	"

NOTE.—The particulars shown in this table are those given in the death certificates, and no attempt has been made by the Commonwealth Bureau of Census and Statistics to verify them.

9. Length of Residence in Australia of Persons who Died.—The length of residence in Australia of all persons whose deaths were registered in the year 1931 is shown in the following table:—

LENGTH OF RESIDENCE IN AUSTRALIA OF PERSONS WHO DIED IN 1931.

Length of Residence.	Male Deaths.	Female Deaths.	Total Deaths.	Length of Residence.	Male Deaths.	Female Deaths.	Total Deaths.
Born in Australia ..	21,030	17,880	38,910	Resident 25 to 29 years ..	235	113	348
Resident under 1 year ..	32	18	50	" 30 to 34 " ..	402	154	556
" 1 year ..	25	12	37	" 35 to 39 " ..	361	130	491
" 2 years ..	37	26	63	" 40 to 44 " ..	1,061	586	1,647
" 3 " ..	75	42	117	" 45 to 49 " ..	1,240	813	2,053
" 4 " ..	95	50	145	" 50 to 54 " ..	1,215	623	1,838
" 5 " ..	97	58	155	" 55 to 59 " ..	565	365	930
" 6 " ..	77	53	130	" 60 to 64 " ..	493	436	929
" 7 " ..	90	50	140	" 65 yrs. and over ..	1,560	1,873	3,433
" 8 " ..	68	47	115	Length of residence not stated .. ..	1,531	447	1,978
" 9 " ..	70	44	114				
" 10 to 14 years ..	233	204	437				
" 15 to 19 " ..	529	402	931				
" 20 to 24 " ..	675	338	1,013				
				Total ..	31,796	24,764	56,560

10. Birthplaces of Persons who Died.—The following table provides a summary of birthplaces of persons whose deaths were registered in 1911 and 1931. More detailed information in respect of 1911 and 1931 will be found in "Australian Demography," Bulletin No. 49.

BIRTHPLACES OF PERSONS WHO DIED.—AUSTRALIA.

Birthplace.	1911.			1931.		
	Males.	Females.	Total.	Males.	Females.	Total.
Australasia—						
Australia .. ..	14,476	12,279	26,755	21,030	17,880	38,910
New Zealand .. ..	126	79	205	259	160	419
Europe—						
England and Wales .. ..	5,639	3,541	9,180	5,169	3,594	8,763
Scotland .. ..	1,666	1,112	2,778	1,325	904	2,229
Ireland .. ..	2,837	2,528	5,365	1,591	1,480	3,071
Other British Possessions .. ..	40	26	66	38	17	55
Western Europe .. ..	365	62	427	353	80	433
Central Europe .. ..	678	292	970	489	249	738
Southern Europe .. ..	122	15	137	270	47	317
Eastern Europe .. ..	71	6	77	88	22	110
Asia—						
British Possessions .. ..	102	28	130	103	30	133
Foreign Countries .. ..	470	8	478	243	12	255
Africa—						
British Possessions .. ..	29	18	47	40	24	64
Foreign Countries .. ..	2	1	3	2	3	5
America—						
Canada .. ..	73	15	88	57	22	79
Other British Possessions .. ..	5	6	11	17	6	23
United States of America .. ..	72	18	90	74	39	113
Other Foreign Countries .. ..	35	12	47	11	8	19
Polynesia—						
British .. ..	47	4	51	12	5	17
Foreign .. ..	44	10	54	38	8	46
Indefinite .. ..	692	218	910	587	174	761
Total .. ..	27,591	20,278	47,869	31,796	24,764	56,560

11. **Occupations of Males who Died.**—Information as to the main groups of the occupations of the 31,796 males who died in Australia in 1931 is contained in the following table. Corresponding data for 1911 and 1921 have been added for purposes of comparison.

**OCCUPATIONS OF MALES WHO DIED.—AUSTRALIA.**

Occupations in Classes.	Number of Male Deaths.			Percentage on Total.		
	1911.	1921.	1931.	1911.	1921.	1931.
Professional .. ..	1,028	1,307	1,534	3.73	4.26	4.82
Domestic .. ..	757	830	846	2.74	2.71	2.66
Commercial .. ..	2,120	2,739	3,727	7.68	8.94	11.72
Transport and Communica- tion .. ..	1,614	1,841	2,189	5.85	6.01	6.89
Industrial .. ..	7,379	8,613	10,330	26.74	28.10	32.49
Agricultural, Pastoral, and Mining, &c. .. ..	5,587	5,711	6,157	20.25	18.63	19.36
Indefinite .. ..	1,649	1,436	1,802	5.98	4.68	5.67
Dependent .. ..	7,457	8,175	5,211	27.03	26.67	16.39
<b>Total Male Deaths ..</b>	<b>27,591</b>	<b>30,652</b>	<b>31,796</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

12. **Causes of Death.**—(i) *General.* The classification adopted by the Commonwealth Bureau of Census and Statistics is that of the International Institute of Statistics, as amended by the Committees of Revision which met in Paris in 1909, 1920, and 1929. The revised classification has been used the first time for the year 1931.

(ii) *Mortality Statistics for 1907 and Subsequent Years.* The statistics relating to causes of death in Australia from the year 1907 onward have been tabulated in the Commonwealth Bureau of Census and Statistics in accordance with the above-mentioned classification, and the system is being employed also in the various State statistical offices.

(iii) *Classification of Causes of Death, 1927 to 1931, according to Abridged International Classification.* An abridged classification, which enumerates forty-three diseases and groups of diseases according to the revised classification, is in use in many European countries and American States, and a table has been prepared showing the causes of death according to the abridged classification, so that the results may be compared with those of countries which use the abridged index.

The compilations for the years 1927 to 1931 will be found in full in *Bulletins Nos. 45 to 49 of "Australian Demography."* In the following tables the abridged classification has been employed. Tables A, B and C show deaths of males, females and persons for the year 1931. Table D shows the number of persons who died in each of the years 1927 to 1931 and gives the rate per million of population for the last-named year.

Since death rates are subject to continual fluctuation, it is unsafe to base deductions on the figures relating to a single year. In order, therefore, to furnish a valid basis for comparison, Table E giving the number of deaths and the rates per 1,000,000 persons for three quinquennial periods has been prepared. While the absolute number of deaths has increased, the death rate has shown a very satisfactory decrease, which is reflected in the great majority of the causes specified in the table.



## A—CAUSES OF DEATH—AUSTRALIA.—MALES, 1931.

Abridged Classification.	General Classification Numbers.	N.S.W.	Vic.	Q'land.	S. Aus.	W. Aus.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
1. Typhoid Fever .. .. .	1, 2	23	10	11	7	5	..	..	..	56
2. Typhus Fever .. .. .	3	..	..	..	1	..	..	..	..	1
3. Small-pox .. .. .	6	..	..	..	..	..	..	..	..	..
4. Measles .. .. .	7	12	5	..	..	..	..	..	..	17
5. Scarlet Fever .. .. .	8	18	11	4	1	..	..	..	1	35
6. Whooping Cough .. .. .	9	81	33	7	3	5	7	1	..	137
7. Diphtheria .. .. .	10	81	77	38	7	15	9	..	..	227
8a. Influenza—Pneumonic .. .. .	11(a)	93	115	41	15	30	13	..	1	308
8b. Influenza—Other .. .. .	11(b)	49	45	15	5	19	2	..	..	135
9. Plague .. .. .	14	..	..	..	..	..	..	..	..	..
10. Tuberculosis of the Respiratory System .. .. .	23	607	472	214	154	152	53	2	1	1,655
11a. Tubercular Meningitis .. .. .	24	27	24	4	10	5	9	..	..	79
11b. Other Tuberculous Diseases .. .. .	25-32	36	30	10	11	4	..	..	..	102
12. Syphilis .. .. .	34	34	31	16	9	16	4	..	..	110
13. Malaria .. .. .	38	3	..	9	..	..	..	8	..	20
14. Other Infectious or Parasitic Diseases .. .. .	*	114	91	38	44	19	8	1	..	315
15. Cancer and other Malignant Tumours .. .. .	45-53	1,265	989	531	338	249	109	2	1	3,484
16. Tumours, Non-Malignant or of Unspecified Nature .. .. .	54, 55	66	35	20	19	5	5	..	..	150
17. Chronic Rheumatism, Gout .. .. .	57, 58	24	21	9	5	4	2	..	..	65
18. Diabetes Mellitus .. .. .	59	126	109	32	28	20	7	..	..	322
19. Acute and Chronic Alcoholism .. .. .	75	16	9	5	5	4	..	..	..	39
20. Other General Diseases .. .. .	*	209	119	78	42	29	22	1	..	500
21. Locomotor Ataxy, General Paralysis of Insane .. .. .	80, 83	73	31	14	5	14	1	..	..	138
22. Cerebral Hemorrhage, Embolism, etc. .. .. .	82	442	401	192	167	117	58	1	1	1,379
23. Other Diseases of Nervous System and Sense Organs .. .. .	*	233	153	108	71	31	28	2	1	627
24. Diseases of the Heart .. .. .	90-95	2,356	1,756	758	442	363	195	4	2	5,876
25. Other Diseases of the Circulatory System .. .. .	96-103	576	428	193	77	76	35	1	..	1,386
26a. Acute Bronchitis .. .. .	106(a) (c)	53	26	13	5	7	2	..	..	106
26b. Chronic Bronchitis .. .. .	106(b) (d)	123	121	40	26	26	14	1	..	351
27. Pneumonia (all forms) .. .. .	107-109	818	706	256	178	165	80	2	..	2,205
28. Other Diseases of the Respiratory System .. .. .	104, 105, 110-114	158	239	105	65	54	25	1	..	647
29a. Diarrhoea and Enteritis (under two years of age) .. .. .	119	161	51	35	19	30	7	..	..	303
29b. Diarrhoea and Enteritis (two years and over) .. .. .	120	72	68	51	6	23	2	..	..	222
30. Appendicitis .. .. .	121	124	100	62	26	24	5	..	..	341
31a. Cirrhosis of the Liver .. .. .	124	73	52	32	14	15	3	..	..	189
31b. Other Diseases of the Liver and Biliary Calculi .. .. .	125-127	64	38	22	13	12	8	..	..	157
32a. Hernia, Intestinal Obstruction .. .. .	122	87	86	49	23	20	11	..	..	276
32b. Other Diseases of the Digestive System .. .. .	*	197	151	84	47	36	25	..	2	542
33. Nephritis .. .. .	130-132	732	509	252	131	106	35	4	1	1,770
34. Other Diseases of the Genito-Urinary System .. .. .	133-139	259	209	119	74	51	24	1	..	737
37. Diseases of the Skin, Bones, etc. .. .. .	151-156	80	44	18	17	16	12	..	..	187
38. Congenital Debility, Malformations, Premature Birth, etc. .. .. .	157-161	758	502	288	133	119	85	1	3	1,889
39. Senility .. .. .	162	381	472	233	131	134	82	8	..	1,431
40. Suicide .. .. .	163-171	225	143	139	59	96	24	2	1	689
41. Homicide .. .. .	172-175	29	27	9	6	11	2	..	..	84
42. Accidental or Violent Death (except Suicide and Homicide) .. .. .	176-198	883	603	348	150	214	71	11	7	2,287
43. Non-specified and Ill-Defined Causes .. .. .	199-200	49	48	33	49	28	5	8	..	220
Total—Males .. .. .	..	11,890	9,190	4,525	2,638	2,376	1,093	62	22	31,796

\* No. 14:—4, 5, 12, 13, 15-22, 33, 35-37, 39-44; No. 20:—56, 60-74, 76, 77; No. 23:—78, 79, 84-89; No. 32b:—115-118, 123, 128, 129.

## B—CAUSES OF DEATH.—AUSTRALIA—FEMALES, 1931.

Abridged Classification.	General Classification Numbers.	N.S.W.	Vic.	Q'land.	S. Aus.	W. Aus.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
1. Typhoid Fever .. .. .	1, 2	12	16	10	3	3	3	..	..	47
2. Typhus Fever .. .. .	3	..	..	..	..	..	..	..	..	..
3. Small-pox .. .. .	6	..	..	..	..	..	..	..	..	..
4. Measles .. .. .	7	17	10	..	1	..	..	..	..	28
5. Scarlet Fever .. .. .	8	18	16	3	1	1	..	..	..	39
6. Whooping Cough .. .. .	9	105	39	9	3	5	6	..	..	167
7. Diphtheria .. .. .	10	87	53	32	7	4	10	..	3	196
8a. Influenza—Pneumonic .. .. .	11(a)	90	120	22	11	24	10	1	..	278
8b. Influenza—Other .. .. .	11(b)	48	41	21	6	7	1	1	..	125
9. Plague .. .. .	14	..	..	..	..	..	..	..	..	..
10. Tuberculosis of the Respiratory System .. .. .	23	406	393	114	138	71	45	..	1	1,168
11a. Tubercular Meningitis .. .. .	25-24	18	33	6	11	1	4	..	..	73
11b. Other Tuberculous Diseases .. .. .	25-32	29	36	5	8	5	7	..	..	90
12. Syphilis .. .. .	34	14	12	5	4	1	..	..	..	36
13. Malaria .. .. .	38	1	..	2	..	1	..	..	..	4
14. Other Infectious or Parasitic Diseases .. .. .	*	96	49	30	18	17	9	..	1	220
15. Cancer and other Malignant Tumours .. .. .	45-53	1,172	964	345	351	158	111	2	2	3,105
16. Tumours, Non-Malignant or of Unspecified Nature .. .. .	54, 55	83	57	20	17	13	5	..	..	195
17. Chronic Rheumatism, Gout .. .. .	57, 58	34	48	7	9	4	4	..	..	106
18. Diabetes Mellitus .. .. .	59	263	151	65	59	27	15	..	..	580
19. Acute and Chronic Alcoholism .. .. .	75	6	5	2	..	..	..	..	..	13
20. Other General Diseases .. .. .	*	254	158	82	47	31	29	..	1	602
21. Locomotor Ataxy, General Paralysis of Insane .. .. .	80, 83	18	7	1	5	..	..	..	..	31
22. Cerebral Hamorrhage, Embolism, etc. .. .. .	82	512	518	152	170	79	74	..	..	1,505
23. Other Diseases of Nervous System and Sense Organs .. .. .	*	179	129	69	56	22	22	1	..	478
24. Diseases of the Heart .. .. .	90-95	1,829	1,407	531	360	209	169	1	..	4,506
25. Other Diseases of the Circulatory System .. .. .	96-103	431	439	121	97	43	20	..	..	1,151
26a. Acute Bronchitis .. .. .	106(a)(c)	79	18	10	9	2	2	..	..	120
26b. Chronic Bronchitis .. .. .	106(b)(d)	111	96	38	22	13	9	..	..	289
27. Pneumonia (all forms) .. .. .	107-109	579	515	189	158	74	74	1	..	1,590
28. Other Diseases of the Respiratory System .. .. .	104, 105, 110-114	102	116	47	50	25	21	..	..	361
29a. Diarrhoea and Enteritis (under two years of age) .. .. .	119	122	42	20	14	19	10	..	..	227
29b. Diarrhoea and Enteritis (two years and over) .. .. .	120	66	71	30	12	8	4	..	..	191
30. Appendicitis .. .. .	121	72	52	22	14	14	3	..	..	177
31a. Cirrhosis of the Liver .. .. .	124	25	20	4	8	6	..	..	..	63
31b. Other Diseases of the Liver and Biliary Calculi .. .. .	125-127	105	85	42	12	13	8	..	..	265
32a. Hernia, Intestinal Obstruction .. .. .	122	92	65	36	21	19	14	..	..	247
32b. Other Diseases of the Digestive System .. .. .	*	107	100	30	21	16	15	..	..	290
33. Nephritis .. .. .	130-132	577	488	236	126	70	38	..	1	1,536
34. Other Diseases of the Genito-Urinary System .. .. .	133-139	110	87	39	22	22	10	..	..	290
35a. Post-Abortive Sepsis .. .. .	140(a)	42	13	7	7	6	1	..	..	76
35b. Criminal Abortion .. .. .	140(b)	45	15	5	..	4	2	..	..	71
35c. Puerperal Septicæmia .. .. .	145	41	34	11	9	4	4	..	..	103
36. Other Diseases of Pregnancy and Labour .. .. .	141-144, 146-150	162	92	85	26	21	11	..	3	400
37. Diseases of the Skin, Bones, etc. .. .. .	151-156	58	35	17	14	8	5	..	..	137
38. Congenital Debility, Malformations, Premature Birth, etc. .. .. .	157-161	529	396	181	102	104	56	1	1	1,370
39. Senility .. .. .	162	302	551	176	140	63	87	..	..	1,319
40. Suicide .. .. .	163-171	52	37	20	12	11	6	..	..	138
41. Homicide .. .. .	172-175	13	14	7	4	6	..	..	..	44
42. Accidental or Violent Death (except Suicide and Homicide) .. .. .	176-198	254	176	84	58	41	36	..	1	650
43. Non-specified and Ill-Defined Causes .. .. .	199-200	13	24	10	6	10	4	..	..	67
Total—Females .. .. .	..	9,380	7,843	3,000	2,250	1,305	964	8	14	24,764

\* No. 14:—4, 5, 12, 13, 15-22, 33, 35-37, 39-44; No. 20:—56, 60-74, 76, 77; No. 23:—78, 79, 81, 84-89; No. 32b:—115-118, 123, 128, 129.

## C—CAUSES OF DEATH,—AUSTRALIA—PERSONS, 1931.

Abridged Classification.	General Classification Numbers.	N.S.W.	Vic.	Q'land.	S. Aus.	W. Aus.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
1. Typhoid Fever .. .. .	1, 2	35	26	21	10	8	3	..	..	103
2. Typhus Fever .. .. .	3	..	..	..	1	..	..	..	..	1
3. Small-pox .. .. .	6	..	..	..	..	..	..	..	..	..
4. Measles .. .. .	7	29	15	..	1	..	..	..	..	45
5. Scarlet Fever .. .. .	8	36	27	7	2	1	..	..	1	74
6. Whooping Cough .. .. .	9	186	72	16	6	10	13	1	..	304
7. Diphtheria .. .. .	10	168	130	70	14	19	19	..	3	423
8a. Influenza—Pneumonic .. .. .	11(a)	183	235	63	26	54	23	1	1	586
8b. Influenza—Other .. .. .	11(b)	97	86	36	11	26	3	1	..	260
9. Plague .. .. .	14	..	..	..	..	..	..	..	..	..
10. Tuberculosis of the Respiratory System .. .. .	23	1,013	865	328	292	223	98	2	2	2,823
11a. Tubercular Meningitis .. .. .	24	45	57	10	21	6	13	..	..	152
11b. Other Tuberculous Diseases .. .. .	25-32	65	66	15	19	16	11	..	..	192
12. Syphilis .. .. .	34	48	43	21	13	17	4	..	..	146
13. Malaria .. .. .	38	4	..	11	..	1	..	8	..	24
14. Other Infectious or Parasitic Diseases .. .. .	*	210	140	68	62	36	17	1	1	535
15. Cancer and other Malignant Tumours .. .. .	45-53	2,437	1,953	876	689	407	220	4	3	6,589
16. Tumours, Non-Malignant or of Unspecified Nature .. .. .	54, 55	149	92	40	36	18	10	..	..	345
17. Chronic Rheumatism, Gout .. .. .	57, 58	58	69	16	14	8	6	..	..	171
18. Diabetes Mellitus .. .. .	59	389	260	97	87	47	22	..	..	902
19. Acute and Chronic Alcoholism .. .. .	75	22	14	7	5	4	..	..	..	52
20. Other General Diseases .. .. .	*	463	277	160	89	60	51	1	1	1,102
21. Locomotor Ataxy, General Paralysis of Insane .. .. .	80-83	91	38	15	10	14	1	..	..	169
22. Cerebral Hæmorrhage, Embolism, etc. .. .. .	82	954	919	344	337	196	132	1	1	2,884
23. Other Diseases of Nervous System and Sense Organs .. .. .	*	412	282	177	127	53	50	3	1	1,105
24. Diseases of the Heart .. .. .	90-95	4,185	3,163	1,289	802	572	364	5	2	10,382
25. Other Diseases of the Circulatory System .. .. .	96-103	1,007	867	314	174	119	55	1	..	2,537
26a. Acute Bronchitis .. .. .	106 (a)(c)	132	44	23	14	9	4	..	..	226
26b. Chronic Bronchitis .. .. .	106 (b)(d)	234	217	78	48	39	23	1	..	640
27. Pneumonia (all forms) .. .. .	107-109	1,397	1,221	445	336	239	154	3	..	3,795
28. Other Diseases of the Respiratory System .. .. .	104, 105, 110-114	260	355	152	115	79	46	1	..	1,008
29a. Diarrhœa and Enteritis (under two years of age) .. .. .	119	283	93	55	33	49	17	..	..	530
29b. Diarrhœa and Enteritis (two years and over) .. .. .	120	138	139	81	18	31	6	..	..	413
30. Appendicitis .. .. .	121	196	152	84	40	38	8	..	..	518
31a. Cirrhosis of the Liver .. .. .	124	98	72	36	22	21	3	..	..	252
31b. Other Diseases of the Liver and Biliary Calculi .. .. .	125-127	160	123	64	25	25	16	..	..	422
32a. Hernia, Intestinal Obstruction .. .. .	122	179	151	85	44	39	25	..	..	523
32b. Other Diseases of the Digestive System .. .. .	*	304	251	114	69	52	40	..	2	832
33. Nephritis .. .. .	130-132	1,309	997	488	257	176	73	4	2	3,306
34. Other Diseases of the Genito-Urinary System .. .. .	133-139	369	296	158	96	73	34	1	..	1,027
35a. Post-Abortive Sepsis .. .. .	140(a)	42	13	7	7	6	1	..	..	76
35b. Criminal Abortion .. .. .	140(b)	45	15	5	..	4	2	..	..	71
35c. Puerperal Septicæmia .. .. .	145	41	34	11	9	4	4	..	..	103
36. Other Diseases of Pregnancy and Labour .. .. .	141-144, 146-150	162	92	85	26	21	11	..	3	400
37. Diseases of the Skin, Bones, etc. .. .. .	151-156	138	79	35	31	24	17	..	..	324
38. Congenital Debility, Malformations, Premature Birth, etc. .. .. .	157-161	1,287	898	469	235	223	141	2	4	3,259
39. Senility .. .. .	162	683	1,023	399	271	197	169	8	..	2,750
40. Suicide .. .. .	163-171	277	180	159	71	107	30	2	1	827
41. Homicide .. .. .	172-175	42	41	16	10	17	2	..	..	128
42. Accidental or Violent Death (except Suicide and Homicide) .. .. .	176-193	1,137	779	432	208	255	107	11	8	2,937
43. Non-specified and Ill-Defined Causes .. .. .	199-200	62	72	43	55	38	9	8	..	287
Total—Persons .. .. .	..	21,270	17,033	7,525	4,888	3,681	2,057	70	36	56,560

\* No. 14:—4, 5, 12, 13, 15-22, 33, 35-37; No. 20:—56, 60-74, 76, 77; No. 23:—78, 79, 81, 84-89; No. 32b:—115-118, 123, 128, 129.

## D—CAUSES OF DEATH.—AUSTRALIA, 1927 TO 1931.

Abridged Classification.	General Classification Numbers.	1927.	1928.	1929.	1930.	1931.	1931— Rate per 1,000,000 Population.
1. Typhoid Fever .. .. .	1, 2	161	169	106	113	103	16
2. Typhus Fever .. .. .	3	2	5	..	2	1	1
3. Small-pox .. .. .	6	..	..	..	2	..	..
4. Measles .. .. .	7	113	201	143	146	45	7
5. Scarlet Fever .. .. .	8	159	131	101	79	74	11
6. Whooping Cough .. .. .	9	377	237	345	330	304	47
7. Diphtheria .. .. .	10	388	433	460	387	423	65
8a. Influenza—Pneumonic .. .. .	11(a)	238	547	646	137	586	90
8b. Influenza—Other .. .. .	11(b)	189	252	373	141	260	40
9. Plague .. .. .	14	..	..	..	..	..	..
10. Tuberculosis of the Respiratory System .. .. .	23	3,030	3,202	3,002	2,850	2,823	434
11a. Tubercular Meningitis .. .. .	24	179	164	185	153	152	23
11b. Other Tuberculous Diseases .. .. .	25-32	232	277	277	255	192	30
12. Syphilis .. .. .	34	134	171	146	166	146	22
13. Malaria .. .. .	38	29	15	17	22	24	4
14. Other Infectious or Parasitic Diseases .. .. .	..	584	633	674	562	535	82
15. Cancer and other Malignant Tumours .. .. .	45-53	5,758	6,010	6,256	6,120	6,589	1,014
16. Tumours, Non-Malignant or of Unspecified Nature .. .. .	54, 55	149	333	332	349	345	53
17. Chronic Rheumatism, Gout .. .. .	57, 58	153	147	162	139	171	26
18. Diabetes Mellitus .. .. .	59	806	753	823	722	902	139
19. Acute and Chronic Alcoholism .. .. .	75	100	121	104	74	52	8
20. Other General Diseases .. .. .	*	1,216	1,084	1,131	1,093	1,102	170
21. Locomotor Ataxy, General Paralysis of Insane .. .. .	80-83	224	181	174	142	169	26
22. Cerebral Haemorrhage, Embolism, etc. .. .. .	82	3,614	3,022	3,017	2,810	2,884	444
23. Other Diseases of Nervous System and Sense Organs .. .. .	*	1,548	1,426	1,457	1,149	1,105	170
24. Diseases of the Heart .. .. .	90-95	8,393	8,737	9,281	8,626	10,382	1,593
25. Other Diseases of the Circulatory System .. .. .	96-103	1,362	2,174	2,453	2,646	2,537	390
26a. Acute Bronchitis .. .. .	106(a)(c)	344	260	307	215	226	35
26b. Chronic Bronchitis .. .. .	106(b)(d)	790	753	821	625	640	98
27. Pneumonia (all forms) .. .. .	107-109	4,451	4,685	4,948	3,328	3,795	584
28. Other Diseases of the Respiratory System .. .. .	104, 105, 110-114	1,095	1,030	1,073	956	1,008	155
29a. Diarrhoea and Enteritis (under two years of age) .. .. .	119	1,330	1,616	963	1,078	530	82
29b. Diarrhoea and Enteritis (two years and over) .. .. .	120	513	520	442	464	413	64
30. Appendicitis .. .. .	121	483	470	481	508	518	80
31a. Cirrhosis of the Liver .. .. .	124	321	339	301	276	252	39
31b. Other Diseases of the Liver and Biliary Calculi .. .. .	125-127	432	398	440	462	422	65
32a. Hernia, Intestinal Obstruction .. .. .	122	517	539	583	560	523	80
32b. Other Diseases of the Digestive System .. .. .	*	895	909	843	791	832	128
33. Nephritis .. .. .	130-132	3,098	3,189	3,406	3,182	3,306	509
34. Other Diseases of the Genito-Urinary System .. .. .	133-139	1,013	967	1,076	1,011	1,027	158
35a. Post-Abortive Sepsis .. .. .	140(a)	†	†	†	†	76	12
35b. Criminal Abortion .. .. .	140(b)	†	†	†	†	71	11
35c. Puerperal Septicæmia .. .. .	145	288	275	222	242	103	16
36. Other diseases of Pregnancy and Labour .. .. .	141-144, 146-150	504	527	436	438	400	62
37. Diseases of the Skin, Bones, etc. .. .. .	151-156	355	351	384	364	324	50
38. Congenital Debility, Malformations, Premature Birth, etc. .. .. .	157-161	4,147	4,059	3,945	3,742	3,259	502
39. Senility .. .. .	162	3,623	3,196	3,332	3,071	2,750	423
40. Suicide .. .. .	163-171	740	777	785	943	827	127
41. Homicide .. .. .	172-175	110	111	118	103	128	20
42. Accidental or Violent Death (except Suicide and Homicide) .. .. .	176-198	3,525	3,379	3,550	3,356	2,937	452
43. Non-specified and Ill-Defined Causes .. .. .	199, 200	570	603	536	401	287	44
Total .. .. .	..	58,282	59,378	60,857	55,331	56,560	8,701

\* No. 14:—4, 5, 12, 13, 15-22, 33, 35-37; No. 20:—56, 60-74, 76, 77; No. 23:—78, 79, 81, 84-89; No. 32b:—115-118, 123, 128, 129. † Not available, included in 35c and 36.

## E—CAUSES OF DEATH.—AUSTRALIA, NUMBERS AND RATES.

Abridged Classification.	General Classification. Numbers.	Number of Deaths.			Rate per 1,000,000 of Population.		
		1911-15.	1921-25.	1927-31.	1911-15.	1921-25.	1927-31.
1. Typhoid Fever .. .. .	1, 2	2,848	1,209	652	119	43	21
2. Typhus Fever .. .. .	3	..	4	10	..	..	..
3. Small-pox .. .. .	6	6	4	2	..	..	..
4. Measles .. .. .	7	1,505	582	648	63	20	20
5. Scarlet Fever .. .. .	8	237	235	544	10	8	17
6. Whooping Cough .. .. .	9	1,657	1,612	1,593	69	57	50
7. Diphtheria .. .. .	10	3,677	2,565	2,091	154	90	66
8a. Influenza—Pneumonic .. .. .	11(a)	..	1,808	2,154	..	64	68
8b. Influenza—Other .. .. .	11(b)	1,894	1,344	1,215	79	47	38
9. Plague .. .. .	14	..	72	..	..	3	..
10. Tuberculosis of the Respiratory System .. .. .	23	15,737	15,321	14,907	659	538	469
11a. Tubercular Meningitis .. .. .	24	1,156	876	833	48	31	26
11b. Other Tuberculous Diseases .. .. .	25-32	1,460	1,404	1,233	61	49	39
12. Syphilis .. .. .	34	837	632	763	35	22	24
13. Malaria .. .. .	38	112	150	107	5	5	3
14. Other Infectious or Parasitic Diseases .. .. .	*	2,820	3,063	2,988	118	108	94
15. Cancer and other Malignant Tumours .. .. .	45-53	17,838	25,794	30,733	746	907	967
16. Tumours, Non-Malignant or of Unspecified Nature .. .. .	54, 55	546	633	1,508	23	22	48
17. Chronic Rheumatism, Gout .. .. .	57, 58	552	862	772	23	30	24
18. Diabetes Mellitus .. .. .	59	2,322	3,355	4,006	97	118	126
19. Acute and Chronic Alcoholism .. .. .	75	920	763	451	38	27	14
20. Other General Diseases .. .. .	*	4,039	5,355	5,626	169	188	177
21. Locomotor Ataxy, General Paralysis of Insane .. .. .	80-83	1,074	1,118	890	45	39	28
22. Cerebral Hemorrhage, Embolism, etc. .. .. .	82	10,957	13,637	15,347	458	479	483
23. Other Diseases of Nervous System and Sense Organs .. .. .	* ..	12,550	10,323	6,685	525	363	210
24. Diseases of the Heart .. .. .	90-95	24,358	31,588	45,419	1,019	1,110	1,430
25. Other Diseases of the Circulatory System .. .. .	96-103	7,869	7,191	11,172	329	253	352
26a. Acute Bronchitis .. .. .	106(a)(c)	2,250	1,580	1,352	94	56	43
26b. Chronic Bronchitis .. .. .	106(b)(d)	4,962	4,053	3,629	208	142	114
27. Pneumonia (all forms) .. .. .	107-109	15,201	18,400	21,207	636	647	668
28. Other Diseases of the Respiratory System .. .. .	104, 105 110-114	4,583	5,781	5,162	192	203	163
29a. Diarrhœa and Enteritis (under two years of age) .. .. .	119	15,207	9,866	5,517	636	347	174
29b. Diarrhœa and Enteritis (two years and over) .. .. .	120	4,027	3,144	2,352	169	111	74
30. Appendicitis .. .. .	121	1,761	2,035	2,460	74	72	77
31a. Cirrhosis of the Liver .. .. .	124	1,932	1,531	1,489	81	54	47
31b. Other Diseases of the Liver and Biliary Calculi .. .. .	125-127	1,445	1,796	2,154	60	63	68
32a. Hernia, Intestinal Obstruction .. .. .	122	2,336	2,648	2,722	98	93	86
32b. Other Diseases of the Digestive System .. .. .	*	3,968	4,053	4,270	166	142	134
33. Nephritis .. .. .	130-132	10,751	12,803	16,181	450	450	509
34. Other Diseases of the Genito-Urinary System .. .. .	133-139	3,065	4,140	5,094	128	146	160
35a. Post-Abortive Sepsis .. .. .	140(a)	†	†	76†	†	†	2†
35b. Criminal Abortion .. .. .	140(b)	†	†	71†	†	†	2†
35c. Puerperal Septicæmia .. .. .	145	1,072	1,138	1,130	45	40	36
36. Other Diseases of Pregnancy and Labour .. .. .	141-144 146-150 151-156	2,060	2,321	2,305	86	82	73
37. Diseases of the Skin, Bones, etc. .. .. .	151-156	994	1,556	1,778	42	55	56
38. Congenital Debility, Malformations, Premature Birth, etc. .. .. .	157-161	21,410	21,511	19,152	896	756	603
39. Senility .. .. .	162	20,904	20,429	16,172	875	718	509
40. Suicide .. .. .	165-171	3,123	3,106	4,073	131	109	128
41. Homicide .. .. .	172-175	446	439	570	19	15	18
42. Accidental or Violent Death (except Suicide and Homicide) .. .. .	176-198	14,842	13,875	16,747	621	488	527
43. Non-specified and Ill-Defined Causes .. .. .	199, 200	3,026	3,460	2,397	127	122	75
Total .. .. .	..	256,337	271,171	290,408	10,726	9,531	9,140

\* No. 14:—4, 5, 12, 13, 15-22, 33, 35-37, 39-44; No. 20:—36, 60-74, 76, 77; No. 23:—78, 79, 81, 84-89; No. 32b:—115-118, 123, 128, 129. † 1931 only. ‡ Not available, included in 35c and 36.

13. Deaths from Specific Causes.—(i) *Typhoid Fever*. The number of deaths from typhoid fever declined from 161 in 1927 to 103 in 1931, the rate for the latter year being sixteen per 1,000,000 living, and much lower than the average of 21 for the last five years. Of the 103 who died, 56 were males and 47 females. During the quinquennium 1911 to 1915 the death rate from typhoid fever was 119 per 1,000,000.

(ii) *Typhus*. Deaths from typhus have been rare in Australia, and only one death, which occurred in Western Australia, was recorded during 1931. During 1930, two deaths were recorded from this cause, both of which occurred in Western Australia. In 1928, three deaths occurred in Queensland and two in Western Australia. In 1927, one death occurred in South Australia and one in Western Australia.

(iii) *Small-pox*. The number of deaths from small-pox in Australia is very small. During the five years under review only two deaths were recorded from this cause, both of which occurred in 1930 in Western Australia.

(iv) *Measles*. Of the deaths from measles the greatest number occurred during 1928, when 201 were registered, while the minimum was in 1931 with a total of 45 deaths. Of the 45 deaths during 1931, 17 were males and 28 females. The death rate for the last five years, viz., 20 per 1,000,000 was equal to that for the years 1921 to 1925, but much less than the 63 per 1,000,000 recorded in 1911 to 1915.

(v) *Scarlet Fever*. The number of deaths has decreased each year since 1927. During 1931, there were 74 deaths, of which 35 were males and 39 females. Of these deaths 36 occurred in New South Wales. The rate per 1,000,000 in 1927-31, viz., 17, was the highest for the three periods reviewed on the previous page, but the rate for 1931 was only 11.

(vi) *Whooping Cough*. During 1931, deaths from whooping cough numbered 304 (137 males and 167 females) representing a death rate of 47 per 1,000,000 persons. The death rate for this disease is almost invariably heavier for females than for males. For both sexes combined it has declined from 69 in 1911-15, to 50 per 1,000,000 in 1927-31.

(vii) *Diphtheria*. The number of deaths due to diphtheria was 423 in 1931. Of these deaths (representing a death rate of 65 per 1,000,000 persons) 227 were males and 196 females. The death rate is now less than half of that experienced during the five years ended 1915.

(viii) *Influenza*. The deaths from influenza during 1931 were rather above the average of the years 1927 to 1931. Of the 846 deaths during 1931 from this disease, 586 were ascribed to pneumonic influenza and 260 to ordinary influenza.

(ix) *Plague*. Since 1911 deaths from this disease numbered 1 in 1912; 57 in 1921; 14 in 1922; and 1 in 1923.

(x) *Tuberculosis of the Respiratory System*. Of the various forms of tuberculosis prevalent in Australia, phthisis, or tuberculosis of the lungs, has attracted the most attention. The intimate relation, however, between tuberculosis of the lungs and of other parts of the respiratory system renders it desirable that all forms of tuberculosis of the respiratory system should be brought under one head for investigations concerning the age incidence and duration of this disease.

The decline in the toll levied by this disease on the community is plainly disclosed by the table on page (536), which shows how both the number of deaths and the death rate have declined since the period 1911 to 1915.

During 1931 there were 2,823 deaths (1,655 males and 1,168 females) from tuberculosis of the respiratory system, which compares favourably with the average of 3,021 for the preceding four years. The deaths in 1931 represented a rate of 434 per 1,000,000 persons.

(xi) *Tuberculosis of the Meninges*. The number of deaths ascribed to this cause in 1931 was 152, which is below the average for the preceding four years.

(xi) *Other Forms of Tuberculosis.* The deaths in 1931 include the following:—Tuberculosis of the intestines and peritoneum, 55; spinal column, 40; other bones and joints, 14; skin, etc., 2; lymphatic system, 4; genito-urinary system, 19; acute disseminated tuberculosis, 43; chronic disseminated tuberculosis, 2, and disseminated tuberculosis not specified as acute or chronic, 12.

(xii) *All Forms of Tuberculosis.*—(a) *General.* The total number of deaths in 1931 was 3,167, viz., 1,836 males and 1,331 females.

(b) *Ages at Death.* The following table shows the ages of these 3,167 persons. Corresponding figures are also given for the year 1911:—

**TUBERCULAR DISEASES.—DEATHS IN AGE-GROUPS, AUSTRALIA.**

Ages.	1911.			1931.		
	Males.	Females.	Total.	Males.	Females.	Total.
Under 5 years .. ..	124	114	238	57	47	104
5 years and under 10 .. ..	30	31	61	14	14	28
10 " " 15 .. ..	44	42	86	19	20	39
15 " " 20 .. ..	70	148	218	45	105	150
20 " " 25 .. ..	168	260	428	113	183	296
25 " " 30 .. ..	219	255	474	136	199	335
30 " " 35 .. ..	220	206	426	191	164	355
35 " " 40 .. ..	187	176	363	187	156	343
40 " " 45 .. ..	246	140	386	207	102	309
45 " " 50 .. ..	223	100	323	197	83	280
50 " " 55 .. ..	164	49	213	185	62	247
55 " " 60 .. ..	140	49	189	164	57	221
60 " " 65 .. ..	89	43	132	128	50	178
65 " " 70 .. ..	64	37	101	110	38	148
70 " " 75 .. ..	42	19	61	52	31	83
75 " " 80 .. ..	15	6	21	27	16	43
80 " " over .. ..	7	6	13	4	4	8
Age unspecified .. ..	3	..	3	..	..	..
<b>Total .. ..</b>	<b>2,055</b>	<b>1,681</b>	<b>3,736</b>	<b>1,836</b>	<b>1,331</b>	<b>3,167</b>

(c) *Occupations at Death, Males.* A tabulation of occupations of the males who died from tubercular diseases and the percentage which each class bears on the total male deaths from these diseases in 1911, 1921 and 1931 is given hereunder:—

**OCCUPATIONS OF MALES WHO DIED FROM TUBERCULAR DISEASES—AUSTRALIA.**

Occupation Class.	Number of Male Deaths.			Percentage on Total.		
	1911.	1921.	1931.	1911.	1921.	1931.
Professional .. ..	112	167	107	5.45	7.69	5.83
Domestic .. ..	87	95	64	4.23	4.38	3.48
Commercial .. ..	280	292	270	13.63	13.45	14.71
Transport and Communication	160	165	170	7.79	7.60	9.26
Industrial .. ..	695	784	694	33.82	36.11	37.80
Agricultural, Pastoral, Mining, etc. .. ..	400	404	303	19.46	18.61	16.50
Indefinite .. ..	62	80	157	3.02	3.68	8.55
Dependent .. ..	259	184	71	12.60	8.48	3.87
<b>Total Male Deaths ..</b>	<b>2,055</b>	<b>2,171</b>	<b>1,836</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

(d) *Length of Residence in Australia.* The length of residence in Australia of persons who died from tubercular diseases in 1931 is given in the next table.

**LENGTH OF RESIDENCE IN AUSTRALIA OF PERSONS WHO DIED FROM TUBERCULAR DISEASES, 1931.**

Length of Residence in Australia.	Male.	Fem.	Total.	Length of Residence in Australia.			
				Male.	Fem.	Total.	
Born in Australia ..	1,363	1,128	2,491	Resident 10 years & under 15	30	25	55
Resident under 1 year ..	2	..	2	"  15 "  "  20	48	28	76
"  1 year ..	2	3	5	"  20 "  & over ..	235	88	323
"  2 years ..	3	3	6	Length of residence not stated	62	11	73
"  3 "  " ..	10	5	15				
"  4 "  " ..	17	9	26				
"  5 "  and under 10	64	31	95	Total Deaths ..	1,836	1,331	3,167

(e) *Death Rates.* The preceding table and the table on page 530 show that among persons who have lived less than five years in Australia, 412 deaths occurred, and of these, 54, or 13.1 per cent., were due to tubercular diseases.

In order to show the prevalence of tuberculosis in the several States and the change in the incidence in recent years, the death rates from tubercular diseases in respect of the years 1911 and 1931 are given in the following table, together with the proportion which deaths from tuberculosis bear to 10,000 deaths from all causes :—

**TUBERCULOSIS (ALL FORMS).—DEATH RATES (a) AND PROPORTION OF TOTAL DEATHS.**

State or Territory.	Death Rate per 100,000 of Mean Population.					
	1911.			1931.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
New South Wales ..	85	67	76	53	37	45
Victoria ..	101	97	99	59	51	55
Queensland ..	74	58	67	45	28	37
South Australia ..	81	91	86	58	56	57
Western Australia ..	84	71	78	74	40	58
Tasmania ..	90	82	86	61	51	56
Northern Territory ..	293	..	241	69	..	44
Federal Capital Territory ..	..	131	56	21	25	23
Australia ..	88	78	83	55	42	49

State or Territory.	Proportion per 10,000 Deaths from all Causes.					
	1911.			1931.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
New South Wales ..	737	737	737	563	483	528
Victoria ..	801	936	862	572	589	580
Queensland ..	613	648	626	504	417	469
South Australia ..	775	995	877	663	698	679
Western Australia ..	718	870	770	707	590	666
Tasmania ..	839	854	846	604	581	593
Northern Territory ..	1,356	..	1,231	323	..	286
Federal Capital Territory ..	..	2,000	1,000	455	714	556
Australia ..	745	829	780	577	537	560

a) Number of deaths from tuberculosis per 100,000 of mean population.



(f) *Death Rates, Various Countries.* The following comparative table for various countries shows that Australia occupies a very favourable position as regards the death rate from this disease.

**TUBERCULOSIS.—DEATHS PER 100,000 PERSONS LIVING, VARIOUS COUNTRIES.**

Country.	Year.	Respiratory System.	All Forms.	Country.	Year.	Respiratory System.	All Forms.
Queensland ..	1931	34	37	Egypt ..	1927	66	85
New Zealand ..	1931	35	43	Scotland ..	1930	62	88
Union of South Africa (Whites) ..	1929	32	45	England and Wales ..	1930	74	90
New South Wales ..	1931	40	45	Great Britain and Northern Ireland ..	1930	73	91
Tasmania ..	1931	56	45	Italy ..	1930	82	111
Victoria ..	1931	55	48	Switzerland ..	1930	94	124
<b>Australia</b> ..	<b>1931</b>	<b>43</b>	<b>49</b>	Sweden ..	1930	(a)	125
Western Australia ..	1931	58	53	Northern Ireland ..	1930	95	128
South Australia ..	1931	50	57	Irish Free State ..	1930	101	130
Ceylon ..	1929	(a)	60	Spain ..	1929	111	135
United States (Registration Area) ..	1930	63	71	Norway ..	1930	121	150
Denmark ..	1929	59	74	Greece ..	1926	136	151
Netherlands ..	1930	55	75	France ..	1928	140	165
Germany ..	1930	(a)	78	Czechoslovakia ..	1929	160	179
Belgium ..	1929	56	78	Japan ..	1930	134	186
Canada (including Quebec) ..	1930	65	80	Finland ..	1929	233	270

(a) Not available.

(xii) *Syphilis.*—In 1931, 146 persons—110 males and 36 females—died from syphilis. The rate per 1,000,000 persons was 22 in 1931 compared with average rates of 24, 22, and 35 for the year groups 1927–31; 1921–25 and 1911–15, respectively.

(xiii) *Malaria.* Deaths from malarial diseases are mainly confined to the tropical districts of Northern Queensland and Western Australia, and to the Northern Territory; 11 out of the 24 deaths registered in 1931 occurred in Queensland, 8 in the Northern Territory, 4 in New South Wales and 1 in Western Australia. The death rate was 3 per 1,000,000 for the quinquennium 1927–31, as compared with a rate of 5 for 1911 to 1915, and 1921 to 1925.

(xiv) *Other Infectious and Parasitic Diseases.* The deaths registered under this heading numbered 535 in 1931, including 95 from dysentery, erysipelas 56, lethargic encephalitis 36, acute poliomyelitis 49, meningococcal meningitis 25, tetanus 74, leprosy 6, purulent infection and septicæmia 77, hydatid cysts 53, and other infectious or parasitic diseases 64.

(xv) *Cancer and other Malignant Tumours.*—(a) *General.* The number of deaths from cancer increased continuously to 6,256 in 1929, but declined slightly to 6,120 in 1930, and rose again to 6,589 in 1931. Of the deaths registered, 3,484 were of males, viz., 1,265 in New South Wales, 989 in Victoria, 531 in Queensland, 338 in South Australia, 249 in Western Australia, 109 in Tasmania, 2 in the Northern Territory and 1 in Federal Capital Territory; while 3,105 were of females, viz., 1,172 in New South Wales, 964 in Victoria, 345 in Queensland, 351 in South Australia, 158 in Western Australia, 111 in Tasmania, 2 in the Northern Territory and 2 in Federal Capital Territory.

(b) *Type and Seat of Disease.* Tables showing the type and seat of disease, in conjunction with age, and with conjugal condition, of the persons dying from cancer in 1931 will be found in Bulletin No. 49 of "Australian Demography." A summary regarding type and seat of disease for the year 1931 is given hereunder:—

## DEATHS FROM CANCER.—TYPE AND SEAT OF DISEASE, AUSTRALIA, 1931.

Type of Disease.	Males.	Females	Persons.	Seat of Disease.	Males.	Females	Persons.
Cancer .. ..	344	311	655	Buccal Cavity and Pharynx ..	365	48	413
Carcinoma—				Digestive Tract and Peritoneum ..	2,055	1,411	3,466
Carcinoma Simplex	2,461	2,257	4,718	Respiratory Organs	198	65	263
Epithelioma ..	190	73	263	Uterus .. ..	..	489	489
Scirrhus .. ..	2	35	37	Other Female Genital Organs ..	..	177	177
Rodent Ulcer ..	28	17	45	Breast .. ..	7	594	601
Adeno-Carcinoma	29	40	69	Male Genito-Urinary Organs ..	468	..	468
Colloid Carcinoma	4	2	6	Skin .. ..	117	51	168
Paget's Disease ..	1	..	1	Other or Unspecified Organs ..	274	270	544
Sarcoma—							
Sarcoma .. ..	160	146	306				
Myeloma .. ..	2	2	4				
Endothelioma ..	12	4	16				
Melanoma—							
Melanotic Sarcoma	18	11	29				
Melano-Carcinoma	7	2	9				
Embryonic Tumours—							
Hypernephroma	18	13	31				
Teratoma .. ..	3	1	4				
Malignant Disease..	205	191	396				
<b>Total Deaths</b>	<b>3,484</b>	<b>3,105</b>	<b>6,589</b>	<b>Total Deaths</b>	<b>3,484</b>	<b>3,105</b>	<b>6,589</b>

(c) *Ages at Death.* The ages of the persons who died from cancer in 1911 and 1931 are given in the following table, which shows that while the ages below 35 are not immune from the disease, the great majority of deaths occurred at ages from 35 upwards, the maximum being found in the age-group 65 to 70. The table also reveals the very great increase in numbers dying from cancer. The increase in the rate is shown in a succeeding table.

## DEATHS FROM CANCER.—AGES, AUSTRALIA.

Ages.	1911.			1931.		
	Males.	Females.	Total.	Males.	Females.	Total.
Under 15 years .. ..	21	8	29	25	23	48
15 years and under	10	6	16	12	11	23
20 .. ..	10	7	17	12	14	26
25 .. ..	12	17	29	19	13	32
30 .. ..	25	35	60	26	55	81
35 .. ..	29	59	88	59	98	157
40 .. ..	81	100	181	111	173	284
45 .. ..	132	173	305	149	261	410
50 .. ..	208	203	411	261	287	548
55 .. ..	203	179	382	349	344	693
60 .. ..	243	177	420	519	400	919
65 .. ..	306	194	500	662	478	1,140
70 .. ..	203	160	363	609	410	1,019
75 .. ..	150	136	286	397	294	691
80 .. ..	83	67	150	187	152	339
85 years and over	44	39	83	87	92	179
Unspecified .. ..	1	..	1	..	..	..
<b>Total Deaths</b> ..	<b>1,761</b>	<b>1,560</b>	<b>3,321</b>	<b>3,484</b>	<b>3,105</b>	<b>6,589</b>

(d) *Occupations.* A tabulation in summarized form of occupations of the males who died from cancer in 1911, 1921 and 1931, together with the percentage of each class on the total male deaths from this disease, is given hereunder :—

#### OCCUPATION OF MALES WHO DIED FROM CANCER.—AUSTRALIA.

Occupation Class.	Number of Male Deaths.			Percentage on Total.		
	1911.	1921.	1931.	1911.	1921.	1931.
Professional .. ..	92	133	188	5.23	5.45	5.40
Domestic .. ..	62	76	97	3.52	3.11	2.78
Commercial .. ..	179	275	446	10.17	11.27	12.80
Transport and Communica- tion .. ..	121	212	295	6.87	8.69	8.47
Industrial .. ..	622	940	1,346	35.32	38.52	38.63
Agricultural, Pastoral, Mining, etc. .. ..	512	639	843	29.07	26.19	24.20
Indefinite .. ..	124	129	130	7.04	5.29	3.73
Dependent .. ..	49	36	139	2.78	1.48	3.99
<b>Total Male Deaths ..</b>	<b>1,761</b>	<b>2,440</b>	<b>3,484</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

(e) *Death Rates.* The following table shows the death rates per 100,000 of mean population from cancer in each State for the years 1911 and 1931.

The substantial increase in the death rate since 1911 is reflected in both sexes and in all States.

#### DEATHS FROM CANCER.—RATES.(a)

State or Territory.	1911.			1931.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales .. ..	77	71	74	99	95	97
Victoria .. ..	80	85	82	111	106	109
Queensland .. ..	71	56	64	105	77	92
South Australia .. ..	70	76	73	112	124	118
Western Australia .. ..	65	57	62	110	81	97
Tasmania .. ..	77	60	69	100	100	100
Northern Territory .. ..	37	..	30	69.	119	87
Federal Capital Territory ..	99	..	56	21	51	35
<b>Australia .. ..</b>	<b>75</b>	<b>72</b>	<b>74</b>	<b>105</b>	<b>97</b>	<b>101</b>

(a) Number of Deaths from cancer per 100,000 of mean population.

(f) *Proportion of Total Deaths.* While the death rate from all causes has diminished substantially in recent years, the rate from cancer has risen almost continuously, the result being that out of 10,000 deaths from all causes, 1,165 were due to cancer in 1931, as against 693 per 10,000 total deaths in 1911.

## DEATHS FROM CANCER—PROPORTIONS ON 10,000 DEATHS.

State or Territory.	1911.			1931.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales ..	662	783	713	1,064	1,249	1,146
Victoria .. ..	637	819	719	1,076	1,229	1,147
Queensland .. ..	586	628	602	1,173	1,150	1,164
South Australia ..	675	828	745	1,281	1,560	1,410
Western Australia ..	557	700	605	1,048	1,211	1,106
Tasmania .. ..	723	629	680	997	1,151	1,070
Northern Territory ..	170	..	154	323	2,500	571
Federal Capital Territory ..	2,000	..	1,000	455	1,429	833
Australia .. ..	638	769	693	1,096	1,254	1,165

(g) *Comparison with Tuberculosis.* In recent years the death rate from tuberculosis has shown a tendency to decrease, while that from cancer has displayed an almost continuous increase. The table hereunder shows that for each of the periods under review the decline in the death rate from tuberculosis has been accompanied by an almost equal increase in the rate for cancer. Thus the death rate for tuberculosis declined by 36 while the rate for cancer increased by 34 per 100,000 population. This equal but opposite tendency may be demonstrated by stating that the death rate from tuberculosis and cancer combined remains almost constant from period to period, the figures being:—1901–05, 152 per 100,000; 1906–10, 145; 1911–1915, 152; 1916–20, 154; 1921–25, 153; and 1927–31, 150.

## TUBERCULOSIS AND CANCER.—DEATH RATES(a)—AUSTRALIA.

Period.	Death Rate (a) from Tuberculosis.			Death Rate (a) from Cancer.		
	Males.	Females.	Total.	Males.	Females.	Total.
1901–05 ..	100	77	89	64	61	63
1906–10 ..	81	69	75	71	70	70
1911–15 ..	84	69	77	75	74	75
1916–20 ..	84	59	71	86	80	83
1921–25 ..	71	52	62	93	88	91
1927–31 ..	62	46	53	100	96	97

(a) Number of deaths per 100,000 of mean population.

(h) *Death Rates, Various Countries.* The following table shows the Australian death rate from cancer in comparison with that for other countries:—

## CANCER.—DEATHS PER 100,000 PERSONS LIVING, VARIOUS COUNTRIES.

Country.	Year.	Rate.	Country.	Year.	Rate.
Egypt .. ..	1927	20	New Zealand ..	1931	103
Greece .. ..	1926	28	Czechoslovakia ..	1929	111
Italy .. ..	1930	70	Irish Free State ..	1930	113
Japan .. ..	1930	70	Sweden .. ..	1928	118
Spain .. ..	1929	70	Northern Ireland ..	1930	119
Belgium .. ..	1929	75	Netherlands ..	1930	123
Finland .. ..	1929	75	Norway .. ..	1930	127
Union of South Africa			Germany .. ..	1930	131
(Whites) .. ..	1929	77	Switzerland ..	1930	141
Canada (including			Denmark .. ..	1929	144
Quebec) .. ..	1930	91	Great Britain and		
France .. ..	1928	95	Northern Ireland ..	1930	145
United States (Regis-			England and Wales ..	1930	145
tration Area) ..	1930	97	Scotland .. ..	1930	146
Australia .. ..	1931	101			

(xvi) *Tumours, Non-malignant or of Unspecified Nature.* The number of deaths in 1931 was 1,508, including 124 deaths from non-malignant tumours, viz.—female genital organs 77, brain 29, other organs 18; and 221 deaths from tumours of undetermined nature, viz.—female genital organs 8, brain 168, other organs 45. The rate per million was 53 for 1931 and 48 for the period 1927–31. Comparison with earlier periods is vitiated by the omission from this cause prior to 1928 of tumours of the brain.

(xvii) *Chronic Rheumatism, Gout.* Deaths from this cause in 1931 numbered 171, viz.—65 males and 106 females. The rate per million for 1927–31 was lower than for 1921–25, but higher than for 1911–15.

(xviii) *Diabetes Mellitus.* Table E, page 536, shows that both the number of deaths and the rate per million persons have been steadily increasing. The rate per million for 1927–31 was 126 as compared with 97 for 1911–15. In 1931, the number of deaths from this cause was 902, viz.—322 males, and 580 females—representing a rate of 139 per million persons.

(xix) *Acute and Chronic Alcoholism.* Deaths from this cause have been decreasing rapidly. The number of deaths in 1931 was 52, with a rate per million persons of only 8. The rate for the period 1911–15, was 38.

(xx) *Other General Diseases.* Under this head are included rheumatic fever, diseases of the thyroid gland, *anæmia*, leucæmia, and a number of less important diseases. For the number of deaths under each sub-head see Table F, page 553.

(xxi) *Locomotor Ataxy, General Paralysis of the Insane.* The number of deaths in 1931 was 169, viz.—locomotor ataxy 45 males, 10 females; general paralysis of the insane, 93 males, 21 females. The rate per million persons was 28 for the period 1927–31, as compared with 45 for the period 1911–15.

(xxii) *Cerebral Hæmorrhage, Embolism and Softening of the Brain.* The deaths under this heading have increased in number during the period under review. The figures for 1931 are made up as follows:—Cerebral hæmorrhage and apoplexy, 947 males, 1,088 females; cerebral embolism, 35 males, 30 females; cerebral thrombosis, 253 males, 252 females; softening of the brain, 34 males, 30 females; hemiplegia and paralysis without specified cause, 110 males, 105 females.

Cerebral hæmorrhage, etc., associated with arterio-sclerosis is not now included in this group but forms part of group (xxv.), q.v.

The total of the group, viz., 2,884, ranks eighth in magnitude of the causes shown on p. 535 and corresponds to a death rate of 444 per million.

(xxiii) *Other Diseases of Nervous System.* Deaths in this group have declined from a rate per million of 525 in 1911–15 to 210 in 1927–31. The number of deaths in 1931 was 1,105 representing a rate of 170 per million persons.

(xxiv) *Diseases of the Heart.* The number of deaths in 1931 was 10,382, viz., 5,876 males and 4,506 females. Of these deaths, 45 were attributed to pericarditis, 151 to acute infective endocarditis, 32 to other acute endocarditis, 400 to aortic valve disease, 733 to mitral valve disease, 79 to aortic and mitral valve disease, 240 to endocarditis not returned as acute or chronic, 708 to other and unspecified valve disease, 76 to acute myocarditis, 49 to fatty heart, 3,242 to other myocardial degeneration, 2,126 to myocarditis not returned as acute or chronic, 564 to diseases of coronary arteries, 575 to *angina pectoris*, 330 to disordered action of the heart, 93 to cardiac dilation (cause unspecified), and 839 to heart disease undefined. The sex and territorial distribution of the deaths will be found in the tables on pages 532 to 534. This class is the largest among causes of death, the death rate having grown from 1,019 per million in 1911–15 to 1,430 in 1927–31. The death rates and proportions per 10,000 deaths in 1931 were as follow:—

**DEATH RATES<sup>(a)</sup> FROM DISEASES OF THE HEART AND PROPORTION OF  
10,000 TOTAL DEATHS, AUSTRALIA, 1931.**

State or Territory.	Death Rates (a) from Diseases of the Heart.			Proportion of 10,000 Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales ..	185	148	167	1,981	1,950	1,968
Victoria .. .. .	198	155	176	1,911	1,794	1,857
Queensland .. ..	149	118	135	1,675	1,770	1,713
South Australia ..	147	127	137	1,676	1,600	1,641
Western Australia ..	161	107	136	1,528	1,602	1,554
Tasmania .. .. .	179	153	166	1,784	1,753	1,770
Northern Territory ..	138	60	109	645	1,250	714
Federal Capital Territory ..	43	..	23	909	..	556
<b>Australia .. .. .</b>	<b>178</b>	<b>142</b>	<b>159</b>	<b>1,848</b>	<b>1,820</b>	<b>1,836</b>

(a) Number of deaths from diseases of the heart per 100,000 of mean population.

(xxv) *Other Diseases of the Circulatory System.* The principal cause of death under this head was arterio-sclerosis. In 1931 the number of deaths from arterio-sclerosis with record of cerebral vascular lesion (i.e., in association with cerebral hæmorrhage, etc.) was 1,205 and without such record, 900. For further particulars see Table F, p. 554.

(xxvii) *Acute Bronchitis.* Deaths from bronchitis are classified under the following headings:—(a) Acute, (b) chronic, (c) unspecified, under five years of age, and (d) unspecified, five years and over. For the purpose of the abridged classification, (a) and (c) are treated as "acute," and (b) and (d) as "chronic" bronchitis. Acute bronchitis caused 226 deaths in 1931, viz., 106 males and 120 females.

(xxviii) *Chronic Bronchitis.* (See xxvii) The deaths from this cause in 1931 numbered 640, viz., 351 males and 289 females, which was below the average for the previous four years, and much lower than the average for previous periods.

(xxix) *Pneumonia (all forms).* The deaths from pneumonia (all forms) during 1931 were 3,795—2,205 males and 1,590 females—and were equivalent to a rate of 584 per million persons. The average rate for 1927-31 was 668, and for 1911-15 636 per million persons. The total of 3,795 deaths is made up of 1,657 from broncho-pneumonia, 12 from capillary bronchitis, 1,030 from lobar pneumonia and 1,096 from pneumonia, other and unspecified.

(xxx) *Other Diseases of the Respiratory System.* Deaths under this heading in 1927 numbered 1,095; in 1928, 1,030; in 1929, 1,073; in 1930, 956; and in 1931, 1,008. For causes of death included under this head see Table F, p. 554.

The experience of deaths from diseases of the respiratory system in 1931 was favourable, the number being 12 per cent. below the average of the previous four years. The death rate of 872 per million shows a gratifying decrease on that of 988, 1,048, and 1,130 for the respective periods 1927-31, 1921-25, and 1911-15.

(xxxi) *Diarrhœa and Enteritis (Children under two years only).* The number of deaths due to these causes was 530 in 1931, and was the lowest number recorded for many years. During 1931, 5,830 children died before reaching their second birthday, and of these 530, or 9.1 per cent., died from diarrhœa and enteritis. The ages of children dying from these diseases during the first year of life will be found on page 526.

The number of deaths (under 2 years of age), the death rates, and proportions of 10,000 deaths due to diarrhoea and enteritis for 1911-15, 1921-25 and 1931 are given below. Reference to the last three lines of the table will reveal the very satisfactory improvement in deaths due to these diseases.

DEATHS, DEATH RATES(a), ETC., DIARRHOEA AND ENTERITIS (UNDER 2 YEARS OF AGE).—AUSTRALIA, 1931.

State.	Number of Deaths from Diarrhoea and Enteritis. (Under 2 years of age.)			Death Rates (a) from Diarrhoea and Enteritis. (Under 2 years of age.)			Proportion of 10,000 Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	161	122	283	13	10	11	135	130	133
Victoria ..	51	42	93	6	5	5	55	54	55
Queensland ..	35	20	55	7	4	6	77	67	73
South Australia ..	19	14	33	6	5	6	72	62	68
Western Australia	30	19	49	13	10	12	126	146	133
Tasmania ..	7	10	17	6	9	8	64	104	83
Federal Capital Territory ..	..	..	..	..	..	..	..	..	..
Australia, 1931 ..	303	227	530	9	7	8	95	92	94
Annual Average—									
1911-15 ..	1,687	1,354	3,041	68	59	64	569	627	593
1921-25 ..	1,114	859	1,973	38	31	35	362	366	364

(a) Number of deaths from these diseases per 100,000 of mean population.

(xxixb) *Diarrhoea and Enteritis (2 years and over)*. The number of deaths from the same causes in older ages, viz., 413, compared favourably with the average of 470 for the period 1927 to 1931.

(xxx) *Appendicitis and Typhlitis*. Deaths under this heading numbered 518 in 1931, including 341 males and 177 females. The death rate has remained fairly constant during the periods under review, being 74 per million in 1911-15, 72 in 1921-25, 77 in 1927-31, and 80 in 1931.

(xxxia) *Cirrhosis of the Liver*. The deaths from this cause during 1931 numbered 252, and included 36 deaths from alcoholic cirrhosis.

(xxxib) *Other Diseases of the Liver, and Biliary Calculi*. Under this heading are included deaths from acute yellow atrophy of the liver 23, from other diseases of the liver 48, from biliary calculi 161, and from other diseases of the gall bladder and ducts 190—giving a total of 422 for the group.

(xxxia) *Hernia, Intestinal Obstruction*. The deaths under this heading have not varied greatly from year to year, the number registered in 1931 being 523, viz., hernia, 149, and intestinal obstruction, 374.

(xxxib) *Other Diseases of the Digestive System*. For causes included, see Table F, p. 554. The total number of deaths in 1931 was 832.

(xxxiii) *Acute and Chronic Nephritis*. Of the 3,306 deaths registered in 1931, 145 were ascribed to acute nephritis, and 2,884 to chronic nephritis. Nephritis is amongst the most prolific causes of death and accounted in 1931 for a death rate of 509 per million persons. The death rate for the period 1927-31, viz., 509 per million, shows a considerable increase on the rates of 450 per million for the periods 1911-15 and 1921-25.

(xxxiv) *Other Diseases of the Genito-Urinary System.* This group of diseases accounted for 1,027 deaths in 1931, the most frequent cause being diseases of the prostate with 446 deaths. For further particulars see Table F, p. 554.

(xxxv) *Puerperal Septicæmia* (including Post-Abortive Sepsis, 35A, but excluding Criminal Abortion, 35B). The 179 deaths from puerperal septicæmia during 1931 showed a decrease from the average of the previous four years. The rate was 151 per 1,000 live births. The corresponding rates during the preceding five years were:—1926, 1.64; 1927, 2.15; 1928, 2.05; 1929, 1.71, and 1930, 1.88. It is probable that some of the deaths now included under "Criminal Abortion" and excluded from figures affecting the rate for 1931, may have been classified with puerperal septicæmia in previous years. The rate in 1931 per 1,000 live births of 250 deaths from puerperal septicæmia, including criminal abortion, was 2.11. The 250 deaths mentioned above were made up as follows:—Post-abortive sepsis 76, criminal abortion 71, puerperal septicæmia 103. The following table shows the death rate per 1,000 live births from puerperal causes in various countries.

CHILDBIRTH.—DEATHS PER 1,000 LIVE BIRTHS, VARIOUS COUNTRIES.

Country.	Year.	Rates per 1,000 Live Births from—		
		Puerperal Sepsis.	Other Puerperal Causes.	All Puerperal Causes.
Italy .. .. .	1930	0.88	1.84	2.72
Japan .. .. .	1930	0.79	1.93	2.72
France .. .. .	1928	1.11	1.82	2.93
Norway .. .. .	1930	1.40	1.63	3.03
Sweden .. .. .	1930	1.47	1.58	3.05
Denmark .. .. .	1929	1.03	2.20	3.23
Hungary .. .. .	1929	1.68	1.69	3.37
Netherlands .. .. .	1930	1.17	2.26	3.43
Spain .. .. .	1929	2.06	1.55	3.61
Tasmania .. .. .	1931	1.05	2.73	3.78
Egypt .. .. .	1927	1.52	2.28	3.80
Western Australia .. .. .	1931	1.17	2.93	4.10
Czechoslovakia .. .. .	1929	2.42	1.90	4.32
England and Wales .. .. .	1930	1.92	2.48	4.40
Switzerland .. .. .	1929	1.85	2.70	4.55
South Australia .. .. .	1931	1.76	2.86	4.62
Great Britain and Northern Ireland .. .. .	1930	1.95	2.79	4.74
New Zealand .. .. .	1931	1.77	3.00	4.77
Irish Free State .. .. .	1930	1.39	3.65	5.04
Victoria .. .. .	1931	1.55	3.52	5.07
Union of South Africa (Whites)	1929	3.03	2.23	5.26
Northern Ireland .. .. .	1930	1.51	3.78	5.29
Germany .. .. .	1929	2.83	2.53	5.36
Australia .. .. .	1931	1.51	3.98	5.49
Canada (including Quebec) .. .. .	1930	2.06	3.71	5.77
Greece .. .. .	1926	3.35	2.59	5.94
Queensland .. .. .	1931	1.01	5.05	6.06
New South Wales .. .. .	1931	1.74	4.33	6.07
Belgium .. .. .	1929	3.54	2.70	6.24
United States (Registration Area) .. .. .	1930	2.47	4.41	6.88
Scotland .. .. .	1930	2.34	4.65	6.99
Ceylon .. .. .	1927	6.48	11.02	17.50

(xxxvi) *Other Diseases of Pregnancy and Labour.* The deaths under this heading numbered 504 in 1927; 527 in 1928; 436 in 1929; 438 in 1930, and 400 in 1931. Included in the 400 deaths in 1931 were the following:—Abortion not returned as septic, 38; ectopic gestation, 30; other accidents of pregnancy, 7; puerperal hæmorrhage, 77; puerperal albuminuria and convulsions, 99; other toxæmias of pregnancy, 26; phlegmasia alba dolens, embolism or sudden death, 36; other accidents of childbirth, 64; other or unspecified conditions of the puerperal state, 23.



(xxxvii) *All Puerperal Causes.* The 650 deaths in 1931 under the two preceding headings correspond to a death rate of 20 per 100,000 females. It may be expressed in other terms by stating that 1 of every 180 women confined in 1931 died from puerperal causes. The corresponding ratios for married women were 1 of every 191, and for single women 1 of every 88. More detailed information will be found in a series of tables in Bulletin No. 49 "Australian Demography."

A tabulation of these causes according to age at death for married and single women separately will be found in the Bulletin referred to.

The total number of children left by the married mothers was 1,643, an average of 2.8 children per mother.

Thirty of the mothers who died had been married less than one year, 66 between one and two years, and 48 between two and three years. The duration of marriage ranged up to 27 years, apart from 6 cases in which the date of marriage was not stated. A tabulation, distinguishing the ages at marriage, will be found in Bulletin No. 49 "Australian Demography," which also includes a table showing in combination the duration of marriage and previous issue.

(xxxviii) *Diseases of the Skin, Bones, etc.* The number of deaths in 1931 was 324, made up as follows:—Carbuncle 43, cellulitis 82, other diseases of the skin and annexe 56, osteomyelitis 111, other diseases of the bones (tuberculosis and rheumatism excepted) 16, diseases of the joints and other organs of locomotion 16.

(xxxix) *Congenital Malformation, Debility, and Premature Birth.* The deaths under this heading in 1931 numbered 3,259, of which 3,196 were of children under one year of age. Of the deaths of children under one year of age 58 per cent were due to those causes. The number of deaths for 1931 is given in the following table:—

#### DEATHS FROM CONGENITAL DEBILITY, ETC., AND MALFORMATION, 1931.

State or Territory.	Congenital Malformation.			Premature Birth and Injury at Birth.			Congenital Debility and other diseases peculiar to early infancy.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	130	75	205	481	347	828	147	107	254
Victoria ..	90	64	154	284	232	516	128	100	228
Queensland ..	50	33	83	170	118	288	68	30	98
South Australia	22	32	54	88	58	146	23	12	35
Western Australia	21	20	41	66	64	130	32	20	52
Tasmania ..	16	10	26	49	37	86	20	9	29
Northern Territory	..	..	..	..	..	..	1	1	2
Federal Capital Territory ..	1	..	1	2	1	3	..	..	..
Australia .. ..	330	234	564	1,140	857	1,997	419	279	698
Number of deaths under one year per 1,000 births	4.87	3.96	4.23	18.68	14.91	16.85	6.87	5.42	5.89

(xl) *Senility.* In 1931, 2,750 deaths were attributed to this cause, as follows:—1,431 males and 1,319 females.

Of the deaths described as due to senility, 9 males and 6 females were stated to be aged 100 years or over.

The death rate from senility in 1931 was 423 per million. For the three quinquennia tabulated on page 536 the rate has declined from 875 per million in 1911-15 to 718 in 1921-25 and to 509 in 1927-31.

(xl) *Suicide*.—(a) *General*. Deaths by suicide have shown an increase each year since 1922, except 1931, the number in 1926 being 711, viz., 583 males and 128 females; in 1927, 740, viz., 598 males and 142 females; in 1928, 777, viz., 635 males and 142 females; in 1929, 785, viz., 644 males and 141 females, in 1930, 943, viz., 791 males and 152 females; and in 1931, 827, viz., 689 males and 138 females.

(b) *Modes Adopted*. The modes adopted by persons who committed suicide in the years 1927 to 1931 were as follow:—

**SUICIDES, MODES ADOPTED.—AUSTRALIA.**

Mode of Death.	Males.		Females.		Persons.	
	Average of 5 years, 1926-30.	1931.	Average of 5 years, 1926-30.	1931.	Average of 5 years, 1926-30.	1931.
Poisoning .. ..	156	148	62	42	218	190
Poisonous gas .. ..	25	39	9	14	34	53
Hanging or Strangulation .. ..	93	94	22	13	115	107
Drowning .. ..	41	49	18	34	59	83
Firearms .. ..	197	231	7	16	204	247
Cutting or piercing instruments	104	100	12	7	116	107
Jumping from a high place .. ..	9	6	4	5	13	11
Crushing .. ..	15	6	4	2	19	8
Other Modes .. ..	10	16	3	5	13	21
<b>Total .. ..</b>	<b>650</b>	<b>689</b>	<b>141</b>	<b>138</b>	<b>791</b>	<b>827</b>

(c) *Death Rates*. The death rates from suicide and the proportion per 10,000 of total deaths are given in the following table: corresponding rates for the periods 1911-15, 1921-25 and 1926-30 are shown at the foot of the table:—

**SUICIDE.—DEATHS, DEATH RATES(a), AND PROPORTION OF TOTAL DEATHS, 1931.**

State or Territory.	Number of Deaths.			Death Rates (a) from Suicide.			Proportion of 10,000 Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	225	52	277	18	4	11	189	55	130
Victoria .. ..	143	37	180	16	4	10	156	47	106
Queensland .. ..	139	20	159	27	4	17	307	67	211
South Australia	59	12	71	20	4	12	224	53	145
Western Australia	96	11	107	43	6	25	404	84	291
Tasmania .. ..	24	6	30	22	5	14	220	62	146
Northern Territory	2	..	2	69	..	44	323	..	286
Federal Capital Territory .. ..	1	..	1	21	..	12	455	..	278
<b>Australia—1931</b>	<b>689</b>	<b>138</b>	<b>827</b>	<b>21</b>	<b>4</b>	<b>13</b>	<b>217</b>	<b>56</b>	<b>146</b>
<b>Average—1926-30</b>	<b>650</b>	<b>141</b>	<b>791</b>	<b>20</b>	<b>5</b>	<b>13</b>	<b>193</b>	<b>56</b>	<b>136</b>
" 1921-25	509	112	621	18	4	11	166	48	114
" 1911-15	509	115	624	21	5	13	172	53	122

(a) Number of deaths from suicide per 100,000 of mean population.

These results disclose a tendency for the number of suicides and the proportion of suicides in total deaths to increase since 1925, but the death rate has remained fairly constant. The average death rate for the period 1926-30 was the same as that for 1911-15, while the rate for 1921-25 was about 15 per cent. lower.

(d) *Ages.* From the following table, which shows the ages of the persons who committed suicide in 1931, it will be seen that both extreme youth and extreme old age are represented:—

**AGES OF PERSONS WHO COMMITTED SUICIDE.—AUSTRALIA, 1931.**

Ages.	M.	F.	Total.	Ages.	M.	F.	Total.
10 years and under 15	2	..	2	60 years and under 65	57	7	64
15 " " 20	13	6	19	65 " " 70	42	3	45
20 " " 25	32	11	43	70 " " 75	30	6	36
25 " " 30	53	21	74	75 " " 80	22	1	23
30 " " 35	64	15	79	80 " " 85	..	..	..
35 " " 40	71	11	82	85 " " 90	3	..	3
40 " " 45	58	13	71	95 " " 100	1	..	1
45 " " 50	68	18	86	Not stated	..	..	..
50 " " 55	88	11	99				
55 " " 60	83	15	98				
				Total Deaths ..	689	138	827

(e) *Occupations of Males.* The next table gives the occupations of the males who committed suicide in 1911, 1921 and 1931:—

**OCCUPATIONS OF MALES WHO COMMITTED SUICIDE.—AUSTRALIA.**

Occupation Class.	Number of Male Deaths.			Percentage on Total.		
	1911.	1921.	1931.	1911.	1921.	1931.
Professional .. ..	34	32	29	7.62	6.27	4.21
Domestic .. ..	16	20	22	3.59	3.92	3.19
Commercial .. ..	63	81	106	14.13	15.88	15.38
Transport and Communica- tion .. ..	34	42	52	7.62	8.24	7.55
Industrial .. ..	172	180	256	38.56	35.29	37.16
Agricultural, Pastoral, Min- ing, etc. .. ..	100	131	182	22.42	25.69	26.41
Indefinite .. ..	23	21	39	5.16	4.12	5.66
Dependent .. ..	4	3	3	0.90	0.59	0.44
Total Male Deaths ..	446	510	689	100.00	100.00	100.00

(f) *Death Rates, Various Countries.* The following comparative table for various countries shows that Australia occupies a fairly favourable position as regards the death rate from suicide.

**SUICIDE.—DEATHS PER 100,000 PERSONS LIVING, VARIOUS COUNTRIES.**

Country.	Year.	Rate.	Country.	Year.	Rate.
Irish Free State ..	1930	2.8	Great Britain and Nor- thern Ireland ..	1930	12.2
Egypt .. ..	1927	3.2	Belgium .. ..	1929	12.5
Greece .. ..	1926	3.1	England and Wales ..	1930	12.7
Northern Ireland ..	1930	4.9	<b>Australia .. ..</b>	<b>1931</b>	<b>12.7</b>
Spain .. ..	1929	6.2	Tasmania .. ..	1931	13.6
Norway .. ..	1930	7.2	United States .. ..	1930	15.6
Netherlands .. ..	1930	8.1	New Zealand .. ..	1931	15.6
Italy .. ..	1930	9.6	Queensland .. ..	1931	16.6
Canada .. ..	1930	10.0	Denmark .. ..	1927	16.9
Victoria .. ..	1931	10.0	France .. ..	1928	18.9
Scotland .. ..	1930	10.1	Japan .. ..	1930	21.6
Union of South Africa (a) .. ..	1929	10.7	Western Australia ..	1931	25.4
New South Wales ..	1931	11.0	Switzerland .. ..	1930	26.1
Sweden .. ..	1930	11.8	Czechoslovakia .. ..	1929	27.7
South Australia ..	1931	12.2	Germany .. ..	1930	30.0

(a) White population only.

(xli) *Homicide.* Deaths from homicide in 1931 numbered 128, this figure being slightly higher than the average for the previous four years.

(xlii) *Accidental or Violent Deaths (except Suicide and Homicide).* Deaths from accidents in 1931 numbered 2,937, compared with an average of 3,452 for the previous four years. Of the deaths in 1931, 1,137 occurred in New South Wales; 779 in Victoria; 432 in Queensland; 208 in South Australia; 255 in Western Australia; 107 in Tasmania; 11 in Northern Territory; and 8 in the Federal Capital Territory.

The following table shows the various kinds of violent deaths, including homicides, but excluding suicides, recorded in Australia for the year 1931, to which the death rate per million has been added in respect of the periods 1911-15, 1921-25, 1926-30 and 1931. These latter figures reveal a decrease to 1921-25 but an increase in the rates for 1926-30, to which the growth of automobile accidents has contributed very largely. For 1931 the death rate per million was comparatively low.

## DEATHS FROM EXTERNAL VIOLENCE.—AUSTRALIA, 1931.

Cause of Death.	Males.	Females.	Persons.
Infanticide (murder of children under 1 year) ..	8	4	12
Homicide by firearms .. .. .	36	14	50
Homicide by cutting or piercing instruments ..	7	11	18
Homicide by other means .. .. .	33	15	48
Poisoning by venomous animals—			
(a) Snakebite .. .. .	10	..	10
(b) Other .. .. .	..	1	1
Poisoning by food .. .. .	6	9	15
Accidental absorption of irrespirable or poisonous gas .. .. .	19	6	25
Other acute accidental poisonings (gas excepted) ..	23	13	36
Conflagration .. .. .	12	6	18
Accidental burns (conflagration excepted) ..	116	101	217
Accidental mechanical suffocation .. .. .	28	15	43
Accidental drowning .. .. .	295	52	347
Accidental injury by firearms .. .. .	85	4	89
Accidental injury by cutting or piercing instruments	7	2	9
Accidental Injury by Falling, Crushing, etc.—			
In Mines and Quarries .. .. .	68	1	69
By Machinery .. .. .	35	1	36
Connected with Methods of Transport—			
Railways .. .. .	111	21	132
Tramways .. .. .	40	12	52
Automobiles .. .. .	644	169	813
Other land vehicles .. .. .	93	6	99
Transport by water .. .. .	9	..	9
Transport by air .. .. .	15	2	17
Fall not otherwise specified .. .. .	276	163	439
Other crushings .. .. .	96	5	101
Injuries by animals (not poisoning) .. .. .	28	4	32
Starvation, thirst, fatigue .. .. .	11	1	12
Excessive cold .. .. .	8	..	8
Excessive heat .. .. .	19	5	24
Lightning .. .. .	8	..	8
Other accidental electric shocks .. .. .	28	3	31
Other and unstated forms of accidental violence—			
Inattention at birth .. .. .	5	3	8
Other .. .. .	58	14	72
Violent deaths of unstated nature (open verdict)—			
Drowning .. .. .	67	21	88
Firearms .. .. .	10	1	11
Cutting or Piercing Instruments .. .. .	2	..	2
Fall .. .. .	13	..	13
Crushing .. .. .	8	2	10
Other .. .. .	24	7	31

DEATHS FROM EXTERNAL VIOLENCE.—AUSTRALIA, 1931—*continued.*

Cause of Death.	Males.	Females.	Persons.
War wounds.. .. .	9	..	9
Capital punishment .. .. .	1	..	1
<b>Total Deaths .. .. .</b>	<b>2,371</b>	<b>694</b>	<b>3,065</b>
<b>Death Rate per 1,000,000 of mean population—</b>			
1931 .. .. .	716	218	472
1926-30.. .. .	864	257	566
1921-25.. .. .	771	225	503
1911-15.. .. .	973	288	645

(xliii) *Unspecified or Ill-defined Diseases.* The number of deaths included under this heading was 570 in 1927, 603 in 1928, 536 in 1929, 401 in 1930, and 287 in 1931, of which 220 were males and 67 females. The detailed classification shows these ill-defined diseases under two headings—sudden death, including syncope; and unspecified or ill-defined causes, of which the following are specimens:—Heart failure, asthenia, anasarca, atrophy, exhaustion, dropsy, ascites, and general œdema, etc. In 1931, the number of deaths which came under the first of these categories was 41, and under the second, 287. It is inevitable that cases will occur regarding which the available information is insufficient to permit of a clear definition of the fatal disease in the certificate of death. In the majority of cases, however, there is little doubt that more satisfactory certificates might have been given.

(xliv) "*Other Diseases.*" The abridged classification of causes of death used in Tables A to E in the preceding pages differs from that used in previous Year Books in that no residue of "other diseases" is shown at the foot. The items are ranged in classes or groups of classes and each class or group of classes is made complete by the addition of an "other diseases" item for that class or group of classes. These "other diseases" items are expanded into their constituent causes in the following table, viz. :—

## F.—DEATHS FROM "OTHER DISEASES."—AUSTRALIA, 1931.

Causes.	G.C.N. (a)	M.	F.	Total.
<b>14. OTHER INFECTIOUS OR PARASITIC DISEASES.</b>				
Relapsing Fever .. .. .	4	..	..	..
Undulant Fever .. .. .	5	..	..	..
Cholera .. .. .	12	..	..	..
Dysentery—				
Amœbic .. .. .	13a	1	..	1
Bacillary .. .. .	13b	39	17	56
Other .. .. .	13c	12	26	38
Erysipelas .. .. .	15	20	36	56
Acute Poliomyelitis .. .. .	16	35	14	49
Encephalitis Lethargica .. .. .	17	20	16	36
Cerebrospinal Fever .. .. .	18	12	13	25
Glanders .. .. .	19	..	..	..
Anthrax .. .. .	20	1	..	1
Rabies .. .. .	21	..	..	..
Tetanus .. .. .	22	61	13	74
Leprosy .. .. .	33	5	1	6
Other Venereal Diseases .. .. .	35	3	1	4
Purulent Infection and Septicæmia .. .. .	36	44	33	77
Yellow Fever .. .. .	37	..	..	..
Other Diseases due to Protozoa .. .. .	39	1	..	1
Ankylostomiasis .. .. .	40	1	6	7

(a) G.C.N. = General Classification Number.

F.—DEATHS FROM "OTHER DISEASES."—AUSTRALIA, 1931—*continued.*

Causes.	G.C.N. (a)	M.	F.	Total.
<b>14. OTHER INFECTIOUS OR PARASITIC DISEASES—<i>contd.</i></b>				
Hydatid Cysts—				
Liver .. .. .	41a	17	13	30
Other Organs .. .. .	41b	17	6	23
Other Diseases due to Helminths .. .. .	42	1	..	1
Mycoses .. .. .	43	7	..	7
Mumps .. .. .	44a	1	7	8
Other .. .. .	44b	17	18	35
<b>20. OTHER GENERAL DISEASES.</b>				
Rheumatic Fever .. .. .	56	94	104	198
Scurvy .. .. .	60	..	3	3
Beri-beri .. .. .	61	5	..	5
Pellagra .. .. .	62	..	..	..
Ricketts .. .. .	63	..	1	1
Osteomalacia .. .. .	64	1	1	2
Diseases of the Pituitary Gland .. .. .	65	3	4	7
Diseases of the Thyroid and Parathyroid Glands—				
Exophthalmic Goitre .. .. .	66a	15	118	133
Other Diseases of Thyroid Gland .. .. .	66b	8	35	43
Diseases of Parathyroid Gland .. .. .	66c	..	1	1
Diseases of the Thymus Gland .. .. .	67	6	16	22
Diseases of the Adrenals (Addison's Disease) .. .. .	68	12	18	30
Other General Diseases .. .. .	69	8	10	18
Hæmorrhagic Conditions .. .. .	70	40	24	64
Anæmia, Chlorosis—				
Pernicious .. .. .	71a	121	159	280
Others .. .. .	71b	28	24	52
Leucæmia, Lymphadenoma—				
Leucæmia .. .. .	72a	93	49	142
Aleucæmia (Lymphadenoma) .. .. .	72b	45	18	63
Diseases of the Spleen .. .. .	73	4	9	13
Other Diseases of the Blood and Blood-forming Organs .. .. .	74	2	1	3
Alcoholism (Acute and Chronic) .. .. .	75	39	13	52
Chronic Poisoning by Organic Substances .. .. .	76	..	..	..
Chronic Poisoning by Mineral Substances—				
Chronic Lead Poisoning .. .. .	77a	14	6	20
Other .. .. .	77b	1	1	2
<b>23. OTHER DISEASES OF NERVOUS SYSTEM AND SENSE ORGANS.</b>				
Encephalitis (not epidemic)—				
Cerebral Abscess .. .. .	78a	31	14	45
Others .. .. .	78b	19	29	48
Simple Meningitis—				
Simple Meningitis .. .. .	79a	88	63	151
Non-Epidemic Cerebro-Spinal Meningitis .. .. .	79b	17	2	19
Other Diseases of the Spinal Cord .. .. .	81	107	73	180
Other Forms of Insanity .. .. .	84	46	41	87
Epilepsy .. .. .	85	98	71	169
Convulsions of Infants under Five years of Age .. .. .	86	29	29	58
Other Diseases of the Nervous System—				
Chorea .. .. .	87a	1	4	5
Neuralgia and Neuritis .. .. .	87b	7	5	12
Paralysis Agitans .. .. .	87c	60	50	110
Disseminated Sclerosis .. .. .	87d	29	26	55
Idiocy, Imbecility .. .. .	87e	9	10	19
Other Diseases .. .. .	87f	30	25	55
Diseases of the Eye and Annexa .. .. .	88	4	3	7
Diseases of the Ear and Mastoid Sinus .. .. .	89	52	33	85

F.—DEATHS FROM "OTHER DISEASES."—AUSTRALIA, 1931—*continued.*

Causes.	G.C.N. (a)	M.	F.	Total.
<b>25. OTHER DISEASES OF THE CIRCULATORY SYSTEM.</b>				
Aneurysm (other than of Heart) .. .. .	96	131	40	171
Arteriosclerosis (of coronary arteries excepted)—				
With record of Cerebro-Vascular Lesion .. .. .	97a	581	624	1,205
Without record of Cerebro-Vascular Lesion .. .. .	97b	530	370	900
Gangrene .. .. .	98	52	33	85
Other Diseases of the Arteries .. .. .	99	45	31	76
Diseases of the Veins (Varices, Hæmorrhoids, Phlebitis, etc.) .. .. .	100	13	21	34
Diseases of the Lymphatic System, Lymphangitis, etc.	101	9	4	13
Abnormalities of Blood Pressure .. .. .	102	19	25	44
Other Diseases of the Circulatory System .. .. .	103	6	3	9
<b>28. OTHER DISEASES OF THE RESPIRATORY SYSTEM.</b>				
Diseases of the Nasal Fossæ and Annexa .. .. .	104	11	13	24
Diseases of the Larynx .. .. .	105	26	12	38
Pleurisy .. .. .	110	122	67	189
Congestion, Hæmorrhagic Infarction of Lung .. .. .	111	175	177	352
Asthma .. .. .	112	76	63	139
Pulmonary Emphysema .. .. .	113	9	3	12
Other Diseases of the Respiratory System, Tuberculosis excepted—				
Chronic Interstitial Pneumonia .. .. .	114a	195	9	204
Gangrene of the Lung .. .. .	114b	6	2	8
Other Diseases .. .. .	114c	27	15	42
<b>32B. OTHER DISEASES OF THE DIGESTIVE SYSTEM.</b>				
Diseases of the Buccal Cavity, Pharynx, etc.—				
Buccal Cavity and Annexa .. .. .	115a	22	11	33
Pharynx and Tonsils .. .. .	115b	56	46	102
Diseases of the Oesophagus .. .. .	116	10	6	16
Ulcer of the Stomach or Duodenum—				
Stomach .. .. .	117a	194	66	260
Duodenum .. .. .	117b	91	21	112
Other Diseases of the Stomach (Cancer excepted) .. .. .	118	56	50	106
<b>34. OTHER DISEASES OF THE GENITO-URINARY SYSTEM.</b>				
Other Diseases of the Kidney and Annexa .. .. .	133	155	126	281
Calculi of the Urinary Passages .. .. .	134	43	14	57
Diseases of the Bladder .. .. .	135	49	31	80
Diseases of the Urethra, Urinary Abscess, etc. .. .. .	136	38	3	41
Diseases of the Prostate .. .. .	137	446	..	446
Diseases of the Male Genital Organs, not stated as Venereal .. .. .	138	6	..	6
Diseases of the Female Genital Organs, not stated as Venereal—				
Ovary, Fallopian Tubes and Parametrium .. .. .	139a	..	84	84
Uterus .. .. .	139b	..	31	31
Breast .. .. .	139c	..	1	1
Others .. .. .	139d	..	..	..

(a) G.C.N.—General Classification Number.

14. Causes of Deaths in Classes.—The figures in the preceding sub-sections relate to specific causes of death, and are of greater value in medical statistics than a mere grouping under general headings. The classification under eighteen general headings adopted by the compilers of the International Nomenclature is, however, shown in

the following table, together with the death rates and proportions on total deaths pertaining to those classes. A further table furnishes the death rates for the quinquennia 1911-15, 1921-25 and 1926-30:—

## DEATHS, DEATH RATES(a), ETC., IN CLASSES.—AUSTRALIA, 1931.

Class.	Total Deaths.			Deaths Rates.(a)			Proportion of 10,000 Deaths.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1. Parasitic and Infectious Diseases	3,197	2,471	5,668	97	77	87	1,005	998	1,002
2. Cancer and Other Tumours	3,634	3,300	6,934	110	104	107	1,143	1,333	1,226
3. Rheumatism, Diseases of Nutrition, of Endocrine Glands, and Other General Diseases	539	997	1,536	16	31	24	170	493	272
4. Diseases of the Blood and Blood-forming Organs	333	284	617	10	9	10	105	115	109
5. Chronic Poisonings and Intoxications	54	20	74	2	1	1	17	8	13
6. Diseases of the Nervous System and of the Organs of Sense	2,144	2,014	4,158	65	63	64	674	813	735
7. Diseases of the Circulatory System	7,262	5,657	12,919	219	178	198	2,285	2,283	2,285
8. Diseases of the Respiratory System	3,309	2,360	5,669	100	74	87	1,041	953	1,002
9. Diseases of the Digestive System	2,030	1,460	3,490	61	46	54	638	590	617
10. Diseases of the Genito-Urinary System and Annexa	2,507	1,826	4,333	76	57	67	788	737	766
11. Pregnancy, Labour and Puerperal State	..	650	650	..	20	10	..	262	115
12. Diseases of the Skin and of the Cellular Tissue	90	91	181	3	3	3	28	37	32
13. Diseases of the Bones and Organs of Locomotion	97	46	143	3	1	2	31	19	25
14. Congenital Malformations	330	234	564	10	7	9	104	94	100
15. Early Infancy	1,559	1,136	2,695	47	36	42	490	549	476
16. Old Age	1,431	1,319	2,750	43	41	42	450	533	486
17. External Causes	3,060	832	3,892	92	26	60	962	336	688
18. Causes of Death not Determined	220	67	287	7	2	4	69	27	51
Total	31,796	24,764	56,560	960	777	870	10,000	10,000	10,000

(a) Number of deaths per 100,000 of mean population.

## QUINQUENNIAL DEATH RATES IN CLASSES.—AUSTRALIA.

Class.	Number of Deaths per 100,000 of Mean Population.								
	1911 to 1915.			1921 to 1925.			1926 to 1930.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1. Parasitic and Infectious Diseases	261	236	249	248	222	236	107	86	97
2. Cancer and Other Tumours							100	98	100
3. Rheumatism, Diseases of Nutrition, of Endocrine Glands, and Other General Diseases							19	29	24
4. Diseases of the Blood and Blood-forming Organs							8	9	8
5. Chronic Poisonings and Intoxications							3	1	2
6. Diseases of the Nervous System and of the Organs of Sense	112	93	103	93	83	88	78	77	
7. Diseases of the Circulatory System	147	116	132	150	118	134	186	150	
8. Diseases of the Respiratory System	132	93	113	121	88	105	116	85	
9. Diseases of the Digestive System	135	123	130	97	81	89	79	63	
10. Non-venereal Diseases of the Genito-Urinary System	72	46	59	72	49	61	77	56	
11. Puerperal Condition	..	27	13	..	25	12	..	24	
12. Diseases of Skin and Cellular Tissue	6	5	6	6	4	5	4	3	
13. Diseases of Organs of Locomotion	2	1	1	3	2	2	3	2	
14. Congenital Malformations	12	9	10	12	10	11	12	9	
15. Early Infancy	87	71	79	73	56	65	60	46	
16. Old Age	94	80	88	76	68	72	55	53	
17. External Causes	117	33	77	95	26	61	107	30	
18. Causes of Death not Determined	16	9	13	15	9	12	12	6	
Total	1,193	942	1,073	1,061	841	953	1,026	827	928



15. Ages at Death of Married Males and Females, and Issue.—Bulletin No. 49 "Australian Demography" contains a number of tables showing the ages at marriage, ages at death, birthplaces, and occupations, in combination with the issue of married persons who died in Australia in 1931. A summary of those tables is given hereunder. Deaths of married males in 1931 numbered 19,199, and of married females, 17,474. The tabulations which follow deal, however, with only 18,872 males and 17,259 females, the information in the remaining 542 cases being incomplete. The total number of children in the families of the 18,872 males was 83,823, and of the 17,259 females, 81,453. The average number of children is shown for various age-groups in the following table:—

AGES AT DEATH OF MARRIED MALES AND FEMALES, AND AVERAGE ISSUE.—  
AUSTRALIA.

Age at Death.	Average Family.					
	Males.			Females.		
	1911.	1921.	1931.	1911.	1921.	1931.
Under 20 years .. ..	0.33	..	0.75	0.94	0.77	0.66
20 to 24 " .. ..	0.77	0.84	0.81	1.27	1.22	1.13
25 " 29 " .. ..	1.25	1.29	1.33	1.82	1.86	1.81
30 " 34 " .. ..	2.05	2.06	1.79	2.74	2.45	2.34
35 " 39 " .. ..	2.80	2.58	2.13	3.64	3.29	2.89
40 " 44 " .. ..	3.47	3.23	2.77	4.09	3.66	3.29
45 " 49 " .. ..	4.09	3.48	3.10	4.54	3.76	3.55
50 " 54 " .. ..	4.75	3.76	3.46	5.35	4.23	3.60
55 " 59 " .. ..	5.44	4.41	3.69	5.86	4.69	4.01
60 " 64 " .. ..	5.95	4.98	4.02	5.99	5.39	4.21
65 " 69 " .. ..	6.23	5.50	4.41	6.50	5.86	4.82
70 " 74 " .. ..	6.41	6.06	5.06	6.38	6.30	5.41
75 " 79 " .. ..	6.75	6.66	5.65	6.72	6.56	6.02
80 " 84 " .. ..	6.68	6.89	6.17	6.22	6.76	6.26
85 " 89 " .. ..	6.67	7.18	6.59	5.97	6.93	6.57
90 " 94 " .. ..	6.03	7.21	6.94	5.69	6.53	6.73
95 " 99 " .. ..	7.30	6.97	6.69	5.05	6.05	7.10
100 years and upwards ..	9.33	9.20	7.00	5.17	5.11	8.20
Age not stated .. ..	4.33	5.36	5.00	4.60	5.80	5.00
All ages .. ..	5.42	4.97	4.44	5.35	5.05	4.72

The figures in the preceding table include the issue both living and dead, the proportion between them, taking the issue of deceased males and females together, being about 1,000 to 261. The totals are shown in the following table:—

ISSUE OF MARRIED MALES AND FEMALES.—AUSTRALIA, 1931.

Issue of Married Males.	Males.	Females.	Total.	Issue of Married Females.	Males.	Females.	Total.
Living ..	34,234	33,889	68,123	Living ..	31,201	31,706	62,907
Dead ..	8,951	6,749	15,700	Dead ..	10,455	8,091	18,546
Total ..	43,185	40,638	83,823	Total ..	41,656	39,797	81,453

16. **Ages at Marriage of Deceased Males and Females, and Issue.**—While the table giving the average families of married males and females naturally shows an increase in the averages with advancing ages at death, the following table, which gives the average families of males and females according to the age at marriage of the deceased parents shows a corresponding decrease in the averages as the age at marriage advances:—

**AGES AT MARRIAGE OF DECEASED MALES AND FEMALES, AND AVERAGE ISSUE.—AUSTRALIA.**

Age at Marriage.	Average Family.					
	Males.			Females.		
	1911.	1921.	1931.	1911.	1921.	1931.
Under 15 years .. ..	..	..	..	9.71	7.60	6.36
15 to 19 " .. ..	6.97	6.32	6.15	7.10	6.97	6.79
20 " 24 " .. ..	6.34	6.05	5.56	5.77	5.50	5.23
25 " 29 " .. ..	5.70	5.17	4.70	4.27	4.09	3.79
30 " 34 " .. ..	4.92	4.45	3.96	3.04	2.66	2.42
35 " 39 " .. ..	4.05	3.90	3.14	1.68	1.61	1.40
40 " 44 " .. ..	3.43	2.67	2.36	0.72	0.62	3.88
45 " 49 " .. ..	2.59	2.20	1.96	0.26	0.03	0.12
50 " 54 " .. ..	2.45	1.70	1.60	..	..	..
55 " 59 " .. ..	1.66	1.30	0.95	..	..	..
60 " 64 " .. ..	2.00	0.33	0.63	..	..	..
65 years and upwards ..	1.00	0.25	0.18	..	..	..
Age unspecified .. ..	5.40	4.93	3.64	5.23	5.41	3.96
All Ages .. ..	5.42	4.97	4.44	5.35	5.05	4.72

17. **Birthplaces of Deceased Married Males and Females, and Issue.**—The following table shows the birthplaces of married males and females who died in 1911 and 1931, together with the average issue. No generalizations can, of course, be made in those cases in which the number of deaths was small, but where the figures are comparatively large, as in the case of natives of Australia and the British Isles, differences occur between the average of these individual countries, which appear inexplicable on any other ground than that of different age constitution of the locally born population. It will be noted that the differences occur both in the male and female averages.

**BIRTHPLACES OF DECEASED MARRIED MALES AND FEMALES, AND AVERAGE ISSUE.—AUSTRALIA.**

Birthplace.	Married Males.				Married Females.			
	1911.		1931.		1911.		1931.	
	Deaths.	Average Family.	Deaths.	Average Family.	Deaths.	Average Family.	Deaths.	Average Family.
<b>Australasia—</b>								
Australia .. ..	4,074	4.71	11,319	4.37	4,566	4.57	11,281	4.50
New Zealand .. ..	64	3.89	187	3.05	56	3.84	132	3.27
<b>Europe—</b>								
England and Wales ..	4,079	5.87	4,114	4.51	3,152	5.86	3,238	5.05
Scotland .. ..	1,133	5.89	989	4.70	1,002	6.09	801	5.32
Ireland .. ..	1,766	6.12	1,063	5.03	2,118	5.83	1,237	5.40
<b>Other British Possessions</b>								
Western .. ..	23	6.52	26	4.12	24	5.75	14	4.57
Central .. ..	199	4.33	234	4.41	55	5.07	66	4.67
Southern .. ..	484	5.81	370	5.36	270	6.56	230	6.09
Eastern .. ..	58	5.09	149	3.54	12	4.92	39	4.31
Asia—								
British Possessions ..	35	4.37	55	3.18	6	4.50	19	4.05
Foreign Countries ..	32	3.87	50	3.50	17	6.41	23	5.00
Africa—								
British Possessions ..	74	2.46	76	2.79	5	2.60	11	4.45
Foreign Countries ..	16	3.56	27	3.85	15	4.80	21	4.43
America—								
British Possessions ..	..	..	2	2.00	..	..	2	2.00
United States .. ..	42	5.55	53	3.79	17	6.47	24	4.54
Other Foreign Countries	40	3.78	51	3.84	17	4.94	31	3.81
Polynesia .. ..	17	4.53	6	5.50	10	4.50	7	3.71
Indefinite .. ..	5	4.00	19	3.53	9	3.33	10	3.20
Total .. ..	72	4.28	82	4.39	72	4.85	73	5.30
<b>Total .. ..</b>	<b>12,213</b>	<b>5.42</b>	<b>18,872</b>	<b>4.44</b>	<b>11,423</b>	<b>5.35</b>	<b>17,259</b>	<b>4.72</b>

18. Occupations of Deceased Married Males, and Issue.—The following tabulation shows the average issue in combination with the occupation of deceased males:—

**OCCUPATIONS OF DECEASED MARRIED MALES AND AVERAGE ISSUE—  
AUSTRALIA.**

Occupation Class.	Deaths of Married Males.			Average Family.		
	1911.	1921.	1931.	1911.	1921.	1931.
Professional .. ..	681	926	1,194	4.55	4.04	3.78
Domestic .. ..	452	552	621	3.92	3.55	3.64
Commercial .. ..	1,407	1,977	2,962	4.70	4.18	3.55
Transport and Communica- tion .. ..	1,001	1,254	1,742	4.56	4.63	4.15
Industrial .. ..	3,981	5,086	6,883	5.38	4.95	4.49
Agricultural, Pastoral, Min- ing, etc. .. ..	3,610	3,983	4,495	6.25	5.83	5.31
Indefinite .. ..	1,037	759	936	5.81	5.49	4.68
Dependents .. ..	44	15	39	4.30	4.00	3.85
<b>Total .. ..</b>	<b>12,213</b>	<b>14,552</b>	<b>18,872</b>	<b>5.42</b>	<b>4.97</b>	<b>4.44</b>

#### § 4. Australian Life Tables.

Official Year Book, No. 20, pp. 962 and 969 to 973, contained a synopsis of the various Australian Life Tables, also comparisons with other countries of the expectation of life at various ages. Considerations of space, however, do not permit of their repetition herein.

#### § 5. Registration of Births, Deaths and Marriages in the Territory for the Seat of Government.

Up to the end of 1929 the provisions of the Registration of Births, Deaths and Marriages Act of 1899 and the Marriage Act of 1899 of New South Wales applied to the Territory for the Seat of Government. Births, deaths and marriages occurring within the Territory were registered by the District Registrars, Queanbeyan and Nowra, and were incorporated in the New South Wales records.

Towards the end of 1929, however, the Registration of Births, Deaths and Marriages Ordinances were enacted, providing for the assumption by the Commonwealth Government of the function of registration within the Territory as from 1st January, 1930. The Commonwealth Statistician is the Principal Registrar, and all registrations are made at Canberra.

Marriages within the Territory are celebrated according to the conditions prescribed by the Marriage Ordinance, 1929. This Ordinance, which closely follows the provisions of the Marriage Act of New South Wales, which it supersedes as regards the Territory for the Seat of Government, came into operation on 1st January, 1930.

#### § 6. Graphical Representation of Vital Statistics.

(See Graphs pp. 505 to 510.)

1. **General.**—The progressive fluctuations of the number of births, marriages, and deaths are important indexes of the economic conditions and social ideals of a community. Graphs have accordingly been prepared which show these fluctuations. It should be remembered, however, that, normally, the increase of births and marriages should be proportional to the growth of population.

2. **Graphs of Annual Births, Marriages, and Deaths.**—The outstanding features of the graph representing births are :—An almost continuous rise in the numbers from 1860 to 1891 ; a decline till 1898, associated with the commercial crisis of 1891–93 ; a sharp fall in 1903 which accompanied a severe drought ; an uninterrupted increase from 1903 to 1914, the total for 1914 being the highest recorded ; a rapid decline until 1920, the result of war conditions. The figures for the last ten years show a tendency to greater stability, though with a general downward tendency.

The graph for marriages up to 1914 discloses approximately the same features as that for births—financial crises and droughts having a similar effect. The numbers for 1914 and 1915 showed a considerable increase over previous years. From 1916 to 1918 there was a rapid fall, the numbers being much below those of pre-war years. During 1919 and 1920 the recovery was very rapid, the total for the latter year being the highest ever recorded. The totals for 1923 to 1931 were not so favourable.

The characteristic feature of the graph of deaths is its irregular nature. On the whole, however, there is an increase which is due to the growth of population.

3. **Graphs of Annual Birth, Marriage, and Death Rates, and Rate of Natural Increase.**—The graph of the birth rate indicates a well-marked decline throughout the whole period. This reduction of rate has been subject to fluctuations, there being two periods of arrested decline, viz., from 1877 to 1890, and from 1903 to 1912.

The variations in the marriage rates, though less abrupt than those in the birth and death rates, have ranged from a minimum of 6.08 per 1,000 which marked the culmination of a commercial depression in 1894 to a maximum of 9.62 per 1,000 in 1920. The depression of 1931, however, was responsible for the establishment of a new minimum of 5.98 per 1,000 in that year.

On the whole, the graph for the death rate furnishes clear evidence of a satisfactory decline during the period. The graph brings into prominence six years in which the rates were very high when compared with adjacent years, viz., 1860, 1866, 1875, 1884, 1898, and 1919. Epidemics of measles were largely responsible for the high rates in the first five years, while influenza caused the increase during 1919.

The graph of natural increase shows roughly the same variations as that for the birth rate, but the influence of the death rate is indicated by the very low rates of natural increase for 1875, 1898, and 1919, which resulted from the exceptionally high death rates of those years.

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## CHAPTER XVIII. MINERAL INDUSTRY.

### § 1. The Mineral Wealth of Australia.

1. *Place of Mining in Australian Development.*—The value of production from the mineral industry is now considerably less than that returned by the agricultural or the pastoral industry, nevertheless it was the discovery of gold in payable quantities that first attracted population to Australia, and thus laid the foundation of its nationhood.

2. *Extent of Mineral Wealth.*—The extent of the total mineral wealth of Australia cannot yet be regarded as completely ascertained, as large areas of country still await systematic prospecting. More detailed allusion to this matter will be found in preceding Official Year Books. (See No. 22, p. 755.)

3. *Quantity and Value of Production during 1930.*—(NOTE.—A table showing particulars of mineral production for the year 1931 will be found in the Appendix. This information was not available at the time of compilation of the present Chapter.) The quantities (where available) and the values of the principal minerals produced in each State, and in Australia as a whole, during the year 1930, are given in the tables immediately following. It must be clearly understood that the figures quoted in these tables refer to the quantities and values of the various minerals in the form in which they were reported to the States Mines Departments, and represent amounts which the Mines Departments consider may fairly be taken as accruing to the mineral industry as such. They are not to be regarded as representative of Australia's potentiality as a producer of *metals*, this matter being dealt with separately in § 17 hereinafter. It may be explained, therefore, that the item pig-iron in New South Wales refers only to metal produced from the locally-raised ore and so reported to the Mines Department. New South Wales is, of course, in normal times, a large producer of iron and steel from ironstone mined in South Australia. As the table shows, the latter State receives credit for this ironstone in its mineral returns, but the iron and steel produced therefrom cannot be assigned to the mineral industry of New South Wales. Similarly lead, silver-lead, and zinc are credited in the form reported to the State of origin—chiefly New South Wales—although the actual metal extraction is carried out to a large extent elsewhere.

#### MINERAL PRODUCTION.—QUANTITIES, 1930.

Minerals.	Unit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T. (c)	Australia.
Antimony ..	ton	65	..	..	..	..	..	..	65
Arsenic ..	..	796	..	..	..	..	..	..	796
Asbestos ..	..	..	..	..	..	82	..	..	82
Barytes ..	..	173	..	..	1,535	..	..	..	1,708
Bismuth ..	cwt.	30	..	33	..	..	19	..	82
Brown Coal ..	ton	..	1,831,507	..	..	..	..	..	1,831,507
Coal ..	..	7,093,055	703,487	1,094,676	..	501,425	138,716	..	9,531,359
Copper (ingot, matte, etc.) ..	..	93	..	2,930	99	..	9,941	..	13,063
Copper ore ..	..	149	..	..	..	10	..	92	251
Diatomaceous earth ..	..	1,240	..	..	..	..	..	..	1,240
Gold ..	fine oz.	12,493	24,119	7,821	1,311	416,369	4,467	13	466,593
Gypsum ..	ton	2,868	5,809	..	40,827	1,581	..	..	51,085
Iron (pig) (b) ..	..	..	..	..	..	..	..	..	..
Iron oxide ..	..	3,800	..	..	..	..	..	..	3,800
Ironstone ..	..	..	..	2,417	928,392	..	..	..	930,809
Kaolin ..	..	2,299	1,951	..	521	..	..	..	4,771
Lead (b) ..	..	..	..	231	..	..	4,238	..	4,469
Lead and silver- lead ore, concen- trates, etc. ..	..	279,513	..	..	..	391	..	136	280,040
Limestone flux ..	..	28,556	..	8,873	12,434	..	87,205	..	137,068
Magnesite ..	..	8,655	63	..	36	..	..	..	8,754
Manganese ore ..	..	125	..	..	..	..	..	..	125
Molybdenite ..	cwt.	65	..	40	..	..	..	..	105
Osmiridium ..	oz.	26	..	..	..	..	953	..	953
Phosphate ..	ton	..	..	..	..	..	..	..	26
Pigments ..	oz.	585	..	..	17	..	..	..	602
Platinum ..	oz.	155	..	..	..	..	..	..	155
Salt ..	ton	..	(a)	..	58,766	..	..	..	58,766
Sapphires ..	oz.	..	..	(d)	..	..	..	..	(d)
Shale (oil) ..	..	346	..	..	..	..	3,428	..	5,774
Silver ..	fine oz.	5,290	813	69,808	1,058	46,348	711,619	..	834,936
Tin and tin ore ..	ton	590	..	603	..	62	512	31	1,798
Wolfram ..	..	10	..	21	..	..	113	63	207
Zinc and concen- trates ..	..	297,762	..	..	..	..	943	..	298,705

(a) Not available for publication. (b) See letterpress preceding this table. No production of pig-iron recorded in 1930. (c) Year ended 30th June. (d) Quantity not stated.

The values of the minerals raised in each State during 1930 are given in the following table:—

MINERAL PRODUCTION.—VALUE, 1930.

Minerals.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T. (d)	Australia.
	£	£	£	£	£	£	£	£
Antimony ..	3,178	..	..	..	..	..	..	3,178
Arsenic ..	16,574	..	..	..	..	..	..	16,574
Asbestos ..	..	..	..	..	4,728	..	..	4,728
Barytes ..	432	..	..	4,605	..	..	..	5,037
Bismuth ..	508	..	135	..	..	475	2	1,120
Brown Coal ..	..	173,713	..	..	..	..	..	173,713
Coal ..	5,193,032	807,699	952,856	..	394,758	110,253	..	7,458,598
Copper (ingot and matte) ..	6,610	..	174,075	6,966	..	620,578	..	808,229
Copper ore ..	1,737	..	..	..	102	..	589	2,428
Diamonds ..	714	..	..	..	..	..	..	714
Alumina ..	3,720	..	..	..	..	..	..	3,720
Gold ..	53,066	102,456	33,224	5,569	1,768,623	18,976	57	1,981,971
Gypsum ..	2,868	1,610	..	35,724	1,990	..	..	42,192
Iron (pig) (b) ..	..	..	..	..	..	..	..	..
Iron Oxide ..	2,600	..	..	..	..	..	..	2,600
Ironstone ..	..	..	2,233	1,067,651	..	..	..	1,069,884
Kaolin ..	3,165	1,792	..	1,278	..	..	..	6,235
Lead (b) ..	..	..	4,169	6	..	77,590	..	81,765
Lead and silver- lead ore, con- centrates, etc. ..	2,088,523	..	..	..	5,582	..	1,684	2,095,780
Limestone flux ..	10,708	..	9,069	4,663	..	42,743	..	67,183
Magnesite ..	17,310	239	..	72	..	..	..	17,621
Manganese ore ..	375	..	..	..	..	..	..	375
Molybdenite ..	435	..	398	..	..	..	..	833
Opal ..	5,500	..	800	1,142	..	..	..	7,442
Osmiridium ..	..	..	..	..	..	16,235	..	16,235
Phosphate ..	22	..	..	..	..	..	..	22
Pigments ..	1,104	..	..	93	..	..	..	1,197
Platinum ..	1,073	..	..	..	..	..	..	1,073
Salt ..	..	(a)	..	132,224	..	..	..	132,224
Sapphires ..	..	..	4,948	..	..	..	..	4,948
Shaft (oil) ..	125	..	..	..	..	3,490	..	3,615
Silver (b) ..	267	65	5,527	84	3,748	56,068	..	65,759
Tin and tin ore ..	84,800	..	49,708	..	10,608	69,592	3,345	218,053
Wolfram ..	637	..	1,491	..	..	12,216	..	18,211
Zinc & concentrates ..	986,087	..	..	..	..	19,322	..	1,005,409
Unenumerated ..	(c) 18,864	769	2,492	3,321	1,254	3,385	(e) 7,112	37,197
<b>Total ..</b>	<b>8,504,034</b>	<b>1,088,343</b>	<b>1,241,125</b>	<b>1,263,398</b>	<b>2,191,393</b>	<b>1,050,923</b>	<b>16,656</b>	<b>15,355,872</b>

(a) Not available for publication. (b) See letterpress above preceding table. (c) Includes dolomite £5,323, silica £6,204, and fireclay £4,400. (d) Year ended 30th June. (e) Mica, £6,099; Central Australia; tantalite, £1,013, North Australia.

It may be pointed out in connexion with the figures given in the above table that the totals are exclusive of returns relating to certain commodities, such as stone for building and industrial uses, sand, gravel, brick and pottery clays, lime, cement, and slates, which might be included under the generic term "mineral." Valuations of the production of some of these may be obtained from the reports of the various Mines Departments, but in regard to others it is impossible to obtain adequate information. In certain instances, moreover, the published information is of little value. Some of the items excluded, such as cement, carbide and sulphuric acid are included in manufacturing production, and, in any case, only the raw material could properly be included in mineral production. The items excluded from the total for New South Wales in 1930 consist of—lime, £52,635; building stone, £207,921; Portland cement, £926,792; coke, £589,343; road materials, £892,783; shell grit, £4,024; mineral water, £88; sulphur and sulphuric acid, £26,616; and brick and pottery clays, £146,140. Carbide, £51,437, and cement, £115,520, have been excluded from the Tasmanian figures.

4. Value of Production, 1926 to 1930.—The value of the mineral production in each State during the five years 1926 to 1930 is given in the table hereunder:—

MINERAL PRODUCTION.—VALUE, 1926 TO 1930.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
	£	£	£	£	£	£	£	£
1926 ..	16,319,265	1,082,006	1,583,614	996,910	2,371,864	1,566,587	19,085	23,939,331
1927 ..	15,449,702	1,176,378	1,614,535	1,150,847	2,202,437	1,400,994	19,609	23,014,502
1928 ..	12,600,668	1,098,691	1,359,616	1,008,514	2,128,109	1,329,057	14,627	19,539,282
1929 ..	10,155,164	1,116,083	1,683,050	1,295,053	2,087,852	1,556,276	18,345	17,911,823
1930 ..	8,504,034	1,088,343	1,241,125	1,263,398	2,191,393	1,050,923	16,656	15,355,872

For New South Wales the value of production in 1930 was over £8,000,000 lower than that for 1925, viz., £16,658,000, which was the highest ever recorded. The falling-off in 1930 was again largely due to the decreased returns from the principal metals and from coal.

The decrease in the Victorian returns for 1930 was chiefly due to a fall in the production of gold, coal and gypsum.

In Queensland the fall in production in 1930 was due to decreases in the yields from gold, from the industrial metals and from coal. The returns for South Australia in 1930 showed a decline of over £31,000 on the figures for 1929. While there was a record production from ironstone amounting to over £1,000,000, the gain in this item was more than counterbalanced by losses in other directions, the principal decreases being in gypsum, salt, and copper, which showed losses of £48,000, £40,000 and £16,000 respectively. In Western Australia the total for 1930 shows an increase of about £103,500 on that for the preceding year. All minerals, however, with the exception of gold, showed decreases. The yield from gold accounted for over 80 per cent. of the total value of the State's output in 1930. The decline in Tasmania during 1930 was mainly due to the fall in price of the chief industrial metals. This was reflected in the returns from copper and tin, which showed decreases of £120,000 and £60,000 respectively. It is stated that the decline in the Northern Territory returns for recent years is due in some measure to the fact that some of those engaged in mining forsook it to take up more profitable work in other pursuits. The number of Chinese miners in the Territory has steadily decreased and those remaining are all old men. Mica to the value of £6,099 was the chief item of production in 1930, the mineral being obtained principally in the Harts Range, but new deposits have recently been located near the Plenty River.

5. Total Production to end of 1930.—In the next table will be found the estimated value of the total mineral production in each State up to the end of 1930. The figures given in the table are also exclusive of the same items referred to in connexion with the preceding table. Thus the total for New South Wales falls short by over £44,000,000 of that published by the State Department of Mines, the principal items excluded being coke, £14,345,000; cement, £18,274,000; lime, £1,648,000; and considerable values for marble, slate, granite, chert, gravels, etc., which the Department now includes in the returns for quarries.

MINERAL PRODUCTION.—VALUE TO END OF 1930.

Minerals.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter. (a)	Australia.
	£	£	£	£	£	£	£	Million. £
Gold ..	63,920,816	303,598,660	85,922,334	1,642,119	165,293,843	8,987,348	2,283,772	632
Silver and lead ..	120,003,968	265,070	4,189,588	381,742	2,278,797	9,031,065	65,743	136
Copper ..	15,578,981	216,686	26,631,263	33,147,602	1,808,828	20,393,720	233,441	98
Iron ..	7,737,083	15,641	475,992	8,989,335	36,722	52,110	..	17
Tin ..	14,473,519	976,662	11,119,476	..	1,600,274	17,239,288	624,525	46
Wolfram ..	274,226	11,885	1,065,563	301	1,441	236,371	220,726	2
Zinc ..	23,878,939	..	13,460	15,993	5,437	996,077	..	25
Coal ..	189,581,911	13,169,434	19,452,724	..	6,602,312	1,857,402	..	231
Other ..	8,032,224	869,945	2,756,547	4,396,347	226,129	2,050,097	61,849	18
Total	443,481,667	319,123,983	151,626,947	48,573,439	177,853,783	60,843,478	3,490,056	1,205

(a) To 30th June, 1930.

The "other" minerals in New South Wales include alunite, £209,000; antimony, £360,000; arsenic, £122,000; bismuth, £236,000; chrome, £122,000; diamonds, £146,000; magnesite, £166,000; molybdenite, £213,000; opal, £1,597,000; scheelite, £193,000; and oil shale, £2,691,000. In the Victorian returns antimony ore was responsible for £612,000. The value for coal in this State includes £1,427,000 for brown coal. Included in "other" in the Queensland production were opal, £185,000; gems, £627,000; bismuth, £118,000; cobalt, £155,000; molybdenite, £599,000; and limestone flux, £722,000. The chief items in South Australian "other" minerals were salt, £2,774,000; limestone flux, £279,000; gypsum, £743,000; phosphate, £131,000; and opal, £125,000. In the Tasmanian returns osmiridium was responsible for £571,000, scheelite for £112,000, and iron pyrites for £94,000.

6. **Decline in the Metalliferous Industry.**—On the 1st December, 1921, a Select Committee was appointed by the Legislative Assembly of New South Wales to inquire into and report upon the serious decline in the metalliferous industry. The result of the Committee's investigations was published in a Report issued in 1922, wherein the chief contributing causes of the decline in New South Wales and in Australia generally were summarized as follows:—(1) High cost of production; (2) Deterioration in ore values in existing mines: (3) Inadequate machinery: (4) High freights: (5) High treatment charges: (6) Imperfect labour conditions in mines: (7) Lack of new payable discoveries: (8) Lack of efficiently-supported prospecting.

7. **Geophysical Methods for Detection of Ore Deposits.**—Reference to the application of geophysical survey methods in Australia will be found in Official Year Book No. 24, p. 570.

## § 2. Gold.

1. **Discovery in Various States.**—The discovery of gold in payable quantities was an epoch-making event in Australian history, for, as one writer aptly phrases it, this event "precipitated Australia into nationhood." A more or less detailed account of the finding of gold in the various States appears under this section in Official Year Books Nos. 1 to 4.

2. **Production at Various Periods.**—In the following table will be found the value of the gold raised in the several States and in Australia as a whole during each of the eight decennial periods from 1851 to 1930, and in single years from 1921 to 1931, from the dates when payable discoveries were first reported. Owing to the defective information in the earlier years the figures fall considerably short of the actual totals, for during the first stages of mining development, large quantities of gold were taken out of Australia by successful diggers, who preferred to keep the amount of their wealth secret.

### GOLD.—VALUE OF PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Australia.
	£	£	£	£	£	£	£	£
1851-60..	11,530,583	93,337,052	14,565	..	..	788,564	..	105,670,764
1861-70..	13,676,103	65,106,264	2,076,494	..	..	12,174	..	80,871,035
1871-80..	8,576,654	40,625,188	10,733,048	579,068	..	700,048	79,022	61,293,028
1881-90..	4,306,541	28,413,792	13,843,081	246,668	..	1,514,921	713,345	49,216,821
1891-1900	10,332,120	29,904,152	23,989,359	219,931	22,308,524	2,338,336	906,988	89,999,410
1901-10..	9,569,492	30,136,686	23,412,395	310,080	75,540,415	2,566,170	473,871	142,009,109
1911-20..	4,988,377	13,354,217	9,876,677	238,808	46,808,351	873,302	100,652	76,240,384
1921-30..	940,946	2,721,309	1,976,715	47,564	20,458,080	193,833	9,894	26,348,341
1921 ..	271,302	554,087	214,060	13,933	2,935,693	28,311	1,299	4,018,685
1922 ..	118,359	501,515	378,154	4,693	2,525,811	16,101	540	3,545,173
1923 ..	83,323	422,105	392,563	4,199	2,232,179	16,300	743	3,151,414
1924 ..	86,905	312,398	459,716	4,093	2,255,932	21,516	3,270	3,143,830
1925 ..	82,498	200,901	197,118	3,535	1,874,320	14,969	1,939	2,375,280
1926 ..	82,551	208,471	49,914	3,219	1,857,716	17,936	594	2,214,401
1927 ..	76,595	163,699	161,321	1,776	1,734,571	20,646	468	2,159,076
1928 ..	54,503	144,668	56,395	2,258	1,671,093	15,306	431	1,944,054
1929 ..	31,842	111,609	40,250	4,289	1,602,142	23,772	553	1,814,457
1930 ..	53,066	102,456	33,224	5,560	1,768,623	18,976	57	1,981,971
1931 ..	118,623	262,462	79,652	17,328	3,054,743	28,156	2,535	3,563,499
<b>Total</b>								
1851-1931	64,039,439	303,861,122	86,001,986	1,659,447	168,348,586	9,015,504	2,286,307	635,212,391



In the figures quoted above, allowance has been made in the values for the years in which gold was at a premium in Australian currency.

The value of the gold yield in 1929 was the lowest recorded since the discovery of the precious metal in 1851, while the slight increase in 1930 was to some extent due to the increased activity in prospecting and the working over of old auriferous areas resultant on prevailing economic conditions. Consequent on the enhanced price realized for gold in 1931 the figures for the year show a considerable increase, the total for Australia being the highest recorded since 1921. The average price in Australian currency applied to the production for this year was £5 19s. 9d. Reference to the bounty paid by the Commonwealth Government on local production will be found in § 16. 1. hereinafter.

The amount of gold raised in Australia in any one year attained its maximum in 1903, in which year Western Australia also reached its highest point. For the other States the years in which the greatest yields were obtained were as follow:—New South Wales 1852; Victoria, 1856; Queensland, 1900; South Australia, 1894; and Tasmania, 1899.

The following table shows the quantity in fine ounces of gold raised in each State and in Australia during each of the last five years. A separate line is added showing the total production in thousands of fine ounces since 1851:—

#### GOLD.—QUANTITY PRODUCED.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter. (a)	Australia.
	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.
1927 ..	18,032	38,538	37,979	418	408,353	4,861	110	508,291
1928 ..	12,831	33,917	13,277	532	393,408	3,603	101	457,669
1929 ..	7,496	26,275	9,476	1,009	377,176	5,597	130	427,159
1930 ..	12,493	24,119	7,821	1,311	416,369	4,467	13	466,593
1931 ..	19,673	43,637	13,147	2,782	510,572	4,760	552	595,123
Total (b) 1851-1931	15,022	71,392	20,147	388	38,814	2,115	537	148,415

(a) Year ended 30th June.

(b) '000 omitted in each case.

3. **Changes in Relative Positions of States as Gold Producers.**—The figures in the table showing the value of gold raised will sufficiently explain the enormous increase in the population of Victoria during the period 1851 to 1861, when an average of over 40,000 persons reached the State each year. With the exception of the year 1889, when its output was surpassed by that of Queensland, Victoria maintained its position as the chief gold-producer for a period of forty-seven years, or up to 1898, when its production was outstripped by that of Western Australia, the latter State from this year onward contributing practically half, and so far as the last ten years are concerned nearly four-fifths of the entire yield of Australia. New South Wales occupied the second place on the list until 1874, when Queensland returns exceeded those of the parent State, and, with the exception of the years 1921, 1926 and 1930, maintained this pre-eminence.

4. **Place of Australia in the World's Gold Production.**—In the table given below will be found the estimated value of the world's gold production, and the share of Australia therein in decennial periods since 1851 and during each of the last five years for which returns are available. The figures given in the table have been compiled chiefly from returns obtained directly by the Commonwealth Bureau of Census and Statistics from the gold-producing countries of the world.

## GOLD.—WORLD'S PRODUCTION.

Period.	World's Production of Gold.	Gold Produced in Australia.	Percentage of Australia on Total.
	£	£	%
1851-60 .. ..	260,645,000	105,671,000	40.5
1861-70 .. ..	228,031,000	80,871,000	35.5
1871-80 .. ..	214,427,000	61,293,000	28.5
1881-90 .. ..	220,903,000	49,217,000	22.3
1891-1900 .. ..	436,421,000	89,999,000	20.6
1901-10 .. ..	777,696,000	142,009,000	18.3
1911-20 .. ..	908,537,000	76,240,000	8.4
1921-30 .. ..	823,212,000	26,348,000	3.2
1926 .. ..	82,684,000	2,214,000	2.7
1927 .. ..	82,567,000	2,159,000	2.6
1928 .. ..	83,829,000	1,944,000	2.3
1929 .. ..	83,312,000	1,814,000	2.2
1930 .. ..	85,640,000	1,982,000	2.3

The value of the gold yield in the ten chief producing countries during each of the five years 1926 to 1930 is given in the table hereunder. Particulars of the quantity and value of the gold production for all countries for the ten years 1921-30 will be found in the Bulletin of Australian Production issued by this Bureau.

## GOLD.—PRODUCTION, CHIEF COUNTRIES.

Country.	1926.	1927.	1928.	1929.	1930.
	£	£	£	£	£
Union of South Africa	42,285,000	42,998,000	43,982,000	44,229,000	45,520,000
United States ..	9,509,000	8,993,000	9,110,000	8,736,000	8,922,000
Canada .. ..	7,451,000	7,870,000	8,031,000	8,191,000	8,950,000
Russia .. ..	4,214,000	4,507,000	5,097,000	4,248,000	(a)4,248,000
Mexico .. ..	3,282,000	3,081,000	2,970,000	2,769,000	2,848,000
Rhodesia .. ..	2,521,000	2,470,000	2,447,000	2,382,000	2,358,000
Australia .. ..	2,214,000	2,159,000	1,944,000	1,814,000	1,982,000
India .. ..	1,631,000	1,632,000	1,597,000	1,546,000	1,398,000
Japan .. ..	1,285,000	1,374,000	1,312,000	1,419,000	1,512,000
Gold Coast ..	847,600	728,800	670,400	883,000	1,023,000

(a) Not available ; previous year's figures taken.

The next table shows the average yearly value in order of importance of the yield in the chief gold-producing countries for the decennium 1921-1930.

## GOLD.—AVERAGE ANNUAL PRODUCTION, CHIEF COUNTRIES, 1921 TO 1930.

Country.	Value.	Country.	Value.
	£		£
Union of South Africa ..	42,078,600	Rhodesia .. ..	2,660,000
United States .. ..	10,050,000	Australia .. ..	2,634,800
Canada .. ..	7,125,800	India .. ..	1,692,300
Russia .. ..	3,395,700	Japan .. ..	1,306,800
Mexico .. ..	3,256,100		

The comparison has been restricted to countries where the average for the period is in excess of a million sterling.

5. **Employment in Gold Mining.**—The number of persons engaged in gold mining in each State in 1901 and during each of the last five years is shown in the following table :—

**GOLD MINING.—PERSONS EMPLOYED.**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Total.
	No.	No.	No.	No.	No.	No.	No.	No.
1901 ..	12,064	27,387	9,438	1,000	19,771	1,112	200	70,972
1926 ..	808	1,967	321	26	4,488	107	26	7,743
1927 ..	670	1,126	304	17	4,056	65	12	6,250
1928 ..	736	655	343	30	3,863	47	12	5,686
1929 ..	684	864	326	58	4,108	63	5	6,108
1930 ..	4,229	942	903	114	4,452	43	4	10,687

The heavy decline noticeable since 1901 is of course due to the exhaustion of accessible payable deposits and the failure to locate any considerable fresh sources of supply. As pointed out previously, the increase in number in 1930 as compared with 1929 was due to considerable accessions to the ranks of prospectors, particularly in New South Wales, where much attention was devoted to turning over old gold-fields.

6. **Bounty on Production.**—A reference to the bounty provided by the Commonwealth on gold production in Australia will be found in § 16. 1. hereinafter.

**§ 3. Platinum and Platinoid Metals.**

1. **Platinum.**—(i) *New South Wales.* The deposits at present worked in the State are situated in the Fifield division, near Parkes, and the production in 1930 amounted to 155 ozs., valued at £1,073 as compared with 128 ozs., valued at £1,352, in the preceding year, while the total production recorded to the end of 1930 amounted to 19,083 ozs., valued at £119,795.

(ii) *Victoria.* In Gippsland the metal has been found in association with copper, and 127 ozs. were produced in 1913, but there was no production in recent years.

(iii) *Queensland.* Platinum, associated with osmiridium, has been found in the beach sands between Southport and Currumbin, in creeks on the Russell gold-field near Innisfail, and in alluvial deposits on the Gympie gold-field, but no production has been recorded.

2. **Osmium, Iridium, etc.**—(i) *New South Wales.* Small quantities of osmium, iridium, and rhodium are found in various localities. Platinum, associated with iridium and osmium, has been found in the washings from the Aberfoil River, about 15 miles from Oban; on the beach sands of the northern coast; in the gem sand at Bingara, Mudgee, Bathurst, and other places. In some cases, as for example in the beach sands of Ballina, the osmiridium and other platinoid metals amount to as much as 40 per cent. of the platinum, or about 28 per cent. of the whole metallic content.

(ii) *Victoria.* In Victoria, iridosmine has been found near Foster, and at Waratah Range, South Gippsland.

(iii) *Tasmania.* For 1930 the yield of osmiridium was returned as 953 ozs., valued at £16,235, the quantity raised being about 400 ozs. less than in 1929. The decrease was largely due to the decline in price, which fell to £17 os. 9d. in 1930, as compared with £22 18s. 1d. in 1929, and £25 9s. in 1928. It is stated that one of the reasons for the decreased demand for the metal and the consequent fall in price, is that osmiridium itself is of no commercial value, the value being in the osmium and iridium extracted therefrom. The process of extraction is a particularly dangerous one, owing to the fact that osmium oxide, which is a deadly poison, is given off in a gaseous state. Some of the American firms have ceased producing on this account, and are using African ore containing platinum and iridium, the extraction of which is simpler and less hazardous.

## § 4. Silver, Lead, and \*Zinc.

1. Occurrence in Each State.—Particulars regarding the occurrence of silver in each State were given in Year Books, Nos. 1 to 5, but considerations of space precluded the repetition of this matter.

2. Development of Silver Mining.—The value of the production of silver, silver-lead and ore, and lead from each State during the five years ending 1930 is given hereunder :—

## SILVER AND LEAD.—PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter. (a)	Australia.
	£	£	£	£	£	£	£	£
1926 ..	4,399,953	307	147,724	865	85,604	281,155	447	4,916,055
1927 ..	3,487,980	304	32,102	143	30,421	222,427	379	3,773,756
1928 ..	2,492,089	275	3,387	..	10,836	180,517	22	2,687,126
1929 ..	3,032,741	100	14,807	258	12,525	233,353	79	3,293,863
1930 ..	2,088,790	65	9,696	90	9,330	133,658	1,684	2,243,313

(a) Year ended 30th June.

The figures quoted above for New South Wales for the year 1930 include silver to the value of £267 and silver-lead ore and concentrates valued at £2,088,523. Since the closing down of the Sulphide Corporation's works in 1922 the silver (metal) is obtained chiefly in the refining of gold and copper ores, and there has been no production of lead (pig) in the State. It may be noted here that the bulk of the carbonate and siliceous ore from the Broken Hill field is sent for treatment by the Broken Hill Associated Smelters Proprietary Limited at Port Pirie in South Australia, while the remainder of the ore is concentrated on the field and the product is dispatched to Port Pirie for refining.

Low prices coupled with increased costs of production were responsible for the decrease in values recorded in New South Wales during the period dealt with. The improvement in 1929 as compared with 1928 was mainly due to an advance in the price of lead.

It must be understood that the totals for New South Wales in the above table represent the *net* value of the product (excluding zinc) of the silver-lead mines of the State. In explanation of the values thus given, it may be noted that the metallic contents of the larger portion of the output from the silver-lead mines in the State are extracted outside New South Wales, and the Mines Department considers, therefore, that the State should not take full credit for the finished product. The real importance of the State as a producer of silver, lead, and zinc is thus to some extent lost sight of. The next table, however, which indicates the quantity of these materials locally produced, and the contents by assay of concentrates exported during the last five years, will show, as regards New South Wales, the estimated total production and the value of the metal contents of all ore mined :—

## SILVER-LEAD MINES.—NEW SOUTH WALES, TOTAL PRODUCTION.

Year.	Metal Produced within Australia.				Contents of Concentrates Exported.			
	Silver.	Lead.	Zinc.	Value.	Silver.	Lead.	Zinc.	Value.
	ozs. fine.	tons.	tons.	£	ozs. fine.	tons.	tons.	£
1926 ..	7,338,477	142,654	39,277	6,730,689	2,371,264	23,242	96,167	1,591,673
1927 ..	7,901,861	156,306	42,757	5,955,009	2,339,382	26,709	115,123	1,467,235
1928 ..	7,068,964	151,475	44,004	5,256,649	1,259,931	11,372	94,087	835,620
1929 ..	7,619,884	165,364	46,163	5,918,014	835,697	7,009	76,619	734,261
1930 ..	7,876,894	162,703	53,958	4,579,412	844,188	14,044	87,913	911,724

\* Further details in regard to zinc are given in § 7 hereinafter.

The figures given above are quoted on the authority of the Mines Department of New South Wales. Accurate details in regard to gold, copper, and antimony contained in the silver-lead ores are not available. Cadmium was first extracted in 1922 at Risdon, in Tasmania, and in 1930 the amount won from ores of New South Wales origin was given as 224 tons, valued at £76,275. As pointed out previously, credit for the value is not taken in the New South Wales returns, the value accruing to the State being taken as that of the declared value of the concentrates at the time of their dispatch.

3. Sources of Production.—Broken Hill, in New South Wales, is the chief centre of silver production in Australia.

(i) *New South Wales.* (a) *Broken Hill.* A description of the silver-bearing area in this district is given in earlier issues of the Year Book. (See No. 4, page 506.)

Although the returns are not complete in all cases, the following table relating to the companies controlling the principal mines at Broken Hill will give some idea of the richness of the field:—

SILVER.—BROKEN HILL RETURNS TO END OF 1930.

Mine.	Value of Output to end of 1930.	Dividends and Bonuses Paid to end of 1930.
	£	£
Broken Hill Proprietary Co. Ltd. . . . .	53,263,050	13,655,247
Broken Hill Proprietary Block 14 Co. Ltd. . . . .	4,748,346	670,160
British-Australian Broken Hill Co. Ltd. . . . .	5,858,998	821,280
Broken Hill Proprietary Block 10 Co. Ltd. . . . .	4,946,989	1,432,500
Sulphide Corporation Ltd. (Central and Junction Mines)	26,811,642	3,436,875
Broken Hill South Ltd. . . . .	21,867,681	5,055,000
North Broken Hill Ltd. . . . .	17,226,649	5,202,690
Broken Hill Junction Lead Mining Co. . . . .	1,185,058	87,500
Junction North Broken Hill Mine . . . . .	3,511,940	171,431
The Zinc Corporation Ltd. . . . .	9,128,603	3,392,944
Barrier South Ltd. . . . .	151,517	50,000
Totals . . . . .	148,700,473	33,975,627

The returns relating to dividends and bonuses paid are exclusive of £1,744,000 representing the nominal value of shares in Block 14, British, and Block 10 companies, allotted to shareholders of Broken Hill Proprietary Company. If the output of the companies which were, prior to 1930, engaged in treating the tailings, etc., be taken into consideration, the totals for output and dividends shown in the table would be increased to about 156 millions and 37 millions respectively. The authorized capital of the various companies amounted to £6,823,000. In 1931 the increase in dividends and bonuses paid amounted to £203,000 shared in by four only of the Companies included above, i.e., Zinc Corporation, £83,000; North Broken Hill, £70,000; Sulphide Corporation, £30,000; and Broken Hill South, £20,000.

(b) *Other Areas.* Silver is found in various other localities in New South Wales, but the production therefrom in 1930 was unimportant, with the exception of the Yerranderie area, from which a yield of 84,900 ozs. was reported. About 2,500 tons of ore were raised for experimental purposes in 1930 by the Lake George Mines Ltd. at Captain's Flat, but the products were not sold. At the end of the year the total ore reserves amounted to over 2 million tons, averaging 7.67 per cent. lead, 13.06 per cent. zinc, and 0.75 per cent. copper, together with silver 2.34 ozs. and gold 1.30 dwt.

(ii) *Victoria.* The silver produced in 1930 amounted to 813 ozs., valued at £65, and was obtained in the refining of gold at the Melbourne Mint.

(iii) *Queensland.* Owing to low prices, the yields from the chief silver and lead producing centres in 1930 showed a considerable decline, the total value of the production of both metals being only £9,696, as compared with £148,000 in 1926, and £241,000 in 1925. Great hopes are entertained from the activities of the Company engaged in

exploiting the immense silver-lead field at Mount Isa. The deposits are being worked on a large scale, and the most modern appliances have been installed. A well ordered town furnished with up-to-date conveniences has been established in close proximity to the workings.

(iv) *South Australia.* Silver ore has been discovered at Miltalie and Poonana, in the Franklin Harbour district, also at Mount Malvern and Olivaster, near Rapid Bay, and in the vicinity of Blinman and Farina, at Baratta, and elsewhere. The production of silver in 1930 was valued at £84, and of lead at £6.

(v) *Western Australia.* The quantity of silver obtained as a by-product and exported in 1930 was 46,348 ozs., valued at £3,748. In addition, 391 tons of lead and silver-lead ore and concentrates valued at £5,582 were exported. No lead ore was produced from the Northampton mineral field in 1930.

(vi) *Tasmania.* The silver produced in 1930 amounted to 711,619 ozs., valued at £56,068, and the lead to 4,238 tons, valued at £77,590. About 529,000 ozs. of the total silver output were contained in silver-lead, while 183,000 ozs. were contained in the blister copper produced by the Mount Lyell Co.

(vii) *Northern Territory.* A rich deposit of silver-lead and copper ore was located in 1930 at the Jervois Range about 200 miles east of Alice Springs. Development is, however, hindered by the low price of metals coupled with transport difficulties and lack of permanent water. Rich sulphides have been found at Barrow Creek. During the year a small quantity of silver-lead ore was raised in the Mt. Gardner district.

4. *World's Production.*—The world's production of silver during the last five years for which particulars are available is estimated to have been as follows:—

## SILVER.—WORLD'S PRODUCTION.

Total.	1926.	1927.	1928.	1929.	1930.
World's production in 1,000 fine ozs. . .	253,186	251,232	257,273	261,715	245,290

The share of Australia in the world's silver production in 1919 was estimated at 7,800,000 ozs., or about  $4\frac{1}{2}$  per cent. of the total production, but in 1921, owing to the cessation of operations at the Broken Hill field, the total local extraction fell to 4,573,000 ozs., and the estimated silver contents of the ores, bullion, and concentrates exported to 732,000 ozs., the total being a little over 3 per cent. of the world's production. For 1930 local extraction was set down as 9,003,000 ozs., and exports as 783,000 ozs., the total being equivalent to about 4 per cent. on the production for the world. The figures for the world's production are given on the authority of *The Mineral Industry*.

Arranged in order of importance the estimated yields in 1930 from the chief silver producing countries were as follow:—

## SILVER.—PRODUCTION, CHIEF COUNTRIES, 1930.

Country.	Production.	Country.	Production.
	Fine ozs. ( <sup>000</sup> omitted.)		Fine ozs. ( <sup>000</sup> omitted.)
Mexico .. .. .	105,204	Japan .. .. .	5,000
United States .. .. .	48,638	Central America .. .. .	2,500
South America .. .. .	26,500	East Indies .. .. .	1,750
Canada .. .. .	26,436	Transvaal .. .. .	1,050
Europe .. .. .	10,750	China .. .. .	150
Australia .. .. .	9,786	Rhodesia .. .. .	100
British India .. .. .	7,050		

5. Prices of Silver, Lead, and Zinc.—In view of the close association in Australia, particularly in New South Wales, of ores containing these metals, the average prices of each metal during the last five years have been incorporated in the table hereunder :—

PRICES OF SILVER, LEAD, AND SPELTER.

Metal.	1927.			1928.			1929.			1930.			1931.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Silver (Standard) per oz.	0	2	2.04	0	2	2.75	0	2	0.46	0	1	5.66	0	1	2.60
Lead .. per ton	24	8	1	21	3	4	23	4	11	18	1	5	13	0	9
Spelter per ton	28	9	11	25	5	5	24	17	8	16	16	9	12	8	11

The above figures are quoted on the authority of the Mines Department of New South Wales.

6. Employment in Silver, Lead and Zinc Mining.—The number of persons employed in mining for these metals during each of the last five years is given below :—

SILVER MINING.—PERSONS EMPLOYED.

Year.	N.S.W. (a)	Q'land.	S. Aust.	W. Aust. (b)	Tasmania. (a)	Nor. Ter.	Australia.
	No.	No.	No.	No.	No.	No.	No.
1926 ..	5,924	390	25	138	523	2	7,002
1927 ..	5,833	277	1	51	718	..	(c) 6,882
1928 ..	4,666	282	..	12	627	..	(d) 5,589
1929 ..	5,001	447	7	31	540	2	6,028
1930 ..	4,489	474	2	..	231	35	5,231

(a) Silver, lead, and zinc.  
Victoria.

(b) Principally lead and silver-lead ore.  
(d) Including 2 in Victoria.

(c) Including 2 in Victoria.

With the development of the great silver-lead field at Mount Isa, in Queensland, it is expected that the employment returns for that State will in future assume considerable importance.

§ 5. Copper.

1. Production.—The production of copper in the various States has been influenced considerably by the ruling prices, which have undergone extraordinary fluctuations. The value of the local production as reported and credited to the mineral industry for the years 1926 to 1930 is shown hereunder. Quantities for Australia as a whole as returned by the several State Mines Departments are appended on separate lines at the foot of the table.

COPPER.—PRODUCTION AUSTRALIA.

State.		1926.	1927.	1928.	1929.	1930.
		£	£	£	£	£
New South Wales ..	..	22,473	12,655	3,497	14,183	8,347
Queensland ..	..	73,591	218,842	177,043	294,188	174,075
South Australia ..	..	14,681	12,452	13,321	22,982	6,966
Western Australia ..	..	84	101	765	2,778	102
Tasmania ..	..	454,854	362,988	444,802	740,985	620,578
Northern Territory (a)	..	60	..	..	..	589
Australia ..	..	565,743	607,038	639,428	61,075,146	810,657
Ingot, Matte, etc. ..	tons	8,722	9,940	9,455	12,613	13,063
Ore ..	tons	7	192	100	416	251

(a) Year ended 30th June.

(b) Includes £30, value of production in Victoria.

The total value of the production in 1920 was £2,658,000, and the heavy fall during recent years was due to the low price of the metal preventing the profitable working of many of the copper mines throughout Australia. Production in 1930 was again depressed by the fall in price.

2. Sources of Production.—(i) *New South Wales.* The depression in this branch of the mining industry during the last few years is likely to continue, unless copper appreciates in value, and less costly methods of production are evolved. For the year 1917 the yield was valued at upwards of £814,000, in 1918 it was returned at £697,000, but in 1928 it had declined to under £4,000. The rise in price during 1929 led to a moderate increase in activity. The small production in 1930 was obtained principally from the Mount Royal mine at Tottenham, the output for the year including 93 tons of electrolytic copper valued at £6,610, and 149 tons of ore valued at £1,737 exported overseas.

(ii) *Queensland.* The yield in this State amounted in 1930 to 2,930 tons valued at £174,075, and shows a serious decline as compared with 1920 when nearly 16,000 tons valued at £1,552,000 were raised. The falling-off in the yield in recent years was due partly to the low prices realized for copper and partly to old-fashioned plant and methods of treatment. Returns from the chief producing areas in 1930 were as follow :—Cloncurry, 2,169 tons, £128,841; Herberton, 350 tons, £20,824; Mount Morgan, 276 tons, £16,394; and Gladstone, 75 tons, £4,472.

(iii) *South Australia.* Taking the entire period over which production extended, the yield of copper in South Australia easily outstrips that of any other State. In recent years, however, Queensland, Tasmania, and New South Wales have come to the front as copper producers, as the table on the preceding page shows. Deposits of copper ore are found over a large portion of South Australia. A short account of the discovery, etc., of some of the principal mining areas, such as Kapunda, Burra Burra, Wallaroo, and Moonta, was given in earlier issues of the Official Year Book. Increased attention is being given to the possibility of making fresh discoveries in the Moonta and Wallaroo copper field. Opened in 1860, this field worked continuously until 1923, and produced copper to the value of £20,500,000. In 1930 the production fell to 94 tons, valued at £6,966, the lowest return since the year 1845. Owing to the low price of the metal a considerable tonnage of ore was held in reserve at Moonta.

(iv) *Western Australia.* The value of the copper ore exported from this State in 1930 was only £102 as compared with £18,200 in 1925, the small production in 1930 being due to the low price ruling for the metal.

(v) *Tasmania.* The quantity of copper produced in Tasmania during 1930 was 9,940 tons, valued at £620,578, the whole of the production being due to the Mount Lyell Mining and Railway Co. Ltd. This Company treated 58,320 tons of ore and concentrates and produced 10,018 tons of blister copper, containing copper, 9,900 tons; silver, 183,000 ozs.; and gold, 3,800 ozs., the whole being valued at £651,000.

(vi) *Northern Territory.* Copper has been found at various places, but lack of capital and difficulty of transport prevent the development of the deposits. The bulk of the production in 1930 was obtained chiefly from old mine dumps at Mount Diamond.

3. Prices.—The great variation in price that the metal has undergone is shown in the following table, which gives the average price in London and New York during each of the last five years. The figures are given on the authority of the *The Mineral Industry* :—

## COPPER.—PRICES.

Year.				Average London Price per Ton Standard Copper.	Average New York Price in Cents per lb. Electrolytic Copper.
				£	Cents.
1926	..	..	..	57.90	13.80
1927	..	..	..	55.65	12.92
1928	..	..	..	63.70	14.57
1929	..	..	..	75.42	18.11
1930	..	..	..	54.62	12.98



In 1931 the average London price fell to £38.48 per ton.

As evidence of the tremendous variation in the price of copper it may be noted that in December, 1916, the average London price of standard copper was £145.32 per ton, while in June, 1927, it was quoted at £54.03. In 1930 the highest average was £71.47, recorded in January, but in October the price had fallen as low as £43.03.

4. *World's Production of Copper.*—The world's production of copper during the five years 1926–1930 is estimated to have been as follows. The figures for foreign countries have been taken from the latest issue of *The Mineral Industry* :—

#### COPPER.—WORLD'S PRODUCTION.

Year.	1926.	1927.	1928.	1929.	1930.
World's production—tons . .	1,459,000	1,502,000	1,689,000	1,899,000	1,562,000

The yields from the chief copper-producing countries in 1930 were as follow :—

#### COPPER.—PRODUCTION, CHIEF COUNTRIES, 1930.

Country.		Production.	Country.		Production.
		Tons.			Tons.
United States	.. ..	634,600	Spain and Portugal	.. ..	41,500
Chile	.. ..	218,500	Germany	.. ..	26,600
Africa	.. ..	163,100	Yugoslavia	.. ..	25,100
Canada	.. ..	135,600	<b>Australia</b>	.. ..	<b>18,200</b>
Japan	.. ..	78,500	Norway	.. ..	16,700
Mexico	.. ..	67,300	Cuba	.. ..	16,000
Russia	.. ..	47,900	Bolivia	.. ..	4,800
Peru	.. ..	46,900	Austria	.. ..	3,600

During the five years ending in 1930 the share of the United States in the world's copper production amounted to over 48 per cent.

The Australian production in 1930 amounted to a little over 1 per cent. of the total.

5. *Employment in Copper Mining.*—The number of persons employed in copper mining during each of the last five years was as follows :—

#### COPPER MINING.—PERSONS EMPLOYED.

Year.		N.S.W.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Australia.
		No.	No.	No.	No.	No.	No.	No.
1926	.. ..	31	270	26	8	697	..	1,032
1927	.. ..	29	271	20	9	760	..	1,089
1928	.. ..	3	517	14	10	1,181	..	1,725
1929	.. ..	32	366	74	9	1,307	..	(a)1,789
1930	.. ..	33	376	58	3	1,333	6	1,809

(a) Including 1 in Victoria.

In 1917, over 9,000 persons were engaged in copper mining.

### § 6. Tin.

1. *Production.*—The development of tin mining is, of course, largely dependent on the price realized for the metal, and, as in the case of copper, the production has been subject to somewhat violent fluctuations. The table below shows the value of the production as reported to the Mines Departments in each of the States during the five years 1926 to 1930. A separate line is appended showing the recorded tonnages for Australia during each of the specified years.

## TIN.—PRODUCTION, AUSTRALIA.

State.	1926.	1927.	1928.	1929.	1930.
	£	£	£	£	£
New South Wales .. ..	326,474	287,539	231,843	191,199	84,800
Victoria .. ..	5,075	11,454	12,954	3,545	..
Queensland .. ..	174,147	193,774	134,727	114,518	49,708
Western Australia .. ..	10,450	13,316	15,002	13,432	10,608
Tasmania .. ..	322,526	317,593	258,676	130,014	69,592
Northern Territory (a) ..	15,852	18,754	10,828	6,958	3,345
Total .. ..	854,524	842,430	664,030	459,666	218,053
Tonnage .. ..	3,482	3,507	3,425	2,723	1,798

(a) Year ending 30th June.

In 1923, the average London price of tin was £202 3s. per ton, while in 1926 it had advanced to £291 2s. per ton. There was a decline in the average for 1927 to £289 1s. 5d. per ton, although in March of that year the price was £313 9s. 5d. The sharp decline in value to £227 4s. 8d. in 1928, to £203 19s. 4d., in 1929, and the tremendous drop to £141 19s. in 1930, are reflected in the decreased production for those years. In December, 1930, the price had fallen to £111 13s. per ton.

2. Sources of Production.—(i) *New South Wales.* The production in 1930 was estimated at 590 tons of ingots valued at £84,800. A large proportion of the output in this State is obtained in normal years by dredging, principally in the New England district, the quantity so won in 1930 being 294 tons, valued at £25,266. The majority of the dredging plants, however, were not in operation during 1930, and many of the employees turned their attention to fossicking. The principal lode mines are at Torrington and Ardlethan.

(ii) *Victoria.* The production in 1929 was obtained by dredging, the Cock's Pioneer Gold and Tin Co. in the Beechworth district contributing 14 tons valued at £2,000, the balance mainly coming from Toora in Gippsland. No production was recorded in 1930.

(iii) *Queensland.* The chief producing districts in Queensland during 1930 were Herberton, 404 tons, valued at £32,359; Stanthorpe, 82 tons, £7,930; and Kangaroo Hills, 54 tons, £4,237. Chillagoe and Cooktown areas each produced about 30 tons. The total production was the lowest recorded since the year 1898.

(iv) *Western Australia.* The export of tin from the State during 1930 amounted to 62 tons, valued at £10,608. The production from the Greenbushes and Yilgarn fields was trifling, while only 12 tons of black tin valued at £1,300 were reported from the Pilbara field.

(v) *Tasmania.* During 1930 the output of tin amounted to 512 tons of metallic tin, valued at £69,592, the lowest return over a long series of years.

(vi) *Northern Territory.* The Maranboy field was the chief contributor to the output of tin in 1930. Small quantities were raised also at Finnis River, Pine Creek, Brock's Creek and other localities.

3. *World's Production.*—According to *The Mineral Industry* the world's production of tin during each of the last five years was as follows :—

## TIN.—WORLD'S PRODUCTION.

1926.	1927.	1928.	1929.	1930.
Tons. 142,989	Tons. 157,000	Tons. 178,000	Tons. 190,600	Tons. 174,400

The yields from the chief producing countries in 1930 were as follow :—

**TIN.—PRODUCTION, CHIEF COUNTRIES, 1930.**

Country.	Production.	Country.	Production.
	Tons.		Tons.
Federated Malay States ..	62,100	Great Britain .. ..	2,500
Bolivia .. ..	38,100	Unfederated Malay States	1,700
Netherlands East Indies ..	34,500	<b>Australia</b> .. ..	<b>1,500</b>
Siam .. ..	11,200	Spain and Portugal ..	1,500
Nigeria .. ..	8,700	Congo .. ..	1,000
China .. ..	6,500	Indo-China .. ..	800
Burma .. ..	2,700	South Africa .. ..	700

Australia's share of the world's tin production would appear therefore to be less than 1 per cent.

4. Prices.—The average price of the metal in the London market for the years 1926 to 1931 was as follows :—

**TIN.—PRICES.**

Year.	Average Price Per Ton.	Year.	Average Price per Ton.
	£ s. d.		£ s. d.
1926 .. ..	287 15 4	1929 .. ..	203 18 10
1927 .. ..	289 1 5	1930 .. ..	141 19 1
1928 .. ..	227 4 8	1931 .. ..	118 9 1

At the London sales in December, 1930, the price fell as low as £104 a ton, the lowest rate quoted since 1902.

5. Employment in Tin Mining.—The number of persons employed in tin mining during the last five years is shown below :—

**TIN MINING.—PERSONS EMPLOYED.**

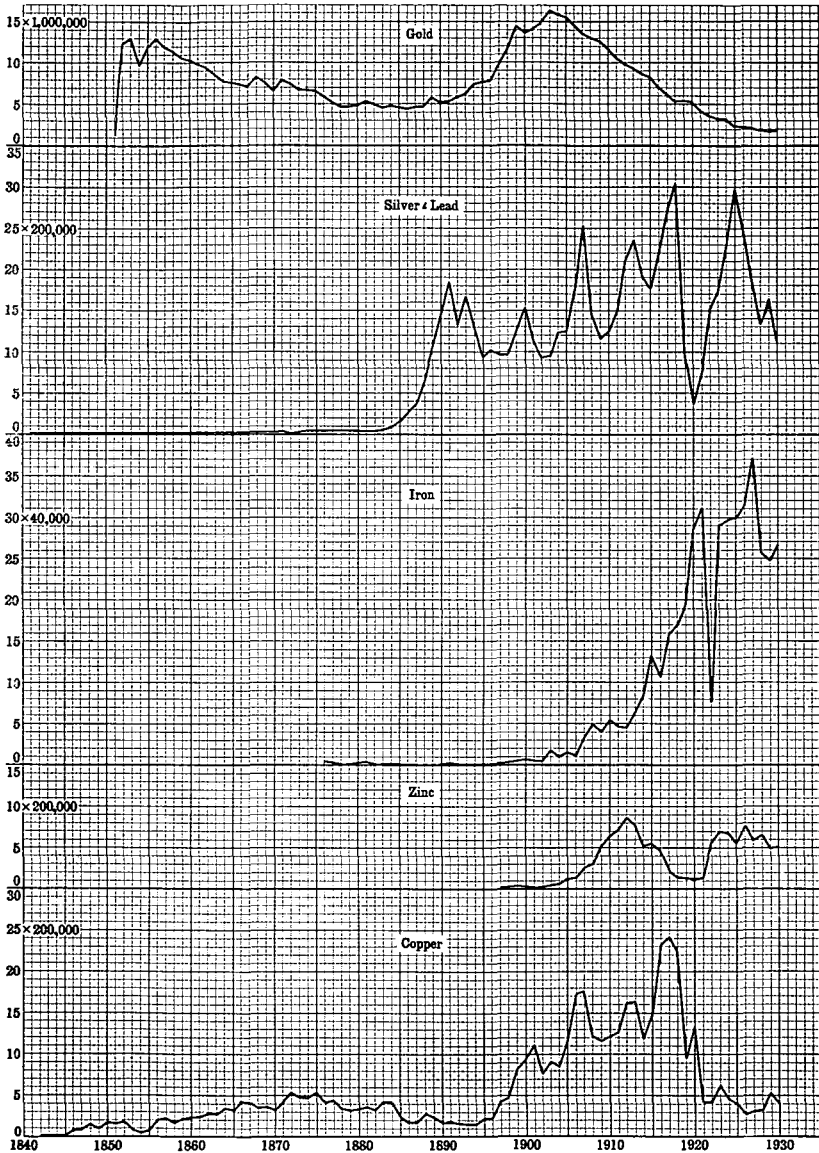
Year.	N.S.W.	Victoria. (a)	Q'land.	W. Aust.	Tas.	Nor. Ter.	Australia.
	No.	No.	No.	No.	No.	No.	No.
1926 .. ..	1,235	..	714	78	1,057	112	3,196
1927 .. ..	1,430	42	906	106	1,230	95	3,809
1928 .. ..	1,275	118	954	119	1,113	95	3,674
1929 .. ..	1,008	49	750	49	810	66	2,732
1930 .. ..	870	..	579	30	443	60	1,932

(a) The tin produced in Victoria was raised by a dredging company operating primarily for gold.

**§ 7. Zinc.**

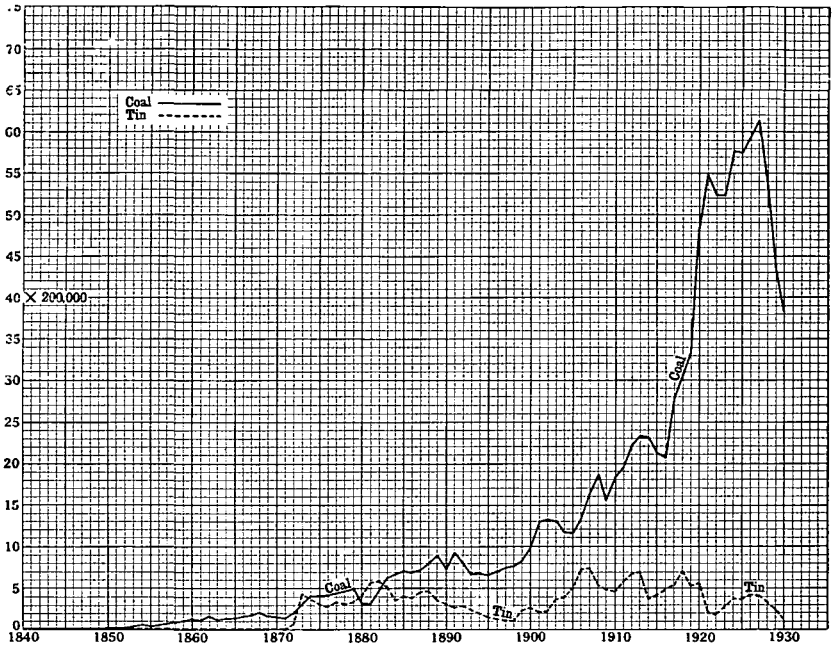
1. Production.—(i) *New South Wales.* (a) *Values Assigned.* The production of zinciferous concentrates is chiefly confined to the Broken Hill district of New South Wales, where zincblende forms one of the chief constituents in the enormous deposits of sulphide ores. During the earlier years of mining activity on this field a considerable amount of zinc was left unrecovered in tailings, but from 1909 onwards improved methods of treatment resulted in the profitable extraction of the zinc contents of the accumulations at the various mines.

## VALUES OF THE PRINCIPAL MINERALS PRODUCED—AUSTRALIA, 1840 TO 1930

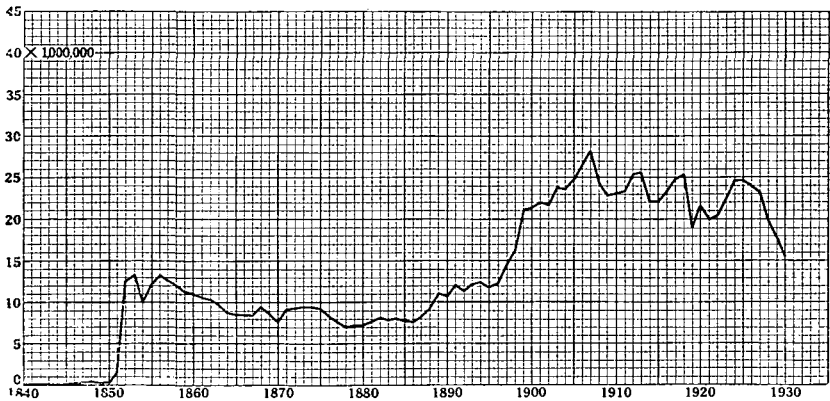


EXPLANATION.—The values shown are those of the total Australian production of certain of the most important minerals in successive years from 1840 onwards

The base of each small square represents an interval of one year, and the vertical height represents in the case of gold £1,000,000; in the case of silver and lead, zinc and copper £200,000; and in the case of iron £40,000.

VALUES OF PRINCIPAL MINERALS PRODUCED—AUSTRALIA. 1840 TO 1930—*continued.*

## Total Mineral Production



EXPLANATION.—The values shown are those of the total Australian production of certain of the most important minerals in successive years from 1840 onwards.

The base of each small square represents an interval of one year, and the vertical height represents in the case of coal and tin £200,000, and in the case of total mineral production £1,000,000.

As the metallic contents of the bulk of the concentrates, etc., produced in the Broken Hill district are extracted outside New South Wales, the mineral industry of that State is not credited by the Mines Department with the value of the finished product. During 1930 the zinc concentrates actually exported amounted to 298,000 tons, valued at £986,000. Portion of the zinc concentrates produced is treated at Risdon in Tasmania, and the balance is exported overseas.

(b) *Local and Foreign Extraction.* A statement of the quantity of zinc extracted in Australia and the estimated zinc contents of concentrates exported overseas during the five years 1926 to 1930 will be found in § 17 hereinafter.

(ii) *Queensland.* The total production of zinc in 1926 was returned at 200 tons, valued at £6,827, produced from ore raised in the Chillagoe area, but there was no record of production in later years.

(iii) *South Australia.* Zinc is known to exist in various localities in South Australia, but there has been no production during recent years.

(iv) *Tasmania.* During the year 1930 the production from local ores was taken as 943 tons, valued at £19,322, almost the entire output coming from the mines worked by the Electrolytic Zinc Co., which has erected extensive works at Rosebery. In addition, about 3 tons of cadmium, valued at £1,333, were obtained as a by-product.

The Electrolytic Zinc Co. at Risdon operated on raw materials obtained partly from the West Coast district of Tasmania, but chiefly from Broken Hill in New South Wales. Production from other than Tasmanian ores in 1930 consisted of 53,958 tons of zinc valued at £1,015,610, and 224 tons of cadmium, valued at £76,275.

2. *World's Production.*—According to *The Mineral Industry* the world's production of zinc during the five years 1926–30 was as follows:—

## ZINC.—WORLD'S PRODUCTION.

1926.	1927.	1928.	1929.	1930.
Tons. 1,226,100	Tons. 1,307,200	Tons. 1,399,000	1929. 1,447,200	Tons. 1,388,600

The yields from the chief producing countries in 1930 were as given hereunder.

## ZINC.—PRODUCTION, CHIEF COUNTRIES, 1930.

Country.	Production.	Country.	Production.
	Tons.		Tons.
United States .. ..	450,400	Mexico .. ..	36,700
Belgium .. ..	175,300	Norway .. ..	36,700
Poland (a) .. ..	171,600	Netherlands .. ..	22,900
<b>Australia .. ..</b>	<b>142,000</b>	Japan .. ..	19,700
Canada .. ..	108,500	Italy .. ..	18,300
Germany .. ..	95,800	Rhodesia .. ..	17,900
France .. ..	89,300	Spain .. ..	10,500
Great Britain .. ..	48,600		

(a) Including Upper Silesia.

The figures for Australia have been taken from returns supplied by the Australian Mines and Metals Association.

3. *Prices.*—Information regarding prices of zinc will be found in the table in § 4.5, ante.

## § 8. Iron.

1. **General.**—The fact that iron ore is widely distributed in Australia had long been known, and extensive deposits have been discovered from time to time at various places throughout the States, but the utilization of these deposits for the production of iron and steel is, at present, confined to New South Wales.

2. **Production.**—(i) *New South Wales.* The production from local ores only in 1929 amounted to 3,911 tons, valued at £17,600, but there was no production from this source recorded in 1930, as the smelters now obtain their ore from places outside the State.

The figures quoted do not, of course, represent the total production of pig iron in New South Wales, since a considerable quantity of ore raised in South Australia, and credited therefore to the mineral returns of that State, is treated in New South Wales. A quantity of iron oxide is purchased by the various gasworks for use in purifying gas, and is also to some extent employed as a pigment, and in paper manufacture, the output in New South Wales being drawn chiefly from the deposits in the Port Macquarie Division. During 1930 the iron oxide raised amounted to 3,800 tons, valued at £2,600.

(ii) *South Australia.* The production from the deposits worked by the Broken Hill Pty. Co. Ltd., at Iron Knob, and at Middlebank reached its maximum in 1930, the ore raised amounting to over 928,000 tons, valued at £1,068,000.

(iii) *Other States.* Reference to the iron ore deposits in the other States will be found in preceding issues of the Official Year Book (see No. 22, page 779).

3. **Iron and Steel Bounties.**—During the year 1930-31 the bounties paid under the Iron and Steel Products Bounty Act on articles manufactured from locally produced materials were as follow:—fencing wire, £39,913; galvanized sheets, £79,429; wire-netting, £22,696; traction engines, £1,974.

4. **World's Production of Iron and Steel.**—(i) *General.* The Australian production of iron and steel at present forms a very small proportion of the world's output. According to *The Mineral Industry*, the world's production of each commodity in the years specified for the principal countries was as follows:—

## PIG IRON AND STEEL.—WORLD'S PRODUCTION.

Country.	Pig Iron.			Steel Ingots and Castings.		
	1928.	1929.	1930.	1928.	1929.	1930.
	Thousands of Tons.			Thousands of Tons.		
United States .. .. .	38,156	42,614	31,752	51,544	56,433	40,699
Germany .. .. .	11,804	13,401	9,694	14,517	16,246	11,539
France .. .. .	10,097	10,439	10,100	9,387	9,666	9,402
Saar Territory .. .. .	1,936	2,088	1,884	2,040	2,209	1,935
Belgium .. .. .	3,825	3,970	3,403	3,870	4,039	3,370
Luxemburg .. .. .	2,724	2,906	2,473	2,510	2,702	2,269
Austria .. .. .	457	450	287	637	630	468
Italy .. .. .	539	678	534	1,910	2,115	1,774
Spain .. .. .	565	709	650	734	929	850
Czechoslovakia .. .. .	1,569	1,643	1,572	1,992	2,145	1,984
Poland .. .. .	684	704	478	1,437	1,377	1,237
Sweden .. .. .	396	490	457	576	694	603
Russia .. .. .	3,274	4,018	4,969	4,246	4,723	5,552
China .. .. .	400	250	400	300	50	200
Japan .. .. .	1,508	1,750	1,400	1,519	2,100	1,750
United Kingdom .. .. .	6,611	7,580	6,197	8,520	9,655	7,298
India .. .. .	1,051	1,348	703	440	580	619
Canada .. .. .	1,039	1,080	814	1,239	1,380	1,012
<b>Australia .. .. .</b>	<b>420</b>	<b>333</b>	<b>440</b>	<b>439</b>	<b>348</b>	<b>420</b>
<b>Total—All Countries</b>	<b>86,760</b>	<b>96,263</b>	<b>78,942</b>	<b>109,789</b>	<b>118,208</b>	<b>93,442</b>

The figures for Japan include Manchuria and Korea. Production of both iron and steel improved somewhat in 1930 in Australia, the decline in the previous year being due principally to shortage in fuel owing to industrial disturbances on the coal-fields.

(ii) *Australia.* The table below, which is also given on the authority of *The Mineral Industry*, shows the estimated production of pig iron and steel ingots and castings in Australia during each of the last ten years for which particulars are available.

**PIG IRON AND STEEL.—AUSTRALIAN PRODUCTION.**

Year.	Pig Iron.	Steel.	Year.	Pig Iron.	Steel.
	Thousands of Tons.			Thousands of Tons.	
1921 ..	352	209	1926 ..	450	360
1922 ..	84	220	1927 ..	410	426
1923 ..	330	200	1928 ..	420	439
1924 ..	416	306	1929 ..	333	348
1925 ..	439	351	1930 ..	440	420

The principal producers in Australia are the Broken Hill Proprietary and the Australian Iron and Steel Co., the former situated at Newcastle and the latter at Port Kembla in New South Wales.

**§ 9. Other Metallic Minerals.**

Detailed information in regard to the occurrence and production of other metallic minerals in each of the States will be found in Official Year Book No. 22, and preceding issues.

**§ 10. Coal.**

1. *Production in each State.*—An account of the discovery of coal in each State will be found in preceding issues of the Year Book. (See No. 3, pp. 515-6.) The quantity and value of the production in each State and in Australia during the years specified are given in the table hereunder:—

**COAL.—PRODUCTION, AUSTRALIA.**

Year.	N.S.W.	Victoria. (a)	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
QUANTITY.							
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1913 ..	10,414,165	593,912	1,037,944	..	313,818	55,043	12,414,882
1921 ..	10,793,387	514,859	954,763	..	468,817	66,476	12,798,302
1926 ..	10,885,766	591,001	1,221,059	..	474,819	102,358	13,275,003
1927 ..	11,126,114	684,245	1,099,040	..	501,505	112,056	13,522,960
1928 ..	9,448,197	658,323	1,076,340	..	528,420	128,500	11,839,780
1929 ..	7,617,736	703,828	1,368,745	..	544,719	130,291	10,365,319
1930 ..	7,093,055	703,487	1,094,676	..	501,425	138,716	9,531,359
VALUE.							
	£	£	£	£	£	£	£
1913 ..	3,770,375	274,371	403,767	..	153,614	25,367	4,627,494
1921 ..	9,078,388	603,323	831,483	..	407,117	63,446	10,983,757
1926 ..	9,436,520	657,798	1,098,927	..	394,400	90,401	11,678,046
1927 ..	9,782,002	762,530	987,465	..	407,967	99,802	12,039,766
1928 ..	8,263,729	731,015	971,690	..	420,145	106,558	10,493,137
1929 ..	5,952,720	813,370	1,199,599	..	426,706	105,877	8,498,272
1930 ..	5,193,032	807,699	952,856	..	394,758	110,253	7,458,598

(a) Exclusive of brown coal, shown in next table.



The figures for Victoria quoted above are exclusive of brown coal, the quantity and value of which for the years specified were as follow :—

**BROWN COAL.—PRODUCTION, VICTORIA.**

Year.		Quantity.	Value.	Year.		Quantity.	Value.
		Tons.	£			Tons.	£
1913	.. ..	2,984	569	1928	.. ..	1,591,858	202,393
1921	.. ..	79,224	31,074	1929	.. ..	1,741,176	178,052
1926	.. ..	957,935	188,899	1930	.. ..	1,831,507	173,713
1927	.. ..	1,455,482	220,003				

2. **Production Per Employee.**—The production per employee for New South Wales and for Australia as a whole is shown in the appended table.

**COAL.—PRODUCTION PER EMPLOYEE.**

Year.	Coal Production per Employee.		Year.	Coal Production per Employee.			
	New South Wales.	Australia.		New South Wales.	Australia.		
	Tons.	Tons.		Tons.	Tons.		
1913	.. ..	550	530	1927	.. ..	450	480
1921	.. ..	500	480	1928	.. ..	440	490
1925	.. ..	470	480	1929	.. ..	520	580
1926	.. ..	440	440	1930	.. ..	430	500

The averages for Australia include employment and production in connexion with brown coal.

3. **Distribution and Production of Coal in each State.**—(i) *New South Wales.* Estimates of the quantity of merchantable coal available in the deposits in each State were given in preceding issues of the Official Year Book (see No. 20, pp. 752 *et seq.*).

The coal from the various districts differs considerably in quality—that from the Northern district being especially suitable for gas-making and household purposes, while the product of the Southern (Illawarra) and Western (Lithgow) is an excellent steaming coal. At the present time the Greta coal seams are being extensively worked between West Maitland and Cessnock, and this stretch of country, covering a distance of 15 miles, is now the most important coal-mining district in Australasia.

The table hereunder gives the yields in each of the three districts during the five years 1926 to 1930 :—

**COAL.—PRODUCTION IN DISTRICTS, NEW SOUTH WALES.**

District.	1926.	1927.	1928.	1929.	1930.
	Tons.	Tons.	Tons.	Tons.	Tons.
Northern .. ..	7,257,598	7,145,116	5,978,480	3,019,693	3,715,805
Southern .. ..	2,024,520	2,155,461	1,817,225	2,339,837	1,529,674
Western .. ..	1,603,648	1,825,537	1,652,492	2,258,206	1,847,576
Total .. ..	10,885,766	11,126,114	9,448,197	7,617,736	7,093,055

The depression in industry is reflected in the decreased production, and the output for 1930 was the lowest since 1909. Of the total quantity of coal won in New South Wales since the inception of operations to the end of the year 1930, viz., 357 million

tons, about 244 millions or 68 per cent. was obtained in the Northern District, 75 million tons or 21 per cent. came from the Southern District, and 38 million tons or 11 per cent. was contributed by the mines in the Western District.

(ii) *Victoria.* (a) *Black Coal.* The deposits of black coal in Victoria occur in the Jurassic system, the workable seams, of a thickness ranging from two feet three inches to six feet, being all in the Southern Gippsland district.

The output of black coal in Victoria during the last five years was as follows :—

#### BLACK COAL.—PRODUCTION, VICTORIA.

Year.				State Coal Mine.	Other Coal Mines.	Total Production.	Value.
				Tons.	Tons.	Tons.	
1926	..	..	..	531,869	59,132	591,001	657,798
1927	..	..	..	610,618	73,627	684,245	762,530
1928	..	..	..	600,931	57,392	658,323	731,015
1929	..	..	..	634,805	69,023	703,828	813,370
1930	..	..	..	637,261	66,226	703,487	807,699

Amongst the other coal mines the chief producers in 1930 were the Kilcunda Coal Mining Co. at Kilcunda, with 22,742 tons; the Sunbeam Colliery at Korumburra, with 15,586 tons; the South Gippsland Coal Mining Co. at Kilcunda, with 10,335 tons; the Austral Coal Mine, at Korumburra South, with 6,770 tons; and the Howitt at Outtrim, with 6,171 tons.

(b) *Brown Coal.*—(1) *General.* Some account of the brown coal deposits and of the operations of the State Electricity Commission in connexion therewith will be found in preceding Official Year Books (see No. 22, page 785), but it is not proposed to repeat this information in the present issue. The brown coal produced in Victoria was raised chiefly at the State Open Cut at Yallourn, where the output in 1930 amounted to 1,808,578 tons, while 22,929 tons were raised at the old open cut at Morwell.

(2) *Production of Briquettes.* The briquetting plant started operations in November, 1924, and the output for the year 1930–31 was 225,470 tons, an increase of nearly 64,000 tons on the total for the preceding year. This increase was due to the coming into operation of extensions on which construction had been in progress for some years. The Yallourn briquettes are considered to be equal in quality to those produced in the best German factories.

(3) *Distillation Products.* A new industry is in contemplation for the distillation of oil, motor spirit, and other valuable substances from brown coal, experiments in this direction on a small scale having yielded very satisfactory results.

(iii) *Queensland.* The distribution of production during the year 1930 was as follows :—

#### COAL PRODUCTION.—QUEENSLAND, 1930.

District.	1930.	Districts.	1930.
	Tons.		Tons.
Ipswich .. .. .	566,392	Clermont .. .. .	49,712
Darling Downs .. .. .	85,942	Bowen .. .. .	223,032
Wide Bay and Maryborough	106,525	Mount Mulligan (Chillagoe)	11,965
Rockhampton (Central) ..	51,108		
		Total .. .. .	1,094,676

The output in 1929, amounting to 1,369,000 tons, was the highest recorded, but with the resumption of operations after the close of the dispute in New South Wales the trade slackened off. Amongst the chief contributing factors were the effect of the competition of southern coal as a result of reductions in award rates, increase in the

use of internal combustion engines, and general trade depression. There were 44 collieries operating in the Ipswich district, 7 in the Darling Downs, 9 in the Marybrough area, 4 in Clermont district, 2 in Rockhampton district, 1 in Chillagoe district, and 2 in the Bowen district. State coal mines are in operation at Collinsville in the Bowen field, and at Styx in the Central area.

(iv) *South Australia.* So far no coal has been worked in South Australia (see Official Year Book No. 22, page 786).

(v) *Western Australia.* The production from the six collieries operating at Collie amounted in 1930 to 501,425 tons, a decrease of about 43,000 tons on the return for 1929. The deposits at Wilga again remained unworked during the year.

(vi) *Tasmania.* The production in 1930 amounted to 138,700 tons, about 8,400 tons more than the total for 1929. About 72,000 tons of the total output in 1930 were contributed by the Cornwall Colliery; 39,000 tons by the Mt. Nicholas; and 19,000 tons by the Jubilee at St. Marys.

(vii) *Australia's Coal Reserves.* A summary of the information available in regard to estimated actual and possible reserves of coal for Australia as a whole was given in tabular form on page 755 of Official Year Book No. 20.

4. *Production in Various Countries.*—The total known coal production of the world in 1930 amounted to about 1,390 million tons, towards which Australia contributed about 11½ million tons, or 0.7 per cent. The following tables show the production of the chief British and foreign countries during each of the last three years where the returns are available:—

#### COAL PRODUCTION.—BRITISH EMPIRE.

Year.	Great Britain.	British India.	Canada.	Australia.	New Zealand.	Union of S. Africa.
BLACK COAL.						
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1928 .. ..	237,471,900	22,542,900	12,241,400	11,839,800	1,348,700	12,407,500
1929 .. ..	257,906,800	23,418,700	12,079,000	10,365,300	1,367,200	12,812,800
1930 .. ..	243,881,800	23,803,000	10,202,700	9,531,400	1,382,900	12,029,500
BROWN COAL, LIGNITE.						
1928 .. ..	640	..	3,439,300	1,591,900	1,088,000	..
1929 .. ..	320	..	3,542,900	1,741,200	1,168,700	..
1930 .. ..	..	..	3,074,400	1,831,500	1,159,200	..

#### COAL PRODUCTION.—FOREIGN COUNTRIES.

Year.	Germany.	Austria.	Hungary.	Belgium.	France. (b)	Czecho-slovakia.	Yugoslavia.
BLACK COAL.							
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1928 .. ..	148,478,000	198,900	770,900	27,142,700	50,554,000	14,330,300	351,900
1929 .. ..	160,859,300	204,700	813,200	26,514,400	52,930,400	16,260,500	435,100
1930 .. ..	140,444,000	212,500	798,700	26,972,700	53,033,000	14,207,000	360,400
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1928 .. ..	39,974,900	10,525,300	32,351,400	33,325,400	25,000,000	514,368,800	
1929 .. ..	45,505,800	11,398,300	38,084,000	33,716,800	25,000,000	541,232,000	
1930 .. ..	36,907,300	12,018,200	45,722,000	30,880,700	(c)	473,941,700	

COAL PRODUCTION.—FOREIGN COUNTRIES—*continued.*

## BROWN COAL, LIGNITE.

Year.	Germany.	Austria.	Hungary.	Belgium.	France.	Czecho- slovakia.	Yugoslavia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1928 ..	162,972,900	3,211,000	6,405,800	..	1,057,700	20,128,400	4,620,300
1929 ..	171,700,700	3,469,100	6,932,700	..	1,178,300	22,204,500	5,363,500
1930 ..	143,609,300	3,014,600	6,078,900	..	1,124,700	18,890,500	4,826,700

Year.	Poland.	Nether- lands.	Russia.	Japan.	China.	United States.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1928 ..	72,400	193,600	2,836,300	120,000	..	(a)
1929 ..	73,100	154,100	(a)	137,000	..	(a)
1930 ..	(a)	141,900	(a)	126,600	..	(a)

(a) Included with black coal. (b) Exclusive of Saar District, which produced 12,899,700 tons in 1928; 13,364,900 tons in 1929; and 13,026,700 tons in 1930. (c) Not available.

5. Exports.—The exports of coal from Australia are chiefly confined to New South Wales.

The quantity of coal of Australian production (exclusive of bunker coal) exported to other countries in 1930-31 was 388,000 tons, valued at £412,000, of which 358,000 tons were exported from New South Wales, and 30,000 tons from Queensland. The quantity and value of the oversea exports of Australian coal for the years specified are shown in the appended table.

## COAL.—OVERSEA EXPORTS, AUSTRALIA.

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	Tons.	£		Tons.	£
1913 (a) ..	2,098,505	1,121,505	1928-29 ..	346,658	428,754
1921-22 ..	1,028,767	1,099,899	1929-30 ..	294,503	346,916
1926-27 ..	807,148	965,899	1930-31 ..	387,851	411,612
1927-28 ..	555,617	690,995	1931-32 ..	344,015	341,800

(a) Calendar Year.

Australian coal taken for bunker purposes during the same years was as follows:—

## COAL.—BUNKER, AUSTRALIA.

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	Tons.	£		Tons.	£
1913 (a) ..	1,647,870	1,018,375	1928-29 ..	739,713	1,009,163
1921-22 ..	1,498,035	2,178,101	1929-30 ..	507,349	742,383
1926-27 ..	1,028,810	1,421,927	1930-31 ..	509,303	607,537
1927-28 ..	950,708	1,300,832	1931-32 ..	282,604	426,651

(a) Calendar Year

The oversea and interstate coal exports from New South Wales in 1930 amounted to 1,903,000 tons, valued at £2,113,000.

Of the exports of coal from New South Wales in 1930, about 60 per cent., or 1,136,000 tons, were shipped from the port of Newcastle. Victoria took 414,000 tons, South Australia 283,000 tons, other Australian States 97,000 tons, New Zealand 134,000 tons, while 58,000 tons went to the United Kingdom, 19,000 tons to India, 29,000 tons to Java, 14,000 to Philippine Islands, about 11,000 tons to Straits Settlements and Canada respectively, and 8,000 tons to Nauru. The figures quoted include bunker coal.

During the year 1930 the exports from Port Kembla, Bulli and Bellambi to other States amounted to 196,000 tons, while 43,000 tons were sent to New Zealand, and about 9,000 tons to New Caledonia. The coal shipped from Sydney went principally to New Zealand, New Guinea, and Pacific Islands. For the twelve months ended 30th June, 1930, about 54,000 tons of coal were dispatched to interstate ports from the jetty at Catherine Hill Bay, near Newcastle.

The distribution of the total output from New South Wales collieries during the last five years was as follows, the particulars given of quantity exported including coal shipped as bunker coal :—

#### COAL.—DISTRIBUTION OF OUTPUT, NEW SOUTH WALES.

Year.	Exports to Australian Ports.	Exports to Foreign Ports.	Local Consumption.	Total.
	Tons.	Tons.	Tons.	Tons.
1926 .. ..	2,740,570	1,797,257	6,347,939	10,885,766
1927 .. ..	2,651,492	1,687,716	6,786,906	11,126,114
1928 .. ..	2,209,981	1,135,572	6,102,644	9,448,197
1929 .. ..	1,237,272	694,913	5,685,551	7,617,736
1930 .. ..	1,279,288	624,106	5,189,661	7,093,055

For the period of five years shown in the table above, 22 per cent. of the total output was exported to other States, 13 per cent. was sent overseas, and 65 per cent. was consumed locally.

The figures quoted in the table above are given on the authority of the New South Wales Mines Department.

6. **Consumption in Australia.**—An estimate of the consumption of coal in Australia may be arrived at by adding the imports to the home production, and deducting the exports (including bunker coal taken by oversea vessels). The following table shows the consumption computed in the manner specified for the last five years :—

#### COAL.—CONSUMPTION AUSTRALIA.

Year.	Quantity of Coal Consumed.		
	Home Produce.	Produce of Other Countries.	Total.
	Tons.	Tons.	Tons.
1926 .. ..	12,338,644	26,080	12,364,724
1927 .. ..	13,378,301	23,563	13,401,864
1928 .. ..	12,273,727	17,870	12,291,597
1929 .. ..	11,140,576	493,461	11,634,037
1930 .. ..	10,446,019	392,675	10,838,694

The bunker coal taken away in 1930 was estimated at 623,500 tons. Figures for brown coal produced in Victoria are included in the total for home produce. The whole of the oversea imports in 1930, with the exception of 1,150 tons from New Zealand, came from the United Kingdom.

7. **Prices.**—(i) *New South Wales.* The price of New South Wales coal depends on the district from which it is obtained, the northern district coal generally realizing a much higher rate than the southern or western product. The average price on the mine in each district and for the State as a whole during the last five years was as follows :—

## COAL.—PRICES, NEW SOUTH WALES.

Year.	Northern District.	Southern District.	Western District.	Average for State.
	Per ton. s. d.	Per ton. s. d.	Per ton. s. d.	Per ton. s. d.
1926 .. ..	18 10	16 5	11 9	17 4
1927 .. ..	19 2	16 8	12 6	17 7
1928 .. ..	19 0	16 6	13 1	17 6
1929 .. ..	16 8	16 11	12 11	15 8
1930 .. ..	15 4	15 8	12 4	14 8

(ii) *Victoria.* In Victoria the average price of coal in 1926 was 22s. 3d.; in 1927, 22s. 3d.; in 1928, 22s. 2d.; in 1929, 23s. 1d.; and in 1930, 23s. per ton. These averages are exclusive of brown coal, the production of which in 1930 was valued at 1s. 11d. per ton.

(iii) *Queensland.* Prices in the principal coal-producing districts during the last five years were as follow :—

## COAL.—PRICES, QUEENSLAND.

District.	Value at Pit's Mouth.				
	1926.	1927.	1928.	1929.	1930.
	Per ton. s. d.	Per ton. s. d.	Per ton. s. d.	Per ton. s. d.	Per ton. s. d.
Ipswich .. ..	17 2	17 0	16 11	16 10	16 7
Darling Downs .. ..	19 2	19 6	19 5	19 5	19 5
Wide Bay and Maryborough	24 2	23 9	23 8	23 2	23 0
Bundaberg .. ..	24 7	23 8	..	..	..
Mount Morgan .. ..	13 11	12 8	12 10	..	..
Rockhampton .. ..	17 10	22 10	23 3	22 11	20 5
Clermont .. ..	13 6	13 11	14 1	12 2	14 3
Bowen .. ..	16 2	16 3	15 2	15 4	15 5
Mackay .. ..	..	29 8	24 4	..	..
Mount Mulligan (Chillagoe)	30 4	32 0	31 11	31 9	29 9
Average for State ..	18 0	18 0	18 0	17 6	17 5

In 1901 the average value at the pit's mouth was 7s. per ton, and the average for the ten years 1901 to 1910 was about 6s. 8d.

(iv) *Western Australia.* The average price of the Collie (Western Australia) coal during the last five years was as follows :—In 1926, 16s. 7d.; in 1927, 16s. 3d.; in 1928, 15s. 11d.; in 1929, 15s. 8d.; and in 1930, 15s. 9d. per ton.

(v) *Tasmania.* The average price per ton of coal at the pit's mouth in Tasmania for the five years 1926 to 1930 was :—In 1926, 17s. 8d.; in 1927, 17s. 10d.; in 1928, 16s. 7d.; in 1929, 16s. 3d.; and in 1930, 15s. 11d.

8. *Prices in the United Kingdom.*—During the five years 1926 to 1930 the average selling value of coal at the pit's mouth in the United Kingdom was :—In 1926, 19s. 6d.; in 1927, 14s. 7d.; in 1928, 12s. 10d.; in 1929, 13s. 5d.; and in 1930, 13s. 7d. per ton.

9. *Employment and Accidents in Coal Mining.*—(i) *Australia.* The number of persons employed in coal mining in each of the States during the year 1930 is shown below. The table also gives the number of persons killed and injured, with the proportion per 1,000 employed, while further columns are added showing the quantity of coal raised for each person killed and injured, this being a factor which must be reckoned with in any consideration of the degree of risk attending mining operations. A further table gives the rate of fatalities during the last five years.

## COAL MINING.—EMPLOYMENT AND ACCIDENTS, 1930.

State.	Persons Employed in Coal Mining.	No. of Persons.		Proportion per 1,000 Employed.		Tons of Coal raised for each Person.	
		Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
New South Wales ..	16,624	16	73	0.96	4.39	443,300	97,200
Victoria ..	2,267	2	13	0.88	5.73	1,267,500	195,000
Queensland ..	2,768	3	113	1.08	40.82	364,900	9,700
Western Australia ..	896	..	114	..	127.23	..	4,500
Tasmania ..	441	..	5	..	11.34	..	27,700
Total ..	22,996	21	318	0.91	13.83	453,900	30,000

Owing to lack of uniformity in the definition of "injury," the figures relating to persons injured possess little comparative value.

The next table shows the average number of miners employed, number of fatalities, and rate per 1,000 during the quinquennium 1926-30 :—

## COAL MINING.—FATALITIES, 1926 TO 1930.

State.	Average No. of Coal Miners.	Average No. of Fatal Accidents.	Rate per 1,000 Employed.
New South Wales ..	20,388	18	0.8
Victoria ..	2,436	2	0.82
Queensland ..	2,815	4	1.42
Western Australia ..	797	1	1.25
Tasmania ..	363	..	..
Total ..	26,799	25	0.93

(ii) *Other Countries.* According to the report of the Chief Inspector of Mines, the average death-rate per 1,000 miners from accidents in coal mines in Great Britain during the quinquennium 1926-30 was 1.08, the rates varying between 1.11 in 1929, and 1.04 in 1928, while, as shown in the table preceding, the rate for Australia for the same period was 0.93. In the United States during the seven years 1923-29 the death rate per 1,000 employees averaged 4.8 for bituminous coal miners, and 3.8 for anthracite miners. Rates for other coal-producing countries for the same period were—Canada, 2.5; South Africa, 3.3; Germany, 2.2; Spain, 1.7; Belgium, 1.1; France, 1.0. In comparing these rates, allowance must be made for the circumstance that the methods of calculation are not identical in all countries.

## § 11. Coke.

Notwithstanding the large deposits of excellent coal in Australia, there was, prior to the war, a fairly considerable amount of coke imported from abroad. During recent years, however, a high standard of excellence has been attained in the local product, and the necessity for import has to a large extent disappeared. For the year 1930-31 the coke imported amounted to 4,267 tons, of which 3,705 tons were obtained from the United Kingdom and 562 tons from Germany, the bulk of the product being taken by South Australia for use in the ore-treating works at Port Pirie. The table hereunder gives the production in New South Wales during the last five years :—

## COKE.—PRODUCTION, NEW SOUTH WALES.

Items.		1926.	1927.	1928.	1929.	1930.
Quantity ..	tons	597,663	709,342	520,201	464,360	367,772
Value, total ..	£	940,416	1,131,335	852,739	757,580	589,343
Value, per ton ..	..	31s. 6d.	31s. 10d.	32s. 9d.	32s. 8d.	32s. 1d.

The figures quoted refer to metallurgical coke, the product of coke ovens, and are exclusive of coke produced in the ordinary way at gas works. As regards both tonnage and value the production in 1927 was the highest recorded.

A small quantity of coke is made in Queensland, the quantity returned in 1930 being 3,444 tons, valued at £6,160. The following table shows the amount manufactured locally during the last five years :—

## COKE.—PRODUCTION, QUEENSLAND.

Year.		1926.	1927.	1928.	1929.	1930.
Quantity ..	tons	6,191	4,196	4,058	4,079	3,444

Negotiations have recently been completed between the Mount Isa silver-lead mines and the Mines Department for the construction of coke ovens with an annual capacity of 30,000 tons, the largest proportion of the product to be taken by Mount Isa. Hitherto the coke used by the Company has been obtained from New South Wales.

In order to avoid duplication with coal values the returns for coke have not been included in the general tables of mineral production in the early part of this chapter.

## § 12. Oil Shale and Mineral Oil.

Reference to the deposits of oil shale as well as to the efforts put forward in connexion with the search for mineral oil in Australia will be found in Official Year Book No. 22, pages 791 to 793. In 1930 the production of oil shale in New South Wales amounted to 346 tons, valued at £125. During the year 1931, however, renewed attention was given to the extensive deposits in the Wolgan Valley. (See also Appendix.) Boring operations were in progress in 1930 at Belford Dome, at Farley, at Bargo, and at Half Way Creek on the Clarence River, and preliminary investigations were continued on other sites in the search for petroleum.

About 55,000 gallons of crude oil were produced in 1930 from shale treated in Tasmania, while the total quantity of oil distilled from shale up to the end of 1930 was set down at 152,000 gallons.

Great hopes were at one time entertained in regard to the petroliferous area in Queensland, but at time of writing it appears that all that can legitimately be said is that while gas and light to medium gravity oils have been found at Roma, and gas and oily wax at Longreach, structural conditions for accumulations on a commercial scale have not yet been located in the drilled areas. Attention, however, is being given to the scientific testing of structures in other areas.

Under prescribed conditions, the South Australian Government offers a bonus of £5,000 to the person or body corporate which first obtains from a local bore or well 100,000 gallons of crude petroleum containing not less than 90 per cent. of products obtainable by distillation.

Boring was continued in 1930 on the area held by the Freney Kimberley Oil Company in the West Kimberley Gold-field, and the indications encountered were regarded as promising.

The Commonwealth Government encourages the search for oil by placing at the disposal of companies and individuals the advice and experience of its technical staff appointed for this purpose. In co-operation with the Air Board useful aerial



reconnaissances have already been made in Queensland by the Commonwealth Geological Adviser, the photographs and mosaics produced proving of great value in conjunction with the ground geological surveys. A further aerial reconnaissance is to be undertaken to cover most of the possible oil producing regions in Australia.

Attention is at present being devoted to the problem of economically obtaining fuel oil and other products from black and brown coals, to a review of the wasteful practice of burning lump coal to generate power, and to the more effective utilization of the known deposits of oil shale, particularly in New South Wales and Tasmania.

### § 13. Other Non-metallic Minerals.

A more or less detailed statement regarding the occurrence and production of other non-metallic minerals is given in preceding Official Year Books (see No. 22, pages 793 to 796). The tables of quantity and value in § 1 of this Chapter will, however, show the production for each State during the year 1930.

### § 14. Gems and Gemstones.

1. **Diamonds.**—It is difficult to secure accurate returns in connexion with the production of precious stones, but the yield of diamonds in 1930 in New South Wales was estimated at 667 carats, valued at £714, while the total production to the end of 1930 is given at 203,245 carats, valued at £145,678. The yield in 1930 was obtained wholly at Copeton in the Tingha division. There was no production from the other States in 1930.

2. **Sapphires.**—The production of sapphires in New South Wales during 1929 was returned as 65 ozs., valued at £450, obtained wholly at Sapphire in the Inverell division, but no output was recorded in 1930. Production during recent years was restricted owing to the unfavourable market.

In Queensland, production in 1930 was restricted by the poor demand for ordinary blue sapphires and small stones, although there was a fair market for good quality blue sapphires and industrial machine stones. The yield was valued at £4,948.

3. **Precious Opals.**—The estimated value of the opal won in New South Wales during the year 1930 was £5,500, obtained on the Lightning Ridge and Grawin fields, while a little opal of poor quality was obtained at Glenogy near Angledool. Some very fine stones are at times obtained, one weighing 5 ozs. and valued at £300 being recovered in 1911. Three finds of large stone were made in 1928, the gems weighing 790, 590, and 232 carats respectively, and showing fine fire and lustre. No finds of importance were made in 1930. Occasionally, black opals of very fine quality are found, one specimen from the Wallangulla field, weighing 6½ carats, being sold in 1910 for £102, while in the early part of 1920 a specimen realized £600. It is stated that this locality is the only place in the world where the "black" variety of the gem has been found. The total value of opal won in New South Wales since the year 1890 is estimated at £1,597,000, but it is a well known fact that fine pieces of the gem have been found and sold privately without notification to the Mines Department.

Small quantities of precious opal are found in the Beechworth district in Victoria.

The opaliferous district in Queensland stretches over a considerable area of the western interior of the State, from Kynuna and Opalton as far down as Cunnamulla. The yield in 1930 was estimated at £800, and up to the end of that year at about £186,000. These figures are, however, merely approximations, as large quantities of opal, of which no record is obtained, are disposed of privately.

Owing to the poor market for gems, production from the Coober Pedy opal field situated in the Stuart Range in South Australia, fell from £11,056 in 1929 to £1,142 in 1930. The field is extremely prolific, a large quantity of precious white opal having been raised therefrom, while only a small portion of the known opal-bearing area has been thoroughly tested.

According to a report a few years ago by the Australian Trade Commissioner in the East there is a good sale for the gems in China. It is stated that there is no difficulty in cutting and polishing, as the Chinese method of dealing with jade, dating back many centuries, can also be applied to opal.

4. **Other Gems.**—Various other gems and precious stones have from time to time been discovered in the different States, the list including agates, amethysts, beryls, chialstolite, emeralds, garnets, olivines, moonstones, rubies, topazes, tourmalines, turquoises, and zircons. In Western Australia, 609 carats (rough) of emeralds, valued at £278, were produced during 1929 in the Cue district on the Murchison gold-field. The value of the 3,750 carats reported from the same area in 1930 was not ascertainable as there were no sales during the year.

**§ 15. Numbers Engaged, Wages Paid, and Accidents in Mining.**

1. **Total Employment in Mining.**—The number of persons engaged in the mining industry in Australia fluctuates according to the season, the price of industrial metals, the state of the labour markets, and according to the permanence of new finds, and the development of the established mines. During the year 1930 the number so employed was as follows :—

**NUMBER OF PERSONS ENGAGED IN MINING, 1930.**

State.	Number of Persons engaged in Mining for—						Total.
	Gold.	Silver, Lead, and Zinc.	Copper.	Tin.	Coal.	Other.	
New South Wales ..	4,229	4,489	33	870	16,624	1,267	27,512
Victoria ..	912	..	..	..	2,267	46	3,255
Queensland ..	903	474	376	579	2,768	434	5,534
South Australia ..	114	2	58	..	..	391	565
Western Australia ..	4,452	..	3	30	896	61	5,442
Tasmania ..	43	231	1,333	443	441	789	3,280
Northern Territory ..	4	35	6	60	..	68	173
<b>Australia ..</b>	<b>10,687</b>	<b>5,231</b>	<b>1,809</b>	<b>1,982</b>	<b>22,996</b>	<b>3,056</b>	<b>45,761</b>

Included in the figures for "other" in South Australia were 149 engaged in mining iron ore, 48 gypsum miners, 107 salt gatherers, and 60 opal miners. The Tasmanian figures include 372 zinc miners and 258 osmiridium miners, and those for the Northern Territory, 31 wolfram miners, 26 mica miners, and 11 tantalite miners.

The following table shows the number of persons engaged in mining in Australia during each of the years 1901, 1911, 1921, 1928, 1929, and 1930, together with the proportion of the total population so engaged :—

**NUMBER ENGAGED IN MINING PER 100,000 OF POPULATION.**

State.	1901.		1911.		1921.	
	Miners employed.	No. per 100,000 of Population.	Miners employed.	No. per 100,000 of Population.	Miners employed.	No. per 100,000 of Population.
New South Wales ..	36,615	2,685	37,017	2,177	29,701	1,408
Victoria ..	28,670	2,381	15,986	1,193	5,211	339
Queensland ..	13,352	2,664	13,201	2,122	5,847	765
South Australia ..	7,007	1,931	6,000	1,435	2,020	406
Western Australia ..	20,895	11,087	16,596	5,644	7,084	2,126
Tasmania ..	6,923	4,017	5,247	2,713	3,170	1,486
Northern Territory ..	..	..	715	..	131	3,351
<b>Australia ..</b>	<b>113,462</b>	<b>2,992</b>	<b>94,762</b>	<b>2,074</b>	<b>53,164</b>	<b>974</b>

NUMBER ENGAGED IN MINING PER 100,000 OF POPULATION—*continued.*

State.	1928.		1929.		1930.	
	Miners employed.	No. per 100,000 of Population.	Miners employed.	No. per 100,000 of Population.	Miners employed.	No. per 100,000 of Population.
New South Wales ..	29,859	1,227	22,893	926	27,512	1,106
Victoria .. .. .	3,045	174	3,231	183	3,255	183
Queensland .. ..	5,283	580	5,069	548	5,534	588
South Australia ..	593	103	619	107	565	97
Western Australia ..	4,853	1,215	5,159	1,254	5,442	1,300
Tasmania .. .. .	3,778	1,783	3,603	1,685	3,280	1,515
Northern Territory ..	160	3,803	153	3,662	173	3,720
Australia .. .. .	47,571	757	40,727	639	45,761	710

The general falling-off since 1901 is largely due to the causes mentioned in § 1. 6 *ante*. As compared with the preceding year, the proportion to population for Australia as a whole shows a slight increase in 1930, attributable mainly to the larger numbers engaged in the search for gold, particularly in New South Wales and Queensland.

2. *Wages Paid in Mining.*—Information regarding rates of wages paid in the mining industry, which in earlier issues of the Year Book was given in this chapter, is now contained in the Labour Report issued by this Bureau.

3. *Accidents in Mining, 1930.*—The following table gives particulars of the number of men killed and injured in mining accidents during the year 1930:—

## MINING ACCIDENTS, 1930.

Mining for—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
<b>KILLED.</b>								
Coal ..	16	2	3	..	..	..	..	21
Copper ..	..	..	..	..	..	3	..	3
Gold ..	1	..	..	..	14	..	..	15
Silver, lead, and zinc ..	6	..	4	..	..	..	..	10
Tin ..	..	..	1	..	..	..	..	1
Other minerals ..	..	..	..	1	..	..	..	1
Total ..	23	2	8	1	14	3	..	51
<b>INJURED.</b>								
Coal ..	73	13	113	..	114	5	..	318
Copper ..	..	..	5	2	..	17	..	24
Gold ..	..	1	3	..	218	..	..	222
Silver, lead, and zinc ..	42	..	29	..	..	6	..	77
Tin ..	1	..	4	..	..	..	..	5
Other minerals ..	1	..	..	4	..	4	..	9
Total ..	117	14	154	6	332	32	..	655

The number killed in mining accidents in 1930 was considerably less than that for 1921 when 132 deaths were recorded, the figures for the earlier year being swollen by the 75 fatalities in the colliery disaster at Mount Mulligan in Queensland.

### § 16. Government Aid to Mining.

1. *Commonwealth.*—Assistance to mining is given by the Commonwealth under the provisions of the *Precious Metals Prospecting Act* 1926, and the *Petroleum Prospecting Acts* of 1926, 1927, and of 1928.

The first-mentioned Act provides for a sum of £40,000, of which £15,000 is to be expended in the Northern Territory, and the balance is to be allocated to the States in such proportions as the Minister determines. At the 30th June, 1931, the expenditure amounted to £15,623. No further assistance is being granted to the States from this fund.

Prior to the passage of the *Petroleum Prospecting Act* 1926 the Commonwealth Government had expended a sum of £368,790 in connexion with the search for oil principally in Papua and New Guinea.

Under the *Petroleum Prospecting Act* 1926–27 a trust account of £160,000 was established to assist in the search for oil. The Minister was authorized to make advances out of the money standing to the credit of this account to persons or companies engaged in the search for oil, and to assist persons, companies, or State Governments to make geological surveys. The *Petroleum Prospecting Act* of 1928 provides a further sum of £50,000. Up to the 30th June, 1931, the total of advances under these Acts amounted to £184,363. The Government has decided to discontinue the granting of subsidies for deep drilling and to confine its attention to assistance in the carrying out of geological surveys and scout boring. Owing to financial stringency, however, the payment of all subsidies for oil prospecting has been temporarily suspended.

A small geological staff, including palaeontologists, has been appointed. The Geological Adviser was instructed to proceed to the United States and the Argentine in 1930 to study oil-field conditions on the spot, and submitted a comprehensive report, which was published as a Parliamentary Paper in 1931.

Experimental aerial photographic surveys have been carried out in conjunction with the Royal Australian Air Force to determine to what extent this technique is applicable under Australian conditions.

The *Gold Bounty Act* 1930 provides that for a period of ten years from 1st January, 1931, a bounty of £1 per ounce is payable under prescribed conditions by the Commonwealth on each ounce of fine gold produced in excess of the average production for the three years 1928–30. Under the *Financial Emergency Act* 1931 the bounty was reduced to 10s. per ounce, subject to increases of 1s. according to each decrease of 3s. per cent. in the average rate of exchange. The rate of exchange on which the reduction to 10s. per ounce was based was taken as 30 per cent.

To provide for geophysical prospecting in Australia, a sum of £32,000 was made available by the Commonwealth Government in conjunction with the Empire Marketing Board. This survey was completed and the covering report in connexion therewith has been issued.

2. *New South Wales.*—The chief aid given in this State is in the direction of assistance to prospectors. Up to the end of 1930 the total sum expended in this manner amounted to £662,461, of which £11,992 was advanced in 1930. Advances are also made for the purpose of assisting in the erection of crushing batteries or reduction plants, but the expenditure in 1930 under this heading was only £50. A sum of £35,000 was appropriated during the year to assist unemployed who had experience in prospecting. To the end of December the expenditure therefrom amounted to £29,418, the men assisted numbering 3,685.

3. **Victoria.**—During the year 1930 expenditure in connexion with mining amounted to £3,681, the whole of which was expended in advances to miners. Of the sum advanced, £357 was provided by the Commonwealth.

4. **Queensland.**—State assistance to the mining industry in 1930–31 amounted to £13,414, of which £12,545 was advanced to prospectors, the balance consisting of grants under the Mining Machinery Advances Act and for the provision of transport facilities, etc., to mineral fields.

State coal mines were in operation at Bowen, Styx (No. 3), and at Mount Mulligan. The last mentioned mine, however, was worked on tribute during the year. There is also a State Assay Office at Cloncurry at which assays and sampling are carried out for the public, and State batteries were maintained at Kidston, Charters Towers, and Bamford. The battery at Charters Towers was leased privately, also the State works for the treatment of tin at Irvinebank.

5. **South Australia.**—Aid is given to the mining industry under the terms of the Mining Act of 1893, and previous measures. Up to the end of 1930 the total amount of subsidy paid was £68,612, of which £13,678 has been repaid, and £4,549 written off, leaving a debit of over £50,000. Portion of this amount is represented by machinery that has fallen into the hands of the Government. Repayments must be provided from profits, but in only two instances have the profits enabled a full return to be made. The State maintains batteries and cyanide works at Mount Torrens, Peterborough, Tarcoola, and Glenloth, and assays for public purposes are made at the School of Mines. Advances to prospectors in 1930 amounted to £519.

6. **Western Australia.**—Under the Mining Development Act of 1902 assistance was granted in 1930 in accordance with the subjoined statement:—Advances in aid of mining work and equipment of mines with machinery, £4,632; aid to prospectors, £7,562; subsidies on stone crushed for the public, £96; total, £12,290. In addition to the foregoing the vote was also charged with rebates on water supplied to the amount of £28,569, while other assistance granted from the vote on various matters during the year amounted to £18,279.

In 1930 there were 22 State batteries in operation. The amount expended thereon up to the end of 1930 was £91,981 from revenue and £322,918 from loan, giving a total of £414,899. The working expenditure up to the end of 1930 exceeded the revenue by £184,570. The total value of gold and tin recovered to the end of 1930 at the State plants was £6,377,805. Free assays and determinations of mineral values for prospectors are made at the Kalgoorlie School of Mines.

7. **Tasmania.**—Aid to Mining in 1930 amounted to £6,642, of which £3,506 was expended under Part II. of the *Aid to Mining Act* 1921, on drilling and boring, and £1,855 represented assistance and sustenance to prospectors, the balance being expended on miscellaneous assistance under Parts III. and IV. of the *Aid to Mining Act* 1927. The amount received from ore sales was £218, the bulk of which was paid to tributers. Receipts amounted to £1,175, of which a grant from the Commonwealth Treasury in aid of prospecting for precious metals accounted for £1,123.

Tributers' assays are made at a nominal charge, and all tribute surveys are carried out free of charge by the Assay and Survey Office at Zeehan.

8. **Northern Territory.**—During the year 1930–31 assistance was granted to approved prospectors at the rate of £1 per week per man for rations and an additional amount not exceeding £2 to each prospector for purchase of tools, etc. At 30th June, 1931, 63 miners were receiving assistance, and the sums advanced amounted to £1,067.

The Government maintains a battery at Marranboy, and the Government Assayer makes free assays for prospectors, and arranges for the sampling, storage, and sale of ores.

### § 17. Metallic Contents of Ores, etc., Produced and Exported.

1. Local Production.—According to returns compiled from various sources by the Australian Mines and Metals Association, the quantities of the principal metals (exclusive of gold) extracted in Australia during the five years 1926 to 1930 were as follow :—

#### REFINED METALS PRODUCED IN AUSTRALIA.

Metal.		1926.	1927.	1928.	1929.	1930.
Silver ..	.. ozs.	8,946,218	9,390,070	8,053,251	9,229,514	9,002,705
Lead, pig ..	.. tons	150,460	164,480	155,076	176,820	168,291
Zinc ..	.. tons	47,356	49,155	50,223	51,872	54,901
Copper ..	.. tons	11,148	9,564	11,858	10,874	14,900
Tin ..	.. tons	3,188	2,989	3,133	2,260	1,544

The local production of pig iron during the quinquennium 1923-27 ranged between 330,000 tons in 1923, and 517,000 tons in 1927. Complete information for later years is not available from the returns published by the Association, but according to the metal extraction returns published in the Statistical Register of New South Wales, the production of pig iron in that State amounted in 1927-28 to 428,000 tons, in 1928-29 to 461,000 tons, and in 1929-30 to 308,369 tons.

2. Metallic Contents of Ores, Concentrates, etc., Exported.—The estimated metallic contents of ores, concentrates, etc., exported during the five years 1926 to 1930 are given in the following table :—

#### METALLIC CONTENTS OF ORES, CONCENTRATES, ETC., EXPORTED.

Metal.		Contained in—	1926.	1927.	1928.	1929.	1930.
Silver	ozs.	Lead-Silver-Gold Bullion	..	..	..	44,677	44,777
		Lead Concentrates and Ores	190,647	615,484	117,846	31,121	179,185
		Zinc Concentrates and Ores	1,206,313	1,640,891	1,453,396	604,014	558,577
		Copper and Gold Ores ..	..	..	..	..	..
		Total .. ..	1,396,960	2,256,375	1,571,242	679,812	782,539
Lead	tons	Lead-Silver-Gold Bullion	2,483	488	..	689	252
		Lead Concentrates and Ores	7,174	12,115	2,221	878	12,986
		Zinc Concentrates and Ores	13,943	14,198	12,726	5,704	9,482
		Total .. ..	23,600	26,801	14,947	7,271	22,720
Zinc	tons	Lead Concentrates and Ores	529	579	77	21	396
		Zinc Concentrates and Ores	94,043	111,755	117,858	69,958	86,761
		Total .. ..	94,572	112,334	117,935	69,979	87,157
Copper	tons	Ores, Matte, etc. ..	1,112	1,597	1,989	2,737	3,277
Tin	tons	Concentrates and Ores ..	1	12	..	4	..

## § 18. Oversea Exports of Ores, Metals, etc.

The following table shows the quantity and value of the principal overseas exports of ores, concentrates, and metals, the produce of Australia, together with the countries to which the respective products were forwarded, for the year 1930-31:—

## OVERSEA EXPORTS OF AUSTRALIAN ORES, METALS, ETC., 1930-31.

Article.	Total Exports.	Exports to—						
		United Kingdom.	United States.	Belgium.	Germany.	Japan.	New Zealand.	Other Countries.
QUANTITY.								
Ores—	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.
Copper .. .. .	8,272	2,135	5,083	..	1,054	..	..	..
Silver and Silver-lead	46,542	702	223	15,994	29,623	..	..	..
Iron .. .. .	2,615,080	..	1,334,220	278,100	..	1,002,760	..	..
Wolfram .. .. .	907	38	752	..	..	..	..	..
Concentrates—								
Silver and Silver-lead	461,339	207	..	295,754	84,323	..	..	(a) 81,055
Zinc .. .. .	3,085,929	2,527,297	..	558,632	..	..	..	..
Cadmium—Blocks, Ingots, etc. ..	2,449	1,204	..	..	..	70	..	(b) 1,175
Copper—								
Matte .. .. .	47,862	..	..	47,862	..	..	..	..
Ingot .. .. .	193,165	138,900	46,011	..	8,109	..	145	..
Tin—Ingot .. .. .	11,990	4,200	5,400	..	71	..	2,298	21
Lead (f)—								
Matte .. .. .	233	3	..	..	230	..	..	..
Pig .. .. .	3,092,962	2,154,450	..	367,346	462,460	56,308	22,192	(c) 30,206
Zinc—Bars, Blocks, etc.								
(d) Platinum, Osmium, etc. .. .. .	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.
Gold—								
Bar, Dust, etc. ..	253,800	253,224	136	..	128	..	312	..
Silver—								
Bar, Ingot, etc. ..	8,441,617	544,626	7,109	..	20,063	..	623	e 7,869,196
VALUE—£.								
Ores—								
Copper .. .. .	8,162	1,206	6,861	..	95	..	..	..
Silver and Silver-lead	17,142	350	135	7,280	9,377	..	..	..
Iron .. .. .	82,838	..	45,621	9,725	..	27,492	..	..
Wolfram .. .. .	4,224	72	3,787	..	365	..	..	..
Concentrates—								
Silver and Silver-lead	214,579	70	..	129,842	39,236	..	..	45,431
Zinc .. .. .	520,720	466,942	..	53,778	..	..	..	..
Cadmium—Blocks, Ingots, etc. ..	30,262	16,283	..	..	..	910	..	13,069
Copper—								
Matte .. .. .	23,267	..	..	23,267	..	..	..	..
Ingot .. .. .	462,013	340,313	98,531	..	22,729	..	440	..
Tin—Ingot .. .. .	81,660	25,322	38,990	..	467	..	16,741	140
Lead—								
Matte .. .. .	164	..	..	..	150	..	14	..
Pig .. .. .	2,418,710	1,707,917	..	263,152	349,591	49,975	21,973	26,102
Zinc—Bars, Blocks, etc.								
Platinum, Osmium, etc.	13,414	12,340	94	..	980	..	..	..
Gold—								
Bar, Dust, etc. ..	1,073,134	1,070,266	578	..	540	..	1,750	..
Silver—								
Bar, Ingot, etc. ..	555,947	32,738	533	..	1,337	..	60	521,279

(a) France. (b) Sweden, 1,000 cwt. (c) Hong Kong, 23,299 cwt.; South Africa, 6,192 cwt. (d) Mainly osmiridium and platinum produced in Tasmania and New South Wales. (e) India, 7,394,032 ozs., China, 473,599 ozs. (f) In addition, 54,088 cwt. of lead slime residues were exported, mainly to France.

## CHAPTER XIX.

## PASTORAL PRODUCTION.

## § 1. Initiation and Growth of Pastoral Industry.

1. **Early Statistics.**—In earlier issues of the Year Book will be found a brief reference to the pastoral industry in Australia prior to the year 1860. (See Year Book No. 6 page 330.)

2. **Subsequent Statistics.**—While the statistical records of live stock in Australia prior to the year 1860 are somewhat defective, from that year onwards fairly complete particulars are available for most of the States. At the present time, statistics of live stock are collected annually in all the States principally through the agency of the police, but in the years 1885 to 1888 inclusive, and 1893 to 1895 inclusive, these particulars were not collected in South Australia, and similar gaps occur in the Victorian records for the periods 1895 to 1899 inclusive, and 1901 to 1903. In order to obtain totals for Australia for these years the missing numbers have been supplied by interpolation. The results so obtained probably differ but slightly from the actual numbers for the respective years.

3. **Increase in Live Stock.**—Particulars concerning the numbers of each of the principal kinds of live stock in Australia at decennial intervals from 1860 to 1920, and from 1926 onwards in single years, are given in the following table, and are shown continuously in the graphs hereinafter.

During the seventy years covered by the table the live stock of Australia increased considerably, horses 315 per cent., cattle 198 per cent., sheep 449 per cent., and pigs 205 per cent. The average annual increases which these aggregates represent are as follow :—Horses, 2.06 per cent. ; cattle, 1.56 per cent. ; sheep, 2.46 per cent. ; and pigs, 1.60 per cent.

## LIVE STOCK.—AUSTRALIA.

31st December.				Horses.	Cattle.	Sheep.(a)	Pigs.
1860	..	..	..	431,525	3,957,915	20,135,286	351,096
1870	..	..	..	716,772	4,276,326	41,593,612	543,388
1880	..	..	..	1,068,774	7,527,142	62,184,252	815,776
1890	..	..	..	1,521,598	10,299,816	97,881,221	891,138
1900	..	..	..	1,609,654	8,640,225	70,602,995	950,349
1910	..	..	..	2,165,866	11,744,714	98,066,046	1,025,850
1920	..	..	..	2,415,510	13,499,737	81,795,727	764,406
1926	..	..	..	2,122,516	11,963,278	104,267,101	989,009
1927	..	..	..	2,040,691	11,617,056	100,827,476	878,207
1928	..	..	..	1,942,753	11,300,757	103,430,773	910,181
1929	..	..	..	1,845,614	11,202,134	104,558,342	1,018,324
1930	..	..	..	1,792,734	11,720,916	110,568,279	1,071,679

(a) See note to Table in § 4, 2 hereinafter.

4. **Fluctuations.**—The increases referred to, however, have not been continuous, marked fluctuations having taken place during the period, mainly on account of the droughts which have from time to time left their impress on the pastoral history of



Australia. These were in evidence in 1868, 1877, 1883-4, 1892, 1893, 1895, 1901-2, 1912, 1914-15, 1918, 1919, 1922-23, 1925-26, and 1927-28, in which latter years Central and Northern Queensland experienced one of the driest periods on record with a heavy mortality of stock.

The years in which the numbers of live stock attained their maxima are as follows :—Horses, 1918, 2,527,149; cattle, 1921, 14,441,309; sheep, 1930, 110,568,279; and pigs, 1917, 1,169,365.

5. Live Stock in Relation to Population.—The number of each kind of live stock per head of the population of Australia has varied during the past seventy years in the manner shown in the succeeding table :—

LIVE STOCK PER HEAD OF POPULATION.—AUSTRALIA.

Year.	Horses.	Cattle.	Sheep.	Pigs.	Year.	Horses.	Cattle.	Sheep.	Pigs.
1860 ..	0.38	3.45	17.58	0.31	1920 ..	0.44	2.49	15.11	0.14
1870 ..	0.43	2.60	25.24	0.33	1926 ..	0.35	1.96	17.06	0.16
1880 ..	0.48	3.37	27.87	0.37	1927 ..	0.33	1.86	16.14	0.14
1890 ..	0.48	3.17	31.06	0.28	1928 ..	0.31	1.78	16.32	0.14
1900 ..	0.43	2.29	18.75	0.25	1929 ..	0.29	1.75	16.30	0.16
1910 ..	0.49	2.65	22.16	0.23	1930 ..	0.28	1.81	17.07	0.17

6. Live Stock in Relation to Area.—The numbers of live stock per square mile in the several States and Territories of Australia are given in the following table :—

LIVE STOCK PER SQUARE MILE, 1930.

States and Territories.	Horses.	Cattle.	Sheep.	Pigs.
New South Wales (a) .. .. .	1.70	9.18	172.46	1.08
Victoria .. .. .	4.32	16.27	187.50	3.20
Queensland .. .. .	0.72	8.15	33.62	0.32
South Australia .. .. .	0.48	0.58	15.74	0.22
Western Australia .. .. .	0.16	0.83	10.13	0.10
Tasmania .. .. .	1.25	8.78	80.85	2.08
Northern Territory .. .. .	0.06	1.38	0.03	0.00
Federal Capital Territory (a) .. .. .	0.87	4.51	194.76	0.04
Total .. .. .	0.60	3.94	37.17	0.36

(a) 30th June, 1930.

7. Minor Classes of Live Stock.—The numbers of minor classes of live stock returned for 1930 were as follows :—Goats, 136,757; camels, 6,187; mules and donkeys, 13,672; and ostriches, 127. Of these, goats were most numerous in Queensland; camels, mules and donkeys in Western Australia; and ostriches in South Australia. In the raising of goats, attention has in recent years been devoted to the angora goat and its product (mohair), and 5,686 angora goats are included in the total of 136,757 goats shown above. Of these, 1,487 were in New South Wales, 745 in Tasmania, 982 in Western Australia, 632 in South Australia, and 1,840 in Queensland, while the quantity of mohair produced in the latter State in 1930 was set down at 1,288 lbs., and the number of skins placed on the market was returned as 310.

8. Net Exports of Principal Pastoral Products.—The quantities by which the exports of the principal pastoral products of Australia exceeded the imports for the years 1926-27 to 1930-31 were as follow :—

## NET EXPORTS OF PASTORAL PRODUCTS.—AUSTRALIA.

Products.	Unit of Quantity.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
QUANTITIES.						
Animals (living)—						
Cattle .. .. .	No.	10,093	11,131	8,452	6,191	174
Horses .. .. .	"	5,276	5,627	5,356	5,969	4,926
Sheep .. .. .	"	26,218	30,871	29,545	38,764	26,071
Bones .. .. .	cwt.	18,394	14,486	14,060	10,503	12,238
Glue-pieces and Sinews .. .. .	"	-12,840	-13,469	-18,420	-20,176	-15,927
Glycerine .. .. .	lb.	-553,950	-571,266	-388,800	-703,682	-254,290
Hair .. .. .	"	(a)	(a)	(a)	(a)	126,712
Hoofs .. .. .	cwt.	8,371	13,543	9,852	11,273	(a)
Horns .. .. .	"	(a)	(a)	(a)	(a)	(a)
Meats—						
Frozen Beef .. .. .	lb.	112,124,913	169,094,472	189,090,102	156,748,365	155,630,647
Frozen Mutton and Lamb .. .. .	"	93,514,533	46,359,146	84,905,335	100,410,980	109,252,956
Frozen Rabbits and Hares .. .. .	pair	3,298,372	3,433,098	3,598,075	3,873,337	(a)
Frozen, Other .. .. .	lb.	3,893,937	7,592,372	7,127,553	6,115,445	6,920,925
Potted, and Extract of .. .. .	"	(a)	(a)	(a)	(a)	(a)
Preserved in Tins, etc. .. .. .	lb.	8,674,251	3,760,147	3,168,759	3,381,248	4,265,578
Other (excluding Bacon and Ham) .. .. .	"	166,537	322,117	447,495	434,050	344,712
Sausage Casings .. .. .	cwt.	24,222	22,714	31,489	30,984	8,976
Skins—						
Hides .. .. .	No.	720,065	1,034,317	816,980	702,135	(a)
Sheep .. .. .	"	8,487,652	11,315,072	11,026,291	12,944,781	(a)
Rabbit and Hare .. .. .	cwt.	126,745	112,547	100,655	77,566	63,348
Other (including Undressed Furs) .. .. .	"	(a)	(a)	(a)	(a)	(a)
Tallow .. .. .	cwt.	833,336	648,592	768,314	592,231	484,762
Wool—						
Greasy .. .. .	lb.	709,438,954	682,913,332	759,443,979	696,578,126	767,050,003
Scoured .. .. .	"	52,110,342	55,397,621	46,019,059	44,195,688	43,685,080
Tops .. .. .	"	4,519,357	2,559,159	872,774	552,152	1,033,823

NOTE.—The minus sign — signifies net imports. (a) Quantity not available.

The values of the net exports for the same five years are furnished in the next table, and amount to no less a total than £320,236,861 for the period, or an average of £64,047,372 per annum, of which wool represents 79.56 per cent. Skins, meat and tallow rank next in order of importance.

## NET EXPORTS OF PASTORAL PRODUCTS.—AUSTRALIA.

Products.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.	
VALUES.						
Animals (living)—						
Cattle .. .. .	£	41,352	21,205	-19,814	-6,491	
Horses .. .. .	£	65,285	79,257	85,178	109,827	
Sheep .. .. .	£	40,512	43,447	35,681	4,586	
Bones .. .. .	£	8,932	10,775	8,015	8,713	
Glue-pieces and Sinews .. .. .	£	-2,503	-6,956	-13,577	-11,305	
Glycerine .. .. .	£	-15,097	-6,809	-15,167	-2,407	
Hair .. .. .	£	-43,054	-35,660	-47,591	-5,091	
Hoofs .. .. .	£	7,826	6,162	7,128	4,412	
Horns .. .. .	£	25,488	24,385	22,626	18,182	
Meats—						
Frozen Beef .. .. .	£	2,377,871	2,888,284	2,569,782	2,235,526	
Frozen Mutton and Lamb .. .. .	£	1,188,388	2,165,321	2,386,175	2,105,957	
Frozen Rabbits and Hares .. .. .	£	309,149	331,456	339,917	412,845	
Frozen, Other .. .. .	£	142,475	180,422	152,319	149,782	
Potted, and Extract of .. .. .	£	-60,602	-76,328	-52,491	10,096	
Preserved in Tins, etc. .. .. .	£	100,110	84,029	118,513	139,213	
Other (excluding Bacon and Ham) .. .. .	£	6,243	11,086	8,695	7,631	
Sausage Casings .. .. .	£	136,567	144,063	245,246	175,333	
Skins—						
Hides .. .. .	£	1,401,029	886,430	459,192	536,472	
Sheep .. .. .	£	4,385,138	4,524,170	3,123,282	1,947,071	
Rabbit and Hare .. .. .	£	2,490,709	2,624,253	1,567,142	558,694	
Other (including Undressed Furs) .. .. .	£	831,042	277,477	586,842	203,449	
Tallow .. .. .	£	1,043,311	1,366,341	981,454	602,849	
Wool—						
Greasy .. .. .	£	58,295,914	55,592,624	32,775,631	29,304,155	
Scoured .. .. .	£	6,621,937	5,519,161	3,563,207	2,469,542	
Tops .. .. .	£	488,199	166,957	87,781	114,023	
Total Values .. .. .	£	73,518,868	79,886,161	76,823,552	48,915,166	41,093,114

NOTE.—The minus sign — signifies net imports.

9. Value of Pastoral Production.—Details of the quantities and values of the items included in the value of pastoral production for the year 1930-31 are shown in the following table. The values quoted are the gross values in the metropolitan markets at port of shipment oversea. Complete data regarding production costs to permit of a determination of the net value of production in accordance with the resolutions of the Statistical Conference of 1924 and subsequent years are not available. The omission of the local consumption of rabbits (meat and skins) and other pastoral by-products, tends, however, to limit the exaggeration of the total gross value shown.

## PASTORAL PRODUCTION.—AUSTRALIA, 1930-31.

Item.	Quantity.	Value.
		£
Wool .. .. .	lb. 912,141,253	34,803,500
Meats—		
Beef—		
Local Consumption (including Factories) .. .. .	.. .. .	.. .. .
Exports of Carcasses .. .. .	.. .. .	.. .. .
Mutton and Lamb—		
Local consumption (including Factories) .. .. .	.. .. .	.. .. .
Exports of Carcasses .. .. .	.. .. .	.. .. .
Rabbits and Hares (Export only) .. .. .	pair	.. .. .
Other Meats, frozen and other (Export only) .. .. .	.. .. .	.. .. .
Sausage Casings (Export only) .. .. .	cwt.	.. .. .
Skins—		
Exports—		
Cattle and Calf .. .. .	No.	.. .. .
Sheep .. .. .	.. .. .	.. .. .
Rabbit and Hare .. .. .	cwt.	.. .. .
Other Furred .. .. .	.. .. .	.. .. .
Other Skins .. .. .	.. .. .	.. .. .
Consumption in Factories .. .. .	.. .. .	.. .. .
Tallow—		
Exports .. .. .	cwt.	.. .. .
Local Consumption .. .. .	.. .. .	.. .. .
Hair, Horns, etc. (Export only) .. .. .	.. .. .	.. .. .
Net Exports of Live Stock .. .. .	.. .. .	.. .. .
Increase in Live Stock—		
Sheep .. .. .	No.	.. .. .
Cattle .. .. .	.. .. .	.. .. .
Horses .. .. .	.. .. .	.. .. .
	.. .. .	69,498,572

(a) Not available.

10. Consumption of Meats.—Particulars of the per capita consumption of meat in Australia are shown in the following table, together with returns for certain other countries. The figures have in each case been obtained from official sources, although it is not definitely known that they are all on a similar basis.

While the average consumption in Australia is considerably below that of New Zealand, it is greatly in excess of that of Canada, Great Britain and the United States. The deficiency in these countries is partly counterbalanced by the large consumption of pork, the average of which is greatly in excess of that recorded for Australia and New Zealand.

## MEATS.—PER CAPITA CONSUMPTION, AUSTRALIA AND OTHER COUNTRIES.

Description.	Australia, 1930-31.	New Zealand, 1929-30. (d)	Great Britain, 1924-27.	Canada, 1929.	United States of America, 1930.
	lb.	lb.	lb.	lb.	lb.
Beef and Veal .. ..	94.46	155.73	71.40	68.13	56.90
Mutton and Lamb .. ..	76.52	86.87	26.20	7.03	6.60
Pork .. ..	6.44	13.11	(b)46.80	31.52	(c)68.20
Total .. ..	177.42	255.71	144.40	156.68	131.70
Bacon and Ham .. ..	10.65	13.47	(a)	(a)	(a)
Total All Meats .. ..	188.07	269.18	144.40	156.68	(c)131.70

(a) Probably included with Pork.

(b) Including Lard.

(c) Excluding Lard.

(d) Average, three years ending 1929-30.

## § 2. Horses.

1. Suitability of Australia for Horse-breeding.—From the earliest times the suitability of the climate and pastures of Australia for the production of serviceable breeds of horses has been fully recognized. By the importation of high-class sires, and the careful selection of breeding mares, these natural advantages are utilized to the fullest extent, all classes of horses being bred. As a consequence of this combination of advantages, the Australian horse, whether of the heavy draught, medium weight, or light saddle and carriage variety, compares more than favourably with the product of other lands. The Australian horse is highly regarded by the military authorities in India, and large numbers are obtained annually for remount purposes. During the war, Australian horses were found to stand up well to requirements, especially in Palestine and Sinai, where the rigours of the desert campaign fully tested their powers of endurance.

2. Distribution throughout Australia.—The States of New South Wales, Queensland and Victoria together depasture more than 75 per cent. of the total number of horses in Australia. In the following table figures are given for each State, etc., for each of the last five years:—

## HORSES.—NUMBER.

Year.	N.S.W. (a)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	F.C.T. (a)	Total.
1926	622,009	447,988	570,690	234,352	166,463	36,830	42,801	1,383	2,122,516
1927	598,377	428,666	547,412	224,027	165,021	35,872	40,108	1,208	2,040,691
1928	567,371	412,867	522,490	205,865	160,876	34,908	37,452	924	1,942,753
1929	534,945	393,015	500,104	189,054	159,528	34,336	33,703	929	1,845,614
1930	524,512	379,872	480,970	183,529	156,973	32,700	33,363	815	1,792,734

(a) 30th June year following.

The number of horses attained its maximum in Australia during 1918, when a total of 2,527,149 was recorded. Since that date, however, a general decline has been experienced, and the number for 1930 is the lowest returned since 1906. The numbers of horses in Australia and in the United States of America reached their maximum in 1918, while in Canada the highest total was recorded in 1921. The decline in each country since that year up to the latest available date amounted to 29, 35 and 13 per cent.

respectively. In Argentina on the other hand, a slight increase was recorded in 1930 over the numbers ascertained at the previous census of 1922. The rapid development of motor transport coupled with the use of petrol-driven cultivating and other machinery on farms brought about the decreases alluded to. In Australia, however, there has recently been a tendency to revert to the horse not only on the farm, but to some extent as regards the transport of goods in the cities.

Particulars regarding the number of horses in Australia from 1860 onwards, may be ascertained from the graph herein.

3. Proportions in the Several States and Territories.—The percentages of the number of horses in the several States and Territories on the total for Australia for the past five years are as follows :—

#### HORSES.—PERCENTAGES IN EACH STATE.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	F.C.T.	Total.
	%	%	%	%	%	%	%	%	%
1926 ..	29.30	21.11	26.89	11.04	7.84	1.73	2.02	0.07	100.00
1927 ..	29.32	21.00	26.83	10.98	8.09	1.76	1.97	0.05	100.00
1928 ..	29.20	21.25	26.89	10.60	8.28	1.80	1.93	0.05	100.00
1929 ..	28.98	21.29	27.10	10.24	8.64	1.86	1.83	0.06	100.00
1930 ..	29.26	21.19	26.83	10.24	8.75	1.82	1.86	0.05	100.00

The percentages in the various States have remained practically constant during the quinquennium.

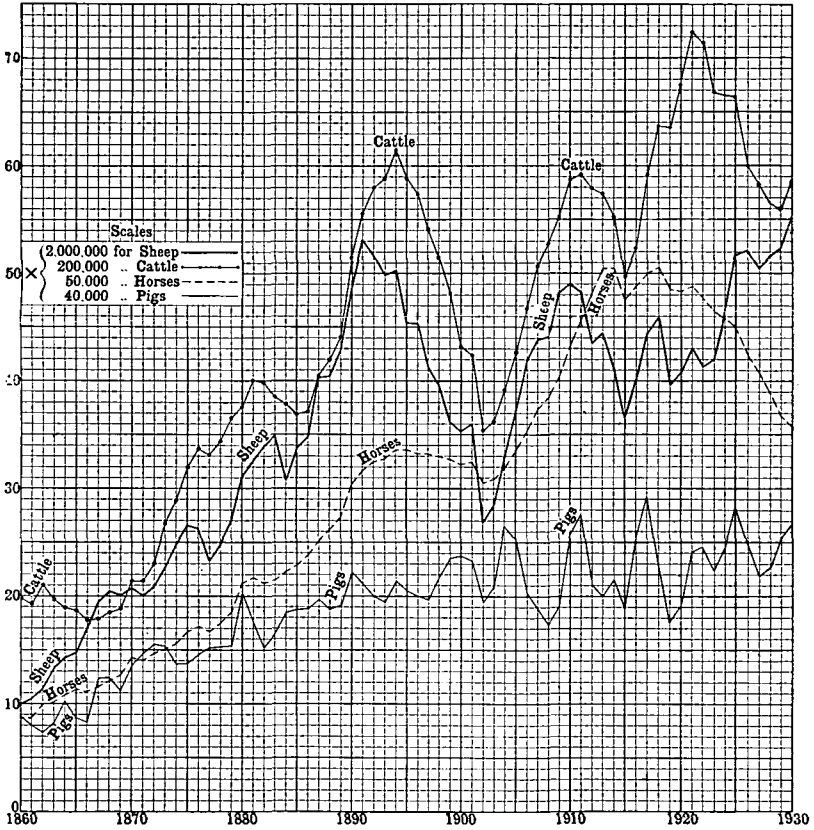
4. Relation to Population.—In proportion to population, horses are much more numerous in the Northern Territory than in any other of the principal divisions of Australia. Queensland is next in order, while Tasmania has the smallest number of horses per head. The number per head of population has declined in all the statistical divisions since 1926. Particulars for the past five years are as follows :—

#### HORSES.—NUMBER PER HEAD OF POPULATION.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	All States
1926 ..	0.26	0.26	0.65	0.41	0.44	0.17	10.98	0.28	0.35
1927 ..	0.25	0.25	0.61	0.39	0.43	0.17	9.47	0.21	0.33
1928 ..	0.23	0.23	0.57	0.36	0.40	0.16	9.41	0.11	0.31
1929 ..	0.22	0.22	0.54	0.33	0.38	0.16	7.54	0.11	0.29
1930 ..	0.21	0.21	0.51	0.32	0.37	0.15	7.23	0.10	0.28

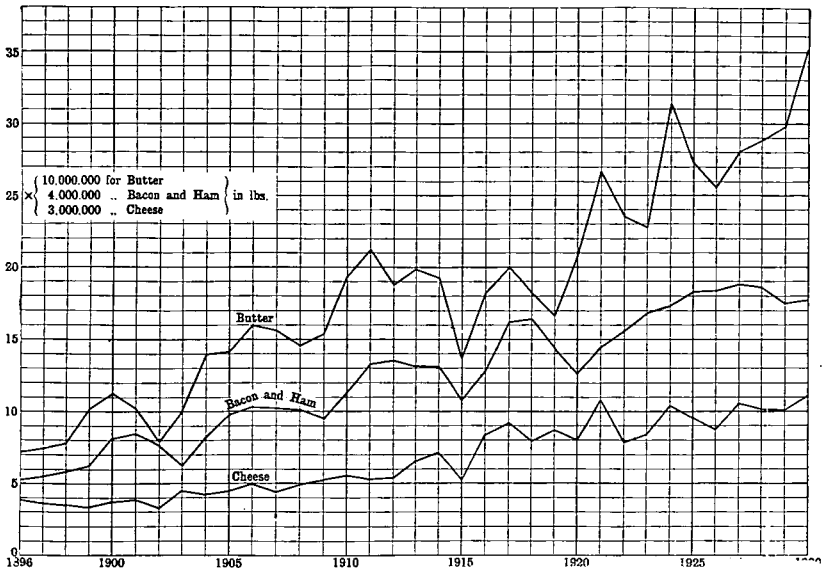
5. Comparison with other Countries.—The number of horses in some of the leading horse-breeding countries of the world, according to the latest available returns, is as follows :—

## NUMBER OF HORSES, CATTLE, SHEEP, AND PIGS—AUSTRALIA, 1860 TO 1930.



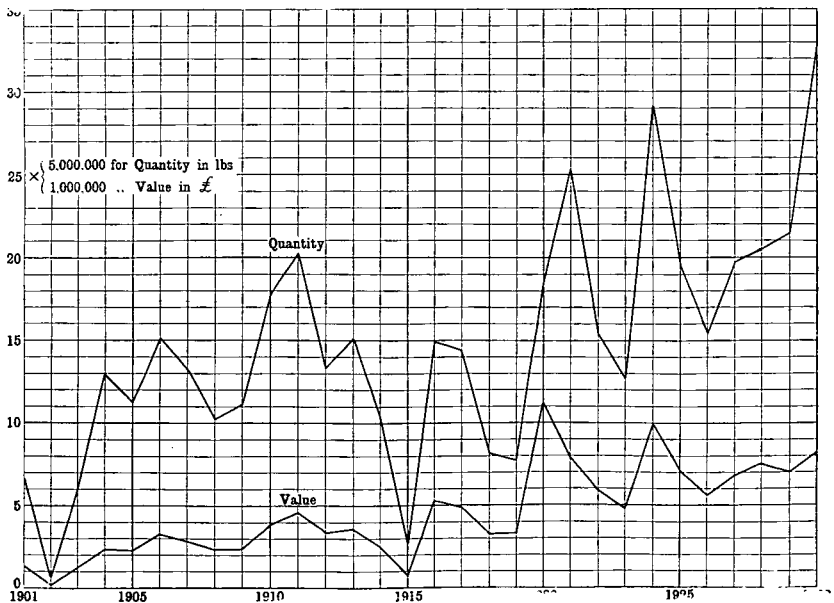
EXPLANATION—The base of each small square represents an interval of one year and the vertical side 2,000,000 in the case of sheep, 200,000 for cattle, 50,000 for horses, and 40,000 for pigs.

PRODUCTION OF BUTTER, CHEESE, AND BACON AND HAM—AUSTRALIA,  
1896 TO 1930-31.



EXPLANATION.—The base of each small rectangle represents an interval of one year, and the vertical height of each denotes in the case of butter 10,000,000 lbs.; in the case of bacon and ham 4,000,000 lbs. and in the case of cheese 3,000,000 lbs.

QUANTITY AND VALUE OF NET EXPORTS OF BUTTER FROM AUSTRALIA, 1901 TO 1930-31



EXPLANATION.—The base of each small rectangle represent an interval of one year, and the vertical height 5,000,000 lbs. in weight, or £1,000,000 in value.

## HORSES.—NUMBER IN PRINCIPAL COUNTRIES.

Country.	Date.	Number of Horses (,000 omitted).	Country.	Date.	Number of Horses (,000 omitted).
Soviet Republics ..	1930	31,158	Union of South Africa	1926	856
U.S. of America ..	1930	12,803	Cuba ..	1929	758
Argentine Republic	1930	9,858	Czechoslovakia ..	1930	748
Brazil ..	1920	5,254	Dutch East Indies..	1929	768
China ..	1916	4,401	Sweden ..	1930	653
Poland ..	1930	4,103	Spain ..	1929	598
Germany ..	1930	3,520	Lithuania ..	1930	559
Canada ..	1930	3,295	Uruguay ..	1924	513
France ..	1929	2,986	Denmark ..	1930	494
India (British and Native)	1928	2,190	Turkey ..	1930	463
Rumania ..	1930	1,809	Bulgaria ..	1926	482
<b>Australia</b> ..	<b>1930</b>	<b>1,790</b>	Irish Free State ..	1930	448
Japan ..	1929	1,490	Finland ..	1929	395
United Kingdom ..	1930	1,212	Latvia ..	1930	359
Yugoslavia ..	1930	1,161	Philippine Islands..	1929	341
Mexico ..	1926	1,036	Chile ..	1925	324
Italy ..	1930	967	Netherlands ..	1930	299
Colombia ..	1929	929	New Zealand ..	1930	297
Hungary ..	1930	860	Paraguay ..	1926	210

6. *World's Totals.*—Several countries do not issue annual statistics of live stock, the information available consisting of censuses or estimates made at varying intervals. It is not possible, therefore, to give world aggregates for the different classes of stock year by year, nor to make a satisfactory comparison between the totals for consecutive years. In order, however, to give some idea of the latest position as regards live stock and the changes that have taken place as compared with pre-war years, the following information has been taken from the Year Book of the International Institute of Agriculture. The list of countries included is fairly complete, but China, which possesses large numbers of horses, is omitted, as also are certain parts of Asiatic Russia, together with a few other countries. While for some countries the figures are the result of careful enumeration, in the case of others they are merely approximations. The totals, therefore, can be regarded as a general indication only of the position at the dates shown. The figures for horses are as follow :—

## HORSES.—WORLD'S TOTALS.

Continents, etc.	Number at the date nearest—		Increase (+) or Decrease (–) in 1927.	
	1913.	1927.	Actual Figures.	Percentages.
	,000	,000	,000	%
Europe (excluding Soviet Republics) ..	22,698	22,863	+ 165	+ 0.7
Union of Socialist Soviet Republics ..	35,522	31,258	– 4,264	– 12.0
North and Central America ..	26,134	20,465	– 5,669	– 21.7
South America ..	18,162	17,653	– 509	– 2.8
Asia (excluding Soviet Republics) ..	4,914	5,394	+ 480	+ 9.8
Africa ..	1,692	2,079	+ 387	+ 22.9
Oceania ..	2,976	2,445	– 531	– 17.8
<b>Total ..</b>	<b>112,098</b>	<b>102,157</b>	<b>– 9,941</b>	<b>– 8.9</b>



Compared with the pre-war totals reductions have taken place in all the continents, with the exception of Africa, where the number of horses is relatively insignificant. The greatest decrease occurred in North and Central America, viz. :—5,669,000, largely as the result of the decline in the United States.

7. *Oversea Trade in Horses.*—(i) *Exports.* Australia's export trade in horses has fluctuated considerably since the war, and is now far below that of earlier years. For instance, during the period 1901–5 the average number exported was over 18,000, whereas during the last five years the figure was under 6,000. The total number of horses exported during that period amounted to 28,608, valued at £825,670, equal to an annual average of 5,722 for £165,134. The average export price for the period was £28 17s. 3d. About 86 per cent. of the horses exported went to India, where they are largely used for remount purposes.

(ii) *Imports.* The number of horses imported into Australia is comparatively small, consisting mainly of valuable animals introduced for breeding purposes, principally from the United Kingdom and New Zealand. The average value per head of the horses imported during the last five years was £311 19s. 7d., as compared with £28 17s. 3d. per head for the exports for the same period. The average number imported per annum was, however, only 289, and the average annual value, £90,162. The following table gives the imports, exports, and net exports of horses during each of the years from 1926–27 to 1930–31 :—

#### HORSES.—IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£		£		£
1926–27.. ..	343	111,297	5,619	146,610	5,276	35,313
1927–28.. ..	300	87,065	5,936	152,350	5,636	65,285
1928–29.. ..	339	95,025	5,695	174,282	5,356	79,257
1929–30.. ..	362	121,902	6,331	207,080	5,969	85,178
1930–31.. ..	101	35,521	5,027	145,348	4,926	109,827

### § 3. Cattle.

1. *Purposes for which Raised.*—In all the States, cattle-raising is carried out, the main object in certain districts being the production of stock suitable for slaughtering purposes, and in others the raising of profitable dairy herds. The great impetus which the development of the export trade in Australian butter gave to the dairying industry led to a considerable increase in numbers and improvement in quality of the dairy herds in Victoria, New South Wales, and Southern Queensland in particular, the portion of Australia in the temperate zone being the best adapted to this industry. On the other hand, beef-producing cattle are mainly raised in the tropical districts, i.e., in the northern parts of Queensland, in the Northern Territory, and in the Kimberley district in the north of Western Australia.

2. *Distribution throughout Australia.*—Until 1880, New South Wales occupied the leading position as a cattle-raising State, but in that year Queensland took first place, which it has since maintained. The graph herewith shows a rapid increase in the number of cattle in Australia up to the year 1894, when 12,311,617 head were depastured. From 1895 onwards, however, the effects of droughts and the ravages of tick fever reduced the number to 7,062,742 in 1902. Following the disastrous drought which terminated in the latter year, the herds were gradually built up, and despite recurring droughts, they continued to increase in recent years until the maximum number of 14,441,309 cattle was attained in 1921. The decline in the frozen beef trade and the droughts of 1922–23 and 1925–26, which particularly affected the beef cattle areas of New South Wales and Queensland, were mainly responsible for the heavy decreases recorded in both these States during recent years. In 1930, however, a total increase in the numbers of 500,000 was recorded, 170,000 of which was due to increases in the dairy herds.

The number of cattle in the several States and Territories during each of the last five years is as follows :—

## CATTLE.—NUMBER.

Year.	N.S.W. (a)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter. (a)	Total.
1926	2,813,144	1,435,761	5,464,845	340,007	827,303	213,112	863,597	5,509	11,963,278
1927	2,848,654	1,327,077	5,225,804	316,314	846,735	210,894	835,390	6,188	11,617,056
1928	2,784,615	1,304,426	5,128,341	263,016	837,527	208,812	768,751	5,269	11,300,757
1929	2,686,132	1,335,242	5,208,588	204,516	836,646	214,643	711,607	4,760	11,202,134
1930	2,840,473	1,429,920	5,463,724	218,985	812,844	230,254	720,476	4,240	11,720,916

(a) 30th June year following.

3. Proportion in Each State.—Percentages showing the relative importance of cattle-breeding in each State, etc., during the years 1926 to 1930 are given hereunder :—

## CATTLE.—PERCENTAGE IN EACH STATE.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Total.
	%	%	%	%	%	%	%	%	%
1926	23.51	12.00	45.68	2.84	6.92	1.78	7.22	0.05	100.00
1927	24.52	11.42	44.98	2.72	7.29	1.82	7.19	0.06	100.00
1928	24.64	11.54	45.38	2.33	7.41	1.85	6.80	0.05	100.00
1929	23.97	11.92	46.50	1.83	7.47	1.92	6.35	0.04	100.00
1930	24.23	12.20	46.62	1.87	6.93	1.96	6.15	0.04	100.00

Queensland contains within its borders nearly one half of the cattle herds of Australia. Despite decreases during recent years the percentage of cattle in Queensland on the total for Australia amounted to 46.62 in 1930. The largest relative gain since 1926 occurred in Queensland and New South Wales, whilst slight increases were recorded in Victoria, Western Australia, and Tasmania.

4. Comparison with other Countries.—The following table shows the number of cattle in Australia, and in some of the principal cattle-raising countries of the world, at the latest available date :—

## CATTLE.—NUMBER IN VARIOUS COUNTRIES.

Country.	Date.	No. of Cattle (,000 omitted).	Country.	Date.	No. of Cattle (,000 omitted).
India (British and Native) .. ..	1929	146,959	Cuba .. ..	1929	4,865
U.S. of America .. ..	1930	58,955	Turkey .. ..	1930	4,802
Soviet Republics .. ..	1930	52,582	Siam .. ..	1930	4,584
Brazil .. ..	1920	34,271	Czechoslovakia .. ..	1930	4,539
Argentine Republic .. ..	1930	32,212	Dutch East Indies .. ..	1929	4,472
Germany .. ..	1930	18,431	Irish Free State .. ..	1930	4,038
China .. ..	1921	15,973	Rumania .. ..	1930	3,834
France .. ..	1929	15,631	Yugoslavia .. ..	1930	3,812
<b>Australia .. ..</b>	<b>1930</b>	<b>11,721</b>	New Zealand .. ..	1930	3,766
Union of South Africa .. ..	1929	10,518	Spain .. ..	1929	3,660
Poland .. ..	1930	9,400	French Equatorial and West Africa .. ..	1930	3,135
Canada .. ..	1930	8,937	Sweden .. ..	1930	3,060
Uruguay .. ..	1924	8,432	Denmark .. ..	1930	3,057
United Kingdom .. ..	1930	7,759	Nigeria .. ..	1930	2,973
Colombia .. ..	1929	7,343	Paraguay .. ..	1926	2,973
Madagascar .. ..	1930	7,048	Rhodesia .. ..	1930	2,934
Italy .. ..	1930	6,893	Netherlands .. ..	1930	2,366
Mexico .. ..	1926	5,585	Venezuela .. ..	1922	2,278
Tanganyika Territory .. ..	1930	5,170	Austria .. ..	1923	2,162
Kenya .. ..	1930	5,193	Bolivia .. ..	1928	1,855

5. **World's Totals.**—The information in the appended table has been taken from the returns published by the International Institute of Agriculture at Rome. The figures given therein are subject to the limitations previously stated in respect to horses (See § 2, 6 *ante*).

**CATTLE.—WORLD'S TOTAL.**

Continents, etc.	Number at the date nearest—		Increase (+) or Decrease (–) in 1927.	
	1913.	1927.	Actual Figures.	Percentages.
	,000	,000	,000	%
Europe (excluding the U.S.S.R.) ..	98,764	100,339	+ 1,575	+ 1.6
Union of Socialist Soviet Republics ..	60,280	67,835	+ 7,555	+ 12.5
North and Central America ..	76,485	79,415	+ 2,930	+ 3.8
South America ..	86,662	101,053	+ 14,391	+ 16.6
Asia (excluding the U.S.S.R.) ..	131,300	143,927	+ 12,627	+ 9.6
Africa ..	34,537	51,270	+ 16,733	+ 48.4
Oceania ..	13,859	15,476	+ 1,617	+ 11.7
<b>Total ..</b>	<b>501,887</b>	<b>559,315</b>	<b>+ 57,428</b>	<b>+ 11.4</b>

The number of cattle increased throughout the world since 1913, the most notable advances being in Africa and South America, where the numbers increased by more than 16 and 14 million head respectively since the pre-war year.

6. **Imports and Exports of Cattle.**—The products of the cattle-raising industry figure largely in the export trade of Australia, although the export of live cattle has never been considerable. The number of cattle imported is also small, consisting, as in the case of horses, mainly of valuable animals for the purposes of breeding. Details are as follow :—

**CATTLE.—IMPORTS AND EXPORTS, AUSTRALIA.**

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£		£		£
1926–27 ..	103	4,412	10,196	48,075	10,093	43,663
1927–28 ..	89	3,553	11,220	44,905	11,131	41,352
1928–29 ..	96	17,761	8,548	38,966	8,452	21,205
1929–30 ..	193	44,309	6,384	24,495	6,191	– 19,814
1930–31 ..	81	10,071	355	3,580	274	– 6,491

*Note.*—The minus sign (–) signifies net imports.

The average value of the cattle imported during the last five years was £142 10s. 9d. per head, while the average value of the cattle exported during the same period was £4 7s. 5d. As previously stated, the imported cattle were required principally for stud purposes.

7. **Cattle Slaughtered.**—The number of cattle slaughtered during each of the years 1926 to 1930 is given hereunder :—

**CATTLE (INCLUDING CALVES) SLAUGHTERED.**

Year.	N.S.W. (a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	N. Ter.	Fed. Cap. Ter. (a)	Total.
1926	809,810	499,519	567,640	143,747	101,948	32,989	1,369	2,784	2,159,806
1927	694,527	469,610	739,995	142,557	101,146	36,249	1,854	2,924	2,188,862
1928	778,994	466,576	685,196	127,627	100,982	36,204	2,065	2,074	2,199,778
1929	680,316	387,662	630,620	117,806	91,195	35,278	1,531	2,143	1,946,551
1930	594,950	328,032	648,473	89,585	95,021	27,338	1,844	1,357	1,786,600

(a) For year ended 30th June of year following.

8. **Production and Consumption of Beef.**—The production of beef in Australia during the year 1930–31 was estimated at 770,638,000 lbs. The requirements of the local market absorbed 611,758,000 lbs., approximately 79 per cent., leaving a balance of 21 per cent., which was exported as frozen and canned beef. (See also § 1, 10 *ante*.)

9. **Export of Frozen Beef.**—The export of frozen meat from Australia dates from about the year 1881, and since that year the trade in frozen beef has grown considerably, the quantities and values exported during the past five years being as follows, viz.:—1926–27, 112,198,096 lbs., £1,627,998; 1927–28, 169,098,425 lbs., £2,377,967; 1928–29, 189,090,357 lbs., £2,888,287; 1929–30, 156,748,665 lbs., £2,569,788, and 1930–31, 155,630,647 lbs., £2,235,526. (See Table § 1 No. S.) The largest purchaser of Australian beef is the United Kingdom, which during the year 1930–31 took £1,441,365 worth, or about 65 per cent., of the total shipments. Other importing countries in order of importance were Belgium, Philippine Islands, Egypt, Italy, Japan, and Malta. These countries, together with the United Kingdom, accounted for 94 per cent. of the total exports.

Australia's distance from the chief markets of the world up to the present has rendered difficult the marketing overseas of chilled beef in competition with the product of Argentina and other South American countries, and the Australian beef exported consists, therefore, almost entirely of frozen beef. The preference for chilled beef in the United Kingdom coupled with the embargoes on imports by former importing countries has adversely affected the development of the beef industry in Australia. An average annual export of approximately 170 million lbs. or 1½ million cwts. has nevertheless been maintained. Investigations are being conducted by the Council for Scientific and Industrial Research in Australia and the Low Temperature Research Station at Cambridge in England into the problem of chilling beef in a manner that will permit of its transport over long distances. The future progress of the industry in Australia would appear to depend upon the successful solution of this problem coupled with the forwarding of regular supplies suited to the requirements of overseas consumers.

10. **Agreements Regarding Meat at the Ottawa Conference.**—A further stimulus to the Australian meat industry should result from the agreement reached in this connexion at the Imperial Economic Conference at Ottawa in August, 1932. Under the terms of the agreement the Government of the United Kingdom undertakes to regulate importations of foreign meat from 1st January, 1932, to 30th June, 1934, in accordance with the following Schedule:—

**STATEMENT SHOWING THE MAXIMUM QUANTITIES OF FOREIGN MEAT TO BE ALLOWED TO BE IMPORTED INTO THE UNITED KINGDOM DURING EACH QUARTER OF THE PERIOD 1ST JANUARY, 1933, TO 30TH JUNE, 1934, EXPRESSED AS PERCENTAGES OF THE QUANTITIES IMPORTED IN THE CORRESPONDING QUARTERS OF THE TWELVE MONTHS ENDED JUNE, 1932.**

Meat.	1933.				1934.	
	January-March.	April-June.	July-September.	October-December.	January-March.	April-June.
Frozen Mutton and Lamb ..	% 90	% 85	% 80	% 75	% 70	% 65
Frozen Beef (Carcasses and Boned Beef) .. ..	90	85	80	75	70	65
Chilled Beef .. ..	100	100	100	100	100	100

Australia undertakes to limit the export to the United Kingdom of frozen mutton and lamb during the year 1933 to a quantity equivalent to that exported during the year ended June, 1932, viz., 165,282,000 lbs., while the export of frozen beef will not be increased during 1933 to an extent exceeding 10 per cent. of the quantity exported during 1931–32, viz., 165,872,000 lbs. Thereafter, no restriction will be placed upon the importation of any meat from Australia into the United Kingdom during the currency

of the agreed programme. At the conclusion of this period at the 30th June, 1934, it is agreed that the regulation of the imports of foreign meat is to be continued until 1938, at the rates in force for the quarter ending June, 1934, unless a permanent policy is agreed upon as a result of consultations which are to take place during 1933 between the Governments of the United Kingdom and Australia. Details of imports of beef, mutton and lamb into the United Kingdom during the period 1926 to 1930 will be found in the tables hereafter.

11. Imports of Chilled and Frozen Beef into the United Kingdom.—The following statement shows the quantities and values of chilled and frozen beef imported into the United Kingdom during each of the five years 1926 to 1930.

IMPORTS OF CHILLED AND FROZEN BEEF IN QUARTERS AND SIDES INTO THE UNITED KINGDOM.

Country of Origin.	1926.	1927.	1928.	1929.	1930.
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CHILLED—QUANTITY.

	cwt.	cwt.	cwt.	cwt.	cwt.
Brazil .. .. .	..	76,832	329,225	332,656	506,976
Uruguay .. .. .	701,710	336,831	589,659	795,465	866,685
Argentina .. .. .	8,956,806	9,986,205	8,644,551	8,174,800	7,713,349
Other Foreign Countries ..	7,824	2,920	..	I	..
British .. .. .	13,622	2,187	1,085	2,004	..
Total Chilled ..	9,679,962	10,404,975	9,564,520	9,304,926	9,087,010

CHILLED—VALUE.

	£	£	£	£	£
Brazil .. .. .	..	188,951	812,048	881,278	1,276,361
Uruguay .. .. .	1,531,343	717,738	1,456,834	2,075,707	2,197,906
Argentina .. .. .	21,091,201	21,893,115	22,260,448	22,275,517	20,248,423
Other Foreign Countries ..	26,845	7,452	..	4	..
British .. .. .	30,554	4,693	2,244	4,121	..
Total Chilled ..	22,679,943	22,811,949	24,531,574	25,236,627	23,722,690

FROZEN—QUANTITY.

	cwt.	cwt.	cwt.	cwt.	cwt.
United States of America ..	2,107	6,190	166	173	..
Brazil .. .. .	7,872	59,087	68,820	50,636	106,271
Uruguay .. .. .	169,047	149,824	94,822	65,924	191,180
Argentina .. .. .	786,550	885,060	288,474	346,619	256,502
Other Foreign Countries ..	2,170	2,474	..	24,268	..
Australia .. .. .	1,002,685	558,621	904,772	820,360	719,111
New Zealand .. .. .	379,407	189,879	331,508	77,969	230,876
Other British Countries ..	3,651	1,424	121	7,347	11,133
Total Frozen ..	2,353,489	1,852,559	1,688,683	1,393,296	1,515,073
Grand Total ..	12,033,451	12,257,534	11,252,933	10,698,222	10,602,083

IMPORTS OF CHILLED AND FROZEN BEEF IN QUARTERS AND SIDES  
INTO THE UNITED KINGDOM—*continued.*

Country of Origin.	1926.	1927.	1928.	1929.	1930.
FROZEN—VALUE.					
	£	£	£	£	£
United States of America ..	5,554	15,379	508	778	..
Brazil .. .. .	14,991	109,397	136,487	110,242	226,617
Uruguay .. .. .	366,063	316,294	225,884	169,468	476,559
Argentina .. .. .	1,695,133	1,822,828	680,191	869,126	664,586
Other Foreign Countries ..	4,752	6,010	..	54,937	..
Australia .. .. .	2,002,549	1,109,227	1,935,417	1,819,616	1,561,342
New Zealand .. .. .	725,172	370,010	681,685	171,623	496,784
Other British Countries ..	7,146	2,757	298	16,280	22,470
Total Frozen .. .. .	4,821,360	3,751,902	3,660,470	3,211,170	3,448,358
Grand Total .. .. .	27,501,303	26,563,851	28,192,044	28,447,797	27,171,048

### § 4. Sheep.

1. *Infiltration of the Pastoral Industry.*—Fortunately for Australia, the suitability of its climate and general conditions for the production of a high class of wool was, at an early date in the history of its settlement, surmised and tested by Captain Macarthur, one of the pioneer sheep-breeders of New South Wales. To the energy of this enterprising pastoralist is due in large measure the rapid and extremely satisfactory development of Australia as a producer of fine wool, and, while it would appear that the introduction of the merino sheep into Australia was not due to Macarthur, a great deal of the credit for having successfully established the pastoral industry in Australia must certainly be his.

2. *Distribution throughout Australia.*—With the exception of a short period in the early sixties, when the flocks of Victoria outnumbered those of the mother State, New South Wales has maintained the premier position in sheep-raising. Within its borders is contained generally one half of the flocks of Australia, and in the returns for the years 1924 to 1927 even this high percentage was exceeded.

Fluctuations in the number of sheep recorded for each year in Australia from 1860 onwards may be seen from the graph accompanying this Chapter. Five marked periods of decline depleted the numbers at successive intervals, but these gaps were quickly restored. Since 1925 the sheep flocks have exceeded 100 millions, reaching 104,558,342 in 1929, and 110,568,279 in 1930, the latter figure constituting a record eclipsing the previous record of 106.4 millions in 1891. At no previous period have such large numbers been depastured continuously, and the development has taken place notwithstanding an annual slaughter of some ten to fifteen million sheep and lambs for the mutton and lamb trade.

The number of sheep in the several States and Territories for each year from 1927 to 1930 with an estimate for the year 1931 is as follows :—

## SHEEP.—NUMBERS.

Year.	New South Wales. (a)	Victoria.	Queens-land.	South Australia.	Western Australia.	Tasmania.	Nor. Ter.	Fed. Cap. Ter. (a)	Total.
1927	50,510,000	15,557,067	16,642,385	7,542,345	8,447,480	1,904,955	9,585	213,659	100,827,476
1928	50,184,950	16,498,222	18,509,201	7,079,947	8,943,002	2,000,605	7,635	207,211	103,430,773
1929	48,720,000	17,427,203	20,324,303	6,186,252	9,556,823	2,091,113	12,203	240,445	104,558,342
1930	53,366,000	16,477,995	22,542,043	5,980,959	9,882,761	2,119,606	15,838	183,077	110,568,279
1931 <sup>b</sup>	53,000,000	16,376,217	22,324,278	6,608,981	10,096,614	2,100,000	15,000	190,000	110,711,090

(a) 30th June year following.

(b) Estimate as at 31st December, 1931.

3. **Proportion in the Several States and Territories.**—Particulars concerning the relative positions of the several States and Territories with respect to the total flocks of Australia during the years 1926 to 1930 are given hereunder:—

## SHEEP.—PERCENTAGES.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Total.
	%	%	%	%	%	%	%	%	%
1926 ..	53.43	14.31	16.17	6.99	7.15	1.73	0.01	0.21	100.00
1927 ..	50.10	15.43	16.51	7.48	8.38	1.88	0.01	0.21	100.00
1928 ..	48.52	15.95	17.90	6.84	8.65	1.93	0.01	0.20	100.00
1929 ..	46.60	16.67	19.44	5.92	9.14	2.00	0.00	0.23	100.00
1930 ..	48.27	14.90	20.39	5.41	8.94	1.92	0.00	0.17	100.00

Apart from the effect of drought the percentage of sheep depastured in the different States shows little change. The most noteworthy alteration was a loss of 1.77 per cent. in Victoria and a gain of 1.67 per cent. in New South Wales during 1930 as compared with the previous year.

4. **Comparison with other Countries.**—As regards the size of its flocks, and the quantity and quality of wool produced, Australia has long occupied a leading position amongst the sheep-raising countries of the world. The following figures taken mainly from the Year Book of the International Institute of Agriculture represent the latest returns available in regard to the number of sheep in the principal wool-producing countries. The leading position is held by Australia, with more than 110 millions, followed by the Soviet Republics, with 90 millions, and the United States with 52 millions. In previous years the largest numbers were recorded in the Soviet Republics where a total of as high as 130 millions was shown, but in 1930 the number quoted by the International Institute of Agriculture was reduced to 90 millions, equal to a decline of over 40 million. No explanation of this large decrease is available, but it is possible that the number now shown refers to woolled sheep only. Extensive slaughtering during the year 1929 may be a further possible explanation. It may be noted, however, that other authorities still show the sheep flocks of the Soviet Republics at more than 120 millions. Efforts are being made by the Soviet Government to improve the quality of the wool and the quantity shorn per fleece, and to this end merino sheep were imported from America and Germany in 1927. In 1928-29, and 1929-30, 2,031 and 5,006 sheep valued at £6,017 and £13,606, respectively were exported from Australia to Russia for breeding purposes. As pointed out in sub-paragraph 6 following, however, the export of stud sheep is now subject to limitations. The production of wool, apparently, amounted to about 386 million lbs. only during the year 1930. This represents an average weight of fleece shorn of about 3 lbs., which is considerably less than half of that obtained in Australia.

## SHEEP.—NUMBER IN VARIOUS COUNTRIES.

Country.	Date.	No. of Sheep (,000 omitted).	Country.	Date.	No. of Sheep (,000 omitted).
Australia .. ..	1930	110,568	Bulgaria .. ..	1926	8,739
Soviet Republics ..	1930	89,860	French Morocco ..	1930	7,976
United States of America ..	1930	51,911	Yugoslavia .. ..	1930	7,953
Union of South Africa ..	1929	45,010	Brazil .. ..	1920	7,933
Argentine Republic ..	1930	44,413	Algeria .. ..	1930	7,168
India (British and Native) ..	1929	35,743	Iraq (a) .. ..	1930	7,153
New Zealand .. ..	1930	39,841	Chile .. ..	1930	6,263
United Kingdom ..	1930	24,669	Greece .. ..	1929	5,806
China .. ..	1916	22,232	Bolivia .. ..	1928	5,552
Uruguay .. ..	1930	20,558	Portugal .. ..	1925	3,721
Spain .. ..	1929	19,370	Canada .. ..	1930	3,696
Rumania .. ..	1930	11,921	Irish Free State ..	1930	3,515
Peru .. ..	1929	11,209	Germany .. ..	1930	3,501
Turkey .. ..	1930	10,639	Kenya .. ..	1930	3,228
France .. ..	1929	10,452	Mexico .. ..	1926	2,698
French Equatorial and West Africa ..	1930	10,146	Poland .. ..	1930	2,492
Italy .. ..	1930	9,896	Basutoland .. ..	1930	2,400
			Tanganyika Territory ..	1930	2,262
			Sudan (Anglo-Egyptian) ..	1930	2,200

(a) Including goats.

5. **World's Totals.**—The number of sheep in the various great divisions of the world has been estimated by the International Institute of Agriculture, and a comparison has been made with pre-war estimates. In the table below the results are shown, the totals being subject to the limitations noted for other classes of live stock. (See § 2, 6 *ante*.)

## SHEEP.—WORLD'S TOTALS.

Continents, etc.	Number at the date nearest—		Increase (+) or Decrease (-) in 1929.	
	1913.	1929.	Actual Figures.	Percentages.
	,000	,000	,000	%
Europe (excluding the U.S.S.R.) ..	126,999	123,900	- 3,099	- 2.4
United Socialist Soviet Republics ..	111,051	132,800	+ 21,749	+ 19.5
North and Central America .. ..	43,148	55,700	+ 12,552	+ 29.1
South America .. ..	100,392	102,500	+ 2,108	+ 2.1
Asia (a) .. ..	41,802	65,900	+ 24,098	+ 55.5
Africa .. ..	76,583	100,300	+ 23,717	+ 30.9
Oceania .. ..	109,331	133,700	+ 24,369	+ 22.2
<b>Total .. ..</b>	<b>609,306</b>	<b>714,800</b>	<b>+ 105,494</b>	<b>+ 20.1</b>

(a) Excluding U.S.S.R., China and Persia.

6. **Oversea Imports and Exports of Sheep.**—As in the case of cattle, the oversea exports of live sheep from Australia are of comparatively small importance. During the past five years the principal consignments of ordinary sheep have been made to Malaya (British) from the State of Western Australia. The purchases by buyers from New Zealand, South Africa, Russia and Japan at the Australian Stud Sheep Sales during recent years opened up a regular export trade with these countries in stud sheep. On the 27th November, 1929, however, the export of stud sheep was prohibited, except with the approval of the Minister for Trade and Customs. Consequently exports declined



during 1930-31, and amounted to 148 sheep only valued at £1,665, as compared with 6,389 valued at £32,933 in 1929-30. The following table shows the imports and exports of stud and ordinary sheep for the years 1926-27 to 1930-31 :—

**SHEEP.—IMPORTS AND EXPORTS, AUSTRALIA.**

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£		£		£
1926-27 ..	6,951	34,595	33,169	49,985	26,218	15,390
1927-28 ..	3,045	12,417	33,916	52,929	30,871	40,512
1928-29 ..	3,764	17,797	33,309	61,244	29,545	43,447
1929-30 ..	2,908	23,278	41,672	58,959	38,764	35,681
1930-31 ..	1,407	9,628	27,478	14,214	26,071	4,586

7. **Sheep Slaughtered.**—The number of sheep slaughtered in the several States during each of the years from 1926 to 1930 was as follows :—

**SHEEP (INCLUDING LAMBS) SLAUGHTERED.**

Year.	N.S.W. (a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	Nor. Ter.	Fed. Cap. Ter.(a)	Total.
1926..	5,600,083	4,528,113	679,266	1,090,756	712,647	310,428	..	19,319	12,940,612
1927..	5,009,511	4,732,494	669,742	1,209,608	784,349	328,671	..	22,507	12,756,882
1928..	4,967,835	5,286,642	805,461	1,263,352	807,510	331,820	..	20,384	13,483,004
1929..	6,326,925	6,024,702	1,089,978	1,242,835	861,785	341,527	644	23,026	15,911,422
1930..	6,254,436	5,745,475	1,671,245	1,308,976	994,813	363,329	540	23,911	16,362,725

(a) Year ended 30th June year following.

8. **Production and Consumption of Mutton and Lamb.**—The production of mutton and lamb during the year 1930-31 amounted to 626,590,289 lbs., of which 516,253,897 lbs. or 82 per cent., was consumed locally, leaving a balance of 18 per cent. for exportation. See also § 1, No. 10.

9. **Exports of Frozen Mutton and Lamb.**—The export trade in mutton and lamb preserved by cold process grew rapidly, until in 1913, the year immediately before the war, the value of the shipments amounted to nearly £3,000,000. The exports fell away considerably during the war years, but a record shipment of 246,971,346 lbs., valued at £5,482,564, was made in 1919-20, and another large consignment, valued at £4,321,917, was dispatched in 1922-23. Climatic conditions have since favoured a considerable output, and shipments have responded accordingly.

The quantity and value of the shipments during each of the past five years were as follows :—1926-27, 93,520,154 lbs., £2,057,607; 1927-28, 46,362,954 lbs., £1,188,506; 1928-29, 84,929,176 lbs., £2,166,043; 1929-30, 100,411,243 lbs., £2,386,186; 1930-31, 109,253,195 lbs., £2,105,963. See Table § 1 No. 8.

As in the case of frozen beef, the principal customer in this trade is the United Kingdom, which absorbed 93 per cent. of the total quantity exported from Australia during the year 1930-31, while the balance was shipped mainly to Canada, Belgium and Malaya (British).

10. **Resolutions at Ottawa Conference.**—Reference has already been made to the agreement reached at the Imperial Economic Conference at Ottawa regarding the regulation of imports of meat into the United Kingdom. See § 3, 10 *ante*.

11. Imports of Frozen Mutton and Lamb into the United Kingdom.—The quantities and values of frozen mutton and lamb imported into the United Kingdom from various countries for the five years ending in 1930 are given in the following table, viz. :—

## IMPORTS OF FROZEN MUTTON AND LAMB INTO THE UNITED KINGDOM.

Country of Origin.	1926.	1927.	1928.	1929.	1930.
<b>MUTTON—QUANTITIES.</b>					
	cwt.	cwt.	cwt.	cwt.	cwt.
Soviet Union .. ..	8,822	..	1,152	..	..
China .. ..	26,385	13,369	..	4,681	..
Chile .. ..	203,440	182,742	223,693	192,017	202,715
Brazil .. ..	481	1,690	1,421	26,168	11,588
Uruguay .. ..	277,777	193,719	245,573	194,441	156,756
Argentina .. ..	735,508	788,681	706,145	654,865	656,685
Other Foreign Countries ..	8,511	952	902	1,803	2,641
<b>Total, Foreign ..</b>	<b>1,260,924</b>	<b>1,181,153</b>	<b>1,178,886</b>	<b>1,073,975</b>	<b>1,030,385</b>
Australia .. ..	214,379	192,440	211,681	128,858	254,238
New Zealand .. ..	1,089,986	1,047,682	962,891	883,789	1,172,262
Other British Countries ..	13	6	311	125	1,305
<b>Total, British ..</b>	<b>1,304,378</b>	<b>1,240,128</b>	<b>1,174,883</b>	<b>1,012,772</b>	<b>1,427,805</b>
<b>Grand Total ..</b>	<b>2,565,302</b>	<b>2,421,281</b>	<b>2,353,769</b>	<b>2,086,747</b>	<b>2,458,190</b>

## MUTTON—VALUE.

	£	£	£	£	£
Soviet Union .. ..	20,192	..	2,690	..	..
China .. ..	67,483	29,587	..	10,922	..
Chile .. ..	415,088	389,778	555,282	440,917	335,882
Brazil .. ..	1,078	3,405	3,941	56,985	29,466
Uruguay .. ..	702,864	434,838	590,242	486,818	366,746
Argentina .. ..	1,766,646	1,760,080	1,838,331	1,693,863	1,594,543
Other Foreign Countries ..	18,979	2,045	2,504	4,536	5,912
<b>Total, Foreign ..</b>	<b>2,992,330</b>	<b>2,619,733</b>	<b>2,992,990</b>	<b>2,694,041</b>	<b>2,332,549</b>
Australia .. ..	481,413	402,108	530,911	293,478	552,149
New Zealand .. ..	2,954,885	2,727,274	2,708,136	2,360,940	2,699,759
Other British Countries ..	11	8	721	347	3,752
<b>Total, British ..</b>	<b>3,436,309</b>	<b>3,129,390</b>	<b>3,239,768</b>	<b>2,654,765</b>	<b>3,255,660</b>
<b>Grand Total ..</b>	<b>6,428,639</b>	<b>5,749,123</b>	<b>6,232,758</b>	<b>5,348,806</b>	<b>5,588,209</b>

IMPORTS OF FROZEN MUTTON AND LAMB INTO THE UNITED KINGDOM—  
*continued.*

Country of Origin.	1926.	1927.	1928.	1929.	1930.
LAMB—QUANTITIES.					
	cwt.	cwt.	cwt.	cwt.	cwt.
Iceland .. .. .	3,594	6,775	8,383	10,980	16,910
United States .. .. .	2,091	2,154	208	1,595	2,443
Chile .. .. .	58,314	92,723	128,528	139,151	152,052
Brazil .. .. .	322	2,994	723	1,002	15,785
Uruguay .. .. .	40,592	123,533	157,823	172,316	266,571
Argentina .. .. .	534,035	747,802	805,323	890,297	795,358
Other Foreign Countries .. .. .	1,567	..	14	1,105	182
Total, Foreign .. .. .	640,515	975,981	1,101,002	1,216,446	1,249,301
Australia .. .. .	536,495	432,377	334,846	464,632	555,932
New Zealand .. .. .	1,591,006	1,679,290	1,831,914	1,862,298	2,120,580
Other British Countries .. .. .	856	88	236	785	905
Total, British .. .. .	2,128,357	2,111,755	2,166,996	2,327,715	2,677,417
Grand Total .. .. .	2,768,872	3,087,736	3,267,998	3,544,161	3,926,718
LAMB—VALUE.					
	£	£	£	£	£
Iceland .. .. .	15,324	24,632	34,864	31,026	50,177
United States .. .. .	7,239	7,320	1,046	5,317	8,761
Chile .. .. .	214,382	324,430	488,993	510,295	443,906
Brazil .. .. .	1,208	8,722	2,392	3,429	51,500
Uruguay .. .. .	135,598	376,436	511,805	573,966	820,209
Argentina .. .. .	1,871,716	2,475,284	2,834,450	3,077,313	2,519,074
Other Foreign Countries .. .. .	6,360	..	125	5,194	634
Total, Foreign .. .. .	2,251,827	3,216,824	3,873,675	4,206,540	3,894,261
Australia .. .. .	2,040,476	1,556,658	1,284,660	1,725,152	1,933,600
New Zealand .. .. .	6,875,094	6,904,046	7,950,598	7,664,459	8,232,156
Other British Countries .. .. .	3,261	426	737	4,007	3,339
Total, British .. .. .	8,918,831	8,461,130	9,235,995	9,393,618	10,169,095
Grand Total .. .. .	11,170,658	11,677,954	13,109,670	13,600,158	14,063,356

## § 5. Wool.

1. *General.*—Australia is the leading wool-growing country in the world. With less than one-sixth of the world's sheep, Australia produced in 1930-31, one-quarter of the world's supply. Moreover, half of the world's production of fine quality merino wool is produced in Australia. The bulk of the production is exported, but with the greater activity of Australian woollen mills the quantity used locally is increasing, nevertheless the amount so used represents under 6 per cent. of the total production.

2. **Value.**—Wool is the chief factor in the pastoral wealth of Australia, and the nation's prosperity is largely dependent upon the satisfactory sale of the clip. The continued heavy decline in the price of wool during the season 1930-31 and its effect upon the national income are reflected in the following figures. Based on the export values of the produce of the various States the output for the season 1930-31 was valued at £34,803,500 compared with £44,222,000 in 1929-30; £70,833,000 in 1928-29, £81,430,000 in the record price year 1924-25, and £58,985,000, representing the average of the previous five seasons. The average export price of greasy wool declined from 17.58d. per lb. in 1928-29 to 11.30d. per lb. in 1929-30, to 9.16d. in 1930-31, and to 8.97d. in 1931-32, a fall of 50.8 per cent. since 1928-29. During the period 1926-27 to 1930-31 the export of wool averaged 43 per cent. of the value of the total shipments of merchandise from Australia, while during 1930-31 the proportion was 35.9 per cent.

3. **Greasy and Scoured Wool.**—For the purpose of comparing the clips as a whole for a series of years, it is convenient to have the total production expressed in terms of greasy wool.

The quantity of Australian greasy wool which was scoured and washed before export during the last five years has been on the average about 17 per cent. of the total export in terms of greasy wool. The loss of weight in scouring varies largely with season, locality, breed, and condition. It seems preferable to express "scoured and washed" wool in terms of "greasy" rather than vice versa, since the absolute error arising from uncertainty as to average loss of weight is thereby minimized.

In the tables dealing with production, "scoured and washed" wool has been converted into the estimated equivalent amount of "greasy" on the assumption that two and one-sixth pounds of "greasy" wool are on the average required to produce one pound of "scoured and washed."

4. **Production.**—(i) *Quantity.* The annual shearing of the live sheep provides the main source of Australia's wool supply, the resultant clip forming about 90 per cent. of the total production. A small quantity, approximately 6 per cent. of the total output, is obtained by fellmongering, or removing wool from skins of slaughtered sheep, while the remaining 4 per cent. represents the estimated quantity of wool exported on sheepskins. Statistics of wool production are compiled from data received from growers, fellmongers, etc. The following table gives the production for each of the past five seasons :—

**WOOL.—TOTAL PRODUCTION.**

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales(a) . .	499,322,000	443,860,000	484,753,597	461,852,890	428,752,210
Victoria . . . . .	151,624,526	148,503,795	179,854,306	160,662,578	146,862,612
Queensland . . . . .	129,435,804	136,544,333	150,108,044	161,087,873	182,061,407
South Australia . . . . .	72,365,200	78,369,918	74,616,004	67,300,881	63,478,524
Western Australia . . . . .	59,300,023	67,549,734	63,890,984	72,562,594	76,951,500
Tasmania . . . . .	12,333,000	13,272,000	14,900,000	14,100,000	14,000,000
Northern Territory(b)	30,000	30,000	30,000	30,000	35,000
<b>Total . . . . .</b>	<b>924,410,553</b>	<b>888,129,780</b>	<b>968,152,935</b>	<b>937,596,816</b>	<b>912,141,253</b>

(a) Including Federal Capital Territory.

(b) Approximate figures.

(ii) *Estimate for 1931-32.* Although the returns are not yet complete, the total wool production of the Commonwealth during 1931-32 is estimated at 950,000,000 lbs., valued at approximately £35,514,000 or 8.97d. per lb. in Australian currency.

5. **Care Needed in Comparing Clips.**—In comparing successive clips, allowance must be made for the circumstance that, owing to climatic or other conditions, the time of shearing may be so far delayed that one clip may include almost thirteen months' growth of wool, while the succeeding one may include little more than eleven months' growth.

6. World's Wool Production.—The following table compiled by the Textile Division of the United States Department of Commerce shows the importance of Australia as a wool-producing country. Out of a total world production of 3,828 million lbs. in 1931, Australia's share amounted to over 912 million lbs., or nearly 25 per cent.

## WOOL (a).—WORLD'S PRODUCTION.

Countries.	Average Annual Pre-War Production.(b)	Production.	
		1930.	1931.(c)
North America—	lbs.	lbs.	lbs.
United States .. ..	314,110,000	397,907,000	435,000,000
Canada .. ..	11,210,000	21,207,000	20,400,000
Mexico .. ..	7,000,000	12,400,000	6,600,000
Total .. ..	332,320,000	431,514,000	462,000,000
Central America and West Indies .. ..	1,000,000	..	..
South America—			
Argentine Republic ..	358,688,000	333,336,000	333,000,000
Brazil .. ..	35,000,000	24,200,000	24,200,000
Chile .. ..	17,430,000	30,000,000	26,700,000
Peru .. ..	9,940,000	10,300,000	12,100,000
Uruguay .. ..	156,968,000	140,000,000	110,000,000
All other .. ..	9,324,000	8,097,000	9,109,000
Total .. ..	587,350,000	545,933,000	515,109,000
Europe—			
Austria .. ..	15,360,000	820,000	770,000
Belgium .. ..	1,060,000	775,000	1,250,000
Bulgaria .. ..	23,700,000	22,036,000	21,600,000
Czechoslovakia .. ..	..	3,290,000	3,290,000
Denmark .. ..	3,508,000	2,646,000	2,590,000
Estonia .. ..	..	1,499,000	1,500,000
Finland .. ..	..	4,501,000	4,500,000
France .. ..	80,688,000	46,297,000	43,000,000
Germany .. ..	52,000,000	35,000,000	32,400,000
Greece .. ..	14,000,000	19,000,000	17,600,000
Hungary .. ..	17,637,000	6,150,000	11,000,000
Iceland .. ..	1,980,000	(d)	(d)
Italy .. ..	55,000,000	33,000,000	28,600,000
Netherlands .. ..	3,556,000	3,520,000	2,470,000
Norway .. ..	8,160,000	5,515,000	5,550,000
Poland .. ..	7,100,000	9,921,000	10,400,000
Portugal .. ..	10,000,000	6,616,000	6,610,000
Rumania .. ..	13,228,000	53,000,000	44,000,000
Russia .. ..	320,000,000	384,252,000	386,000,000
Spain .. ..	72,000,000	75,000,000	108,000,000
Sweden .. ..	2,875,000	1,295,000	1,200,000
Switzerland .. ..	1,049,000	850,000	850,000
Turkey .. ..	28,000,000	..	..
United Kingdom .. ..	134,000,000	152,644,000	156,000,000
Irish Free State .. ..	..	14,747,000	15,000,000
Yugoslavia .. ..	25,446,000	30,000,000	26,800,000
All other .. ..	..	9,495,000	10,672,000
Total .. ..	890,347,000	921,869,000	941,652,000

(a) Computed on "greasy" basis. (b) Average for years 1909 to 1913 inclusive. (c) Where 1931 figures were not obtainable, an earlier figure or an unofficial estimate has been inserted. (d) Included with Denmark.

WOOL.—WORLD'S PRODUCTION—*continued.*

Countries.	Average Annual Pre-War Production.	Production.	
		1930.	1931.
Asia—	lbs.	lbs.	lbs.
British India .. ..	60,000,000	70,000,000	71,000,000
China .. ..	50,000,000	55,500,000	70,000,000
Persia .. ..	12,146,000	45,000,000	48,800,000
Russia in Asia .. ..	60,000,000	(e)	(e)
Turkey in Asia .. ..	90,000,000	59,900,000	60,000,000
All other .. ..	1,000,000	52,050,000	51,051,000
<b>Total .. ..</b>	<b>273,146,000</b>	<b>282,450,000</b>	<b>300,851,000</b>
Africa—			
Algeria .. ..	35,221,000	48,000,000	35,300,000
British South Africa .. ..	165,888,000	337,000,000	335,000,000
Tunis .. ..	3,735,000	8,787,000	8,800,000
Morocco .. ..	14,850,000	23,148,000	30,900,000
All other .. ..	30,000,000	20,409,000	20,615,000
<b>Total .. ..</b>	<b>249,694,000</b>	<b>437,344,000</b>	<b>430,615,000</b>
Oceania—			
Australia .. ..	741,377,000	937,597,000	912,141,000
New Zealand .. ..	198,474,000	241,770,000	266,000,000
<b>Total .. ..</b>	<b>939,851,000</b>	<b>1,179,367,000</b>	<b>1,178,141,000</b>
Total all other Countries .. ..	13,000,000	..	..
<b>GRAND TOTAL .. ..</b>	<b>3,286,708,000</b>	<b>3,798,477,000</b>	<b>3,828,368,000</b>

(e) Included with Russia in Europe. (See also notes on preceding page.)

7. Wool Locally Used.—The quantity of wool used in the woollen and tweed mills of the various States during the past five years was approximately as shown in the table hereunder. The total for the year 1930-31 includes 408,838 lbs. (as in the grease) of wool used in the manufacture of hats and 8,265,090 lbs. used in knitting and hosiery mills.

## WOOL.—GREASY, USED IN LOCAL WOOLLEN, TWEED, AND TOP MILLS.

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales .. ..	15,394,828	12,038,830	14,796,906	12,671,342	13,641,630
Victoria .. ..	29,020,842	24,075,102	23,372,872	23,644,398	25,438,894
Queensland .. ..	..	..	..	..	..
South Australia .. ..	3,373,800	3,589,730	3,116,009	2,266,052	1,835,250
Western Australia .. ..	..	..	..	..	..
Tasmania .. ..	4,337,881	4,400,698	5,862,862	6,829,858	4,519,411
<b>Total .. ..</b>	<b>52,127,351</b>	<b>44,104,360</b>	<b>47,148,649</b>	<b>45,411,650</b>	<b>45,435,185</b>

8. Exports of Wool.—(i) *Greasy—Quantities.* Of the total weight of wool expressed in terms of “greasy” shipped overseas during the past five years slightly more than 32 per cent. was sent to the United Kingdom, as compared with 38 per cent. dispatched in pre-war years. The other leading consignees since 1927–28 were France, Japan, Germany, Belgium, Italy and the United States of America, the principal continental countries taking 50 per cent., and America and Japan 16.4 per cent. of the total shipments. The following table shows the quantities of “greasy” wool exported, and the principal countries of destination :—

WOOL IN THE GREASE.—EXPORTS, AUSTRALIA.

Country to which Exported.	Average Five Years, 1909–13.	1927–28.	1928–29.	1929–30.	1930–31.	Average for Five Years ending 1930–31.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom ..	212,004,088	196,106,241	212,035,141	202,438,310	228,196,396	210,130,178
France ..	149,835,946	140,913,531	172,006,450	172,783,716	147,453,999	161,516,833
Japan ..	7,262,683	106,399,417	101,092,258	83,243,431	151,201,649	104,170,146
Germany ..	106,344,696	95,402,154	99,933,251	94,962,530	104,320,246	98,485,377
Belgium ..	55,143,706	76,032,767	99,695,826	80,764,804	74,488,232	81,574,574
United States of America ..	15,486,447	27,089,377	19,154,235	19,346,569	20,378,195	25,482,924
Italy ..	4,381,197	34,691,092	40,104,242	35,582,700	37,724,169	35,257,605
Netherlands ..	(a)	100,604	296,051	770,940	956,029	642,901
India ..	425,547	778,328	1,404,596	948,394	466,704	809,260
Canada ..	126,653	177,208	270,921	310,135	23,735	224,019
Other Countries ..	5,830,377	11,157,264	17,346,556	8,249,325	3,759,976	8,287,773
Total ..	556,841,340	688,847,983	763,339,527	699,400,904	768,969,330	726,581,590

(a) Included in Other Countries.

(ii) *Scoured and Washed—Quantities.* The exports of “scoured and washed” wool during the period shown were as follows :—

WOOL, SCOURED AND WASHED (a).—EXPORTS, AUSTRALIA.

Country to which Exported.	Average Five Years, 1909–13.	1927–28.	1928–29.	1929–30.	1930–31.	Average for Five Years ending 1930–31.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom ..	32,032,577	19,242,933	24,818,010	26,859,655	23,762,729	24,959,391
France ..	16,068,910	9,193,140	5,463,934	6,331,892	6,206,301	7,454,851
Japan ..	1,888,161	3,179,822	1,972,525	1,333,763	2,334,505	2,764,590
Belgium ..	7,528,058	6,266,931	6,987,612	4,382,222	5,255,927	5,726,578
Germany ..	12,310,967	7,004,132	3,534,812	3,964,028	5,174,277	5,004,383
United States of America ..	66,156	796,867	875,775	585,993	376,543	588,110
Canada ..	(b)	288,396	614,677	440,097	1,091,112	551,036
Italy ..	265,442	395,277	544,585	336,770	616,790	437,676
Netherlands ..	(b)	23,653	12,718	12,590	24,995	14,791
India ..	59,684	17,310	174,272	354,569	459,440	201,482
Other Countries ..	127,155	7,454,477	2,202,143	342,720	355,390	2,177,812
Total ..	70,347,110	53,862,938	47,201,063	44,944,799	45,658,009	49,880,700

(a) Including “tops.”

(b) Included with Other Countries.

The figures for “scoured and washed wool” include tops as follows—in 1926–27, 4,519,357 lbs., valued at £822,713; in 1927–28, 2,559,159 lbs., valued at £488,199; in 1928–29, 872,774 lbs., valued at £166,957; in 1929–30, 552,152 lbs., valued at £87,781 and in 1930–31, 1,033,913 lbs., valued at £114,035. See also § I No. 8. The total exports of wool tops during the last five years amounted to 9,537,355 lbs., valued at £1,679,685, of which 7,204,164 lbs., or more than 75 per cent. were shipped to Japan.

(iii) *Total Value of Exports.* The total value of the wool exported from Australia to the principal countries during the periods under review was as follows :—

**WOOL EXPORTS.—TOTAL VALUE, AUSTRALIA.**

Country to which Exported.	Average Five Years 1909-13.	1927-28.	1928-29.	1929-30.	1930-31.	Average for Five Years ending 1930-31.
	£	£	£	£	£	£
United Kingdom ..	10,608,967	19,993,795	19,947,694	12,648,045	10,257,653	16,372,233
France ..	6,491,832	11,960,477	11,865,744	8,075,006	5,479,746	10,109,139
Japan ..	516,528	10,316,846	8,693,195	4,434,746	6,478,587	7,558,451
United States of America	795,328	3,105,212	1,883,155	1,154,433	1,117,533	2,268,259
Germany ..	5,131,282	9,080,643	7,773,780	4,626,041	4,165,020	6,713,232
Belgium ..	2,546,915	6,186,070	6,434,323	3,316,902	2,623,906	4,813,647
Italy ..	202,434	2,944,103	3,019,802	1,641,166	1,482,943	2,248,894
Netherlands ..	(a)	13,527	27,411	44,001	41,616	43,138
Canada ..	6,765	79,137	113,926	82,850	109,280	90,978
India ..	22,308	53,026	110,802	74,292	41,839	60,726
Other Countries ..	267,283	2,364,282	1,745,413	502,968	205,182	995,411
<b>Total</b> ..	<b>26,592,642</b>	<b>66,097,118</b>	<b>61,615,245</b>	<b>36,600,510</b>	<b>32,003,305</b>	<b>51,274,108</b>

(a) Included with Other Countries.

9. *Average Export Value.*—The following table shows the average values per pound of Australian wool according to the export returns for the periods indicated. The values are based on the market price plus the cost of services incurred in placing the wool on board ship, and in the case of wool shipped on consignment, on the f.o.b. equivalent of ruling prices.

**AUSTRALIAN WOOL.—EXPORT VALUE PER POUND.**

Description.	Average Five Years 1909-13.	Average Five Years 1923-27.	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.	Average Five Years 1928-32.
	d.	d.	d.	d.	d.	d.	d.	d.
Greasy ..	9.40	20.42	20.49	17.58	11.30	9.16	8.97	13.38
Scoured ..	16.36	28.15	31.87	28.72	19.34	13.56	12.14	21.10

10. *Average Market Value.*—The following table gives details of the average price in Australia of greasy and scoured wool as compiled by the National Council of Wool-selling Brokers. In the matter of greasy wool the margin between the values shown and those of the previous table represents the cost of placing the wool on board ship. This cost includes delivery from store to ship, wharfage, buyers' commission, handling charges, and insurance after sale.

**WOOL.—AVERAGE MARKET VALUE PER LB.**

Description.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
	d.	d.	d.	d.	d.	d.	d.
Greasy ..	16.49	16.86	19.50	16.44	10.29	8.36	8.46
Scoured ..	26.50	27.99	32.21	28.12	18.69	13.74	12.65

11. *Exports and Local Sales of Wool.*—Approximately 90 per cent. of Australian wool is now disposed of locally prior to export. Buyers from the United Kingdom, France, Belgium, Germany, and other European countries, and from America, Japan, China, and India, attend the sales conducted in Sydney, Albury, Melbourne, Geelong, Ballarat, Brisbane, Adelaide, Perth, Hobart, and Launceston. Particulars regarding exports and local sales, as well as quantities and proportions of the various descriptions of wool marketed in each State, will be found in the Production Bulletins issued by this Bureau.



12. **The Wool Market.**—(i) *The 1930-31 Season.* The 1930-31 wool-selling season will probably rank as one of the leanest in the history of the wool industry. Prices which commenced to decline towards the end of 1928-29 continued to fall up to 1930-31; the decline amounting to 47.9 per cent. The estimated value of the total wool production for the season 1930-31 amounted to £34,803,500 as compared with £44,222,000 in 1929-30, and £81,430,000 during the record year of 1924-25. The 1930-31 clip compared with that of the previous year has been described as mostly finer in quality, lighter in condition, and carrying less vegetable fault.

During the year the sales figures amounted to 2,481,255 bales, compared with 2,553,321 bales in the previous year. Values depreciated considerably during the season, the average bale realizing £2 28. 11d. less than the previous year, while the aggregate sales amounted to £27,645,745 as against £33,924,062 in 1929-30.

(ii) *Wool Realization Scheme.* The British Australian Wool Realization Association Ltd. ("B.A.W.R.A.") was formed on the 27th January, 1921, for the purpose of realizing the large stock of wool remaining at the close of the Imperial Wool Purchase Scheme, which covered part of the 1916-17 clip and the complete clips of the three following seasons. Detailed information in connexion with procedure is contained in the previous Official Year Books (see No. 22, p. 666). The whole of the wool controlled by B.A.W.R.A. was sold in three and a half years, and passed into consumption together with the current clips of the wool-growing countries.

The liquidation of this Association has now been completed; the final payment of 1s. 4d. per share being made on 15th March, 1932. The following statement provides a summary of the payments, including the final distribution, made to wool-growers under the Imperial Wool Purchase Scheme and of the distribution of profits accruing to growers therefrom:—

**FINAL STATEMENT OF AMOUNTS DISTRIBUTED BY CENTRAL WOOL COMMITTEE AND "B.A.W.R.A."**

1916—November ..	Initiation of Imperial Wool Purchase Scheme.	
1917—January 3rd ..	First appraisalment of wool.	
1920—June 30th ..	Last appraisalment of wool.	£
	Total f.o.b. value of wool and sheepskins	171,518,891
1920—October 27th ..	Payment by Central Wool Committee of 5 per cent. profits dividend .. ..	7,333,700
1921—January ..	Formation of "B.A.W.R.A." Limited—	
	Issue of Priority Wool Certificates and Share Certificates.	
1921—July 30th ..	Payment—47½ per cent.—	£
	Priority Wool Certificates ..	4,487,899
	Cash retirement of small interests and fractional payments ..	206,536
1922—May 18th ..	Payment—52½ per cent.—	
	Final payment of Priority Wool Certificates ..	4,960,310
1923—April 14th ..	First capital reduction—	
	Payment 10s. per share ..	5,651,495
1923—May 1st ..	Last bale of wool shipped from Australia.	
1924—February 12th ..	Second capital reduction—	
	Payment 9s. per share ..	5,086,345
1924—May 2nd ..	Last bale of wool sold in England.	
1927—November 15th ..	Final capital payment—	
	1s. per share .. ..	565,149
		<u>20,957,734</u>
		199,810,325
1927—November 15th ..	First liquidation payment—	
	12s. 6d. per share ..	7,064,368
1932—March 15th ..	Final liquidation payment—	
	1s. 4d. per share .. ..	753,532
		<u>7,817,900</u>
		207,628,225

13. **United Kingdom Importation of Wool.**—The appended statement of the quantity and value of wool imported into the United Kingdom during the year 1930 from the principal wool-producing countries shows the important position which Australia occupies in the supply of wool to the mother country :—

**WOOL (a).—IMPORTS, UNITED KINGDOM, 1930.**

Country from which imported.	Quantity.	Value.	Country from which imported.	Quantity.	Value.
	lbs.	£		lbs.	£
Australia ..	257,256,600	14,485,572	United States of America ..	430,700	22,911
New Zealand ..	174,665,800	10,050,954	Peru ..	1,297,500	60,589
Union of South Africa ..	158,225,800	9,052,455	Belgium ..	2,486,900	221,247
Argentine Republic ..	60,115,700	2,521,677	Falkland Islands	1,443,000	81,070
India ..	34,262,600	1,529,741	Other British Possessions	1,711,400	79,235
Chile ..	30,106,900	1,420,593	Germany ..	1,536,400	102,451
Uruguay ..	31,381,300	1,453,148	Other Countries	6,911,600	324,756
France ..	16,860,300	1,086,277			
Irish Free State	5,761,600	248,176			
			Total ..	784,454,100	42,740,852

(a) Greasy, Scoured, and Tops.

Of the importations of wool into the United Kingdom, Australian wool represented 33 per cent. of quantity and 34 per cent. of value, and New Zealand 22 per cent. of quantity and 24 per cent. of value. Altogether, 633,326,800 lbs., valued at £35,527,203, were received from British Possessions, these figures being equivalent to 81 per cent. of the total weight and 83 per cent. of the total value of all wool imported.

**§ 6. Trade in Hides and Skins.**

1. **Extent of Trade.**—In addition to the hides and skins treated locally, considerable quantities are exported, the value of Australian cattle and horse hides and sheep and other skins sent overseas during the five years 1926–27 to 1930–31 amounting to £37,989,282, or an average of £7,597,856 per annum.

2. **Sheepskins with Wool.**—Sheepskins with wool—the exports of which during the five years aggregated £17,417,968, constitute the largest item in the values referred to in the preceding paragraph. During the year 1930–31 France was the largest purchaser, taking 60.6 per cent. of the total consignments, while the United Kingdom ranked next with 25.1 per cent., and the remaining 14 per cent. was shipped principally to the United States of America, Belgium, and Germany. The exports of sheepskins with wool during each of the years from 1926–27 to 1930–31 were as follow :—

**SHEEPSKINS WITH WOOL.—EXPORTS, AUSTRALIA.**

Particulars.	1926–27.	1927–28.	1928–29.	1929–30.	1930–31.	Average for 5 Years.
Number	9,152,287	10,829,913	10,910,516	12,562,384	12,016,672	11,094,354
Value	£ 3,409,833	4,410,702	4,544,827	3,103,558	1,949,048	3,483,594

3. **Sheepskins without Wool.**—Sheepskins without wool are exported chiefly to the United States of America and the United Kingdom. These two countries were responsible for 97 per cent. of the exports during the past five years, the purchases of the United States of America alone amounting to 50 per cent. of the total shipments. Quantities and values for the last five years are given in the table hereunder :—

**SHEEPSKINS WITHOUT WOOL.—EXPORTS, AUSTRALIA.**

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.	Average for 5 Years.
Number ..	217,102	553,170	514,302	673,221	280,128	447,585
Value £	30,228	42,447	44,001	53,415	13,612	36,741

4. **Hides.**—(i) *Exports.* The export trade in Australian cattle hides, which fell away during the war years, has again become important. Considerable quantities were shipped oversea during each of the last five years; the United Kingdom took 19.4 per cent. of the total shipments during that period, followed by Italy 19 per cent., the United States of America 18 per cent., Germany 15 per cent., and Finland 7 per cent.

The exports during the past five years are given in the table below :—

**CATTLE HIDES.—EXPORTS, AUSTRALIA.**

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.	Average for 5 Years.
Number ..	889,746	1,003,220	829,780	754,846	752,366	845,992
Value £	998,981	1,690,908	1,331,486	794,991	610,720	1,085,417

Calfskins exported during the years 1926-27 to 1930-31 numbered 1,504,531, valued at £413,614, and were shipped mainly to the United States of America, the value of the skins taken by that country averaging 56.5 per cent. of the total exports during the past five years. The annual export of horse hides is very small, and averaged only 8,648 hides, valued at £5,807.

(ii) *Imports.* The imports of cattle hides and calfskins are fairly considerable, the average value during the past five years amounting to £395,871. New Zealand is the chief source of supply, and small quantities are obtained also from the Pacific Islands, France, and Italy. The number and value of cattle hides, including calfskins, imported into Australia during the five years 1926-27 to 1930-31 were as follow :—

**CATTLE HIDES.—IMPORTS, AUSTRALIA.**

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.	Average for 5 Years.
Number ..	371,868	327,903	363,400	340,150	(a)	(a)
Value £	437,932	419,345	570,416	401,793	149,869	395,871

(a) Not available.

The number of horse hides imported into Australia is small. The value of imports during the last five years averaged £331.

5. **Other Skins.**—The exports of skins other than those mentioned in the preceding sub-sections are valued as follow :—

## OTHER SKINS.—EXPORTS, AUSTRALIA.

Description.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.	Average for Five Years ending 1930-31.
	£	£	£	£	£	£
Rabbit and Hare	2,837,663	2,492,522	2,630,295	1,526,242	570,240	2,011,392
Opossum	921,833	540,735	166,059	681,472	215,711	505,162
Kangaroo	137,994	200,781	207,532	193,385	127,932	173,525
Fox	103,683	140,301	132,771	115,241	47,787	107,957
Wallaby	46,655	42,184	87,299	38,714	25,012	47,973
Other	26,400	214,085	20,839	19,281	7,230	57,567
<b>Total</b>	<b>4,074,228</b>	<b>3,630,608</b>	<b>3,244,795</b>	<b>2,574,335</b>	<b>993,912</b>	<b>2,903,576</b>

The United States of America and the United Kingdom were the chief purchasers of these skins, as shown below :—

## OTHER SKINS.—AVERAGE EXPORTS TO UNITED STATES AND UNITED KINGDOM 1926-27 TO 1930-31.

Description.	United Kingdom.	United States of America.
	£	£
Rabbit and Hare	605,589	1,144,719
Opossum	324,427	130,336
Kangaroo	22,140	149,714
Fox	81,401	17,456
Wallaby	38,562	7,849
Other	9,786	40,647
<b>Total</b>	<b>1,171,905</b>	<b>1,490,721</b>

## CHAPTER XX.

### AGRICULTURAL PRODUCTION.

NOTE.—Except where otherwise stated, the "agricultural" years hereafter mentioned are taken as ending on 30th June.

#### § 1. Introductory.

Preceding issues of the Official Year Book contain a brief reference to the attempts at cultivation by the first settlers in New South Wales, and to the discovery of suitable agricultural land on the Parramatta and Hawkesbury Rivers prior to the year 1813, and west of the Blue Mountains thereafter. (See No. 22, p. 670.)

#### § 2. Progress of Agriculture.

1. **Early Records.**—In an "Account of Live Stock and Ground under Crop in New South Wales, 19th August, 1797," Governor Hunter gives the acreage under crop as follows:—Wheat, 3,361 acres; maize, 1,527 acres; barley, 26 acres; potatoes, 11 acres; and vines, 8 acres.

At a muster taken in 1808 the following was the return of crops:—Wheat, 6,874 acres; maize, 3,389 acres; barley, 544 acres; oats, 92 acres; peas and beans, 100 acres; potatoes, 301 acres; turnips, 13 acres; orchards, 546 acres; and flax and hemp, 37 acres.

By the year 1850 the area under crop had increased to 491,000 acres, of which 198,000 acres were cultivated in what is now the State of New South Wales, and 169,000 acres in Tasmania. At the end of 1850 the area under cultivation in Victoria, which was then the Port Phillip District of New South Wales, was 52,190 acres.

The gold discoveries of 1851 and subsequent years had at first a very disturbing effect on agricultural progress, the area under crop declining from 491,000 acres in 1850 to 458,000 acres in 1854. The demand for agricultural products occasioned by the large influx of population was, however, soon reflected in the increased area cultivated, for at the end of 1858 the land under crop in Australia totalled over a million acres. The largest increase took place in Victoria, which returned an area of 299,000 acres. For the same year South Australia had 264,000 acres in cultivation, Tasmania 229,000 acres, and New South Wales 223,000 acres.

2. **Progress of Cultivation.**—The following table shows the area under crop in each of the States and Territories of Australia at decennial intervals since 1860 and during each of the last six seasons:—

AREA UNDER CROP.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1860-1	246,143	387,283	3,353	359,284	24,705	152,860	..	..	1,173,628
1870-1	385,151	692,840	52,210	801,571	54,527	157,410	..	..	2,143,799
1880-1	606,277	1,548,809	113,978	2,087,237	63,902	140,788	..	..	4,560,991
1890-1	852,704	2,031,955	224,993	2,093,515	69,678	157,376	..	..	5,430,221
1900-1	2,446,767	3,114,132	457,397	2,369,680	201,338	224,352	..	..	8,813,666
1910-11	3,386,017	3,952,070	667,113	2,746,334	855,024	286,920	360	..	11,893,838
1920-21	4,465,143	4,489,593	779,497	3,231,083	1,804,987	297,383	296	1,966	15,069,858
1925-26	4,541,360	4,433,460	1,033,765	3,583,867	2,932,110	266,412	391	2,181	16,793,578
1926-27	4,593,847	4,735,173	941,783	3,883,920	3,324,523	289,364	440	3,449	17,772,499
1927-28	4,098,272	4,942,258	1,066,613	4,192,167	3,720,100	296,875	570	2,539	19,219,394
1928-29	5,442,982	5,505,651	1,044,632	4,660,003	4,259,269	273,152	392	3,476	21,189,557
1929-30	5,500,346	5,579,258	1,046,235	4,966,916	4,566,001	265,317	609	4,439	21,929,721
1930-31	6,811,247	6,715,660	1,144,216	5,426,075	4,792,017	267,632	1,550	5,419	25,163,816

The progress of agriculture was uninterrupted from 1860 until 1915-16, when, as the result of a special war effort, Australia cultivated 18,528,234 acres. Following that year, the decline in wheat-growing and the effects of the drought of 1918-19 reduced the acreage to 13,296,407 in 1919-20, a decrease of 5,231,827 acres in the space of four years. With the removal of the obstacles to the disposal of the wheat crop, the area began to expand in 1920-21, and despite occasional adverse seasons, the area planted in 1930-31 amounted to nearly 25.2 million acres. This area is the largest yet cultivated, and exceeds the previous record of 1929-30 by 3,234,095 acres or 15 per cent. The increase in acreage was almost entirely due to wheat. This cereal continues to be the most extensively grown crop in Australia, the area thereunder for both grain and hay during 1930-31 amounting to 77 per cent. of the total acreage under cultivation.

3. Artificially-sown Grasses.—In all the States there are considerable areas under artificially-grown grasses mainly sown on uncultivated land after burning off the scrub, and not included in "area under crops." These areas are however liable to revert to bush, and the information respecting them is too uncertain for formal record.

### § 3. Distribution, Production, and Value of Crops.

1. Distribution of Crops.—The following table gives the areas in the several States under each of the principal crops for the season 1930-31:—

#### DISTRIBUTION OF CROPS, 1930-31.

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Wheat ..	5,134,960	4,600,200	272,316	4,180,513	3,955,763	19,107	..	2,061	18,164,920
Oats ..	176,659	371,024	5,132	218,416	274,874	35,919	..	77	1,082,101
Maize ..	105,024	16,227	172,176	..	10	..	..	13	293,450
Barley—									
Malting ..	7,144	60,800	6,148	235,175	13,202	5,590	..	..	328,059
Other ..	4,382	26,718	2,286	16,782	4,034	602	..	24	54,828
Beans and Peas ..	..	9,311	42	8,766	2,496	21,597	..	..	42,212
Rye ..	3,293	959	29	1,455	356	..	..	36	6,128
Other Cereals ..	19,825	..	..	10	..	..	25	..	19,860
Hay ..	896,770	1,277,398	52,228	612,935	398,411	83,268	..	2,433	3,323,463
Green Forage ..	310,341	126,347	217,282	59,956	107,384	23,438	..	662	845,410
Grass and other Seeds ..	..	2,000	2,558	1,193	..	729	..	..	6,480
Orchards and other Fruit Gardens ..	78,176	79,490	37,102	29,630	19,333	32,561	..	55	276,347
Vines—									
Productive ..	13,345	37,528	1,519	49,521	4,649	..	..	..	106,562
Unproductive ..	2,018	1,192	168	2,713	317	..	..	..	6,408
Market Gardens ..	7,448	20,197	903	1,663	3,025	600	..	13	33,849
Sugar Cane—									
Productive ..	7,617	..	222,044	..	..	..	..	..	229,661
Unproductive ..	8,007	..	74,026	..	..	..	..	..	82,033
Potatoes ..	15,858	67,590	12,292	4,998	6,308	37,229	20	12	144,307
Onions ..	79	6,286	527	407	119	..	..	..	7,419
Other Root Crops ..	1,545	3,653	1,059	684	481	5,508	..	5	12,935
Tobacco ..	547	2,650	71	83	3	..	..	..	3,354
Brown Millet ..	2,182	1,232	510	..	..	..	..	..	3,924
Pumpkins and Melons ..	3,108	1,078	14,661	379	537	..	..	5	19,768
Hops ..	..	185	..	1	..	982	..	..	1,168
Cotton—									
Productive ..	..	..	22,652	..	..	..	..	..	22,652
Unproductive ..	..	..	12,875	..	..	..	..	..	12,875
All other Crops ..	12,919	3,595	13,610	805	705	502	1,505	2	33,643
<b>Total Area ..</b>	<b>6,811,247</b>	<b>6,715,660</b>	<b>1,144,216</b>	<b>5,426,075</b>	<b>4,792,017</b>	<b>267,632</b>	<b>1,550</b>	<b>5,419</b>	<b>25,163,816</b>

2. Relative Areas of Crops in States and Territories.—Taking the principal crops, i.e., those in the case of which the cultivation in Australia amounts to more than 100,000 acres, the proportion of each in the various States and Territories on the total area under crop for the season 1930-31 is shown in the next table. In four of the States, viz., New South Wales, Victoria, South Australia, and Western Australia, wheat-growing

for grain is by far the most extensive form of cultivation, whilst hay is second in extent. In Victoria and Western Australia the oat crop occupies third position, while green forage ranks third in New South Wales, and barley in South Australia. In Queensland the most extensive crops are sugar cane, wheat, maize, and green forage, and in Tasmania hay, oats, potatoes, and orchards and fruit gardens occupy the greatest area.

As pointed out previously, wheat is the main crop in Australia, the area thereunder for grain and hay representing in 1930-31 77 per cent. of the total area under cultivation.

#### RELATIVE AREAS UNDER CROP, 1930-31.

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia
	%	%	%	%	%	%	%	%	%
Wheat ..	75.39	68.50	23.80	77.04	82.55	7.14	..	38.03	72.19
Hay ..	13.17	19.02	4.56	11.30	8.31	31.11	..	45.27	13.21
Oats ..	2.59	5.52	0.45	4.03	5.74	13.42	..	1.42	4.30
Green Forage..	4.56	1.88	18.99	1.10	2.24	8.76	..	12.22	3.36
Maize ..	1.54	0.24	15.05	..	0.00	..	..	0.24	1.17
Barley ..	0.17	1.30	0.74	4.64	0.36	2.31	..	0.26	1.52
Orchards and Fruit Gardens	1.15	1.18	3.24	0.55	0.40	12.17	..	1.01	1.10
Sugar-cane	0.23	..	25.88	..	..	..	..	..	1.24
Potatoes ..	0.23	1.00	1.07	0.09	0.13	13.91	1.29	0.22	0.57
Vineyards	0.23	0.58	0.15	0.96	0.10	..	..	..	0.45
All other..	0.74	0.78	6.07	0.29	0.17	11.18	98.71	1.33	0.89
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

3. Area under Chief Crops, Australia.—The area under the chief crops during each of the last five seasons, together with averages for the decennial periods 1911-21 and 1921-31 are shown hereunder.

#### AREA UNDER CHIEF CROPS.—AUSTRALIA.

Crop.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.	Average 1911-21.	Average 1921-31.
	1,000 acres.	1,000 acres.	1,000 acres.	1,000 acres.	1,000 acres.	1,000 acres.	1,000 acres.
Barley (a) ..	321	276	307	389	328	149	287
Maize ..	286	401	315	298	293	318	322
Oats ..	844	1,122	1,046	1,516	1,082	808	1,061
Rice ..	4.0	9.9	14.1	19.8	19.9	..	6.9
Wheat ..	11,688	12,279	14,840	14,977	18,165	9,098	12,200
Green Forage ..	881	1,389	860	977	845	636	888
Hay ..	2,700	2,632	2,739	2,659	3,323	2,865	2,965
Beans and Peas ..	49	64	48	50	42	40	48
Onions ..	10.1	8.7	8.6	8.9	7.4	7.3	7.5
Potatoes (b) ..	139	163	138	124	142	135	140
Sugar Beet ..	2.0	2.4	2.1	2.5	3	1	2.1
Vineyards ..	112	113	115	115	113	67	111
Hops ..	1.6	1.6	1.5	1.4	1.2	1.4	1.6
Sugar Cane ..	285	291	299	307	312	167	271
Cotton ..	32	29	26	28	36	0.2	40
Tobacco ..	2.2	2.1	2.2	2.5	3.4	2.1	2.6
Market Gardens (c) ..	45	54	45	52	54	43	47
Orchards ..	276	278	277	278	276	243	277
All other Crops ..	95	103	106	126	118	100	103
Total ..	17,772	19,219	21,190	21,930	25,164	14,681	18,781

(a) Malting only.

(b) Not including Sweet Potatoes.

(c) Including Pumpkins and Melons.

4. **Total and Average Production, Chief Crops, Australia.**—The following table shows the production of the chief crops for the five years ending 1930–31 and averages for the decennia ending 1920–21 and 1930–31:—

**TOTAL AND AVERAGE PRODUCTION, CHIEF CROPS.—AUSTRALIA.**

Crop.	Unit of Quantity.	1926–27.	1927–28.	1928–29.	1929–30.	1930–31.	Average 1911–21.	Average 1921–31.
Barley (a) .. ..	1,000 bushels	5,872	4,041	5,692	6,439	5,674	2,749	5,119
Maize .. ..	" "	6,970	11,393	8,323	7,946	8,026	8,002	8,587
Oats .. ..	" "	12,571	12,084	14,109	14,424	16,658	12,771	14,588
Rice .. ..	" "	215	879	1,308	1,829	1,428	..	574
Wheat .. ..	" "	160,762	118,200	159,679	126,884	213,594	100,556	142,171
Hay .. ..	" tons	3,487	2,859	3,175	2,725	4,150	3,136	3,555
Beans and Peas .. ..	bushels	844	700	663	813	737	633	751
Onions .. ..	tons	50	37	34	50	47	33	40
Potatoes (b) .. ..	" "	373	470	284	343	365	347	364
Beet Sugar .. ..	" "	1.2	2.3	2.1	3.5	5.0	1.1	2.8
Grapes .. ..	" "	348	241	393	386	284	105	277
Wine .. ..	gallons	20,456	17,303	18,600	16,069	13,078	6,390	14,967
Raisins and Currants .. ..	cwt.	1,125	657	1,444	1,469	1,016	295	913
Hops .. ..	lb.	2,278	2,898	2,342	2,340	1,973	1,800	2,410
Cane Sugar .. ..	tons	416	509	538	538	536	207	437
Cotton, Unginned .. ..	lb.	9,069	7,061	12,291	8,024	17,023	81	10,705
Tobacco .. ..	lb.	1,218	1,808	1,839	1,702	(c) 324	1,778	1,747
Pumpkins and Melons .. ..	tons	38	78	37	45	59	51	51

(a) Malting only.

(b) Not including Sweet Potatoes.

(c) Exclusive of Victoria.

5. **Average Production per Acre, Chief Crops, Australia.**—Details of the average production for Australia of the principal crops are shown hereunder for the periods indicated:—

**AVERAGE PRODUCTION PER ACRE, CHIEF CROPS.—AUSTRALIA.**

Crop.	Unit of Quantity.	1926–27.	1927–28.	1928–29.	1929–30.	1930–31.	Average 1911–21.	Average 1921–31.
Barley (a) .. ..	bushel	18.30	14.62	18.53	16.56	17.30	18.46	17.85
Maize .. ..	" "	24.36	28.45	26.41	26.71	27.34	25.17	25.71
Oats .. ..	" "	14.89	10.77	13.49	9.52	15.39	15.80	13.75
Rice .. ..	" "	54.16	88.88	93.02	92.44	71.88	..	82.77
Wheat .. ..	" "	13.75	9.63	10.76	8.47	11.76	11.05	11.65
Hay .. ..	ton	1.29	1.09	1.16	1.03	1.25	1.20	1.20
Beans and Peas .. ..	bushel	17.24	12.23	13.74	16.16	14.32	15.91	15.84
Onions .. ..	ton	5.01	4.20	4.03	5.57	6.29	4.49	5.27
Potatoes (b) .. ..	" "	2.68	2.88	2.06	2.76	2.57	2.57	2.60
Beet Sugar .. ..	" "	0.58	1.00	0.99	1.39	1.67	1.08	1.26
Grapes (c) .. ..	" "	3.41	2.31	3.71	3.61	2.67	1.95	2.95
Wine (c) .. ..	gallon	449	364	400	345	281	223	342
Raisins and Currants (c) .. ..	cwt.	22.67	13.43	27.52	27.77	19.17	16.52	21.13
Hops (c) .. ..	lb.	1,516	1,851	1,594	1,708	1,689	1,294	1,524
Cane Sugar (c) .. ..	ton	2.09	2.40	2.42	2.41	2.33	2.06	2.33
Cotton, Unginned (c) .. ..	lb.	482	472	605	535	752	382	420
Tobacco .. ..	lb.	801	848	822	689	460	858	736
Pumpkins and Melons .. ..	ton	3.02	3.58	2.79	2.76	2.96	3.80	3.26

(a) Malting only.

(b) Not including Sweet Potatoes.

(c) Per acre of productive crops.

6. **Gross Value of Agricultural Production, Australia, 1923–24 to 1930–31.**—The following table shows the gross value in the metropolitan wholesale markets of agricultural production in Australia for the years 1923–24 to 1930–31.



## GROSS VALUE OF AGRICULTURAL PRODUCTION.—AUSTRALIA.

Crops.	1923-24.	1924-25.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£1,000	£1,000	£1,000	£1,000	£1,000	£1,000	£1,000	£1,000
Barley (a) .. ..	752	1,156	1,126	1,109	1,006	1,096	1,059	685
Maize .. .. .	2,050	2,467	1,878	2,317	2,799	1,665	2,085	1,617
Oats .. .. .	2,933	2,734	2,334	2,165	2,321	2,137	2,097	1,437
Rice .. .. .	4	4	14	52	198	234	335	295
Wheat .. .. .	29,936	53,547	35,724	42,453	31,895	38,303	27,299	25,047
Green Forage .. ..	3,559	2,309	3,381	3,912	2,731	2,680	3,167	2,385
Hay .. .. .	2,050	18,493	17,078	17,252	15,120	14,137	12,721	14,397
Beans and Peas .. ..	292	234	267	337	333	256	257	199
Onions .. .. .	265	381	457	221	319	314	193	139
Potatoes (b) .. ..	2,433	2,435	3,639	3,116	2,327	3,424	2,375	1,690
Sugar Beet .. .. .	55	49	42	20	54	33	58	82
Grapes .. .. .	2,466	3,593	3,866	5,590	3,786	4,022	4,145	3,496
Hops .. .. .	236	268	207	171	258	189	132	157
Sugar Cane .. .. .	5,106	7,683	6,789	6,568	7,469	7,444	7,476	7,340
Tobacco .. .. .	130	109	168	123	108	97	92	187
Cotton, Ginned .. ..	289	377	380	190	145	214	186	355
Market Gardens (c) ..	2,158	2,177	2,331	2,680	2,374	2,384	2,640	2,259
Orchards .. .. .	6,324	7,484	8,043	8,198	9,109	8,807	8,469	7,086
Other Crops .. .. .	1,470	1,663	1,543	1,821	1,976	2,004	2,323	1,647
<b>Total, Gross Value</b>	<b>81,166</b>	<b>107,163</b>	<b>89,267</b>	<b>98,295</b>	<b>84,328</b>	<b>89,440</b>	<b>77,109</b>	<b>70,500</b>

(a) Malting only. (b) Not including Sweet Potatoes. (c) Including Pumpkins and Melons.

7. **Net Value of Production.**—The following table shows the gross farm and net values of agricultural production for the five years ending 1930-31 computed in accordance with the methods determined at the Statistical Conferences of 1924 and subsequent years. The heading "Marketing Costs" includes freight, handling charges, commission, and cost of containers. The united cost of these items is deducted from the gross value and the balance shown in column 4 represents the gross production valued at the farm. From this amount the cost of seed used and an estimate of the value of fodder consumed on the farm are deducted, leaving the marketed production valued at the farm or the net return to the farmer for his produce (column 6). The costs included in the heading "Materials used and Depreciation" in column 7 are (i) seed pickling (ii) manures (iii) spraying (iv) power and water used in irrigation and (v) depreciation of farm implements and machinery. The sum of these items is subtracted from column 6 leaving the net value of production (column 8). It is from the sum appearing in the last column that such items as wages, interest, rent and profit are met. The net value of agricultural production is, therefore, in fair harmony with that given for manufacturing production. Owing to the lack of complete data for all States, however, the value of materials used in maintenance of buildings, fences, etc., and an allowance for the depreciation of stock used for draught purposes have been omitted in arriving at the amount shown in column 7.

## GROSS, FARM AND NET VALUES OF AGRICULTURAL PRODUCTION.—AUSTRALIA.

(AS ESTIMATED BY STATE STATISTICIANS IN ACCORDANCE WITH CONFERENCE RESOLUTIONS.)

Year.	Gross Production valued at Metropolitan Wholesale Prices.	Marketing Costs. (c)	Gross Production valued at Farm.	Seed used, and Fodder for Farm Stock.	Marketed Production valued at Farm.	Value of Principal Materials used and allowance for Depreciation.	Net Value of Production.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1926-27 ..	£1,000 98,295	£1,000 17,556	£1,000 80,739	£1,000 (b) 18,578	£1,000 ..	£1,000 (a)	£1,000 62,161
1927-28 ..	84,328	15,819	68,509	(b) 19,731	..	(a)	48,778
1928-29 ..	89,440	15,480	73,960	(b) 18,444	..	(a)	55,516
1929-30 ..	77,109	15,637	61,472	12,182	49,290	9,562	39,728
1930-31 ..	70,500	18,487	52,013	11,756	40,257	9,029	31,228

(a) Not available separately, included with Seed used, &c. (b) See Note (a). (c) For details see above.

On account of the fall in prices, and in spite of a greater volume of production, the gross value of agricultural production fell from £98 millions in 1926-27 to £70 millions in 1930-31, a fall of £28 millions or 28 per cent. The net value of production at the same time fell from £62 millions to £31 millions, a fall of £31 millions or 50 per cent. Marketing and production costs actually increased from £36 millions to £39 millions. With allowance for increased costs on account of the increased volume of production, it appears that costs remained at practically the same level during the fall in wholesale prices up to 1930-31. An appreciable measure of adjustment of costs will probably appear in the figures for 1931-32.

### § 4. Wheat.

1. Progress of Wheat-growing.—(i) *Area and Production.* (a) *Seasons 1926-27 to 1931-32.* Wheat is the principal crop raised in Australia, and since 1895, when the area under this crop amounted to 3½ million acres, an average of 418,000 acres has been added annually, until in 1930-31 more than 18.1 million acres were cut for grain. The area and yield of wheat for grain are given below for each State for the five years ended 1930-31, and are shown from the year 1860 onwards in the graphs hereinafter. The figures in the table include also an estimate for the 1931-32 crop :—

#### WHEAT.—AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
AREA.								
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1926-27 ..	3,352,298	2,915,315	57,084	2,768,403	2,571,187	23,194	438	11,687,919
1927-28 ..	3,029,950	3,064,172	215,073	2,941,360	2,998,523	29,448	562	12,279,088
1928-29 ..	4,090,083	3,718,904	218,069	3,445,563	3,343,530	22,570	1,394	14,840,113
1929-30 ..	3,974,064	3,566,135	204,116	3,645,764	3,568,225	16,805	1,455	14,976,564
1930-31 ..	5,134,960	4,600,200	272,316	4,180,513	3,955,763	19,107	2,061	18,164,920
1931-32(a)	3,625,000	3,565,872	300,000	4,071,370	3,158,888	11,700	2,000	14,734,830
PRODUCTION.								
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1926-27 ..	47,373,713	46,886,020	379,339	35,558,711	30,021,616	537,000	5,487	160,761,886
1927-28 ..	27,042,000	26,160,814	3,783,584	24,066,012	36,370,219	773,142	4,004	118,199,775
1928-29 ..	49,257,000	46,818,833	2,515,561	26,826,094	33,790,040	455,336	16,557	159,679,421
1929-30 ..	34,407,000	25,412,587	4,235,172	23,345,093	39,081,183	375,849	27,738	126,884,622
1930-31 ..	65,877,000	53,814,369	5,107,561	34,871,526	53,504,149	391,490	28,296	213,594,391
1931-32(a)	54,140,000	41,955,856	3,427,267	48,093,102	41,360,698	222,000	30,000	189,228,923

(a) Final estimate.

The acreage under wheat for grain increased steadily until 1915-16, when, largely as the result of a special war effort, 12,484,512 acres were sown. After that year, however, there was a serious decline, brought about by prevailing conditions and unfavourable seasons, and the area in 1919-20 fell to 6,419,160 acres, or only half that of 1915-16. The promise of remunerative Government guarantees, coupled with the prospects of high prices, was responsible for a marked advance in 1920-21, and the area has been extended during each of the subsequent years until 1930-31, the increase for Australia since 1919-20 amounting to more than 11.7 million acres.

The area sown to wheat for grain during 1930-31 was 18,164,920 acres, an increase of 3.2 million acres on the previous year, and the greatest recorded. This increase took place in spite of, or perhaps because of, a collapse in prices to half the average of the previous ten years. Seasonal conditions were, however, promising; the last crop had been light and the chances of good yields were high. In these circumstances farmers were not likely to lose by sowing largely, and the advice of experts was to increase acreage to the maximum. The Federal and State Governments also urged the farmers to increase exports in order to maintain national solvency. Consequently the area

under wheat rose from 14.9 million acres in 1929-30 to 18.1 million acres in 1930-31 an increase of 21 per cent., while production advanced from 126.8 million bushels to 213.5 million bushels, i.e., by 68 per cent. during the same period. With the exception of South Australia, where drought conditions were experienced, the season was generally satisfactory and resulted in either average or over average yields in the remaining States. The average for the Commonwealth amounted to 11.76 bushels per acre, as compared with 8.47 bushels for the previous year and 11.65 bushels the average for the decennium ending 1930-31. The total production of grain for the year amounted to more than 213 million bushels, the greatest quantity ever produced in Australia in any one year, and exceeding the previous record production of 1915-16 by more than 34,500,000 bushels, or 19.2 per cent.

The annual production during the seasons 1921-22 to 1930-31 averaged 142.2 million bushels, and the extent to which this average may be exceeded during any year depends in a great measure on seasonal conditions. For the last twelve seasons the yield has exceeded 100 million bushels. During this period, for the first time, a succession of good harvests was experienced, despite some unfavourable seasons, and the result exemplifies the value of bare fallowing, seed selection, and the application of manures. It is the considered opinion of agricultural experts that the improved cultural methods practised by modern wheat-growers preclude the possibility of absolute failure of this crop.

Although final figures are not yet available for all States, the data to hand for the year 1931-32 indicate the area sown to wheat for grain in Australia to be about 14,724,830 acres, a decrease of 3.4 million acres or 19 per cent. on that of the previous year. The fall in area was to be expected after the heavy increase during the preceding year, and indicates the resumption of normal conditions. The total, however, is still considerably in excess of the average sown for the decennium 1921-31, which amounted to 12.2 million acres. The 1931-32 season was particularly favourable and yields were high. Production according to the final estimate amounted to 189 million bushels, or 12.88 bushels per acre, compared with 213 million bushels or 11.76 bushels per acre for the previous year.

(b) *Area, Production and Prices, 1861-70 to 1921-30.* The following table gives average area, production and yield per acre for decennial periods since 1861, together with the average wholesale price since 1871. The price quoted represents the average at Melbourne (Williamstown), and may be accepted as fairly representative for Australia.

**WHEAT.—AVERAGE AREA, PRODUCTION, AND WHOLESALE PRICE,  
AUSTRALIA.**

Period.	Area.	Production.	Yield per Acre.	Average Wholesale Price.
	Acres.	Bushels.	Bushels.	s. d.
1861-70 .. ..	831,457	10,621,697	12.77	(a)
1871-80 .. ..	1,646,383	17,711,312	10.76	5 10
1881-90 .. ..	3,257,709	26,992,020	8.29	4 7
1891-1900.. ..	4,086,701	29,933,993	7.32	3 8
1901-10 .. ..	5,711,230	56,058,070	9.82	3 10
1911-20 .. ..	8,927,974	95,479,866	10.69	5 0
1921-30 .. ..	11,290,543	135,399,860	11.99	5 8

(a) Not available.

(ii) *Average Yields.* In the next table will be found the average yield of wheat per acre in each of the last five seasons, and for the decennium 1921-31 :—

## WHEAT.—YIELD PER ACRE.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1926-27 ..	14.13	16.08	6.65	12.84	11.68	23.15	12.53	13.75
1927-28 ..	8.92	8.54	17.59	8.16	12.12	26.25	7.12	9.63
1928-29 ..	12.04	12.59	11.54	7.79	10.10	20.17	11.88	10.76
1929-30 ..	8.66	7.13	20.75	6.40	10.95	22.37	19.06	8.47
1930-31 ..	12.83	11.70	18.76	8.34	13.53	20.49	13.73	11.76
Average 10 seasons, 1921-31	12.01	12.76	15.40	10.00	11.37	21.86	14.69	11.65

The great variations in the average yields were chiefly due to the vagaries of the seasons. Considerable improvement has been shown in the averages for the past three decades, the figures being 10.33, 11.05, and 11.65 bushels per acre respectively, the increased yields in the later years being principally due to the improvement in cultural methods. The best average yields for single seasons were obtained in 1924-25, 15.20 bushels; in 1920-21, 16.08 bushels; and in 1866, 16.35 bushels. In the last mentioned year less than 1,000,000 acres of relatively fertile land were sown.

(iii) *Relation to Population.* The main producing States of the Commonwealth are New South Wales, Victoria, South Australia and Western Australia. Queensland production closely approaches local demands, but Tasmania imports from the mainland to satisfy its needs. Normally the production of wheat greatly exceeds Australian requirements, and three-quarters of the crop is exported overseas. During recent years Australia has ranked fourth on the list of exporting countries, as compared with sixth in the pre-war period 1909-13. For the later years its exports are exceeded by those of Canada, the United States and Argentine. The quantity exported is approximately 10.7 per cent. of the total quantity shipped by exporting countries.

2. *Australian and Foreign Wheat Yields.*—(i) *Average Yield.* The next table gives the average return per acre in the principal wheat-growing countries of the world, ranging from a maximum in the Netherlands of 46 bushels per acre to a minimum in the Union of South Africa of 8 bushels per acre.

## WHEAT.—YIELD PER ACRE, VARIOUS COUNTRIES.

Country.	Average Yield in Bushels per acre.		Country.	Average Yield in Bushels per acre.	
	Average, 1927-1929.	1930.		Average, 1927-1929.	1930.
Netherlands ..	45.87	42.67	Lithuania ..	17.76	21.56
Belgium ..	40.50	32.26	Yugoslavia ..	17.68	15.31
Denmark ..	35.54	41.04	Bulgaria ..	15.53	19.03
United Kingdom ..	34.12	30.03	United States of America ..	14.73	14.27
New Zealand ..	33.37	26.76	Rumania ..	13.96	17.25
Switzerland ..	32.81	28.99	Spain ..	13.12	13.23
Sweden ..	31.82	33.16	Uruguay ..	12.53	8.33
Germany ..	30.73	31.67	Peru ..	(b) 11.61	(a) 11.89
Czechoslovakia ..	26.45	25.72	Argentine Republic ..	10.99	12.04
Norway ..	26.12	23.64	Cyprus ..	10.51	10.11
Egypt ..	26.11	26.17	Soviet Republics ..	10.34	12.94
Japan ..	25.33	24.53	French Morocco ..	10.03	7.14
Austria ..	23.75	23.64	India ..	9.85	12.34
France ..	22.63	17.54	Korea ..	9.73	10.56
Brazil ..	(b) 22.26	(a) 12.94	Australia ..	9.62	11.76
Hungary ..	21.15	20.07	Portugal ..	9.15	12.34
Chile ..	19.85	13.23	Greece ..	9.07	9.22
Italy ..	18.14	17.69	Union of South Africa ..	8.49	8.92
Poland ..	18.48	20.22			
Canada ..	18.28	15.91			

(a) Year 1928.

(b) Average 1926-28.

(ii) *Total Production.* The latest available official statistics of the production of wheat in various countries are given in the following table:—

**WHEAT.—TOTAL PRODUCTION, VARIOUS COUNTRIES.**

Country.	Yield in Bushels (,000 omitted).		Country.	Yield in Bushels (,000 omitted).	
	Average, 1927-1929.	1930.		Average 1927-1929.	1930.
United States of America ..	862,565	863,444	French Morocco ..	22,687	21,303
Soviet Republics ..	758,025	1,083,939	Sweden ..	18,007	21,469
Canada ..	437,593	397,879	Belgium ..	15,830	13,236
India ..	313,799	390,843	Uruguay ..	14,672	7,218
France ..	292,428	231,121	Syria ..	12,454	19,378
Italy ..	228,210	210,073	Austria ..	12,145	12,008
Argentine Republic ..	227,989	235,962	Greece ..	11,519	12,048
Spain ..	139,653	146,701	Mexico ..	11,418	11,446
<b>Australia ..</b>	<b>134,921</b>	<b>213,594</b>	Denmark ..	11,132	10,216
Germany ..	128,394	139,218	Tunis ..	10,901	10,398
Rumania ..	104,012	130,772	Portugal ..	9,936	13,817
Yugoslavia ..	84,954	80,327	Korea ..	8,653	8,985
Hungary ..	83,711	84,339	New Zealand ..	8,347	6,500
Poland ..	62,058	82,322	Union of South Africa ..	7,626	10,180
United Kingdom ..	51,761	42,245	Lithuania ..	6,976	11,327
Czechoslovakia ..	50,535	50,607	Netherlands ..	6,319	6,056
Egypt ..	42,299	39,754	Brazil ..	(b) 4,581	(c) 6,266
Bulgaria ..	42,001	57,318	Switzerland ..	4,173	3,829
Chile ..	31,679	21,190	Peru ..	(b) 2,911	(a) 4,453
Algeria ..	30,644	32,440	Cyprus ..	1,875	1,873
Japan ..	30,177	29,539	Norway ..	718	720

(a) Year 1928. (b) Average 1926-28. (c) Year 1929.

NOTE.—The harvests reported above for 1930 relate to the year 1930 for the Northern, and 1930-31 for the Southern Hemisphere.

A complete statement of the world's production of wheat is not possible owing to the failure of certain countries to supply the necessary information. The International Institute of Agriculture, Rome, has, however, compiled figures obtained from all the producing countries reporting, with the following results:—

**WHEAT.—WORLD'S PRODUCTION.(a)**

Years.	Area.	Production.	Yield per acre.
	Acres.	Bushels	Bushels.
Average 1909-1913 ..	270,266,000	3,779,479,000	13.98
1926 ..	302,030,330	4,294,357,000	14.27
1927 ..	311,024,770	4,387,933,000	14.13
1928 ..	310,424,317	4,720,485,000	15.17
1929 ..	312,013,170	4,132,504,000	13.23
1930 ..	331,212,840	4,767,863,000	14.42
Average, 1926-1930 ..	313,341,085	4,460,640,000	14.24

(a) From countries reporting.

The Report of the Institute mentions that if all countries for which data are lacking were taken into account, the world's total production of wheat may be approximately estimated at 5,000 million bushels.

The total area harvested in 1930 shows an increase on the figures for the previous year, the Soviet Union, Argentine and Australia being chiefly responsible therefor. The other great divisions of the world showed little change in the area harvested, which exceeded the pre-war average by more than 60,000,000 acres. In comparison with the pre-war period, areas sown to wheat in European countries, exclusive of the Soviet Union, slightly increased. North America, Argentine, and Australia were the chief contributing countries to the increase in 1930 over the average for 1909-13.

The world's acreage under wheat in 1930 and the production therefrom were the highest ever recorded. At the same time there were large accumulations of wheat in North America, and these factors led to a collapse in prices. The average wholesale price of wheat in Melbourne fell from 5s. 2d. per bushel in 1928 to 2s. 5½d. in 1931, a decrease of 53 per cent.

The Australian contribution to the world's average production shown above during the past five years amounted to nearly 3½ per cent.

3. **Export Price of Wheat.**—The table hereunder shows export prices of Australian wheat during each of the last five years :—

#### AUSTRALIAN WHEAT.—EXPORT PRICES.

Item.	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
Price per bushel	s. d. 5 6	s. d. 4 10	s. d. 5 0	s. d. 2 5½	s. d. 3 0½

The export prices here shown are the averages for the successive years in the principal markets of Australia in Australian currency.

4. **Exports of Wheat and Flour.**—(i) *Quantities.* The table appended shows the exports, and net exports of wheat and flour from 1926-27 to 1930-31. For the sake of convenience, flour has been expressed at its equivalent in wheat, 1 ton of flour being taken as equal to 48 bushels of grain. In ordinary seasons the Australian imports of wheat and flour are negligible. During the past five years the exports ranged between 62,745,891 bushels in 1929-30 and 144,386,954 bushels in 1930-31, the net exports for the period averaging 97,512,684 bushels.

#### WHEAT AND FLOUR.—EXPORTS, AUSTRALIA.

Year.	Exports.			Net Exports.
	Wheat.	Flour.	Total.	
	Bushels.	Eq. Bushels.(a)	Bushels.	Bushels.
1926-27	73,925,315	23,686,272	97,611,587	97,607,874
1927-28	53,042,357	20,822,160	73,864,517	73,863,184
1928-29	81,896,245	27,062,544	108,958,789	108,954,924
1929-30	40,390,707	22,355,184	62,745,891	62,743,071
1930-31	119,223,290	25,163,664	144,386,954	144,384,366

(a) Equivalent in bushels of wheat.

(ii) *Destination.* The following table gives the exports of wheat to various countries for each of the five years ending 1930-31, together with averages for the pre-war period 1909-13 and for the five years 1926-31 :—

## EXPORTS OF WHEAT.—AUSTRALIA.

Country to which Exported.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.	Average, 1909-13.	Average, 1926-31.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
United Kingdom	26,510,696	20,465,490	20,564,650	21,488,415	39,095,488	30,305,384	25,804,948
Italy	10,316,509	7,151,695	5,861,552	3,261,455	12,697,635	581,309	7,857,760
Japan	4,208,567	3,199,720	5,626,298	2,811,142	17,676,232	330,131	6,722,392
France	7,254,063	622,785	1,967,455	186,682	350,638	1,681,918	2,076,325
Union of South Africa	2,005,233	6,941,395	4,143,328	1,540,482	956,317	2,992,355	3,117,351
Belgium	4,782,332	1,729,143	994,923	408,990	2,016,602	1,218,131	1,986,398
Egypt	4,625,279	3,827,159	4,943,383	1,178,230	3,143,433	135,377	3,543,493
Germany	2,132,607	2,356,622	1,001,897		193,935	286,822	1,137,912
Netherlands	3,379,723	726,993	1,834,132	490,358	2,158,470	(a)	1,717,935
Other Countries	8,620,316	6,021,364	34,958,627	9,024,953	40,034,540	4,465,847	19,731,960
Total	73,925,316	53,042,357	81,896,245	40,390,707	119,223,290	41,997,274	73,695,583

(a) Included with other Countries.

Exports of flour from Australia for the periods mentioned are given in the table below.

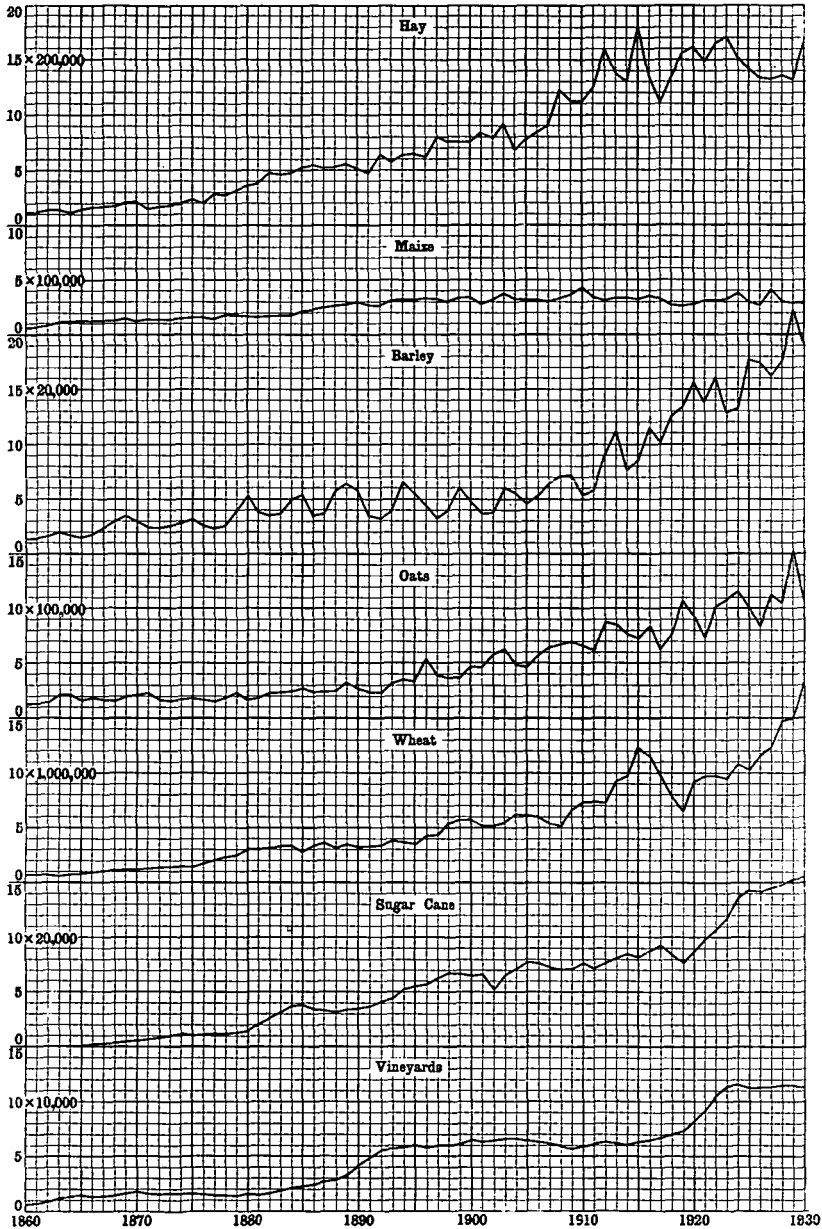
## EXPORTS OF FLOUR.—AUSTRALIA.

Country to which Exported.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.	Average, 1909-13.	Average, 1926-31.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Egypt	185,392	150,795	243,468	125,963	145,694	(a)	170,262
United Kingdom	76,167	71,837	57,945	85,364	134,547	27,699	85,172
Netherlands East Indies	64,648	65,923	79,040	82,595	74,765	26,099	73,394
Malaya (British)	42,451	41,071	52,176	51,160	41,841	15,492	45,740
Union of South Africa	18,912	22,183	24,558	18,256	9,051	30,714	18,592
Ceylon	16,060	20,203	21,705	21,252	21,630	3,389	20,170
New Zealand	28,383	5,053	3,556	3,823	5,168	3,221	9,197
Philippine Islands	8,754	7,569	8,436	8,707	8,949	13,680	8,483
Hong Kong	3,966	5,856	2,972	2,933	5,947	2,672	4,335
Mauritius	7,781	4,979	9,395	5,988	4,896	2,221	6,608
Portuguese East Africa	5,802	7,531	5,917	5,410	5,747	13,462	6,081
Other Countries	35,148	39,795	54,635	54,282	66,008	28,463	48,174
Total	493,464	433,795	563,803	465,733	524,243	167,112	496,208

(a) Included with other Countries.

5. Exports—Principal Countries.—The following table shows the net quantities of wheat exported from the chief exporting countries for the years 1926 to 1930, the average for that period and the average for the period 1909-13. The figures are based mainly on information supplied by the International Institute of Agriculture. Comparison between the periods 1926-30 and 1909-13 shows that the world's supply of wheat in the later years has been obtained from North America, Canada supplying 37 per cent., and the United States 20 per cent., as compared with 14 and 15 per cent. respectively for the pre-war period. Russia's exports, which amounted to about 24 per cent. of the total for the period 1909-13, fell to 4 per cent. for the years 1926-30. Under Government stimulus, however, the area sown to wheat in the Soviet Republics is increasing rapidly. In 1930 the total amounted to 83.8 million acres, which produced 1,083.9 million bushels, an average of 12.94 bushels per acre. While Australian production was only 3½ per cent. of the world's total, the exports accounted for 10.7 per cent. of the quantities exported in the years 1926-30.

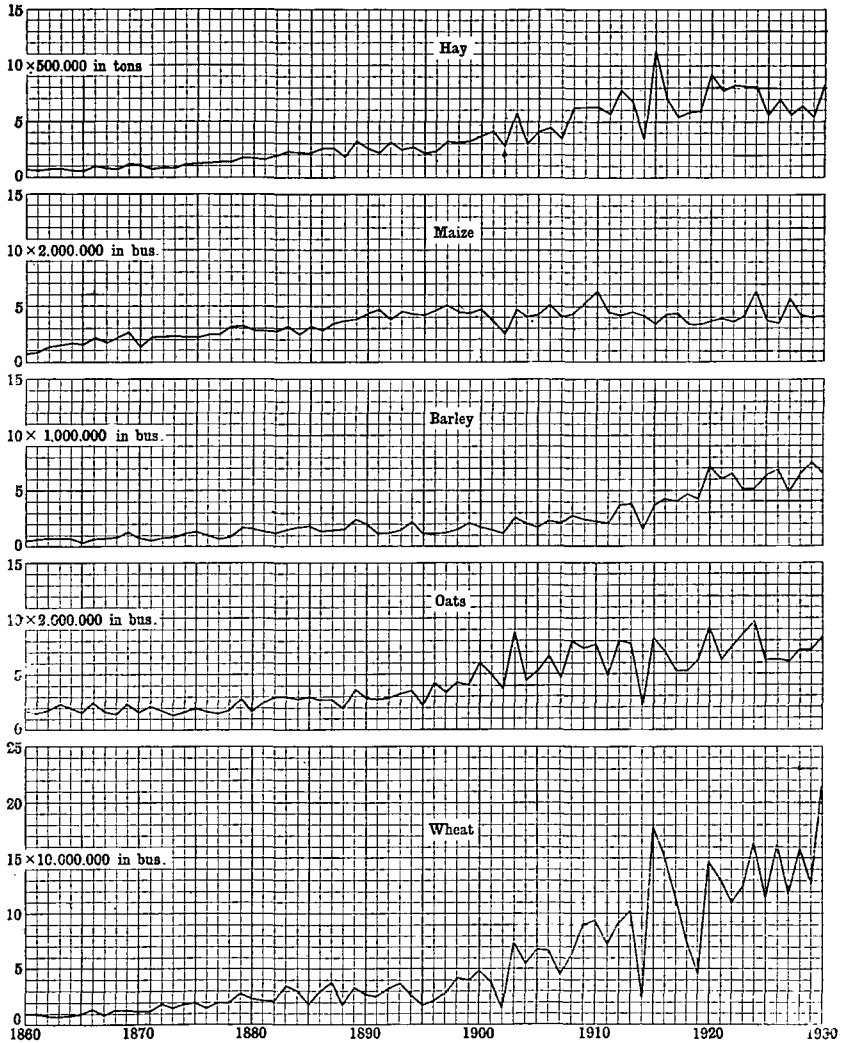
## AREA UNDER PRINCIPAL CROPS—AUSTRALIA 1860 TO 1931.



EXPLANATION.—The base of each small square represents an interval of one year, while the vertical height represents a number of acres, varying with the nature of the crop in accordance with the scale given on the left of the graph. The height of each curve above its base line denotes, for the crop to which it relates, the total area under cultivation in Australia during the successive seasons.



## PRODUCTION OF PRINCIPAL CROPS—AUSTRALIA 1860 TO 1930.



EXPLANATION.—A separate base line is provided for each of the crops dealt with. In each instance the base of a small square represents an interval of one year, the vertical height of such square representing in the case of wheat, 10,000,000 bushels; oats, 2,000,000 bushels; barley, 1,000,000 bushels; maize 2,000,000 bushels; and hay, 500,000 tons. The height of each curve above its base line denotes the aggregate yield in Australia of the particular crop during the successive seasons.

## WHEAT.(a)—NET EXPORTS, PRINCIPAL COUNTRIES.

Country.	Average, 1909-13.		1926.	1927.
	Bushels.	Per cent.	Bushels.	Bushels.
Soviet Republics (a) ..	157,109,000	23.71	38,725,206	29,160,690
Canada .. .. .	89,919,000	13.57	295,301,160	294,974,749
United States of America ..	100,864,000	15.22	178,433,568	215,091,653
Argentina .. .. .	95,041,000	14.34	81,704,321	163,569,085
British India .. .. .	50,886,000	7.68	8,330,180	12,245,294
Australia .. .. .	49,417,000	7.46	73,735,524	104,352,729
All other Countries .. .. .	119,351,000	18.02	74,715,751	42,795,718
<b>Total .. .. .</b>	<b>662,587,000</b>	<b>100.00</b>	<b>750,945,710</b>	<b>862,189,918</b>
<b>World's Production .. .. .</b>	<b>3,779,479,000</b>		<b>4,294,357,000</b>	<b>4,387,933,000</b>
Percentage of Australian Net Exports on Total Net Exports .. .. .	7.46		9.82	12.10
Percentage of Australian Production on World's Production .. .. .	2.39		3.74	2.69

Country.	1928.	1929.	1930.	Average, 1926-30.	
	Bushels.	Bushels.	Bushels.	Bushels.	Per cent.
Soviet Republics (b) ..	..	..	93,500,338	32,277,247	4.00
Canada .. .. .	411,760,521	250,485,790	240,076,983	298,519,841	37.01
United States of America ..	131,835,470	137,914,928	127,484,281	158,151,980	19.61
Argentina .. .. .	202,868,949	249,708,054	86,434,936	156,857,069	19.45
British India .. .. .	27,765,634	..	4,376,975	10,543,436	1.31
Australia .. .. .	79,670,093	99,150,188	75,115,330	86,404,773	10.71
All other Countries .. .. .	51,747,821	71,425,641	78,525,402	63,842,066	7.91
<b>Total .. .. .</b>	<b>905,648,488</b>	<b>808,684,601</b>	<b>705,513,345</b>	<b>806,596,412</b>	<b>100.00</b>
<b>World's Production</b>	<b>4,720,485,000</b>	<b>4,132,564,000</b>	<b>4,767,863,000</b>	<b>4,460,640,400.</b>	
Percentage of Australian Net Exports on Total Net Exports .. .. .	8.80	12.26	10.65	10.71	
Percentage of Australian Production on World's Production .. .. .	3.38	3.07	4.48	3.49	

(a) Including flour expressed in terms of wheat. (b) The average for 1909-13 is not strictly comparable with the later years, owing to changes of frontiers under the Peace Treaty.

6. Imports—Principal Countries.—The quantities of wheat and flour (expressed in terms of wheat) imported into the principal countries of destination, for the periods indicated, are shown in the following table. The United Kingdom is easily the leading importing country. Under the terms of the Agreement at the Imperial Economic Conference at Ottawa in August, 1932, the Government of the United Kingdom undertook to provide for a duty of 3d. per bushel on foreign wheat imported, and the concession should prove of considerable benefit to Canada and Australia. During recent years the imports of wheat to China and Japan have grown considerably, and a large share in this trade has been taken by Australia.

## WHEAT.(a)—IMPORTS, PRINCIPAL COUNTRIES.(b)

Country Importing.	Average, 1909-13.		1926.	1927.
	Bushels.	Per cent.	Bushels.	Bushels.
Germany .. ..	89,731,507	12.44	85,774,904	98,892,898
Belgium .. ..	73,962,974	10.26	38,929,693	45,790,749
France .. ..	38,681,717	5.36	17,601,901	80,043,137
Great Britain ..	219,365,265	30.42	206,210,629	233,425,613
Italy .. ..	57,156,174	7.93	78,972,418	84,898,799
Netherlands ..	76,340,387	10.59	27,347,235	30,809,530
Brazil .. ..	20,774,307	2.88	30,783,821	31,884,695
China .. ..	5,525,863	0.77	21,923,598	15,081,749
Japan .. ..	3,713,840	0.52	26,273,531	18,156,065
Egypt .. ..	7,914,626	1.10	10,042,843	7,620,107
South Africa ..	6,519,097	0.90	4,511,045	5,781,875
All other Countries ..	121,409,356	16.83	198,638,406	226,553,482
<b>Total .. ..</b>	<b>721,095,113</b>	<b>100.00</b>	<b>747,010,024</b>	<b>878,938,699</b>

Country Importing.	1928.	1929.	1930.	Average, 1926-30.	
	Bushels.	Bushels.	Bushels.	Bushels.	Per cent.
Germany .. ..	92,748,593	79,779,402	45,076,168	80,454,375	9.58
Belgium .. ..	44,514,982	44,654,975	44,876,382	43,753,356	5.21
France .. ..	38,356,333	52,592,676	39,331,044	45,585,018	5.43
Great Britain ..	215,560,947	232,781,569	224,793,737	222,554,498	26.50
Italy .. ..	101,033,230	65,030,081	71,417,901	80,270,487	9.56
Netherlands ..	29,519,980	30,187,874	33,835,932	30,340,110	3.61
Brazil .. ..	35,798,744	35,397,795	31,279,111	33,028,815	3.93
China .. ..	19,731,378	47,929,460	21,501,395	25,233,516	3.00
Japan .. ..	24,568,194	27,530,853	18,756,906	23,057,110	2.75
Egypt .. ..	8,162,124	12,656,077	10,225,853	9,741,401	1.16
South Africa ..	8,749,311	7,634,672	2,794,289	5,894,239	0.70
All other Countries	266,606,749	280,693,876	227,141,083	239,926,719	28.57
<b>Total .. ..</b>	<b>885,350,475</b>	<b>916,869,220</b>	<b>771,029,801</b>	<b>839,839,644</b>	<b>100.00</b>

(a) Including flour expressed in terms of wheat. (b) In some instances, the average 1909-13 is not strictly comparable with the other years shown, owing to changes of frontiers.

7. Consumption of Wheat.—(i) *Australia.* The estimated consumption of wheat for food and the quantity used for seed in Australia during the past five years are shown hereunder :—

AVERAGE HUMAN CONSUMPTION, 1926-27 TO 1930-31.

Flour Milled .. .. .		1,144,540 tons
Less Net exports of flour .. .. .	496,154 tons	
Less Net exports of flour in Biscuits	1,563 "	
		497,717 "
Net quantity available for home consumption .. .. .		646,823 "
Equivalent in terms of wheat .. .. .		31,047,504 bushels
Net quantity available per head of population—		
As flour .. .. .		205 lb.
As wheat .. .. .		4.917 bushels

AVERAGE USED FOR SEED, 1926-27 TO 1930-31.

Average area sown for grain and hay .. .. .	15,454,937 acres
Average quantity of seed used .. .. .	14,525,600 bushels
Average quantity of seed used per acre .. .. .	56 lb.
Average quantity per head of population .. .. .	2.300 bushels

In addition to the above, allowance must be made for wheat fed to poultry and other live stock or used as seed for green forage crops. The quantities so used vary from year to year according to the price of wheat and the nature of the season, and sufficient data are not available on which to base an annual estimate, but, taken over a period, the amount so consumed has been estimated to range from one half to one bushel per head of population per annum. The flour available for human consumption necessarily fluctuates from year to year coincident with stocks. In some years the flour available per head of population, after deducting net exports from the quantity milled, shows a substantial increase over the average for the previous year, this, however, being counter-balanced by a decline in the following year. The average quantity of flour consumed per annum for the five years under consideration was 205 lb. per head of population, which, expressed in terms of wheat, represents 4.917 bushels. The estimates of quantity of grain used for seed in Victoria, South Australia and Western Australia are based on data collected from growers. In the other States estimates supplied by the Agricultural Departments have been used. The average annual quantity used for the purposes indicated during the last five years was 2.300 bushels per head of population, or 56 lb. per acre sown. The consumption of wheat in Australia for all purposes during the period dealt with averaged, therefore, 50,309,000 bushels, or 7.97 bushels per head of population.

(ii) *Other Countries.* The following table gives the consumption of wheat in some of the principal countries of the world. The figures, which were obtained partly from the Food Research Institute, of California, represent the *per capita* consumption of wheat exclusive of the quantity used for seed purposes.

PER CAPITA CONSUMPTION OF WHEAT, EXCLUDING SEED, FOR PERIOD 1922-1929.

Country.	Used for human consumption.	Fed to Stock.	Total.
	Bushels.	Bushels.	Bushels.
Argentina .. .. .	5.4	0.2	5.6
Australia (a) .. .. .	4.9	0.7	5.6
Canada .. .. .	4.5	3.3	7.8
New Zealand (b) .. .. .	5.9	0.2	6.1
United Kingdom .. .. .	4.8	1.0	5.8
United States .. .. .	4.2	0.6	4.8

(a) Average for five years ending 1930-31.

(b) Average for five years ending 1930.

8. **Value of the Wheat Crop.**—The estimated value of the wheat crop in each State and in Australia during the season 1930-31 is shown below :—

**WHEAT.—VALUE OF CROP(a), 1930-31.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
Aggregate value...	£ 7,136,680	£ 6,726,796	£ 1,030,642	£ 3,995,696	£ 6,100,588	£ 53,830	£ 3,065	£ 25,047,297
Value per acre ..	£1/7/10	£1/9/3	£3/15/8	£0/19/1	£1/10/10	£2/16/4	£1/9/9	£1/7/7

(a) Gross value of total crop, including seed used on farm, valued at metropolitan prices; but exclusive of value of straw.

9. **Stocks of Wheat and Flour.**—Stocks of wheat and flour held by each State at 30th November, 1931, and the total held in Australia on the same date for the previous four years will be found in the following table. The figures have been compiled from information collected from millers, merchants, the Railway Departments and other sources but are exclusive in certain instances of stocks held by farmers.

**STOCKS OF WHEAT AND FLOUR.—AUSTRALIA, 30TH NOVEMBER, 1931.**

State.		Wheat.	Flour.	Total in terms of wheat.(a)
		Bushels.	Tons.	Bushels.
New South Wales	.. ..	4,033,965	29,565	5,453,085
Victoria	.. ..	6,800,694	21,676	7,841,157
Queensland	.. ..	125,993	6,178	422,525
South Australia	.. ..	876,634	14,236	1,559,959
Western Australia	.. ..	485,793	6,910	817,473
Tasmania	.. ..	124,145	1,487	195,521
Total, 30th November, 1931 ..		12,447,224	80,052	16,289,720
..	.. 1930 ..	10,106,694	77,066	13,805,879
..	.. 1929 ..	11,085,059	93,825	15,588,659
..	.. 1928 ..	5,468,531	70,513	8,853,156
..	.. 1927 ..	7,638,708	92,460	12,076,772

(a) One ton of flour treated as equivalent to 48 bushels of wheat.

10. **Voluntary Wheat Pools.**—Reference to the operations of the voluntary Wheat Pools in the various States during 1931-32 will be found in the Appendix at the end of this volume.

**§ 5. Oats.**

1. **Progress of Cultivation.**—(i) *Area and Production.* Oats is usually next in importance to wheat amongst the grain crops cultivated in Australia, but while wheat grown for grain accounted for 72.19 per cent., oats represented only 4.30 per cent. of the area under crop in 1930-31. The acreage and production of oats for the last five years is shown in the table hereunder, and more fully in the graphs herein :—

## OATS.—AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
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## AREA.

	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1926-27	104,450	303,424	210	152,178	234,826	48,361	665	844,114
1927-28	114,988	529,392	2,272	197,024	235,469	42,950	208	1,122,303
1928-29	126,743	347,021	916	207,266	325,827	37,602	295	1,045,670
1929-30	181,354	630,234	2,003	277,923	385,134	39,061	162	1,515,871
1930-31	176,659	371,024	5,132	218,416	274,874	35,919	77	1,082,101

## PRODUCTION.

	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1926-27	1,890,746	4,884,006	1,674	1,713,337	2,716,436	1,357,000	8,004	12,571,203
1927-28	1,654,560	4,682,724	43,788	1,378,437	2,922,865	1,399,824	2,067	12,084,265
1928-29	2,183,880	5,602,409	13,737	1,740,515	3,554,609	1,011,367	2,160	14,108,677
1929-30	2,528,610	5,058,541	38,494	1,564,287	4,058,160	1,175,041	1,053	14,424,186
1930-31	3,241,980	6,893,827	94,452	2,080,311	3,292,560	1,052,768	2,160	16,658,058

The oat crop showed considerable variation during the past decennium, ranging from 12,084,265 bushels in 1927-28 to 19,393,737 bushels in 1924-25, with an average for the period of 14,700,000 bushels. The demand for the grain for oatmeal is limited to about 2,000,000 bushels annually. The product is mainly used as feed grain, and its value, particularly in good seasons, is not sufficient to warrant an increase in cultivation.

The principal oat-growing State is Victoria, which produces on the average more than one-third of the total quantity grown in Australia. South Australia, Western Australia, and Tasmania, also produce considerable quantities in excess of local requirements. Western Australia disposes of its surplus to the East, principally to British Malaya, whilst the other States export chiefly to New South Wales and Queensland. For Australia as a whole the record yield of oats was obtained during 1924-25, when 19,393,737 bushels were harvested.

(ii) *Average Yield.* The average yield per acre of oats varies considerably in the different States, being highest in Tasmania and lowest in South Australia. Averages for each of the last five seasons, and for the decennium 1921 to 1931 are given in the table below :—

## OATS.—AVERAGE YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1926-27 .. ..	18.10	16.10	7.97	11.26	11.57	28.06	12.04	14.89
1927-28 .. ..	14.39	8.85	19.27	7.00	12.41	32.59	9.94	10.77
1928-29 .. ..	17.23	16.14	15.00	8.40	10.91	26.90	7.32	13.49
1929-30 .. ..	13.94	8.03	19.22	5.63	10.54	30.08	6.50	9.52
1930-31 .. ..	18.35	18.58	18.40	9.52	11.98	29.31	28.05	15.39
Average for 10 seasons 1921-31	16.92	14.60	16.73	9.43	11.55	27.62	15.08	13.75

The smallest average yield per acre ever recorded for Australia was that experienced in the abnormally dry season 1914-15, viz., 5.60 bushels, while the largest in the past ten years was that of the season 1920-21, amounting to 19.77 bushels per acre.

2. **World's Production.**—The world's production of oats for the year 1930, as computed by the International Institute of Agriculture, amounted to 3,802 million bushels. Compared with 1929, the area in 1930 decreased by 3 million acres and the production by 135 million bushels. The average yield per acre in 1930 was 25.70 bushels. In the years 1909 to 1913 the production averaged 3,613 millions of bushels from an average area of 142,870,000 acres. Subsequently the area declined, principally in Europe, but for 1930 a total was returned of 148,000,000 acres, an increase of 5,000,000 acres over the pre-war period.

3. **Prices of Oats.**—The average wholesale prices in the metropolitan markets for the year 1930-31 are given in the following table:—

**OATS.—AVERAGE WHOLESALE PRICES, 1930-31.**

Particulars.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Average price per bushel ..	3 3½	2 3	3 8½	1 10¾	1 6	1 9½

4. **Imports and Exports.**—The production of oats in Australia has not yet reached sufficient proportions to admit of a regular export trade; in fact in two of the years in the following table imports have exceeded the exports. The quantities and values of oats imported into and exported from Australia during the years 1926-27 to 1930-31 are given hereunder:—

**OATS.—IMPORTS AND EXPORTS, AUSTRALIA.**

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
1926-27 ..	197,070	40,553	137,768	26,301	-59,302	-14,252
1927-28 ..	525,568	92,301	64,987	14,172	-460,581	-78,129
1928-29 ..	38,993	8,045	90,463	18,833	51,470	10,788
1929-30 ..	8,658	2,181	117,300	24,950	108,642	22,769
1930-31 ..	3,293	966	171,825	23,957	168,532	22,991

NOTE.—(—) signifies net import.

Imports have been obtained chiefly from New Zealand, while the principal countries to which oats were exported during the years quoted were New Zealand, Malaya (British), Ceylon, and Netherlands East Indies.

5. **Oatmeal, etc.**—The production of oatmeal in Australia during 1930-31 amounted to 274,796 cwt., practically the whole of which is consumed locally, the quantity of oats used for oatmeal being 1,676,661 bushels or 10 per cent. of the total production. Oversea trade in this and similar products is small, the imports of oatmeal, wheatmeal and rolled oats during 1930-31 amounting to 3,415 cwt., and exports to 8,403 cwt.

6. **Value of Oat Crop.**—The estimated value of the oat crop for the season 1930-31 was as follows:—

**OATS.—VALUE OF CROP,(a) 1930-31.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£
Aggregate value..	276,930	617,572	22,039	169,025	257,232	94,450	185	1,437,433
Value per acre ..	£1/11/4	£1/13/6	£4/5/11	£0/15/6	£0/18/9	£2/12/7	£2/8/1	£1/10/9

(a) Exclusive of the value of straw.

§ 6. Maize.

1. **States Growing Maize.**—Maize is grown for grain chiefly in New South Wales and Queensland, the area so cropped in these States during the season 1930-31 being 277,200 acres, or 94 per cent. of the total for Australia. Of the balance, Victoria contributed 16,227 acres, and Western Australia 10 acres. The climate of Tasmania is unsuitable for the growing of maize for grain. In the States mentioned, the crop is grown to a greater or less extent for green forage, particularly in connexion with the dairying industry.

2. **Progress of Cultivation.**—(i) *Area and Production.* Notwithstanding its pre-eminence as the world's most extensively grown cereal, the cultivation of maize has decreased in Australia during the past decennium. Compared with the previous year, the area in 1930-31 decreased by more than 4,000 acres. The greatest area grown was in 1910-11 when it amounted to 414,914 acres. The average for the decennium 1921-31 was 322,360 acres.

The area and production of maize for grain in each State for the past five years are given in the following table. The fluctuations from year to year are shown more fully on the graph herein.

MAIZE.—AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Nor. Ter.	Fed. Cap. Ter.	Australia.
AREA.								
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1926-27	128,512	20,046	137,542	2	32	40	4	286,178
1927-28	148,801	17,645	234,013	..	63	10	12	400,544
1928-29	106,835	16,077	192,173	..	55	..	..	315,140
1929-30	108,219	17,640	171,614	..	29	..	..	297,502
1930-31	105,024	16,227	172,176	..	10	..	13	293,450
PRODUCTION.								
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1926-27	3,625,410	685,407	2,658,895	99	342	..	120	6,970,273
1927-28	3,930,570	757,780	6,703,518	..	1,098	..	84	11,393,050
1928-29	2,506,470	679,810	5,135,607	..	831	..	..	8,322,718
1929-30	3,035,850	533,719	4,376,412	..	339	..	..	7,946,320
1930-31	2,766,660	692,896	4,565,850	..	87	..	126	8,025,619

The greatest production of maize in Australia was recorded in 1910-11, when it amounted to over 13,000,000 bushels. This figure was considerably in excess of the yields for recent years, except in 1924, when a bountiful harvest in Queensland increased the Australian total to 12,400,000 bushels. The production in 1930-31 amounted to 8,025,619 bushels, and the average for the past decennium was 8,586,506 bushels.

(ii) *Average Yield.* The following table gives particulars of the average yield per acre of the maize crops of the States for the seasons 1926-27 to 1930-31, and for the decennium 1921-1931:—

MAIZE.—AVERAGE YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	N. Ter.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1926-27 ..	28.21	34.19	19.33	49.50	10.69	..	30.00	24.36
1927-28 ..	26.42	42.95	28.65	..	17.43	..	7.00	28.45
1928-29 ..	23.46	42.28	26.72	..	15.11	..	..	26.41
1929-30 ..	28.05	30.26	25.50	..	11.69	..	..	26.71
1930-31 ..	26.34	42.70	26.52	..	8.70	..	9.69	27.34
Average for 10 seasons 1921-31	26.76	39.40	24.96	20.15	13.17	5.69	19.71	26.64



The average for Victoria in 1930-31 was amongst the highest in the world. The area, however, is comparatively small and is situated in specially favourable districts. The average for New South Wales is generally higher than for Queensland.

(iii) *Production per Acre—Various Countries.* The average for Australia for the past 10 years was 26.6 bushels per acre. The United States of America shows an average of 27.6 bushels, Argentine 32.98 bushels, Rumania 16.25 bushels, and the Soviet Republic 18.16 bushels per acre.

3. *World's Production.*—The production in 1925, amounting to 4,685 million bushels, was the highest on record. Since that year there was a decline down to 1929 when an increase of approximately 200 million bushels was returned. Totals from 1909 to 1930 were as follow :—

Average 1909 to 1913	..	..	..	4,174,000,000 bushels
1926	..	..	..	4,464,000,000 „
1927	..	..	..	4,373,000,000 „
1928	..	..	..	4,301,000,000 „
1929	..	..	..	4,508,000,000 „
1930	..	..	..	3,972,000,000 „

The United States is the most important maize-producing country in the world. Approximately 100,000,000 acres are planted there annually, and nearly 3,000,000,000 bushels are reaped, representing about 75 per cent. of the world's production. About 85 per cent. of the total is fed to live stock on farms, 10 per cent. is used for human food, and only a very small fraction, viz., 1½ per cent., is exported.

4. *Price of Maize.*—The average wholesale price of maize in the Sydney market for each of the last five years is given in the following table :—

#### MAIZE.—AVERAGE PRICE, SYDNEY.

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Average price per bushel ..	6 10	4 7	4 11½	6 0½	4 1

5. *Overseas Imports and Exports.*—The decline in production has necessitated an average annual import of more than 180,000 bushels during the last five years, the bulk of the supplies being furnished by South Africa. Details of imports and exports for the years 1926-27 to 1930-31 are as follow :—

#### MAIZE.—IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Imports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
1926-27 ..	1,173,514	277,821	2,477	890	1,171,037	276,931
1927-28 ..	115,638	25,443	145,402	24,421	— 29,764	1,022
1928-29 ..	773	539	278,289	50,451	— 277,516	— 49,912
1929-30 ..	66,968	13,899	5,911	824	— 61,057	13,075
1930-31 ..	3,945	681	1,498	377	— 2,447	— 304

NOTE.—(—) denotes net exports.

6. *Maize Products.*—A small quantity of corn-flour is imported annually into Australia, the principal countries of supply being the United Kingdom, South Africa, and the United States of America. During the year 1929-30 the imports amounted to 702,062 lb., and represented a value of £7,956 but in 1930-31 the figures fell to 10 lb., valued at £1. Exports from Australia are small, and in 1930-31 amounted to 15,922 lb., valued at £373

7. Value of Crop.—The value of the crop for the season 1930-31 was as follows:—

MAIZE.—VALUE OF CROP, 1930-31.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	F.C.T.	Australia.
Aggregate value	£ 521,520	£ 129,918	£ 965,487	£ ..	£ 30	£ 24	£ 1,616,979
Value per acre	£4/19/4	£8/0/0	£5/12/2	..	£3/0/0	£1/16/11	£5/10/3

§ 7. Barley.

1. Progress of Cultivation.—(i) *Area and Production.* The area under barley has fluctuated considerably, but results for the last ten years show a tendency towards an increase. The average annual area sown for the decennium 1921-1931 amounted to 341,703 acres, as compared with an average of 213,564 acres for the previous ten years. Victoria was originally the principal barley-growing State, but since 1913-14, South Australia has been the chief producing State, accounting for nearly 66 per cent. of the Australian acreage in 1930-31. Victoria was next in importance with 23 per cent., leaving a small balance of about 11 per cent. distributed among the other States. The figures here given relate to the areas harvested for grain: small areas only are cropped for hay, while more considerable quantities are cut for green forage. These, however, are not included in this sub-section. The area and production of barley for grain in the several States are shown in the following table for the last five years, while the progress since 1860 is illustrated in the graphs herein:—

BARLEY.—AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
AREA.							
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1926-27 ..	5,626	88,896	399	256,528	13,826	5,665	4370,943
1927-28 ..	5,600	76,768	3,220	219,491	12,138	5,101	322,318
1928-29 ..	5,024	75,451	7,654	247,348	14,429	4,613	6354,539
1929-30 ..	7,947	97,678	9,754	305,316	23,649	6,935	6451,339
1930-31 ..	11,526	87,518	8,434	251,957	17,236	6,192	6382,887
PRODUCTION.							
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1926-27 ..	100,221	1,920,722	1,991	4,630,044	128,136	149,800	6,930,953
1927-28 ..	65,850	1,552,109	72,400	3,001,420	126,835	141,407	4,960,021
1928-29 ..	80,910	1,556,118	107,593	4,583,715	189,560	99,085	6,617,341
1929-30 ..	113,850	2,183,325	205,507	4,656,254	261,870	166,984	6,588,852
1930-31 ..	188,610	1,983,130	173,563	3,960,929	185,301	168,625	6,660,911

- (a) Including Federal Capital Territory, 3 acres, 39 bushels.
- (b) " " " " " " 20 acres, 360 bushels.
- (c) " " " " " " 60 acres, 1,002 bushels.
- (d) " " " " " " 24 acres, 753 bushels.

The States in which the annual production of barley averaged over 1,000,000 bushels for the past decade were South Australia and Victoria, the yields being respectively 3,829,943 and 1,864,891 bushels, the higher return per acre in the latter State tending to diminish the advantage held by South Australia in regard to acreage.

(ii) *Malting and Other Barley.* (a) *Year 1930-31.* Particulars for the season 1930-31 are as follow :—

**BARLEY, MALTING AND OTHER.—AREA AND PRODUCTION, 1930-31.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Malting barley..	7,144	60,800	6,148	235,175	13,202	5,590	328,059
Other barley ..	4,382	26,718	2,286	16,782	4,034	602	454,828
<b>Total ..</b>	<b>11,526</b>	<b>87,518</b>	<b>8,434</b>	<b>251,957</b>	<b>17,236</b>	<b>6,192</b>	<b>432,887</b>
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Malting barley..	126,720	1,401,306	134,226	3,717,883	141,240	152,565	5,673,940
Other barley ..	61,890	581,824	39,337	243,046	44,061	16,060	498,697
<b>Total ..</b>	<b>188,610</b>	<b>1,983,130</b>	<b>173,563</b>	<b>3,960,929</b>	<b>185,301</b>	<b>168,625</b>	<b>6,660,911</b>

(a) Including Federal Capital Territory, 24 acres, 753 bushels.

Taking Australia as a whole, about 85 per cent. of the area under barley in 1930-31 was sown with malting barley. The proportion, however, varies largely in the several States.

(b) *Progress of Cultivation.* The following table sets out the acreage and production of malting and other barley in Australia as a whole during the past five seasons :—

**BARLEY, MALTING AND OTHER.—AREA AND PRODUCTION, AUSTRALIA.**

Season.	Acres.			Bushels.			Average Yields per Acre.		
	Malting.	Other.	Total.	Malting.	Other.	Total.	Malting.	Other.	Total.
1926-27 ..	320,846	50,097	370,943	5,872,144	1,058,809	6,930,953	18.30	21.13	18.68
1927-28 ..	276,483	45,835	322,318	4,040,975	919,046	4,960,021	14.62	20.05	15.39
1928-29 ..	307,154	47,385	354,539	5,691,673	925,668	6,617,341	18.53	19.53	18.66
1929-30 ..	388,854	62,485	451,339	6,438,850	1,150,002	7,588,852	16.56	18.40	16.81
1930-31 ..	328,059	54,828	382,887	5,673,940	986,921	6,660,861	17.30	18.00	17.40
Average 10 seasons									
1921-31	286,803	54,900	341,703	5,119,272	1,059,796	6,179,068	17.85	19.30	18.08

During the past ten seasons the area and production of malting barley have represented almost five times the corresponding figures for other barley. The average yield per acre differs very little in respect of the two classes, the results for the past ten-yearly period being slightly in favour of the Cape variety.

(iii) *Average Yield.* The average yield of barley per acre varies considerably in the different States, being as a rule highest in Victoria and Tasmania, and lowest in Western Australia. Details for each State during the past five seasons, and for the decennium 1921-31, are given in the following table :—

BARLEY.—YIELD PER ACRE.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1926-27 ..	17.81	21.61	4.99	18.05	9.27	26.44	18.68
1927-28 ..	11.76	20.22	22.48	13.67	10.45	27.72	15.39
1928-29 ..	16.10	20.62	14.06	18.53	13.14	21.48	18.66
1929-30 ..	14.33	22.35	21.08	15.25	11.07	24.08	16.81
1930-31 ..	16.36	22.66	20.58	15.72	10.75	27.23	17.40
Average for 10 seasons 1921-31	15.81	21.86	17.92	16.97	11.51	23.76	18.08

2. Comparison with Other Countries.—In comparison with the barley production of other countries, that of Australia appears extremely small. Particulars for some of the leading countries during recent years are as follows:—United States 265 million bushels; Soviet Republic 300 million bushels; Germany 132 million bushels; India 110 million bushels; and Canada 105 million bushels.

3. World's Production.—The area under barley in 1930 showed a decrease of 3 million acres on that of the previous year. Compared with the average for 1909-13, the total under cultivation in 1930 amounting to 91 million acres, increased by about 5,000,000 acres. The production of barley in millions of bushels from 1909 onwards was as follows:—

Year.	Production.
Average 1909-13 ..	1,676 millions of bushels.
1926 ..	1,531 "
1927 ..	1,567 "
1928 ..	1,781 "
1929 ..	1,897 "
1930 ..	1,808 "

4. Prices.—The average price in the Melbourne market during each of the past five years is given in the following table:—

BARLEY.—AVERAGE MELBOURNE PRICE PER BUSHEL.

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Malting barley ..	4 3	4 7½	4 7	4 1	2 11
Cape barley ..	3 11	4 3	3 6	3 3½	2 2

5. Imports and Exports.—Australian exports of barley during the last five years averaged 1,705,626 bushels. The grain was consigned mainly to the United Kingdom and Belgium, South Australia being the principal exporting State. Particulars of the Australian overseas imports and exports for the years 1926-27 to 1930-31 are contained in the following table:—

BARLEY.—IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
1926-27 ..	696	285	2,021,480	383,103	2,020,784	382,818
1927-28 ..	262	108	1,251,444	291,636	1,251,182	291,528
1928-29 ..	150	58	1,279,014	228,707	1,278,864	228,649
1929-30 ..	1,760	745	647,542	99,046	645,782	98,301
1930-31 ..	110	52	3,328,652	403,919	3,328,542	403,867

In some years there is an export of Australian pearl and Scotch barley, the total for 1930-31 reaching 13,693 lb., valued at £116 consigned mainly to the Pacific Islands.

6. **Imports and Exports of Malt.**—In pre-war times the imports of malt into Australia were fairly extensive, the supply being obtained principally from the United Kingdom. Since 1914, however, imports have practically ceased, and in 1917-18 and 1920-21 fairly large quantities were exported to South Africa and Japan. Details of imports and exports for the years 1926-27 to 1930-31 are given in the next table :—

#### MALT.—IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
1926-27 .. ..	688	197	2,285	1,340	1,597	1,143
1927-28 .. ..	365	119	3,593	1,498	3,228	1,379
1928-29 .. ..	508	186	4,958	1,897	4,450	1,711
1929-30 .. ..	133	92	8,185	3,467	8,052	3,375
1930-31 .. ..	38	57	4,253	1,730	4,215	1,673

7. **Value of Barley Crop.**—The estimated value of the barley crop for the season 1930-31 and the value per acre are shown in the following table :—

#### BARLEY.—VALUE OF CROP(a), 1930-31.

Value.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£
Total ..	31,480	226,073	31,451	439,782	24,366	22,790	70	776,012
Per acre ..	£2/14/7	£2/11/8	£3/14/7	£1/14/11	£1/8/3	£3/13/7	£2/18/4	£2/0/6

(a) Exclusive of the value of straw.

### § 8. Rice.

Experimental rice cultivation has been carried on at the Yanco Experimental Farm for some years, but it was not until 1924-25 that an attempt was made to grow the cereal on a commercial basis. In that year production amounted to 16,240 bushels from 153 acres, or an average of 106 bushels per acre.

Figures relating to area, production, etc., since 1925-26 will be found in the following table :—

#### RICE.—AREA, PRODUCTION, ETC., AUSTRALIA.

Year.	Area.	Production. Paddy Rice.	Average. Yield.	Imports.	Exports.	Retail Price.
	Acres.	Bushels.	Bushels.	Bushels.	Bushels.	Pence per lb.
1925-26 ..	1,559	61,133	39.21	1,209,693	..	3.40
1926-27 ..	3,967	214,860	54.16	1,195,706	..	3.65
1927-28 ..	9,901	879,113	88.88	521,776	288	3.79
1928-29 ..	14,058	1,307,641	93.02	237,493	7,250	3.74
1929-30 ..	19,789	1,829,297	92.44	282,489	30,866	3.65
1930-31 ..	19,860	1,427,524	71.88	117,624	200,760	3.58

The area and production shown in the above table refer chiefly to the Murrumbidgee Irrigation Area. The production from several small experimental plots in other States is also included, but the quantity is negligible. According to the report of the Irrigation Commission of New South Wales, there are about 53,000 acres of land in the irrigation

settlements suitable for rice-growing, and it is estimated that at least 40,000 acres could be so used, of which, probably, 20,000 acres would be under fallow each year and 20,000 under crop. Annual local requirements are computed at 1,100,000 bushels, but the production during the past three years has exceeded consumption and the surplus has been exported chiefly to the United Kingdom, Canada, New Zealand, and the Pacific Islands.

### § 9. Other Grain and Pulse Crops.

In addition to the grain crops already specified, the principal other grain and pulse crops grown in Australia are beans, peas, and rye. The total area under the two former crops for the season 1930-31 was 42,212 acres, giving a yield of 736,523 bushels, or an average of 17.45 bushels per acre, being above the average yield for the decennium ended 1930-31, which was 15.84 bushels per acre. Beans and peas are grown chiefly in Tasmania, South Australia and Victoria. Peas are exported in considerable quantities to the United Kingdom, the chief exporting State being Tasmania. The total area under rye in Australia during the season 1930-31 was 6,128 acres, yielding 80,919 bushels, giving an average of 13.20 bushels per acre, or slightly higher than the average for the past ten seasons, i.e., 13.10 bushels per acre. Nearly 73 per cent. of the rye grown during the season was produced in New South Wales, and 12 per cent. in Victoria.

### § 10. Potatoes.

**i. Progress of Cultivation.**—(i) *Area and Production.* Victoria possesses peculiar advantages for the growth of potatoes, as the rainfall is generally satisfactory, and the climate is unfavourable to the spread of Irish blight, consequently the crop is grown in nearly every district except in the wheat belt. Tasmania comes next in order of importance, followed by New South Wales.

The area and production of potatoes in each State during the last five years are given hereunder:—

#### POTATOES.—AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
AREA.								
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1926-27 ..	21,906	66,185	8,642	3,549	5,144	33,984	35	139,445
1927-28 ..	21,578	77,649	10,035	4,309	5,280	44,359	21	163,231
1928-29 ..	14,830	68,412	8,154	4,518	4,819	37,299	16	138,068
1929-30 ..	12,785	58,789	8,116	4,536	6,024	33,722	8	123,980
1930-31 ..	15,304	67,590	10,277	4,998	6,306	37,229	12	141,716
PRODUCTION.								
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1926-27 ..	53,223	162,909	9,749	15,375	17,755	114,100	65	373,176
1927-28 ..	47,397	230,348	18,914	17,749	16,746	138,837	50	470,041
1928-29 ..	26,339	140,158	9,687	13,859	18,774	75,222	11	284,050
1929-30 ..	23,907	171,747	13,214	14,990	27,546	91,137	..	342,541
1930-31 ..	32,283	173,341	18,489	18,991	26,318	95,289	13	364,724

(a) Includes Northern Territory, 20 acres.

The acreage grown during the last five years was fairly uniform, except in 1927-28, when there was an increase of nearly 24,000 acres, chiefly owing to larger planting in Victoria and Tasmania. The production in 1930-31 amounted to 364,724 tons, as compared with an average of 364,408 tons for the last ten years and 365,241 tons for the previous decennial period. The record production of 507,153 tons was obtained in 1906-7.

(ii) *Average Production.* Particulars for each State for the seasons 1926-27 to 1930-31, and for the past decennium, are given hereunder:—

#### POTATOES.—PRODUCTION YIELD PER ACRE.

Season.	N.S. W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1926-27 .. ..	2.43	2.46	1.13	4.33	3.45	3.36	1.86	2.68
1927-28 .. ..	2.40	2.97	1.88	4.12	3.17	3.13	2.38	2.88
1928-29 .. ..	1.78	2.05	1.19	3.07	3.90	2.02	0.69	2.06
1929-30 .. ..	1.87	2.92	1.63	3.30	4.57	2.70	1.13	2.76
1930-31 .. ..	2.11	2.56	1.80	3.80	4.17	2.56	1.08	2.57
Averages for 10 seasons 1921-31..	2.12	2.68	1.60	3.59	3.88	2.67	2.83	2.60

The comparatively low yield per acre compared with that of many other countries is due in large measure to the neglect of rotation, and the insufficient use of manures. The production in New Zealand, for example, in 1930-31 averaged 5.56 tons per acre from an area of 23,998 acres, as compared with 2.60 tons per acre from 140,000 acres in Australia.

(iii) *Relation to Population.* The average annual production of potatoes per head of the population of Australia for the past five seasons was approximately 130 lb. In Tasmania, where this crop is of far greater importance in relation to population than is the case in any other State, the production per head in 1906-7 was nearly a ton, while for the past five seasons it has averaged almost 10 cwt. Details for all States for the seasons 1926-27 to 1930-31 are as follow:—

#### POTATOES.—PRODUCTION PER 1,000 OF POPULATION.

Season.	N.S. W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1926-27 .. ..	23	95	11	27	47	531	13	61
1927-28 .. ..	20	132	21	31	43	643	9	75
1928-29 .. ..	11	80	11	24	46	347	1	45
1929-30 .. ..	10	97	14	26	66	416	..	53
1930-31 .. ..	13	97	20	33	63	432	2	56

(iv) *Consumption.* Oversea trade in potatoes is comparatively small, and the consumption in Australia averages between 50 and 60 tons per 1,000 of population, or about 128 lb. per head. From the figures shown above, therefore, it is apparent that New South Wales, Queensland and South Australia do not produce the quantities necessary

for their requirements and must import from Tasmania and Victoria which have a surplus. Assuming that the consumption is uniform in each State, the following table which gives the average annual production and consumption indicates also estimated average annual deficiencies or surpluses for the last five years :—

POTATOES.—PRODUCTION AND CONSUMPTION—STATES, 1927-31.

State.	Average Annual Production.	Average Annual Consumption.	Average Annual Imports.
	1,000 Tons.	1,000 Tons.	1,000 Tons.
New South Wales .. ..	37	141	104
Victoria .. ..	176	103	- 73
Queensland .. ..	14	53	39
South Australia .. ..	16	34	18
Western Australia .. ..	21	23	2
Tasmania .. ..	103	13	- 90
Australia .. ..	367	367	..

The minus sign (-) denotes average exports.

2. Imports and Exports.—Under normal conditions small quantities of potatoes are exported, principally to the Pacific Islands and Papua. In case of a shortage in any of the States, supplies are usually obtained from New Zealand. Figures showing the trade for the past five years are given in the following table :—

POTATOES.—IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£
1926-27 .. ..	14,491	125,188	1,158	14,950	-13,333	-110,238
1927-28 .. ..	218	1,831	2,132	16,619	1,914	14,788
1928-29 .. ..	4	82	1,766	19,948	1,762	19,866
1929-30 .. ..	52	736	1,173	16,974	1,121	16,238
1930-31 .. ..	7	128	1,917	13,948	1,910	13,820

NOTE.—The minus sign (-) signifies net imports.

3. Value of Potato Crop.—The estimated value of the potato crop of each State for the season 1930-31 is given in the following table :—

POTATOES.—VALUE OF CROP, 1930-31.

Value.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
Total ..	£ 218,720	£ 624,027	£ 165,245	£ 86,319	£ 166,818	£ 428,800	£ 88	£ (a)1,690,017
Per acre ..	£14/5/10	£9/4/8	£16/1/7	£17/5/5	£26/9/1	£11/10/4	£7/6/8	£11/18/6

(a) Includes £60 Northern Territory.



### § 11. Other Root and Tuber Crops.

1. **General.**—Root crops, other than potatoes, are not extensively grown in Australia, the total area under such crops for the season 1930-31 being only 20,354 acres. The most important were onions, mangolds, sugar beet, turnips, and "sweet potatoes." Of these, onions, sugar beet and mangolds are most largely grown in Victoria, turnips in Tasmania, and sweet potatoes in Queensland. The total area under onions in Australia during the season 1930-31 was 7,419 acres, giving a yield of 46,660 tons, and averaging 6.29 tons per acre. The area in 1930-31 under root crops other than potatoes and onions was 15,526 acres, from which a production of 118,932 tons was obtained, or an average of 7.66 tons per acre. The areas and yields here given are exclusive of the production of "market gardens," reference to which is made further on.

2. **Imports and Exports.**—The only root crop, other than potatoes, in which any considerable overseas trade is carried on by Australia is that of onions. During the past five years 8,395 tons, valued at £91,760, were imported, principally from Japan, the United States of America, and New Zealand, while during the same period the exports which amounted to 16,101 tons, valued at £127,988, were shipped mainly to New Zealand, the Pacific Islands, the Philippine Islands, and Canada.

### § 12. Hay.

1. **General.**—(i) *Area and Production.* As already stated, the chief crop in Australia is wheat grown for grain. Next in importance, is hay, which for the season 1930-31 averaged more than 13 per cent. of the total area cropped. In most European countries the hay consists almost entirely of meadow and other grasses, but in Australia a very large proportion consists of wheat, oats and lucerne. The area under hay of all kinds in the several States during the last five years is given hereunder. The progress from 1860 onwards may be traced from the graph accompanying this chapter.

#### HAY.—AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	N. Ter.	Fed Cap. Ter.	Aus- tralia.
AREA.									
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1926-27	623,424	1,080,993	40,141	496,105	358,487	98,289	..	2,192	2,699,631
1927-28	680,919	908,804	65,412	532,568	357,065	85,769	..	1,682	2,632,219
1928-29	684,730	1,005,063	55,498	497,538	414,866	80,190	..	788	2,738,673
1929-30	698,395	865,015	49,745	544,438	418,698	80,153	..	2,217	2,658,661
1930-31	899,770	1,277,398	52,228	612,935	398,411	83,268	..	2,453	3,323,463
PRODUCTION.									
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1926-27	875,227	1,387,971	47,740	598,835	423,839	151,200	..	2,540	3,487,352
1927-28	754,176	1,001,251	94,996	464,905	416,707	124,924	..	2,004	2,858,963
1928-29	793,255	1,267,437	85,651	486,993	421,504	119,427	..	971	3,175,238
1929-30	686,962	963,089	79,583	445,579	428,328	119,800	..	1,933	2,725,274
1930-31	1,191,696	1,605,900	87,146	641,273	491,595	128,957	..	3,094	4,149,661

Owing to various causes, the principal being the variation in the relative prices of grain and hay, and the favourableness or otherwise of the season for a grain crop, the area under hay is liable to fluctuate considerably. The area under hay in Australia during the season 1915-16, i.e., 3,597,771 acres, was the highest on record, whilst the average during the past decennium amounted to 2,965,026 acres.

(ii) *Average Production.* During the last ten years Tasmania and Queensland show the highest average production per acre, although the area sown in these States is the smallest. For the same period the lowest yield for Australia as a whole was that of 21 cwt. per acre in 1929-30, while the highest was that of 29 cwt. in 1920-21, followed closely by 27 cwt. obtained in 1924-25. The average for the decennium was 24 cwt. Particulars for the several States for the seasons 1926-27 to 1930-31 and the average for the last ten years are given hereunder :—

## HAY.—PRODUCTION PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1926-27 .. ..	1.40	1.28	1.19	1.21	1.18	1.54	..	1.16	1.29
1927-28 .. ..	1.11	1.10	1.45	0.87	1.17	1.46	..	1.19	1.09
1928-29 .. ..	1.16	1.26	1.54	0.98	1.02	1.49	..	1.23	1.16
1929-30 .. ..	0.98	1.11	1.60	0.82	1.02	1.49	..	0.87	1.03
1930-31 .. ..	1.33	1.26	1.67	1.05	1.23	1.55	..	1.26	1.25
Average for 10 seasons 1921-1931 .. ..	1.23	1.22	1.41	1.11	1.24	1.48	1.67	1.22	1.20

(iii) *Varieties Grown.* Information in regard to the crops cut for hay is available for all States excepting Tasmania. It is known, however, that oaten hay constitutes the most important variety grown in the island State.

Details for the past five seasons are given in the following table :—

## HAY.—VARIETIES GROWN.

Varieties.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	Acres.	Acres.	Acres.	Acres.	Acres.
<b>NEW SOUTH WALES—</b>					
Wheaten .. ..	311,073	369,960	375,270	381,071	520,993
Oaten .. ..	216,403	200,872	214,137	226,025	278,865
Barley .. ..	692	615	817	1,294	1,081
Lucerne .. ..	95,003	109,194	94,275	89,385	95,181
Other .. ..	253	278	231	620	650
<b>Total .. ..</b>	<b>623,424</b>	<b>680,919</b>	<b>684,730</b>	<b>698,395</b>	<b>896,770</b>

HAY.—VARIETIES GROWN—*continued.*

Varieties.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	Acres.	Acres.	Acres.	Acres.	Acres.
<b>VICTORIA—</b>					
Wheaten .. ..	101,243	224,454	135,718	165,564	188,360
Oaten .. ..	959,019	659,983	845,731	675,256	1,049,019
Lucerne, etc. .. ..	20,731	24,367	23,614	24,195	40,019
Total .. ..	1,080,993	908,804	1,005,063	865,015	1,277,398
<b>QUEENSLAND—</b>					
Wheaten .. ..	2,798	3,637	4,585	3,811	10,645
Oaten .. ..	790	2,468	2,192	2,608	4,280
Lucerne .. ..	33,263	48,346	45,476	40,013	34,845
Other .. ..	3,290	10,961	3,245	3,313	2,458
Total .. ..	40,141	65,412	55,498	49,745	52,228
<b>SOUTH AUSTRALIA—</b>					
Wheaten .. ..	230,120	289,219	270,805	318,239	321,295
Oaten .. ..	256,417	233,709	218,140	212,956	275,526
Lucerne .. ..	5,613	5,649	4,833	5,447	6,390
Other .. ..	3,955	3,991	3,700	7,790	9,724
Total .. ..	496,105	532,568	497,538	544,438	612,935
<b>WESTERN AUSTRALIA—</b>					
Wheaten .. ..	207,841	223,827	250,786	209,893	192,345
Oaten .. ..	148,150	130,109	160,675	198,529	192,243
Lucerne .. ..	340	120	184	293	234
Other .. ..	2,156	3,009	3,221	9,983	13,589
Total .. ..	358,487	357,065	414,866	418,698	398,411

Wheat is most largely used for hay in New South Wales, South Australia, and Western Australia, oats in Victoria and Tasmania, and lucerne in Queensland. For all States the proportions of the principal kinds of hay produced average about 55.8 per cent. for oats, 36.5 per cent. for wheaten, 6.8 per cent. for lucerne, and 0.9 per cent. for other hay.

2. **Comparison with Other Countries.**—As already noted, the hay crops of most European countries consist of grasses of various kinds, amongst which clover, lucerne, sainfoin and rye grass occupy prominent places. The statistics of hay production in these countries are not prepared on a uniform basis, consequently any attempt to furnish extensive comparisons would be misleading. It may be noted, however, that in Great Britain the production of hay from clover, sainfoin, etc., for the year 1931 amounted to 2,605,000 tons from 1,726,444 acres, while from permanent grasses a yield of 5,328,000 tons of hay was obtained from 4,777,843 acres, giving a total of 7,933,000 tons from 6,504,287 acres, or about 24 cwt. per acre.

3. **Imports and Exports.**—Under normal conditions, hay, whether whole or in the form of chaff, is somewhat bulky for oversea trade, and consequently does not in such circumstances figure largely amongst the imports and exports of Australia. During 1930-31, 180 tons were imported, while the exports amounted to 4,040 tons, valued at £21,495, the principal purchases being made by New Zealand, Malaya (British), Ceylon, the Philippine Islands, and Hong Kong.

4. Value of Hay Crop.—The following table shows the value, and the value per acre, of the hay crop of the several States for the season 1930-31 :—

HAY.—VALUE OF CROP, 1930-31.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£
Total Value ..	7,009,320	4,255,635	430,571	1,330,641	964,929	386,870	18,677	14,396,643
Value per acre ..	£7/16/4	£3/6/8	£8/4/11	£2/3/5	£2/8/5	£4/12/11	£7/12/3	£4/6/8

### § 13. Green Forage.

1. Nature and Extent.—(i) *Area.* A considerable area is devoted to the production of green forage, mainly in connexion with the dairying industry. The total area so cropped is considerably swollen in adverse seasons by the inclusion of wheat or other cereal crops deemed unsuitable for the production of either grain or hay. Under normal conditions, the principal crops cut for green forage are maize, sorghum, oats, barley, rye, rape, and lucerne, while small quantities of sugar-cane also are so used. Particulars concerning the area under green forage in the several States during each of the last five years are given in the following table :—

GREEN FORAGE.—AREA.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1926-27	217,385	87,241	342,580	105,170	109,314	19,213	..	54	880,957
1927-28	848,042	94,895	155,843	184,782	82,241	23,409	..	8	1,389,220
1928-29	264,699	107,351	180,524	155,460	125,311	25,402	..	837	859,584
1929-30	356,903	169,253	208,624	86,500	132,505	23,245	..	465	977,495
1930-31	310,341	126,347	217,282	59,956	107,384	23,438	..	662	845,410

2. Value of Green Forage Crops.—The value of these crops is variously estimated in the several States, and the Australian total for the season 1930-31 may be taken approximately as £2,384,747 or about £2 16s. 5d. per acre.

### § 14. Sugar-cane and Sugar-beet.

1. Sugar-cane.—(i) *Area.* Sugar-cane for sugar-making purposes is grown only in Queensland and New South Wales, and much more extensively in the former than in the latter State. Thus, of a total area of 311,694 acres under sugar-cane in Australia for the season 1930-31, there were 296,070 acres, or about 95 per cent., in Queensland. Sugar-cane growing appears to have been started in Australia in or about 1862, as the earliest statistical record of sugar-cane as a crop is that which credits Queensland with an area of 20 acres for the season 1862-63. In the following season the New South Wales returns show an area of 2 acres under this crop. The area under cane in New South Wales reached its maximum in 1895-96 with a total of 32,927 acres. Thenceforward, with slight variations, it gradually fell to 10,490 acres in 1918-19, but from that year it expanded until 1924-25, when about 20,000 acres were planted. Later, however, the area declined, and in 1930-31 only 15,624 acres were under cultivation. In Queensland, although fluctuations in area are manifest, the general trend has been upwards, the acreage under cane for the season 1930-31 being the highest on record. The area under sugar-cane in Australia from 1926-27 is given in the following table, and particulars for earlier years may be seen from the accompanying graphs.

## SUGAR-CANE.—AREA.

Season.	New South Wales.		Queensland.		Australia.		Total.
	Productive.	Unproductive.	Productive.	Unproductive.	Productive.	Unproductive.	
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1926-27 ..	10,128	8,181	189,312	77,207	199,440	85,388	284,828
1927-28 ..	8,556	7,905	203,748	71,090	212,304	78,995	291,299
1928-29 ..	6,783	9,055	215,674	67,802	222,457	76,857	299,314
1929-30 ..	7,967	7,458	214,880	76,780	222,847	84,238	307,085
1930-31 ..	7,617	8,007	222,044	74,026	229,661	82,033	311,694

(ii) *Productive and Unproductive Cane.* The areas given in the preceding table do not include the small acreage cut for green forage. The whole area was not necessarily cut for crushing during any one season, there being always a considerable amount of young and "stand-over" cane, as well as a small quantity required for plants. The season in which the highest acreage is recorded may not show the greatest area of productive cane cut for crushing, as was evidenced in 1923-24, when, although the total acreage was greater, the area cut was less than in the previous year.

(iii) *Production of Cane and Sugar.* For Queensland, statistics of the production of sugar-cane are not available for dates prior to the season 1897-98. In that season the total for Australia was 1,073,883 tons, as against the maximum production of 3,965,587 tons in 1925-26. The average production of cane during the decennium ended 1930-31 was 3,370,101 tons. The three highest yields of sugar were in 1930-31, 1929-30, and 1928-29, the quantities being 535,624 tons, 538,084 tons, and 537,574 tons respectively. The decennial average was 437,392 tons of sugar. Particulars relative to the total production of cane and sugar for the past five years are as follows:—

## SUGAR-CANE.—PRODUCTION OF CANE AND SUGAR.

Season.	New South Wales.		Queensland.		Australia.	
	Cane.	Sugar.	Cane.	Sugar.	Cane.	Sugar.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1926-27 ..	230,254	26,604	2,925,662	389,272	3,155,916	415,876
1927-28 ..	208,612	23,349	3,555,827	485,745	3,764,439	509,094
1928-29 ..	147,414	16,954	3,736,311	520,620	3,883,725	537,574
1929-30 ..	174,110	19,568	3,581,265	518,516	3,755,375	538,084
1930-31 ..	160,209	18,841	3,528,660	516,783	3,688,869	535,624

The production of raw sugar in Australia in 1929-30 amounted to 535,624 tons manufactured from 3,688,869 tons of cane. These figures show a small decrease on the returns for the previous year. The assistance mentioned hereafter given by the Commonwealth and State Governments during recent years has greatly benefited the sugar industry. In 1920-21 the area cultivated in Queensland was 162,619 acres and the number of cane farmers was 3,930, whereas in 1930-31, 296,070 acres were under cultivation and the number of growers had risen to 7,221, or an increase of 3,291 in the ten years. Official data are not available regarding the total number engaged in the sugar industry in Queensland, but the average number of persons employed in sugar mills is given as approximately 6,000. In addition, it is unofficially estimated that 15,000 persons are engaged as cane cutters and field workers. The total number of persons directly engaged in the industry in Queensland may therefore be estimated at approximately 28,000.

Final figures for the 1931-32 season are not yet complete, but it is anticipated from the data available that the production of raw sugar will amount to 600,117 tons from 4,194,509 tons of cane crushed. Early indications point to a smaller crop in 1932-33, and it is anticipated that the production will amount to about 544,000 tons of raw sugar.

(iv) *Average Production of Cane and Sugar.* Owing to climatic variation, comparison between the average yield of cane per productive acre in Queensland and New South Wales cannot be accurately made except on an annual basis. In New South Wales between 20 and 24 months are required for the crop to mature, but in Queensland 12 to 14 months is sufficient. After making due allowance on this score, therefore, the average annual yield of cane per productive acre for the decennium ending 1930-31 was for New South Wales, 13.78 tons, and 6.26 tons for Queensland. Similarly, the production of sugar per acre for the same period is estimated at 1.57 tons and 2.12 tons respectively. Leaving aside the consideration mentioned above, the yield of cane and sugar per acre crushed for Australia for the ten years ending 1930-31 was 17.92 tons and 2.33 tons respectively, as compared with 17.62 tons and 2.06 tons for the decennium ended 1920-21.

(v) *Quality of Cane.* The quantity of cane required to produce a ton of sugar varies with the variety planted, the district, and the season, and for the decennium ended 1930-31 averaged 7.70 tons, the average production of sugar being 12.98 per cent. of the weight of cane crushed. As the result of the systematic study of cane culture in Queensland, the sugar content of the cane has been considerably increased in recent years, and in 1930 only 6.83 tons of cane were required to produce one ton of sugar. It is believed that this is the highest sugar content obtained anywhere in the world. During the ten years ended 1920-21 it required on the average 8.56 tons of cane to produce one ton of sugar, whereas the average figure for the past decennium was reduced to 7.70 tons.

## SUGAR-CANE AND SUGAR.—YIELD PER ACRE.

Season.	New South Wales.			Queensland.			Australia.		
	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1926-27 .. ..	22.73	2.63	8.65	15.45	2.06	7.52	15.82	2.09	7.59
1927-28 .. ..	24.38	2.73	8.93	17.45	2.38	7.32	17.73	2.40	7.39
1928-29 .. ..	21.73	2.50	8.69	17.32	2.41	7.18	17.46	2.42	7.22
1929-30 .. ..	21.85	2.46	8.90	16.67	2.41	6.91	16.85	2.41	6.98
1930-31 .. ..	21.03	2.47	8.50	15.89	2.33	6.83	16.06	2.33	6.89
Average 10 seasons, 1921-31 .. ..	25.27	2.88	8.77	17.61	2.30	7.65	17.92	2.33	7.70

The Bureau of Sugar Experiment Stations in Queensland is rendering useful service to the sugar industry by advocating and demonstrating better methods of cultivation, the more scientific use of fertilizers, lime, etc., and by producing and distributing improved varieties of cane.

(vi) *Relation to Population.* The yield of sugar in Australia during the five years 1926-27 to 1930-31 was more than sufficient to supply local requirements, the average production during the period amounting to 180 lb. per head of population. Figures for the period 1926-27 to 1930-31 are as follow:—

## SUGAR.—PRODUCTION PER HEAD OF POPULATION.

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	lb.	lb.	lb.	lb.	lb.
New South Wales .. ..	25	22	16	18	19
Queensland .. ..	988	1,210	1,272	1,248	982
Australia .. ..	152	183	190	188	151

(vii) *Consumption.* The average annual consumption of raw sugar during the five years ending 1930-31 is estimated at 346,000 tons, equal to 123 lb. of raw sugar or 117 lb. of refined sugar per head of population. Sugar contained in jam, preserved fruit, milk, etc., exported during the period has not been taken into account in arriving at the figures quoted. The quantity of sugar used during the last three years in factories is shown in the following table, the figures including, where necessary, estimates of consumption based on the sugar contents of the finished product.

SUGAR.—CONSUMPTION IN FACTORIES, AUSTRALIA.

Factories.	1928-29.	1929-30.	1930-31.
	Tons.	Tons.	Tons.
Aerated Waters and Cordials .. ..	11,063	8,958	6,316
Bacon Factories .. ..	125	113	102
Bakeries—including Cakes and Pastry .. ..	8,575	8,815	7,267
Biscuits .. ..	5,837	5,385	4,359
Breweries .. ..	15,264	13,836	10,939
Condensed and Concentrated Milk .. ..	8,975	7,503	6,133
Confectionery .. ..	24,275	23,166	16,940
Jams, Jellies and Preserved Fruit .. ..	27,779	29,186	22,786
Jelly Crystals .. ..	1,269	1,177	896
Total .. ..	103,162	98,139	75,738

2. *Sugar-beet.*—(i) *Area and Production.* Victoria is the only State at present growing beets for sugar, and particulars in regard to acreage and production for the last five years are incorporated in the table below:—

SUGAR-BEET.—AREA AND PRODUCTION, VICTORIA.

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Area harvested .. acres	2,024	2,353	2,130	2,500	3,045
Production .. tons	9,851	25,438	15,237	26,525	38,291
Average per acre .. ..	4.87	10.81	7.15	10.61	12.58
Sugar produced .. ..	1,177	2,352	2,096	3,472	5,095

Seasonal conditions were favourable during 1930-31, the production amounting to 38,291 tons of beet, from which 5,095 tons of sugar were obtained. The quantity of beet required to produce one ton of sugar was 7.52 tons, as compared with 7.64 tons for the previous year. The average production per acre was 12.58 tons, and the average for the ten years ended 1931 was 10.63 tons.

(ii) *Encouragement of Beet-growing.* During recent years efforts have been made to expand the industry, and the Victorian Government has advanced its irrigation scheme on the Macalister River to provide an increased water supply for the district. A fine grade of white sugar is manufactured at Maffra, and considerable quantities of beet pulp and molasses are distributed for stock feed.

3. *Sugar Bounties.*—An account of the various Acts in connexion with sugar bounties and sugar excise tariffs will be found on pages 394 to 396 of Year Book No. 6. In 1912 the Sugar Excise Repeal Act and the Sugar Bounty Abolition Act were passed by the Federal Parliament, conditionally on the Queensland Parliament approving of legislation

prohibiting the employment of coloured labour in connexion with the industry. The State Sugar Cultivation Act, the Sugar Growers Act, and the Sugar Growers' Employees Act of 1913 having been approved of, the 1912 Federal Acts, which repeal all previous enactments in regard to excise on sugar and bounty on cane, came into force by proclamation in July, 1913.

4. **Sugar Purchase by Commonwealth Government.**—The steps taken by the Commonwealth Government in connexion with this matter were alluded to in previous issues of the Year Book. (See No. 18, p. 720.)

5. **Sugar Agreement—Embargo on Imports, etc.**—By agreement between the Commonwealth and Queensland Governments in 1925, it was arranged that the embargo on the importation of foreign sugar should be extended for three years from 1st September, 1925. The price payable for the raw sugar needed for home consumption was fixed at £27 per ton, less £1 per ton to defray administrative and general expenses of the Sugar Board, and to provide special concessions to certain consumers of sugar, while for that portion reserved for export, the price was fixed at a much lower figure, the latter of course being subject to realization adjustments. The embargo was later extended for a further period of three years until 1st August, 1931, on practically the same terms as previously. In response to representations, the Commonwealth Government appointed a Committee of Inquiry on the 23rd August, 1930, to report on the industry. The Committee consisted of eight members, representing the various interests concerned. The reports of the Committee were made available in March, 1931, and the renewal of the sugar agreement with certain modifications was recommended. The terms of the present agreement follow largely on those previously in force, particularly as regards the embargo on imports and fixation of prices. The assistance to the fruit industry has, however, been increased from £205,000 per annum to £315,000 by way of grant from the sugar industry. The agreement was signed on 1st June, 1931, and remains in force for a period of five years from 1st September, 1931. In 1932, however, conferences were arranged between the Commonwealth Government and representatives of the industry. It was decided that the Sugar Agreement of 1931–36 should be amended to provide for a reduction in the retail price of sugar by  $\frac{1}{4}$ d. per lb. from 1st January, 1933, and that the reduced retail price of 4d. per lb. should continue until the end of the period of the agreement (31st August, 1936). It was recommended also that the amount of assistance to the fruit industry should be reduced by £115,000 to £200,000. Legislation for the ratification of these proposals had not been passed at the time of compilation of this Chapter.

6. **Net Return for Sugar Crop.**—Final calculations by the Sugar Board regarding the disposal of the crop, net value of exports and the average price for the crop will be found in the following table :—

SUGAR.—NET RETURN, ETC., FOR CROP, AUSTRALIA.

Year.	Percentage Exported.	Net Value of Exports per Ton.	Average Price per Ton for Whole Crop.	Estimated Total Value of Crop.
	Per cent.	£ s. d.	£ s. d.	£
1926–27 .. ..	18.67	14 18 10	24 10 10	9,954,000
1927–28 .. ..	31.18	12 2 6	22 0 4	11,034,000
1928–29 .. ..	35.70	10 10 0	20 17 11	11,002,000
1929–30 .. ..	37.71	9 17 0	20 8 2	10,713,000
1930–31 .. ..	39.23	8 5 0	19 12 11	10,196,500

The estimated value of the crop is obtained by applying the wholesale price of £26 per ton to the quantity locally consumed and the net value per ton of exports to the quantity exported and adding the totals so obtained.



7. **Imports and Exports of Sugar.**—Owing to the embargo and the increased production of sugar in Australia, the imports have dwindled to insignificant proportions. Supplies to make up for local deficiencies are usually drawn from Java and Fiji. Particulars concerning the imports and exports of cane sugar for the past five years are as follow :—

**SUGAR.—IMPORTS AND EXPORTS, AUSTRALIA.**

Year.	Oversea Imports.		Oversea Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£
1926-27 ..	3,611	47,844	66,523	1,140,315	62,912	1,092,471
1927-28 ..	20	457	154,654	2,191,576	154,634	2,191,119
1928-29 ..	11	241	199,497	2,391,469	199,486	2,391,228
1929-30 ..	12	192	181,745	2,217,176	181,733	2,216,984
1930-31 ..	..	1	199,161	1,805,897	199,161	1,805,896

The export values quoted in the above table represent the amounts realized overseas.

8. **Sugar By-products.**—Large quantities of molasses are produced as a by-product in the sugar mills. Details for a series of years of the quantity produced and the proportions used for distilling, fuel, manure and other purposes will be found in Chapter XXIV. —“Manufacturing.” A distillation plant erected at the Plane Creek Central Sugar Mill, Mackay, was opened during 1927 and produces power alcohol of excellent quality.

A building material known as “megass board” can be made from megass or bagasse, i.e., the residuum of crushed fibre after the removal of the sugar content from the sugar cane, and the possibility of the manufacture of artificial silk from the same material has also been considered. Up to the present, however, there is no record of commercial production of these commodities.

9. **Sugar Prices.**—The prices of sugar in Australia from 1915 to 1936 are shown in the table below. During recent years the prices were fixed in accordance with the agreement referred to previously.

**SUGAR.—PRICES, AUSTRALIA.**

Date of Determination.	Raw Sugar.		Refined Sugar.	
	Price to Grower and Miller per Ton.		Wholesale Price per Ton.	Retail Price per lb.
	£	s. d.	£ s. d.	d.
19.7.15 to 15.1.16 ..	18	0 0	25 10 0	3
16.1.16 to 30.6.17 ..	18	0 0	29 5 0	3½
1.7.17 to 24.3.20 ..	21	0 0	29 5 0	3½
25.3.20 to 30.6.20 ..	21	0 0	49 0 0	6
1.7.20 to 31.10.22 ..	30	6 8	49 0 0	6
1.11.22 to 30.6.23 ..	30	6 8	42 0 0	5
1.7.23 to 21.10.23 ..	27	0 0	42 0 0	5
22.10.23 to 31.8.25 ..	26	0 0	37 11 4	4½
1.9.25 to 31.8.31 ..	(a)26	10 0	37 6 8	4½
1.9.31 to 31.8.36(b) ..	22	0 0	37 6 8	4½

(a) The price of raw sugar for the years 1925 to 1931 is estimated at £26 10s. per ton, but as the result of the values received for the surpluses exported, the actual price obtained in 1925-26 was £19 10s. 7d.; in 1926-27, £24 10s. 10d.; in 1927-28, £22 0s. 4d.; in 1928-29, £20 17s. 11d.; in 1929-30, £20 8s. 2d.; and in 1930-31, £19 12s. 11d.

(b) See letterpress in 5. Sugar Agreement, hereinbefore.

### § 15. Vineyards.

1. *Progress of Cultivation.*—(i) *Area of Vineyards.* The date of introduction of the vine into Australia has been variously set down by different investigators, the years 1815 and 1828 being principally favoured. It would seem, however, that plants were brought out, with the first fleet in 1788, consequently the Australian vine is as old as Australian settlement. As already mentioned, a report by Governor Hunter gives the area under vines in 1797 as 8 acres. From New South Wales the cultivation spread to Victoria and South Australia, and these States have now far outstripped the mother State in the area under this crop. In Queensland and Western Australia also, vine growing has been carried on for many years, but little progress has been made. In Tasmania the climate is not favourable to the growth of grapes. The purposes for which grapes are grown in Australia are three in number, viz. :—(a) for wine-making, (b) for table use, and (c) for drying. The total area under vines in the several States during each of the last five years is given in the following table, while particulars from 1860 onwards may be gathered from the graph accompanying this chapter.

#### VINEYARDS.—AREA.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1926-27.. ..	14,281	40,612	1,682	50,271	5,274	There are no vineyards in Tasmania.	112,120
1927-28.. ..	14,880	40,988	1,762	50,663	4,959		113,252
1928-29.. ..	15,200	41,565	1,787	51,802	4,943		115,297
1929-30.. ..	15,589	40,594	1,749	52,329	4,964		115,225
1930-31.. ..	15,363	38,720	1,687	52,234	4,966		112,970

The area under vines in Australia amounted to 65,673 acres in 1904-5. From that year onwards a gradual decline set in, and at the end of 1914-15 the acreage had decreased to 60,985. Since that date, however, as a result of extensive plantings, particularly of varieties suitable for drying, the 1904-5 figure was soon exceeded, and the area for 1928-29 was the highest on record. In 1930-31, however, there was again a decline of 2,255 acres as compared with 1929-30.

(ii) *Report on the Wine Industry.* An investigation into conditions in the wine industry was undertaken recently by the Commonwealth Director of Development and the Senior Inspector of Excise, Department of Trade and Customs, and a comprehensive report was presented to Parliament on the 17th July, 1931.

(iii) *Wine Production, Bounties, etc.* The production of wine has not increased as rapidly as the suitability of soil and climate would appear to warrant, owing chiefly to two causes. In the first place Australians are not a wine-drinking people, and consequently do not provide a local market for the product. Secondly, the comparatively new and unknown wines of Australia must compete in the markets of the old world with the well-known and long-established brands from other countries. Continued efforts are made to bring the Australian wines under notice, while the Commonwealth bounty on the export of fortified wine of specified strength has greatly benefited the industry. The bounty was increased to 1s. 9d. per gallon from 13th March, 1930, under the *Wine Export Bounty Act 1930* which provides that this rate will be paid until the 28th February, 1935. At the Imperial Economic Conference at Ottawa in 1932, the margin of preference to be granted by the Government of the United Kingdom is 2s. per gallon on Australian wines not exceeding 27 degrees of proof spirit. Hitherto the duties imposed were as follows:—Empire wines not exceeding 27 degrees, 2s. per gallon, Foreign wines not exceeding 25 degrees, 3s. per gallon, a margin of preference of 1s. per gallon. The margin of 2 degrees in the strength of Empire wines is also

considered a measure of preference. New or additional preferences are also hoped for from certain Crown Colonies and Protectorates. The bulk of the wine exported from Australia contains more than 27 degrees of proof spirit, consequently, under the present (1932) duties in force in the United Kingdom, Australian wines of a strength exceeding 27 but under 42 degrees enjoy a preference of 4s. per gallon.

The quantity of wine produced in the several States during the past five seasons is given in the table hereunder :—

## WINE.—PRODUCTION.

Season.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	No production of wine in Tasmania.	Gallons.
1926-27 ..	1,625,507	2,346,314	32,974	16,159,595	291,951		20,456,341
1927-28 ..	2,295,030	1,739,560	38,571	12,820,733	408,717		17,302,611
1928-29 ..	1,481,846	1,942,701	37,210	14,828,968	309,524		18,600,249
1929-30 ..	1,933,709	1,363,575	48,174	12,406,017	317,637		16,069,112
1930-31 ..	1,335,882	1,254,615	48,899	10,131,034	307,788		13,078,218

2. Imports and Exports of Wine.—(i) *Imports.* The principal countries of origin of wine imported into Australia are France, Spain, Portugal, and Italy, the bulk of the sparkling wines coming from France. The imports for the past five years are given hereunder :—

## WINE.—IMPORTS, AUSTRALIA.

Year.	Quantity.			Value.		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total.
	Gallons.	Gallons.	Gallons.	£	£	£
1926-27 ..	27,720	61,878	89,598	64,134	37,325	101,459
1927-28 ..	20,737	55,403	76,140	45,703	33,997	79,700
1928-29 ..	20,212	56,171	76,383	50,576	32,948	83,524
1929-30 ..	16,833	64,286	81,119	42,434	36,242	78,676
1930-31 ..	2,314	13,166	15,480	5,400	6,262	11,662

(ii) *Exports.* Wine is exported from Australia chiefly to the United Kingdom and New Zealand, although the share of the latter country is comparatively small. Exports for the past five years are given in the following table :—

## WINE.—EXPORTS, AUSTRALIA.

Year.	Quantity.			Value.		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total.
	Gallons.	Gallons.	Gallons.	£	£	£
1926-27 ..	2,956	3,078,841	3,081,797	6,075	827,722	833,797
1927-28 ..	2,744	3,770,035	3,772,779	5,577	1,056,831	1,062,408
1928-29 ..	2,932	1,738,047	1,740,979	5,685	495,299	500,984
1929-30 ..	2,884	2,181,253	2,184,137	4,439	551,682	556,121
1930-31 ..	2,224	2,205,983	2,208,207	3,684	506,368	510,052

3. Other Viticultural Products.—(i) *Table Grapes*. Grapes for table use are grown in all the States except Tasmania, but the greatest development in the industry has taken place in the drying of raisins and currants, particularly in Victoria and South Australia. The quantities of table grapes grown during the past five seasons are as follow :—

TABLE GRAPES.—PRODUCTION.

Season.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1926-27 ..	4,689	4,634	1,410	791	2,195	..	13,719
1927-28 ..	4,250	3,338	1,474	581	2,642	..	12,285
1928-29 ..	4,278	3,909	1,535	899	2,811	..	13,432
1929-30 ..	4,216	3,845	1,642	752	2,900	..	13,355
1930-31 ..	3,680	3,799	2,067	891	2,835	..	13,272

(ii) *Raisins and Currants*. The quantities of raisins (sultanas and lexias) and currants dried during each of the past five seasons are given in the following table :—

RAISINS(a) AND CURRANTS.—PRODUCTION.

Season.	N.S. Wales.		Victoria.		South Aust.		Western Aust.		Australia.	
	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.
1926-27 ..	tons. 2,053	tons. 455	tons. 32,886	tons. 6,773	tons. 8,120	tons. 4,383	tons. 443	tons. 1,147	tons. 43,502	tons. 12,758
1927-28 ..	1,542	227	20,116	3,655	2,757	2,521	810	1,222	25,225	7,625
1928-29 ..	3,004	488	38,556	9,499	10,527	8,207	602	1,311	52,689	19,505
1929-30 ..	4,170	542	39,183	8,911	10,562	8,094	652	1,332	54,567	18,879
1930-31 ..	2,364	425	22,377	7,834	7,825	7,588	651	1,738	33,217	17,585
Average 10 seasons 1921-31	1,700	357	23,478	6,431	6,534	5,668	519	950	32,231	13,406

(a) Sultanas and Lexias.

4. Imports and Exports of Raisins and Currants.—The following table gives the overseas imports and exports of raisins and currants during each of the past five years :—

RAISINS AND CURRANTS.—IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Overseas Imports.		Overseas Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
RAISINS.						
	tons.	£	tons.	£	tons.	£
1926-27 ..	44	5,385	19,678	1,265,994	19,634	1,260,609
1927-28 ..	48	4,388	24,236	1,398,595	24,188	1,394,207
1928-29 ..	148	7,002	33,575	1,620,307	33,427	1,613,305
1929-30 ..	83	4,777	35,413	1,486,580	35,330	1,481,803
1930-31 ..	(a)	21	39,803	1,606,735	39,803	1,606,714
CURRANTS.						
1926-27 ..	2	173	8,576	377,895	8,574	377,722
1927-28 ..	(a)	4	3,667	177,605	3,667	177,601
1928-29 ..	(a)	30	13,326	597,917	13,326	597,887
1929-30 ..	(a)	17	14,867	621,192	14,867	621,175
1930-31 ..	(a)	1	14,381	578,037	14,381	578,036

(a) Quantity negligible.

Since 1912 Australia has not only produced sufficient quantities of raisins and currants for home consumption, but has been able to maintain a large export trade. The average annual production for the decennium ended 1930-31 exceeded 45,500 tons, of which 12,500 tons satisfied local requirements, leaving a surplus averaging 33,000 tons available for export. Under favourable conditions the production has reached 73,000 tons. The chief countries importing Australian raisins and currants are the United Kingdom, Canada and New Zealand, which take 80 per cent., 13 per cent. and 5 per cent. respectively of the average quantity exported. Under the terms of the agreement reached at the Imperial Economic Conference at Ottawa in 1932, it is proposed to increase the tariff in the United Kingdom from 7s. per cwt. to 10s. 6d. per cwt. on raisins imported from foreign countries. As already stated, the United Kingdom absorbs 80 per cent. of Australia's exports, and the proposed preference will therefore, prove of considerable benefit to the Australian grower. The existence of the Anglo-Grecian Trade Treaty, however, precludes any immediate prospect of an advance in the present rate of preference—2s. per cwt.—being secured on Australian currants imported into Great Britain. The exports to Canada have increased from 3,000 tons in 1929 to nearly 10,000 tons in 1932.

5. **Marketing of Raisins and Currants.**—The Dried Fruits Control Board appointed under the Dried Fruits Export Control Act has power to regulate the export, and sale and distribution after export, of Australian sultanas, leixias and currants. The Board, with an agency in London, is financed by an export levy charged on all dried fruits exported.

The regulation of sales and fixation of prices within the Commonwealth is in the hands of the Australian Dried Fruits Association, which has, in addition, power to regulate interstate transfers. The prices fixed for home consumption are somewhat higher than those realized on exports overseas, as will be seen from the next table.

6. **Prices of Australian Raisins and Currants.**—The average prices of Australian raisins and currants both locally and in Great Britain during the last five years will be found in the following table:—

#### RAISINS AND CURRANTS.—PRICES.

Year.	Average Wholesale Price per lb.— Australia.		Average Price per lb.— Great Britain.	
	Sultanas.	Currants.	Sultanas.	Currants.
	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>
1926-27 .. ..	6½	7¼	5½	4½
1927-28 .. ..	6½	7½	3¾	6
1928-29 .. ..	6¾	7½	4	4½
1929-30 .. ..	7	7¼	4½	3¾
1930-31 .. ..	7	7	6¼	4½

### § 16. Orchards and Fruit Gardens.

1. **Progress of Cultivation.**—(i) *Total Area.* The greatest area under orchards and fruit gardens was 281,149 acres in 1921-22. Since that year the area has declined slightly owing to difficulty in disposing of the surplus production. The total area under orchards and fruit gardens in the several States is given in the following table:—

#### ORCHARDS AND FRUIT GARDENS.—AREA.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1926-27 .. ..	74,682	83,215	35,145	31,570	18,512	33,322	5	276,451
1927-28 .. ..	76,999	81,397	36,206	30,983	18,393	33,834	14	277,826
1928-29 .. ..	76,009	79,322	38,452	30,836	18,735	34,087	35	277,476
1929-30 .. ..	77,532	80,820	38,412	30,073	18,855	32,159	53	277,904
1930-31 .. ..	78,176	79,490	37,102	29,630	19,333	32,501	55	276,347

2. Varieties of Crops.—(i) *General*. The varieties grown differ in various parts of the States, ranging from such fruits as the pineapple, paw-paw, mango, and guava of the tropics to the strawberry, the raspberry, and the currant of the colder parts of the temperate zone. The principal varieties grown in Victoria are the apple, peach, pear, orange, plum, and apricot. In New South Wales citrus fruits (oranges, lemons, etc.) occupy the leading position, although apples, peaches, plums, pears cherries and bananas are extensively grown. In Queensland, the banana, the pineapple, the apple, the orange, the peach, the plum, and the coconut are the varieties most largely cultivated. In South Australia, in addition to the apple, orange, apricot, plum, peach, and pear, the almond and the olive are extensively grown. In Western Australia, the apple, orange, pear, plum, peach, apricot and fig are the chief varieties. In Tasmania, the apple occupies nearly four-fifths of the fruit-growing area, but small fruits, such as the currant, raspberry, and gooseberry are extensively grown, while the balance of the area is taken up with the pear, apricot, plum, and cherry. The following tables give the acreage—bearing and non-bearing—under the principal kinds of fruit, and the quantity and value of fruit produced. Although statistics of area are not collected annually in Victoria, the acreage under each class of fruit is estimated from data based on the triennial collection of the number of trees, subject to annual variations in the total area under orchards and fruit gardens.

(ii) *Area*. The table hereunder shows the total acreage for 1930-31.

ORCHARDS AND FRUIT GARDENS.—TOTAL AREA, 1930-31.

Fruit.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Federal Capital Territory.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Apples ..	14,760	31,725	4,039	10,371	11,243	25,724	36	97,898
Apricots ..	1,892	5,059	131	3 202	666	1,379	3	12,332
Bananas ..	4,959	..	18,030	..	10	..	..	22,999
Cherries ..	3,660	1,504	4	673	(a)	64	2	5,907
Lemons ..	2,829	1,976	136	433	496	..	..	5,870
Nectarines and Peaches ..	7,156	11,883	1,691	2,148	1,002	62	4	23,946
Nuts ..	545	518	..	1,313	(a)	..	3	2,379
Oranges ..	30,177	5,795	3,773	5,012	3,066	..	..	47,823
Pineapples ..	83	..	5,543	..	..	..	..	5,626
Pears ..	3,998	11,044	240	2,140	1,053	2,191	2	20,668
Small fruits ..	6,218	5,172	1,215	2,960	940	603	5	17,113
Plums ..	31	1,163	173	320	53	2,481	..	4,221
Other fruits ..	1,868	3,651	2,127	1,058	804	57	..	9,565
<b>Total ..</b>	<b>78,176</b>	<b>79,490</b>	<b>37,102</b>	<b>29,630</b>	<b>19,333</b>	<b>32,561</b>	<b>55</b>	<b>276,347</b>

(a) Included with "Other Fruits."

(iii) *Production*—(a) *Quantities*. The production in 1930-31 is shown in the next table.

ORCHARDS AND FRUIT GARDENS.—PRODUCTION, 1930-31.

Fruit.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Federal Capital Territory.	Australia.
Apples .. bushels	908,705	1,515,410	217,317	486,773	749,449	3,800,000	440	7,678,103
Apricots .. "	113,303	305,717	6,705	283,570	43,840	111,100	..	864,235
Bananas .. "	325,134	..	2,301,108	..	1,075	..	..	2,627,317
Cherries .. "	79,220	46,256	332	35,962	..	2,200	..	163,970
Lemons .. "	320,156	134,479	12,340	28,185	61,605	..	..	556,765
Nectarines and Peaches .. bushels	444,001	1,042,842	106,044	138,139	61,702	6,500	..	1,799,228
Nuts .. lb.	251,104	146,018	..	868,000	..	..	..	1,265,122
Oranges .. bushels	2,579,353	516,133	308,967	409,816	275,490	..	..	4,089,759
Pineapples .. dozen	17,680	..	1,000,508	..	..	..	..	1,018,188
Pears .. bushels	313,970	707,145	16,751	127,883	80,684	302,800	..	1,549,233
Plums .. "	346,244	297,640	58,306	134,924	57,956	64,100	43	959,213
Small Fruits .. cwt.	624	20,993	2,805	6,027	397	65,071	..	95,917

(b) *Values.* The value of production for the various classes of fruit for the year 1930-31 is given in the following table.

ORCHARDS AND FRUIT GARDENS.—VALUE OF PRODUCTION, 1930-31.

Fruit.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Federal Capital Territory.	Australia.
	£	£	£	£	£	£	£	£
Apples .. ..	341,110	397,797	77,601	157,599	343,497	950,000	165	2,267,769
Apricots .. ..	62,310	53,500	4,819	59,540	29,272	27,800	..	237,241
Bananas .. ..	200,500	..	..	..	1,613	..	..	1,105,226
Cherries .. ..	91,040	39,318	288	25,623	(a)	1,600	..	157,866
Lemons .. ..	89,800	43,706	8,612	12,683	19,572	..	..	174,373
Nectarines and Peaches ..	193,920	205,000	40,655	37,213	40,546	1,900	..	519,234
Nuts .. ..	5,641	4,980	..	21,658	(a)	..	..	32,279
Oranges .. ..	701,340	193,550	122,943	170,857	110,595	..	..	1,299,285
Pineapples .. ..	4,910	..	212,528	..	..	..	..	217,438
Pears .. ..	107,840	141,429	6,526	32,509	28,996	60,500	..	377,800
Plums .. ..	146,040	42,954	32,068	31,147	35,860	9,600	18	297,687
Small Fruits .. ..	3,540	44,780	14,615	12,524	3,413	59,200	..	138,072
Other Fruits .. ..	77,859	79,899	66,205	16,178	20,576	1,300	..	262,017
<b>Total .. ..</b>	<b>2,025,850</b>	<b>1,246,913</b>	<b>1,489,973</b>	<b>577,531</b>	<b>633,940</b>	<b>1,111,900</b>	<b>183</b>	<b>7,086,290</b>

(a) Included with "Other Fruit."

3. *Principal Fruit Crops.*—(i) *Area.* The area in Australia under the principal fruit crops for the year 1913-14 and for each of the last five years is shown hereunder.

PRINCIPAL FRUIT CROPS.—AREA, BEARING AND NON-BEARING, AUSTRALIA.

Year.	Apples.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1913-14 ..	56,577	7,778	24,840	13,645	9,657	8,410
1926-27 ..	98,322	18,345	53,570	25,420	22,014	18,070
1927-28 ..	98,244	19,971	54,660	24,869	21,671	17,906
1928-29 ..	98,338	21,681	54,286	23,722	21,268	17,433
1929-30 ..	97,488	22,705	55,013	23,247	20,934	17,412
1930-31 ..	97,898	22,999	54,222	22,694	20,668	17,113

(ii) *Production*—(a) *Quantities.* In the next table the total production for the principal varieties of fruit grown in Australia is shown for the same periods.

PRINCIPAL FRUIT CROPS.—PRODUCTION, AUSTRALIA.

Year.	Apples.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1913-14 ..	5,000,178	835,868	1,638,961	930,144	951,277	621,525
1926-27 ..	5,228,475	2,163,345	3,667,895	1,801,818	1,166,566	675,595
1927-28 ..	11,505,289	2,260,295	3,922,773	2,225,636	1,804,604	895,105
1928-29 ..	5,519,341	2,571,616	4,642,142	1,765,818	1,516,253	794,488
1929-30 ..	9,505,312	2,382,877	4,034,717	1,998,632	2,065,048	937,110
1930-31 ..	7,678,103	2,627,317	4,688,848	1,725,039	1,549,233	959,213

(b) *Values.* The value of the principal fruit crops during the periods mentioned is given in the subjoined table.

**PRINCIPAL FRUIT CROPS.—VALUE OF PRODUCTION, AUSTRALIA.**

Year.	Apples.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums.
	£	£	£	£	£	£
1913-14 ..	1,132,427	157,710	719,808	306,433	258,235	135,654
1926-27 ..	2,477,708	730,576	1,900,613	882,366	447,127	287,695
1927-28 ..	2,837,137	1,276,532	1,916,864	897,571	498,869	289,409
1928-29 ..	2,707,273	1,042,305	2,056,830	702,602	543,940	295,240
1929-30 ..	2,437,095	1,069,039	2,323,256	594,133	472,985	307,086
1930-31 ..	2,267,769	1,105,226	1,490,373	484,904	377,800	297,687

4. *Imports and Exports of Fruit.*—(i) *General.* A considerable export trade in both fresh and dried fruits is carried on by Australia with overseas countries. The import trade in fresh fruits declined heavily during recent years, owing to the imposition of a Customs duty of 1d. per lb. on imported bananas, which had previously been the chief variety of fresh fruit imported into Australia. Under the terms of the agreement reached at Ottawa in 1932, however, 40,000 centals of bananas will be admitted annually from Fiji at the rate of duty of 2s. 6s. per cental. The imports of dried fruits at present consist mainly of dates. The export trade in fresh and dried fruits, however, has greatly expanded during recent years, the value of the shipments in 1930-31 amounting to £3,838,122. Apples constitute the bulk of the fresh fruit exported, although the exports of citrus fruits and pears are fairly considerable, and experiments are being conducted in regard to the dispatch of other fruits. Shipments of raisins and currants have increased greatly since 1914-15, and are mainly responsible for the growth in the dried fruits exports. Dried apricots also figure amongst the exports.

(ii) *Fresh Fruits.* Information with regard to the Australian oversea trade in fresh fruits is given hereunder :—

**FRESH FRUITS.—IMPORTS AND EXPORTS, AUSTRALIA.**

Year.	Oversea Imports.		Oversea Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lbs.	£	lbs.	£	lbs.	£
1926-27 ..	5,086,900	56,932	75,776,600	805,573	70,689,700	748,641
1927-28 ..	4,772,200	61,606	186,625,800	1,819,796	181,853,600	1,758,190
1928-29 ..	6,350,000	69,011	82,706,700	942,960	76,356,700	873,949
1929-30 ..	7,838,000	93,110	196,000,600	1,862,603	188,162,600	1,769,493
1930-31 ..	4,015,400	23,858	168,035,900	1,588,128	164,020,500	1,564,270

(iii) *Exports of Apples, Pears, and Citrus Fruits.* The quantity and value of apples, pears, and citrus fruits exported during each of the last five years are shown in the following table :—

**APPLES, PEARS, AND CITRUS FRUITS.—EXPORTS, AUSTRALIA.**

Year.	Apples.		Pears.		Citrus Fruits.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Cental.	£	Cental.	£	Cental.	£
1926-27 ..	631,508	624,040	30,007	37,001	65,803	80,246
1927-28 ..	1,736,965	1,636,000	57,831	62,742	32,388	46,645
1928-29 ..	644,183	703,037	55,006	68,290	71,932	76,023
1929-30 ..	1,737,872	1,576,275	127,897	136,353	39,271	58,481
1930-31 ..	1,329,563	1,235,583	160,684	150,069	117,000	110,414



(iv) *Dried Fruits.* The quantity and value of oversea imports and exports of dried fruits, other than raisins and currants, for the last five years are shown below: about 85 per cent. of the total imports consisted of dates obtained chiefly from Iraq.

**DRIED FRUITS(a).—IMPORTS AND EXPORTS, AUSTRALIA.**

Year.	Oversea Imports.		Oversea Exports.		Net Imports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lbs.	£	lbs.	£	lbs.	£
1926-27..	11,214,659	168,404	72,140	3,284	11,142,519	165,120
1927-28..	11,983,431	178,225	685,052	23,954	11,298,379	154,271
1928-29..	11,098,182	146,078	2,096,416	81,106	9,001,766	64,972
1929-30..	11,579,470	134,244	1,780,189	62,060	9,799,281	72,184
1930-31..	4,423,939	36,116	2,083,242	65,168	2,340,697	- 29,052

(a) Excluding raisins and currants referred to separately under Vineyards, § 15, 4.

NOTE.—The minus sign (—) signifies net exports.

(v) *Jams and Jellies.* Jams and jellies were exported in large quantities during the war years, and in 1918-19 the record shipment of 79,277,560 lbs., valued at £1,847,970, was dispatched from Australia. Since that year, however, the trade has dwindled, the value of the exports in 1930-31 amounting to only £40,916. Particulars relative to imports and exports during each of the last five years are as follows:—

**JAMS AND JELLIES.—IMPORTS AND EXPORTS, AUSTRALIA.**

Year.	Oversea Imports.		Oversea Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lbs.	£	lbs.	£	lbs.	£
1926-27..	357,838	15,004	2,422,988	72,354	2,065,150	57,350
1927-28..	438,427	18,408	2,298,225	68,949	1,859,798	50,541
1928-29..	325,422	13,133	1,947,786	58,204	1,622,364	45,071
1929-30..	300,805	10,811	1,535,720	44,398	1,234,915	33,587
1930-31..	6,423	417	1,445,520	40,916	1,439,097	40,499

(vi) *Preserved Fruit.* Details concerning the quantities and values of preserved fruit imported into Australia cannot readily be obtained, owing to the fact that in the Customs returns particulars concerning fruit and vegetables are in certain cases combined. The total value of fruit and vegetables preserved or partly preserved in liquid, or pulped, imported into Australia during 1930-31 was £4,808. Oversea exports in 1930-31 were as follows:—Apricots, 4,689,781 lb., £77,425; peaches, 21,823,440 lb., £354,018; pears, 6,451,069 lb., £121,007; pineapples, 926,905 lb., £20,389; and other 542,955 lb., £13,390, or a total shipment of £586,229.

**§ 17. Minor Crops.**

1. *General.*—In addition to the crops previously dealt with, there are many others which, owing either to their nature, or to the fact that their cultivation has advanced but little beyond the experimental stage, do not occupy so prominent a position. Some of the more important of these are included under the headings—Market Gardens, Pumpkins and Melons, Nurseries, Grass Seed, Tobacco, and Millet. Cotton-growing has

recently received considerable attention in the tropical portions of Australia, and the prospects of establishing this industry are hopeful. The decline in area under cultivation from 82,409 acres in 1924-25 to 35,527 acres in 1930-31 was due to poor seasons and difficulty in marketing the product. The total area in Australia during the season 1930-31 devoted to crops not dealt with in previous sections was 133,246 acres, the major portion of which consisted of cotton and market-gardens.

2. **Market Gardens.**—Under this head are included all areas on which mixed vegetables are grown. Where considerable areas are devoted to the production of one vegetable, such for instance as the potato, the onion, the melon, the tomato, etc., the figures are usually not included with market gardens, but are shown either under some specific head, or under some general head as "Other Root Crops," or "All Other Crops." The area under market gardens during each of the last five seasons is given hereunder:—

#### MARKET GARDENS.—AREA.

Season.	N.S. W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Aus- tralia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1926-27 ..	8,184	17,751	1,096	1,320	2,872	599	..	46	31,868
1927-28 ..	7,729	18,984	1,083	1,303	2,647	732	..	32	32,510
1928-29 ..	7,709	18,630	918	1,408	2,924	546	..	11	32,146
1929-30 ..	8,380	21,210	862	1,658	3,075	530	..	10	35,725
1930-31 ..	7,448	20,197	903	1,663	3,025	600	..	13	33,849

3. **Grass Seed.**—The area under this crop during 1930-31, exclusive of New South Wales and Western Australia, for which States complete figures as to area are not available, was 6,480 acres, of which 2,000 acres were in Victoria, 729 acres in Tasmania, 2,558 acres in Queensland, and 1,193 acres in South Australia. The production for 1930-31, including New South Wales, was 110,642 bushels, valued at £131,460. In addition to the areas planted above, 3,299 acres were sown to canary seed in Queensland during 1930-31, returning a yield of 41,298 bushels, valued at £33,554.

4. **Tobacco.**—Tobacco-growing some years ago promised to occupy an important place amongst the agricultural industries of Australia. Thus, as early as the season 1888-89, the area under this crop amounted to 6,641 acres, of which 4,833 were in New South Wales, 1,685 in Victoria, and 123 in Queensland. This promise was, however, not fulfilled, and after numerous fluctuations, in the course of which the Victorian area rose in 1895 to over 2,000 acres, and that in Queensland to over 1,000 acres, the total area declined considerably.

In all the States in which its cultivation has been tried, the soil and climate appear to be suitable for the growth of the plant, and the large imports of tobacco in its various forms are an index of the market for a properly prepared product. The net imports of tobacco into Australia during the year 1930-31 were valued at £1,201,401. A total of 22,367,576 lb. of unmanufactured tobacco valued at £1,411,878 was imported in 1930-31.

A Select Committee appointed by the Commonwealth Government to inquire into the position of the industry in Australia presented its report in July, 1930. A new agreement between the British-Australasian Tobacco Co. and the Commonwealth Government was entered into for three years from July, 1931, the company undertaking to contribute towards investigation work on a £ for £ basis with a maximum contribution of £3,000 per annum. Other manufacturing firms were invited to co-operate, and a Director of Australian Tobacco Investigation was appointed with head-quarters at Canberra. It has been proved that suitable leaf can be grown, and research is in progress with a view to improvement in quality and aroma of the product and the combating of disease. The sowing of seed free from blue mould, together with improved methods of cultivation, will, it is believed, materially reduce the loss occasioned by this parasitic

disease. The extensive local demand which amounts to approximately 18 million lb. annually, coupled with the protection afforded by the tariff, has resulted in a large increase in the area planted. In addition, under an agreement between the Federal Government and the Australian Tobacco Manufacturers, the latter undertook to purchase 7.2 million lb. of suitable local leaf during the season 1931-32 at an average price of 2s. 3d. per lb. At the end of October, 1932, more than 6 million lb. had been purchased at an average price of 2s. 3. 103d. per lb.

The following table furnishes details of the average area, production, etc., in quinquennial periods from 1901 to 1925, and annually from 1926-27 to 1931-32:—

**TOBACCO.—AREA, PRODUCTION, ETC., AUSTRALIA.**

Period.	Area.	Production.	Value.	Number of
				Registered Growers.
	Acres.	Cwts.	£	No.
1901-05 .. .. .	1,412	10,473	(a)	387
1906-10 .. .. .	1,678	12,670	41,581	518
1911-15 .. .. .	2,496	18,805	65,615	479
1916-20 .. .. .	1,648	12,943	104,978	487
1921-25 .. .. .	2,677	17,523	158,748	925
1926-27 .. .. .	2,192	10,878	123,436	727
1927-28 .. .. .	2,133	16,143	108,030	631
1928-29 .. .. .	2,238	16,416	97,438	632
1929-30 .. .. .	2,470	15,200	92,055	647
1930-31 .. .. .	3,354	(b) 19,351	186,984	693
1931-32 (b) .. .. .	5,692	(a)	(a)	(c) 2,774

(a) Not available. (b) Subject to revision. (c) Exclusive of 274 growers registered, but who did not produce.

5. **Pumpkins and Melons.**—The total area under this crop in Australia during 1930-31 was 19,768 acres, of which 3,108 acres were in New South Wales, 1,078 acres in Victoria, 14,661 acres in Queensland, 537 acres in Western Australia, 379 acres in South Australia, and 5 acres in Federal Capital Territory. The production in all the States amounted to 58,554 tons.

6. **Hops.**—Hop-growing in Australia is practically confined to Tasmania and some of the cooler districts of Victoria, the total area for the season 1930-31 being 1,168 acres, of which 982 acres were in Tasmania, 185 acres in Victoria, and 1 acre in South Australia. The Tasmanian area, though still small, has increased considerably during the past thirty years, the total for the season 1901-2 being only 599 acres. In Victoria, the area which in 1901-2 was 307 acres, dwindled to 71 acres in 1918-19, then rose to 312 acres in 1925-26 and dropped to 185 in 1930-31. The cultivation of hops was much more extensive in Victoria some 40 years ago than at present, the area in 1883-84 being no less than 1,758 acres. During the year 1930-31 the exports of hops exceeded the imports by 30,997 lb., though the value was £3,237 less. The value of the production in Australia in 1930-31 amounted to £156,921.

7. **Flax.**—For many years flax was grown intermittently in the Gippsland district of Victoria, and attempts were made to introduce its cultivation into Tasmania and New South Wales, but without success. About the end of the year 1917 the shortage of flax fibre in the world had become acute, and endeavours were made by the Commonwealth Government to encourage local cultivation. The acreage in Victoria increased from 419 acres in 1917-18 to 1,611 acres in 1919-20, but cultivation had fallen in 1928-29 to 179 acres. As the result of the bounty, however, the area increased to 1,216 acres in 1930-31.

Bounty is payable on flax and linseed grown in Australia for a period of five years, commencing on the 1st March, 1930. The rates of bounty payable are 15 per cent. of the market value of the flax or linseed for the first two years, 10 per cent. for the next

two years, and  $7\frac{1}{2}$  per cent. for the last year. The total amount paid shall not exceed £20,000 in any one financial year. During the year 1931-32 the sum of £1,561 was paid on 117 tons of flax and 316 tons of linseed.

8. *Millet*.—Millet figures in the statistical returns of three of the States. The total area devoted thereto in 1930-31 was 3,924 acres, of which 2,182 acres were in New South Wales, 1,232 in Victoria, and 510 in Queensland. The particulars here given relate to millet grown for grain and fibre, the quantity for green forage being dealt with in the section relating thereto.

9. *Nurseries*.—In all the States fairly large areas are occupied as nurseries, but figures in regard to acreages under flowers, fruit trees, etc., are available only for New South Wales, Victoria, South Australia, and Western Australia. During 1930-31 the areas in those States were 825, 1,266, 148, and 137 acres respectively.

10. *Cotton*.—The cultivation of cotton was begun in Queensland in 1860, and ten years later the area cropped had increased from 14 acres to over 14,000 acres. The re-appearance of American cotton in the European market on the conclusion of the Civil War gave a severe setback to the new industry, and the area declined continuously till 1888, when only 37 acres were planted. Later on the industry was resuscitated, and manufacturing on a small scale was undertaken on two separate occasions at Ipswich, but low prices over a term of years checked development. In 1913 the Queensland Government made an advance of 1½d. per lb. on seed cotton, and ginned it on owner's account, the final return being equal to about 1½d. per lb. The rise in price enabled the Government to offer a guarantee of 5½d. per lb. for seed cotton of good quality for the three years ended 31st July, 1923, and the area picked increased from 166 acres in 1920 to 50,186 acres in 1924. Guarantees were continued until 1926, when the Commonwealth Government granted a bounty of 1½d. per lb. on the better grades and ¾d. on the lower grades of seed cotton grown in Australia. In addition to this direct assistance to the growers, the Government subsidized the cotton-manufacturing industry by granting a graduated bounty, varying from ¾d. to 1s. per lb., on all cotton yarn manufactured in Australia which contained 50 per cent. of home-grown cotton. This bounty, however, ceased to operate after 30th June, 1932. The rates payable to growers for seed cotton vary from 1½d. per lb. for the first year for the higher grades and ¾d. per lb. for the lower grades to ½d. and ¼d. per lb. respectively for the year ending 30th September, 1936. The amount of bounty payable in any financial year is limited to £260,000.

The area under cultivation and the production in Queensland since the year 1921 are shown hereunder:—

#### COTTON.—AREA AND PRODUCTION, QUEENSLAND.

Year.					Area(a).	Yield of Unginned Cotton.
					Acres.	lb.
1921	..	..	..	..	1,944	940,126
1922	..	..	..	..	8,716	3,956,635
1923	..	..	..	..	40,821	12,543,770
1924	..	..	..	..	50,186	16,416,170
1925	..	..	..	..	40,062	19,537,274
1926	..	..	..	..	18,743	9,059,907
1927	..	..	..	..	14,975	7,060,756
1928	..	..	..	..	20,316	12,290,910
1929	..	..	..	..	15,003	8,024,502
1930	..	..	..	..	22,652	17,022,897
1931 (b)	..	..	..	..	(b) 39,000	(c)

(a) Area picked.

(b) Estimated.

(c) Not yet available.

With the change over to the bounty system, a cotton pool was formed in Queensland under the Primary Products Pools Act, and a Cotton Board was elected to control the handling, financing, and marketing of all cotton grown in the State. The serious decline in world prices, however, affected local prices and resulted in a smaller return to the growers during the year 1930. The whole of the crop was sold to local spinners.

11. **Coffee.**—Queensland is the only State in which coffee has been to any extent grown, but the results have not been satisfactory. The area under crop reached its highest point in the season 1901-2 with 547 acres. Thereafter the acreage fluctuated, but on the whole with a downward tendency, and in 1930-31 only 12 acres were returned with a production of 6,458 lb.

12. **Other Crops.**—Miscellaneous small crops grown in Australia include tomatoes, rhubarb, artichokes, arrowroot, chicory, and flowers.

### § 18. Bounties.

The bounties paid by the Commonwealth Parliament during the year ending 30th June, 1932, amounted to £3,777,982. For purposes of convenience particulars regarding bounties in operation in Australia on all commodities during the years 1927-28 to 1931-32 have been included in the following table:—

#### BOUNTIES.—AUSTRALIA.

Articles on which Bounty was Paid.	Rate of Bounty Payable(a).	Date of Expiry of Bounty.	Amount Paid.				
			1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
Shale Oil Bounties Act— Crude Shale Oil, as prescribed, produced in Australia from Mined Kerose Shale	3½d. per gallon up to 3,500,000 gallons 2d. per gallon, 3,500,000 to 5,000,000 gallons 1½d. per gallon, 5,000,000 to 8,000,000 gallons 1½d. each additional gallon	31st Aug., 1929	£ 428	£ ..	£ ..	£ ..	£ ..
Iron and Steel Products Bounty Act— *Fencing Wire ..	£2 12s. per ton (f) ..	(g) 6th Nov., 1930	104,485	121,839	114,141	39,913	..
*Galvanized Sheets ..	£2 12s. per ton (d) ..	27th Mar., 1931	65,128	102,650	89,561	79,429	..
*Wire Netting ..	£3 8s. per ton (e) ..	..	73,873	73,945	56,486	22,696	6,334
*Traction Engines ..	According to capacity, £40-£90 per tractor less 10 per cent. from 9th July, 1930, increased to 16 per cent. from 7th November, 1930, and to 40% from 11th July, 1931	..	140	7,109	199	1,974	1,058
Sulphur Bounty Act— Sulphur from Australian Pyrites and other Sulphide Ores or Concentrates	£2 5s. per ton ..	..	57,377	52,009	55,018	48,520	30,962
Flax and Linseed Bounties Act 1930	Rates vary according to year	28th Feb., 1935	..	..	..	..	1,561

(a) All bounties are subject to 20 per cent. reduction from 20th July, 1931. (d) Amount of Bounty raised to £3 12s. per ton on 1st January, 1928, to £4 10s. per ton from 1st January 1930, and reduced to £3 10s. on 21st June, 1930, and to £3 3s. on 10th July, 1930. Bounty ceased on 27th March, 1931, owing to increase in Customs duty. (e) Amount of Bounty reduced to £2 14s. per ton on 10th July, 1930, and to £2 5s. 6d. per ton on 7th November, 1930, and to 12s. per ton from 11th July, 1931. (f) Amount of Bounty reduced to £2 6s. on 10th July, 1930. Bounty ceased on 6th November, 1930, owing to increase in Customs duty. (g) Date on which Bounty ceased.

BOUNTIES.—AUSTRALIA—continued.

Articles on which Bounty was Paid.	Rate of Bounty Payable. (d)	Date of Expiry of Bounty.	Amount Paid.				
			1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
			£	£	£	£	£
Wine Export Bounty Act— Fortified Wine, containing not less than 34 per centum of proof spirit, exported from the Commonwealth from 1st September, 1924, to 28th February, 1935	4s. per gallon to 31st August, 1927 1s. 9d. per gallon from 1st September, 1927, to 8th March, 1928 1s. per gallon from 9th March, 1928 1s. 9d. per gallon from 13th March, 1930	28th Feb., 1935	482,843	76,455	83,210	165,009	201,268
Canned Fruit Bounty Act— Apricots, Peaches, Pears, and Pineapples canned from 1st November, 1923, to 30th September, 1924 Such canned fruit exported from the Commonwealth on or before 28th February, 1925	9d. to 1s. per dozen tins, each containing 30 oz. net  1s. to 1s. 9d. per dozen tins, each containing 30 oz. net	..	4,751	..	..	..	..
Cotton Bounty Act— Seed Cotton grown in Australia and delivered and graded as prescribed	Varies on Higher Grades from 1½d. per lb. up to 1932, to ¼d. per lb. in 1936 Varies on Lower Grades from ½d. per lb. up to 1932, to ¼d. per lb. in 1936	30th Sept., 1936	81,454	64,930	70,307	100,848	64,206
Cotton Yarn manufactured in Australia	Varies according to count and year	30th June, 1932	24,846	33,638	48,660	57,085	94,395
Papua and New Guinea Bounties Act— Cocoa and Coffee Beans (b) produced in these Territories imported into the Commonwealth for home consumption	1½d. per lb.	31st Dec., 1936	194	1,641	1,059	(c) 946	(c) 830
Sisal Hemp ..	£6 per ton	.. ..	..	..	..	40	..
Gold Bounty Act— Gold produced in Australia as prescribed	Varies according to production (h)	31st Dec., 1940	..	..	..	..	80,904
Wheat Bounty Act— Wheat harvested in Australia during the period 1st October, 1931, and 31st March, 1932, and sold or delivered for sale between 1st October, 1931, and 31st October, 1932, as prescribed	4½d. per bushel	31st Oct., 1932	..	..	..	..	3,296,464
<b>Total .. ..</b>	<b>.. ..</b>	<b>.. ..</b>	<b>895,499</b>	<b>534,216</b>	<b>518,647</b>	<b>516,460</b>	<b>3,777,982</b>

(b) Other goods are scheduled in the Act, but no importations of them were made. (c) Including £1 9s. 3d., being amount of bounty paid on 234 lb. of spices in 1930-31, and 12s. 7d. on 126 lb. in 1931-32.

(d) All Bounties are subject to 20 per cent. reduction from 20th July, 1931. (h) Rate of Bounty on gold produced for six months ending June, 1931, was 2.623s. and for six months ending December, 1931, 3.269s. per fine ounce.

## § 19. Fertilizers.

1. **General.**—In the early days of settlement in Australia, scientific cultivation was practically neglected. Farmers were neither under the necessity nor were they aware of the value of supplying the proper constituents to the soil for each class of crop. The widely divergent character of the soils, their degeneration by repeated cropping, the limitations of climatic conditions, and the difficulties of following any desired order of rotation of crops, all rendered it essential to give attention to artificial manuring. The introduction of the modern seed-drill acting also as a fertilizer-distributor has greatly facilitated the use of artificial manures, and much land formerly regarded as useless for cultivation has now been made productive.

2. **Fertilizers Acts.**—In order to protect the interests of users of artificial manures, legislation has been passed in each of the States regulating the sale and prohibiting the adulteration of fertilizers. A list of these Acts and their main features will be found in Year Book No. 12 (page 378).

3. **Imports.**—The Australian production of prepared fertilizers is sufficient for local requirements. Imports consist chiefly of rock phosphate, which is used in making superphosphate, a valuable fertilizer for cereals. During 1930-31 the value of rock phosphate imported represented more than 78 per cent. of the total imports of fertilizers. Nauru and Gilbert and Ellice Islands Colony supplied almost the whole of the shipments. Sodium nitrate is obtained chiefly from Chile.

The imports of artificial manures during the last five years are given in the following table. Although considerable quantities of manufactured superphosphate were imported up to the year 1914-15, imports during recent years were very small.

## FERTILIZERS.—IMPORTS, AUSTRALIA.

Fertilizer.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Bonedust .. .. cwt.	100	(a)	(a)	(a)	(a)
„ .. .. £	58	(a)	(a)	(a)	(a)
Guano .. .. cwt.	20,826	500	52,018	1,000	..
„ .. .. £	1,238	242	6,438	462	..
Superphosphate .. cwt.	1,201	1,400	2,560	4,572	511
„ .. .. £	573	937	1,834	3,331	353
Rock phosphate .. cwt.	10,171,652	9,220,120	12,349,710	10,579,094	8,614,718
„ .. .. £	1,109,414	915,840	1,291,583	1,126,531	568,776
Soda nitrate .. cwt.	100,567	175,074	152,747	256,457	27,434
„ .. .. £	60,951	91,885	75,888	123,635	13,096
Other .. .. cwt.	187,773	237,354	308,425	402,188	341,023
„ .. .. £	87,281	103,634	112,232	205,574	147,500
<b>Total</b> .. cwt.	<b>10,482,119</b>	<b>9,634,448</b>	<b>12,865,460</b>	<b>11,243,311</b>	<b>8,983,686</b>
„ .. £	<b>1,259,515</b>	<b>1,112,538</b>	<b>1,487,975</b>	<b>1,459,533</b>	<b>729,725</b>

(a) Now included with other fertilizers.

4. Exports.—The subjoined table shows the exports of artificial manures for the years 1926-27 to 1930-31. Practically all these fertilizers are manufactured locally, the quantities exported being consigned chiefly to New Zealand, Japan, Java, and the Pacific Islands.

## FERTILIZERS.—EXPORTS, AUSTRALIA.

Fertilizer.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Bonedust .. .. cwt.	2,668	74	39	6,426	6
„ .. .. £	1,220	46	27	2,756	4
Superphosphates .. cwt.	21	33	316	168	144
„ .. .. £	18	14	83	54	52
Rock phosphates .. cwt.	200	..	..	4	..
„ .. .. £	58	..	..	1	..
Soda nitrate .. cwt.	398	7	6	34	7
„ .. .. £	311	7	9	27	14
Ammonia sulphate .. cwt.	99,928	71,911	18,610	972	3,882
„ .. .. £	61,478	42,229	11,255	440	1,470
Other .. .. cwt.	39,718	29,464	66,429	31,474	12,935
„ .. .. £	16,237	12,861	30,097	13,766	4,186
Total .. .. cwt.	142,933	101,489	85,400	39,078	16,974
„ .. .. £	79,322	55,157	41,471	17,044	5,726

5. Quantities Locally Used.—Information regarding quantities, etc., of manures used in each State during the year 1930-31 is given in the table hereunder :—

## FERTILIZERS USED IN EACH STATE, 1930-31.

State or Territory.	Total Area of Crops.	Area Manured.		Manures Used.	
		Aggregate.	Percentage on Total Area of Crops.	Natural (Stable Yard, etc.).	Artificial.
	Acres.	Acres.	%	Loads.	Tons.
New South Wales ..	6,811,247	4,558,287	66.92	142,416	131,572
Victoria .. ..	6,715,660	(a) 6,898,718	(b) 97.17	104,732	(a) 274,420
Queensland .. ..	1,144,216	126,701	11.07	99,011	28,783
South Australia ..	5,426,075	5,140,446	94.74	42,031	194,008
Western Australia ..	4,792,017	(a) 5,195,771	(c) 98.64	62,204	(a) 236,146
Tasmania .. ..	267,632	226,416	84.60	16,074	20,767
Northern Territory ..	1,550	..	..	..	..
Fed. Cap. Territory ..	5,419	3,695	68.19	..	131
Total .. ..	25,163,816	22,150,034	88.02	466,468	885,827

(a) Includes area under sown grasses and manure used.

(b) 1926 figure.

(c) 1923 figure.



Similar particulars in respect of Australia as a whole during the past five years are as shown below :—

### FERTILIZERS USED IN AUSTRALIA.

Year.	Total Area of Crops.	Area Manured.		Manure Used.		
		Aggregate.	Percentage on Total Area of Crops.	Natural (Stable Yard, etc.).	Artificial.	Average per Acre of Total Area (Artificial).
1926-27 ..	17,772,499	14,770,498	83.11	502,055	642,511	81
1927-28 ..	19,219,393	16,607,826	86.41	516,241	725,782	85
1928-29 ..	21,189,557	18,701,389	88.26	450,474	813,656	86
1929-30 ..	21,929,721	19,925,988	90.86	405,812	852,925	87
1930-31 ..	25,163,816	22,150,034	88.02	466,468	885,827	79

The quantity of chemical fertilizers used per acre of all crops increased from 75 lb., the average for the period 1910-13, to 87 lb. in 1929-30, followed by a decrease in 1930-31 to 79 lb. on account of failure of crops in the preceding season owing to drought. It was considered that manured areas on which crops had failed could reasonably be expected to produce another crop without further manuring, or with, at the most, a light dressing.

The percentage of the area manured on the total area cultivated has advanced from 83.11 to 88.02 during the past five years, while the use of artificial manures has increased by more than 243,000 tons during the same period.

6. **Local Production.**—Complete information regarding local production of fertilizers is not available. The number of firms engaged in the manufacture of artificial manures in Australia for the year 1930-31 was 104, made up as follows :—New South Wales, 20 ; Victoria, 30 ; Queensland, 24 ; South Australia, 11 ; Western Australia, 11 ; and Tasmania, 8. The production of superphosphates in Australia during 1930-31 amounted to 660,131 tons, the largest producing States being Victoria and Western Australia.

## § 20. Ensilage.

1. **Government Assistance in Production.**—The various State Governments devote a considerable amount of attention to the education of the farming community in regard to the value of ensilage. Monetary aid is afforded in the erection of silos, and expert advice is supplied in connexion with the design of the silos and the cutting and packing of the silage.

2. **Quantity Made.**—Information regarding the number of holdings on which ensilage was made, and the quantity made during the seasons 1926-27 to 1930-31, is given in the following table :—

### ENSILAGE MADE.

State or Territory.	1926-27.		1927-28.		1928-29.		1929-30.		1930-31.	
	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.
	(a) No.	Tons.	(a) No.	Tons.	(a) No.	Tons.	(a) No.	Tons.	(a) No.	Tons.
New South Wales ..	407	48,718	473	50,464	350	27,177	338	28,155	669	60,172
Victoria ..	94	6,132	75	6,037	89	7,775	74	4,783	99	6,373
Queensland ..	50	4,728	76	5,420	72	4,037	43	2,933	60	4,880
South Australia ..	23	2,405	17	2,415	12	2,808	22	1,319	21	3,656
Western Australia ..	72	5,642	72	5,147	93	7,022	105	7,966	209	10,509
Tasmania ..	8	488	12	526	5	115	6	75	14	840
Northern Territory ..	..	..	..	..	..	..	..	..	..	..
<b>Total</b> ..	<b>654</b>	<b>68,113</b>	<b>725</b>	<b>70,009</b>	<b>621</b>	<b>48,934</b>	<b>588</b>	<b>45,231</b>	<b>1,072</b>	<b>86,430</b>

(a) No. of holdings on which ensilage was made.

The drought of 1902-3 drew increased attention to the value of stocks of ensilage, and during the four seasons ended 1909-10 there was an increase both in the number of holdings on which ensilage was made and in the quantity produced. The following five seasons, however, showed a falling off, but the reduction was due to the fact that stocks had not been drawn upon to any great extent during the previous seasons. The accumulated stocks proved of great value during the 1914 drought, though far below what would have been the case if more attention had been paid to production during the previous years, when there was a surplus of green forage. The quantities made since that date have fluctuated considerably, the output in 1930-31 amounting to 86,430 tons.

## § 21. Agricultural Colleges and Experimental Farms.

1. **General.**—In most of the States agricultural colleges and experimental farms have been established with a view to the promotion of more scientific methods in agriculture, stock-breeding and dairying. In the colleges, and on some of the farms, provision is made for the accommodation of pupils to whom both practical and theoretical instruction is given by experts in various branches of agriculture. Analyses of soils and fertilizers are made, manures are tested, and elementary veterinary science, etc., are taught, while general experimental work is carried on with cereal and other crops, not merely for the purpose of showing that it is practicable to produce certain crops in a given place, but to show also how it is possible to make farming pay in the locality. Opportunities are afforded for practice in general agricultural work, and instruction is given in the conservation of fodder; in cheese and butter making; in the management, breeding, and preparation for the market of live stock; in the eradication of pests and weeds; and in carpentering, blacksmithing, and other trades.

Travelling expert lecturers visit the various agricultural and dairying centres, and there is a wide distribution of periodical agricultural gazettes and bulletins.

2. **Agricultural Colleges and Experimental Farms.**—In previous issues of this volume detailed information was given regarding agricultural colleges, experimental farms, and agricultural education generally. See Year Book No. 11, pages 393-5, and a summary in respect of the year 1930-31 will be found in the Production Bulletin No. 25 issued by this Bureau.

3. **Agricultural and Stock Departments.**—A synopsis of the activities and operations of the Agricultural and Stock Departments of the several States on 30th June, 1920, will be found in Year Book No. 14, pages 1180 to 1191.

## CHAPTER XXI. FARMYARD, DAIRY, AND BEE PRODUCTS.

### § 1. Introductory.

1. **General.**—The introduction of cattle into Australia, and the early history of the dairying industry are referred to in some detail in earlier issues of this work (see Official Year Book No. 6, p. 430). It may here be noted that the original stock has been crossed with specially imported stud cattle, while further judicious crossings of strains has resulted in an increased and improved milk supply. In Australia, dairy cattle thrive in the open throughout the year, local climatic conditions demanding no protection other than tree plantations for shelter, and rugging in the coldest weather. Indigenous and imported grasses furnish food during the greater part of the year, and winter fodder, when necessary, is given to the cattle in the fields. With the adoption of scientific methods in the treatment of animals and pasturages and in the processes of manufacture, coupled with herd testing and effective State supervision, the dairying industry has shown rapid expansion. An investigation into the problems of the dairying industry was decided upon by the Commonwealth Government in 1929, the task of making the necessary inquiries being referred to the Development and Migration Commission and the Council for Scientific and Industrial Research for joint action. The first report, which relates to farm production, was completed by the Federal Dairy Investigation Committee in 1930. The subjects covered in this report included the extent and value of the industry, existing conditions and practices, and the possibilities of improvement. Further reports are to be submitted regarding manufacture and marketing of dairy products.

2. **Official Supervision of Industry.**—Dairy experts, under the supervision of the various State Agricultural Departments, give instruction in approved methods of production, and inspect animals, buildings and marketable produce. A high standard of cleanliness, both of personnel and *matériel*, prevails. Financial assistance of a temporary nature is also given.

The export trade is regulated by the terms of the Commonwealth Commerce Act 1905 and regulations thereunder. The provisions of this Act are set out in detail in Official Year Book No. 6, pp. 431-2. It will be sufficient to state here that the true trade description, etc., must be marked on all produce intended for export, while official inspection ensures the maintenance of purity and quality. Upon request of the exporter the goods are certificated by the inspector.

3. **Stabilization Scheme.**—A scheme for the stabilization of prices of butter and cheese advocated by the Hon. Thomas Paterson, M.H.R., was introduced in January, 1926. The working of the scheme, which is purely voluntary, is controlled by a body known as the Australian Stabilization Committee. Provision is made for levies on all butter and cheese produced within the Commonwealth sufficient to pay a bounty of not less than 3d. per lb. on butter exported and of 1½d. per lb. on cheese exported. Up to the present, however, cheese has not been included in the scheme. The rate of levy charged and the amount of bounty payable on butter exported since 1st January, 1926, are shown in the statement hereunder:—

Period.	Rate of Levy on Butter produced.	Rate of Bounty paid on Butter Exported.
	per lb. d.	per lb. d.
1st January, 1926 to 11th December, 1927 ..	1½	3
12th December, 1927 to 31st December, 1927 ..	1½	4
1st January, 1928 to 31st August, 1928 ..	1½	3
1st September, 1928 to 31st December, 1928 ..	1½	4
1st January, 1929 to 31st December, 1930 ..	1¾	4½
1st January, 1931 to 31st March, 1931 ..	1¾	3½
1st April, 1931 to 11th April, 1931 ..	1¾	3
12th April, 1931 to 2nd April, 1932 ..	1¾	2½
2nd April, 1932 to latest available date (November)	1¾	3

The bounty results in an automatic increase in the local price up to the amount of bounty paid, while the average return to the producer on all butter produced is increased by approximately the amount of the bounty less the rate of levy charged.

On an average annual production of 265,000,000 lb., of which it is estimated that 180,000,000 lb. constitute the requirements for local consumption, leaving a balance of 85,000,000 lb. available for export—the extent to which the producer would benefit from an export bounty of 3d. per lb. is shown hereunder—

Increased value of 3d. per lb. on total production of 265,000,000 lb.	..	£3,313,000
Less amount required to provide export bounty of 3d. per lb. on 85,000,000 lb. exported	.. .. .	1,063,000
Estimated net gain to producer	.. .. .	£2,250,000

It should be noted that the above figures do not take into consideration any consequent increases in the price of milk or other milk products, nor any decrease in consumption resultant thereon.

Allowance must be made also for the fact that the plan, though voluntary, depends upon adequate tariff protection of the "home price". The duty on imported butter was raised to 6d. in 1927 to safeguard the scheme against imports from New Zealand.

4. **Mixed Farming.**—Dairying is not now, as formerly, wholly confined to agriculturists, since many graziers in a large way of business have lately given it their attention. In non-coastal regions it is generally carried on in conjunction with agriculture and sheep-raising, sufficient fodder being grown to carry the cattle through the winter months. Local wants are thus met, and in many places remote from the metropolis well-equipped factories have been established.

5. **Factory System.**—Cream separation and butter-making are often carried on together under the co-operative system. The creation of large central butter factories, supplied by numerous separating establishments or "creameries," has resulted in a considerable reduction in the cost of manufacture, since improved appliances such as refrigerators may be profitably worked at the larger establishments. The product is also of a more uniform quality and the number of farmers who adhere to hand processes is rapidly diminishing. Formerly the average quantity of milk used per pound of hand-made butter was about 3 gallons, but separator butter requires less than 2½ gallons.

6. **Butter and Cheese Factories.**—The factories in Australia for the manufacture of butter, cheese, and condensed milk numbered 506 in 1930–31, as compared with 579 in 1926–27. These were distributed in the various States as follows:—New South Wales, 138; Victoria, 165; Queensland, 117; South Australia, 39; Western Australia, 15; and Tasmania, 32. Fuller details regarding numbers of factories, output, etc., are given in Chapter XXIV.

7. **Ottawa Conference.**—The agreement reached at the Imperial Economic Conference at Ottawa in August, 1932, should materially assist the dairying, bee, and poultry industry. Under the terms of this agreement free entry into the United Kingdom of eggs, poultry, butter, cheese and other milk products of Australian origin will be continued for three years from 15th November, 1932, while similar goods imported from foreign countries are to be subjected to customs duties. The rate to be imposed on the undermentioned items is as follows:—butter, 15s. per cwt.; cheese, 15 per cent. ad valorem; eggs in shell, 1s. to 1s. 9d. per great hundred; honey, 7s. per cwt.; milk powder, 5s. per cwt., and condensed milk 5s. and 6s. per cwt. The right to review the basis of preference of these items at the end of this period is reserved by the Government of the United Kingdom. The quantitative regulation of supplies of bacon and ham coming on to the market in Great Britain is to be arranged after the receipt of the report of the Commission investigating the reorganization of the pig industry in the United Kingdom. The granting of new or additional preferences on some of these items by Crown Colonies and Protectorates should add further benefits to these industries. Details of imports into the United Kingdom are given in § 9 hereafter.

## § 2. Dairy Cattle and Dairy Products.

1. **Dairy Herds.**—The dairy herds of Australia were severely depleted during the drought of 1914–15, when the number was reduced to 1,684,393. Following that year substantial increases have taken place, and the number recorded in 1930 represents a gain of more than 576,000 in the past decade. In New South Wales, Victoria, South Australia, and Tasmania the proportion of dairy cattle to all cattle is high.

Queensland, the Northern Territory, and Western Australia there is a greatly preponderating number of other cattle, the main object in these areas being the production of beef. In Southern Queensland, however, dairying has developed remarkably during the past decennium, and the progress attained in that area has been largely responsible for the Australian increases since 1916. The returns for 1930 include heifers intended for milking and being within three months of calving. Details were not collected for Victoria or Tasmania; but the total of such heifers in the other States amounted to 107,575.

CATTLE AND DAIRY CATTLE.—NUMBER.

State.		1926.	1927.	1928.	1929.	1930.
New South Wales	All Cattle ..	2,813,144	2,848,654	2,784,615	2,686,132	2,840,473
	Dairy Cows ..	885,238	894,440	907,774	913,555	964,739
Victoria	All Cattle ..	1,435,761	1,327,077	1,304,426	1,335,242	1,429,929
	Dairy Cows ..	673,089	626,139	615,092	619,416	660,132
Queensland	All Cattle ..	5,464,845	5,225,804	5,128,341	5,208,588	5,463,724
	Dairy Cows ..	611,227	645,316	670,805	680,577	724,323
South Australia	All Cattle ..	340,007	316,314	263,016	204,516	218,985
	Dairy Cows ..	127,292	117,580	108,969	104,255	109,672
Western Australia	All Cattle ..	827,303	846,735	837,527	836,646	812,844
	Dairy Cows ..	69,627	70,880	69,047	74,223	85,725
Tasmania	All Cattle ..	213,112	210,894	208,812	214,643	230,254
	Dairy Cows ..	67,457	66,902	94,268	72,235	76,825
Northern Territory	All Cattle ..	863,597	835,390	768,751	711,607	720,476
	Dairy Cows ..	(a)	(a)	(a)	(a)	(a)
Federal Capital Territory	All Cattle ..	5,509	6,188	5,269	4,760	4,240
	Dairy Cows ..	815	1,417	704	679	788
Australia..	All Cattle ..	11,963,278	11,617,056	11,309,757	11,202,134	11,720,916
	Dairy Cows ..	2,434,745	2,422,674	2,466,659	2,464,940	2,631,204

(a) Not available.

2. Milk.—The annual quantity of milk produced per dairy cow varies greatly with breed, locality and season, reaching as high as 1,000 gallons, but averaging for the whole of Australia for all dairy cows and for all seasons prior to 1916 considerably under 300 gallons per annum. In recent years not only has there been an improvement in the quality of the cattle, but more scientific methods have been adopted in the industry generally, and the 300 gallon average has been exceeded in each of the last six seasons, the yield of 381 gallons in 1930 constituting a record. The best yields over a series of years were in Victoria, Tasmania, South Australia and New South Wales, while Queensland in normal years shows a higher average than Western Australia. In the following table the annual average yields per cow for the last five years are based on the number of dairy cows which were in milk during any part of the year. The average given is, naturally, far below that for cows which were yielding during the greater part of the year.

MILK PRODUCTION.

Heading.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia. (b)
1926-27—								
Dairy Cows (a) .. No.	837,373	700,515	553,472	123,066	63,768	68,920	730	2,347,844
Production 1,000 gals.	277,917	258,437	130,416	40,434	15,553	21,009	198	749,904
Aver. per cow .. gals.	322	369	246	329	244	305	271	319
1927-28—								
Dairy Cows (a) .. No.	837,617	649,614	565,913	114,459	65,701	67,180	585	2,301,069
Production 1,000 gals.	283,046	260,648	180,679	37,947	17,359	22,556	220	802,255
Aver. per cow .. gals.	338	401	319	332	261	336	376	349
1928-29—								
Dairy Cows (a) .. No.	849,769	620,616	606,637	105,800	65,982	67,491	567	2,316,862
Production 1,000 gals.	277,378	279,032	186,307	35,701	18,252	24,444	245	821,359
Aver. per cow .. gals.	326	450	307	337	277	362	432	354
1929-30—								
Dairy Cows (a) .. No.	858,194	617,254	643,272	98,969	67,592	70,157	550	2,355,988
Production 1,000 gals.	283,947	274,172	188,520	34,774	21,366	25,466	276	828,521
Aver. per cow .. gal.	331	444	293	351	316	363	502	352
1930-31—								
Dairy Cows (a) .. No.	880,079	644,274	671,803	98,502	75,465	74,530	614	2,445,267
Production 1,000 gals.	298,111	313,815	224,085	39,035	24,329	31,165	238	930,778
Aver. per cow .. gal.	339	487	334	396	322	418	388	381

(a) Mean for the year. (b) Exclusive of Northern Territory.

3. **Butter and Cheese.**—Although the quantity of dairy production is largely affected by the nature of the season, a large increase in the output of butter has taken place in recent years. The average annual production rose from 205,000,000 lb. for the quinquennium 1917–1921 to 294,000,000 lb. for the latest five years. Queensland was responsible for the largest share of the increased output during recent years. The largest production of butter in Australia was recorded in 1930–31, when, as a result of a specially favourable season, 350,000,000 lb. were manufactured. The previous highest figure was in 1924 when the total amounted to 314,000,000 lb. It is anticipated that this record will be broken by the return for the season 1931–32. Preliminary data indicate a total production for the season of 390,000,000 lb.

The manufacture of cheese is also largely dependent upon seasonal conditions. The production in 1930–31 of 33,099,781 lb. is the highest yet recorded, exceeding that of 1921 by 500,000 lb..

The development in dairy production since 1896, and in the exports of butter from 1901 onwards are shown in the graphs on page 602. Particulars for the past five years are as follow :—

## BUTTER AND CHEESE PRODUCTION.

State.	1926–27.	1927–28.	1928–29.	1929–30.	1930–31.
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## BUTTER.

	lb.	lb.	lb.	lb.	lb.
New South Wales .. ..	95,832,624	100,794,838	95,337,240	104,175,340	113,237,295
Victoria .. ..	81,995,815	84,270,812	93,728,516	90,639,652	110,006,619
Queensland .. ..	51,402,633	72,039,151	77,044,859	78,796,483	95,719,316
South Australia .. ..	13,416,904	12,136,638	11,315,714	10,789,706	12,961,231
Western Australia .. ..	3,829,728	4,265,258	5,051,088	6,179,489	8,666,399
Tasmania .. ..	6,032,597	6,514,642	7,395,689	8,488,932	9,802,261
Federal Capital Territory .. ..	20,758	16,065	10,094	10,943	11,983
<b>Australia .. ..</b>	<b>252,531,059</b>	<b>280,037,404</b>	<b>289,883,200</b>	<b>299,080,545</b>	<b>350,405,104</b>

## CHEESE.

	lb.	lb.	lb.	lb. °	lb.
New South Wales .. ..	6,735,960	7,284,622	6,339,052	6,345,785	6,516,065
Victoria .. ..	5,997,648	5,621,945	5,595,932	6,953,949	8,064,463
Queensland .. ..	9,260,043	14,128,420	14,391,910	12,380,882	13,648,038
South Australia .. ..	3,708,730	3,465,456	2,975,095	3,536,943	3,901,159
Western Australia .. ..	5,172	5,088	7,526	998	528
Tasmania .. ..	971,644	1,029,344	997,586	954,463	969,528
<b>Australia .. ..</b>	<b>26,679,197</b>	<b>31,534,875</b>	<b>30,217,101</b>	<b>30,173,020</b>	<b>33,099,781</b>

4. **Condensed or Concentrated Milk.**—The manufacture of this product is of comparatively recent growth, the quantity of milk treated in 1901 being negligible, but production increased annually until in 1911 the output nearly doubled that of the previous year. Thenceforward rapid progress was made, the greatest development taking place in Victoria. The output of this State in 1926–27 amounted to 48,186,040 lb.; in 1927–28 to 53,876,662 lb.; in 1928–29 to 53,948,559 lb.; in 1929–30 to 51,581,802 lb., and in 1930–31, to 45,665,474 lb. There is still an import of milk into Australia, but the exports in each year far outweigh the quantity imported. No condensed or concentrated milk is made in South Australia, Western Australia, or Tasmania. Information regarding production in New South Wales and Queensland is not available for publication, but the volume is not very large.



### § 3. Pigs and Pig Products.

1. Pigs.—The number of pigs in Australia for the years 1926 to 1930 is shown below :—

#### PIGS.—NUMBER.

State.	1926.	1927.	1928.	1929.	1930.
New South Wales(a) ..	332,827	301,819	311,605	323,499	334,331
Victoria .. ..	284,271	212,785	222,084	265,978	281,245
Queensland .. ..	183,662	191,947	215,764	236,037	217,528
South Australia ..	79,108	69,733	62,723	74,906	82,991
Western Australia ..	69,798	59,810	49,243	64,522	100,664
Tasmania .. ..	38,906	41,752	48,304	52,899	54,556
Northern Territory ..	343	292	407	359	327
Federal Capital Territory (a)	94	69	51	124	37
<b>Australia .. ..</b>	<b>989,009</b>	<b>878,207</b>	<b>910,181</b>	<b>1,018,324</b>	<b>1,071,679</b>

(a) As on 30th June of year following.

The numbers have fluctuated considerably. There was a heavy falling off in 1915, followed by substantial increases during the next two years, the number in 1917, viz., 1,169,365, being the highest recorded in Australia. From 1917 onwards the numbers remained fairly constant at about 900,000, but an upward tendency is shown by the totals for the latest three years.

2. <sup>o</sup>Bacon and Ham.—(i) *Production.* The production of bacon and ham is increasing fairly rapidly, the averages for the past three quinquennia being 58,000,000, 66,000,000, and 73,000,000 lb. respectively. No increase in the volume of exports has taken place, the extra production being needed to supply the local demand.

#### BACON AND HAM.—PRODUCTION.

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	lb.	lb.	lb.	lb.	lb.
New South Wales ..	24,600,275	25,479,208	23,087,271	21,616,472	21,901,194
Victoria .. ..	20,952,310	20,605,148	19,401,447	18,888,537	18,232,219
Queensland .. ..	18,288,690	18,264,855	22,043,114	19,195,176	20,177,550
South Australia ..	5,165,670	5,111,465	5,110,352	5,232,878	5,710,784
Western Australia (a)	2,678,830	2,760,694	2,557,068	2,713,127	3,042,702
Tasmania .. ..	1,946,323	2,780,304	2,298,745	2,454,548	1,984,454
Federal Capital Territory ..	2,790	..	1,400	1,243	1,230
<b>Total .. ..</b>	<b>73,634,888</b>	<b>75,001,674</b>	<b>74,499,397</b>	<b>70,101,981</b>	<b>71,050,133</b>

(a) Includes a certain quantity made from imported green bacon.

(ii) *Local Consumption.* From the year 1904 onwards the production of bacon and ham has been sufficient to meet the local demand and provide a small surplus for export. Figures showing consumption for the last five years are given hereunder :—

#### BACON AND HAM.—LOCAL CONSUMPTION.

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	lb.	lb.	lb.	lb.	lb.
<b>Total .. ..</b>	<b>72,175,870</b>	<b>73,823,995</b>	<b>73,441,419</b>	<b>68,829,105</b>	<b>68,975,088</b>
Per head of population ..	11.81	11.84	11.59	10.73	10.65



3. **Pork Consumption.**—Data available regarding the consumption of pork indicate an average for Australia in 1930-31 of 6.44 lb. per head of population, as compared with 13 lb. per head in New Zealand, 82 lb. in Canada and 68 lb. in the United States of America.

4. **Oversea Trade in Pig Products.**—The oversea trade in pigs and pig products for the last five years is shown in the following table:—

**PIG PRODUCTS.—OVERSEA TRADE, AUSTRALIA.**

Particulars.		1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
<b>Pigs.</b>						
Imports	.. No.	8	..	85	59	7
"	.. £	223	..	707	2,603	222
Exports	.. No.	418	328	201	325	280
"	.. £	2,506	1,294	934	1,365	1,186
Net Exports	.. No.	410	328	116	266	273
"	.. £	2,283	1,294	227	-1,238	904
<b>BACON AND HAM.</b>						
Imports	.. lb.	374,814	356,288	406,335	209,021	25,245
"	.. £	23,101	21,108	23,405	12,325	1,413
Exports	.. lb.	1,833,832	1,533,967	1,464,313	1,481,897	2,100,290
"	.. £	147,886	129,073	122,929	116,709	115,278
Net Exports	.. lb.	1,459,018	1,177,679	1,057,978	1,272,876	2,075,045
"	.. £	124,785	107,965	99,464	104,384	113,805
<b>LARD.</b>						
Imports	.. lb.	575,293	712,307	420,609	206,037	101,391
"	.. £	17,169	20,092	11,188	5,157	2,633
Exports	.. lb.	1,334,421	1,380,960	1,609,914	969,512	1,043,930
"	.. £	38,839	38,209	41,741	26,664	26,189
Net Exports	.. lb.	759,128	668,653	1,189,305	763,475	942,539
"	.. £	21,670	18,117	30,553	21,507	23,556
<b>FROZEN PORK.</b>						
Imports	.. lb.	733,179	2,112,595	2,288,385	413,949	46,695
"	.. £	31,657	67,876	76,141	13,486	1,492
Exports	.. lb.	481,330	159,494	199,336	934,149	8,629,901
"	.. £	16,608	6,183	7,856	32,735	235,999
Net Exports	.. lb.	-251,849	-1,953,101	-2,089,049	520,200	8,583,206
"	.. £	-15,049	-61,693	-68,285	19,249	234,507

NOTE.—The minus sign (—) signifies net imports.

The output of pig products in Australia is usually sufficient to meet local requirements and provide a small surplus for export. Exports of frozen pork showed a remarkable increase in 1930-31, when more than 8.6 million lb. were sent overseas, as compared with an average of 373,000 lb. for the five preceding years. Heavy exports continued during 1931-32, the chief forwarding States being Queensland and Victoria. During the last five years the value of the average annual net export amounted to £155,625, the bulk of the shipments consisting of bacon, ham and lard. The chief pig product consumed in the United Kingdom is bacon and ham, the imports of which during 1930 amounted to 10 million cwt., valued at £46,000,000, obtained chiefly from Denmark. With the regulation of supplies from foreign countries to the United Kingdom under the terms of the agreement at the Ottawa Conference in 1932, Australia should gain a larger share in this important market.

§ 4. Total Dairy Production.

The total dairy production of Australia in 1930-31 is shown below:—

TOTAL DAIRY PRODUCTION.—AUSTRALIA, 1930-31.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Total.
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MILK.

Used for—	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.
Butter ..	233,337,900	243,610,946	197,818,888	27,502,912	17,960,791	23,926,351	37,432	744,195,220
Cheese ..		7,855,050		3,650,003		951,499		
Condensing and concentrating ..	9,039,670	12,114,734	13,525,525					47,136,481
Other purposes ..	55,733,430	50,234,280	12,740,797	7,882,138	6,367,908	6,287,150	200,703	139,446,406
Total ..	298,111,000	313,815,010	224,085,210	39,035,053	24,328,699	31,165,000	238,135	930,778,107

BUTTER.

In Factories On Dairy and other Farms ..	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
	108,327,574	106,245,532	92,895,809	9,695,732	7,102,515	7,550,206	..	331,817,368
	4,909,721	3,761,087	2,823,507	3,265,499	1,563,884	2,252,055	11,983	18,587,736
Total ..	113,237,295	110,006,619	95,719,316	12,961,231	8,666,399	9,802,261	11,983	350,405,104

CHEESE.

In Factories On Dairy and other Farms ..	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
	6,425,093	7,845,833	13,642,488	3,897,064	..	883,968	..	32,694,446
	90,972	218,630	5,550	4,095	528	85,560	..	405,335
Total ..	6,516,065	8,064,463	13,648,038	3,901,159	528	969,528	..	33,099,781

CONDENSED, CONCENTRATED, OR POWDERED MILK.

In Factories	lb. (b)	lb.	lb. (b)	lb.	lb.	lb.	lb.	lb.
		45,665,474		..	..	..	..	45,665,474

BACON AND HAM.

In Factories On Dairy and other Farms ..	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
	20,984,266	17,340,287	19,842,633	5,208,597	2,912,772	1,213,343	..	67,501,898
	916,928	891,932	334,917	502,187	129,930	771,111	1,230	3,548,235
Total ..	21,901,194	18,232,219	20,177,550	5,710,784	3,042,702	1,984,454	1,230	71,050,133

(a) Including milk used for making cheese. (b) Figures not available for publication. (c) A portion only from pigs slaughtered in the State, the balance being imported and subsequently cured.

Particulars in regard to the production of other milk products are not available for all the States, but the following articles were made in Victoria during 1930-31:—Casein, 2,555,410 lb.; other milk products, 634,402 lb.

### § 5. Poultry Farming.

1. **General.**—Poultry is kept in varying numbers by farmers, and production therefrom furnishes a considerable addition to the annual agricultural or dairying returns. For many years, however, poultry-keeping has been carried on as a separate industry, while it is also practised in conjunction with other rural industries. Special poultry farms have been instituted by the States Governments for scientific breeding, experts have been appointed to advise and instruct in the care and management of the various kinds of poultry raised, and exhibitions of leading breeds have been arranged, as well as egg-laying competitions. Co-operative egg-collecting circles have been formed in some districts; eggs are also delivered with milk and cream to the local butter factories, and thence forwarded to market.

2. **Poultry Products.**—Difficulty is experienced in obtaining complete figures for the yield of poultry products. The following values relate to poultry and eggs:—

#### POULTRY AND EGGS.—VALUE OF PRODUCTION.

Year.	N.S.W.	Victoria.	Qland.	S. Aust.	W. Aust.	Tasmania. (a)	Australia.
	£	£	£	£	£	£	£
1926-27 ..	3,807,500	4,819,500	500,237	1,046,056	330,903	300,000	10,804,196
1927-28 ..	3,924,350	4,700,000	598,467	1,234,532	426,422	300,000	b11,247,869
1928-29 ..	3,329,000	4,348,000	619,329	1,053,939	456,242	300,000	b10,109,695
1929-30 ..	3,471,000	4,638,000	635,145	950,542	542,291	300,000	b10,541,053
1930-31 ..	2,886,000	3,926,000	556,620	831,020	399,430	300,000	b 8,904,600

(a) Estimated. (b) Includes Federal Capital Territory, 1927-28 £4,098, 1928-29 £3,185, 1929-30 £4,075, and 1930-31 £5,530.

3. **Oversea Trade in Poultry Products.**—The Australian oversea trade in poultry products is confined chiefly to eggs, which are mainly consigned to the United Kingdom. New South Wales, Victoria, and Queensland are participating in this trade, which, during 1930-31, amounted to £326,743. The levying in accordance with the Ottawa Conference Agreement of a customs duty varying between 1s. and 1s. 9d. per 10 dozen by the Government of the United Kingdom on imported eggs of foreign origin should assist Australia to obtain a larger share in this valuable market. Exports from Australia have risen from slightly more than 1 million dozen valued at £85,000 in 1927-28 to nearly 10 million dozen valued at £494,000 in 1931-32. The exports of frozen poultry have fluctuated considerably in recent years, being valued at £11,729 during 1930-31, as compared with £50,205 for 1921-22. The oversea trade during the past five years was as follows:—

#### POULTRY PRODUCTS, TRADE.—AUSTRALIA.

Particulars.		1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
<b>LIVE POULTRY.</b>						
Imports	.. No.	281	264	310	424	176
"	.. £	1,604	1,002	1,244	1,512	516
Exports	.. No.	1,847	2,585	2,116	2,165	1,526
"	.. £	1,311	1,837	1,757	1,821	1,147
Net Exports	.. No.	1,566	2,321	1,806	1,741	1,350
"	.. £	-293	835	513	309	631
<b>FROZEN POULTRY.</b>						
Imports	.. lb.	12,340	66,677	14,315	1,097	1,695
"	.. £	749	4,766	1,055	86	107
Exports	.. pair	19,880	9,570	12,419	13,908	14,553
"	.. £	30,259	8,930	15,341	17,118	11,729
Net Exports	.. ..	(a)	(a)	(a)	(a)	(a)
"	.. £	29,510	4,164	14,286	17,032	11,622

NOTE.—The minus (-) signifies net imports.

(a) Quantity not available.

POULTRY PRODUCTS, TRADE.—AUSTRALIA—*continued.*

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
<b>Eggs.</b>					
Imports .. doz.	24,182	25,752	21,349	16,568	10,828
" .. £	1,507	1,579	1,210	873	406
Exports .. doz.	3,151,990	1,104,005	2,916,338	3,570,219	5,970,696
" .. £	233,672	85,844	218,929	255,571	321,627
Net Exports .. doz.	3,127,808	1,078,253	2,894,989	3,553,651	5,959,868
" .. £	232,165	84,265	217,719	254,698	321,221

## EGG-CONTENTS.

Imports .. lb.	39,675	38,858	39,483	29,693	11,108
" .. £	6,382	6,531	5,147	3,901	892
Exports .. lb.	(a)	(a)	(a)	(a)	(a)
" .. £	97	17	127	354	5,116
Net Exports .. lb.	(a)	(a)	(a)	(a)	(a)
" .. £	-6,285	-6,514	-5,020	-3,547	4,224

NOTE.—The Minus (—) signifies net imports.

(a) Quantity not available.

## § 6. Bee Farming.

1. **General.**—Although practised to some extent as a separate industry, bee-farming is frequently carried on in conjunction with agriculture or dairying. The returns of honey from productive hives during 1930-31 gave an average of 62.56 lb. per hive, while the average quantity of wax was 0.77 lb. per hive.

2. **Production of Honey and Beeswax.**—The number of hives and the production of honey and beeswax during the year 1930-31 are given in the following table:—

## BEE-HIVES, HONEY, AND BEESWAX, 1930-31.

State.	Bee Hives.			Honey Produced.		Beeswax Produced.	
	Pro- ductive.	Unpro- ductive.	Total.	Quantity.	Value.	Quantity.	Value.
	No.	No.	No.	lb.	£	lb.	£
New South Wales ..	36,800	8,585	45,385	2,643,871	48,470	36,460	2,582
Victoria ..	45,620	15,541	61,161	2,804,186	52,578	30,478	2,032
Queensland ..	12,930	3,390	16,320	555,244	9,845	8,579	620
South Australia ..	25,245	6,587	31,832	1,717,442	19,679	16,832	1,122
Western Australia ..	10,806	919	11,725	641,969	10,723	9,911	687
Tasmania ..	3,901	1,497	5,398	102,540	2,528	2,008	192
Fed. Cap. Territory..	188	17	205	10,600	194	139	10
<b>Australia ..</b>	<b>135,490</b>	<b>36,536</b>	<b>172,026</b>	<b>8,475,852</b>	<b>144,017</b>	<b>104,407</b>	<b>7,245</b>

The table hereunder gives the production of honey and beeswax for the latest available five years :—

### HONEY AND BEESWAX PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
HONEY.								
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
1926-27	1,510,420	2,370,310	461,009	1,918,195	553,238	75,876	12,120	6,901,168
1927-28	1,154,201	2,992,860	394,960	931,711	366,286	88,419	..	5,928,437
1928-29	2,354,845	4,181,571	667,846	3,047,421	509,415	89,969	12,900	10,863,967
1929-30	2,101,619	3,097,805	714,068	678,348	611,938	115,845	4,170	7,323,793
1930-31	2,643,871	2,804,186	555,244	1,717,442	641,969	102,540	10,600	8,475,852
BEESWAX.								
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
1926-27	22,532	33,238	8,785	22,368	5,190	1,224	104	93,441
1927-28	17,139	34,358	7,504	13,069	5,501	1,337	..	78,908
1928-29	30,064	49,675	13,629	28,041	6,555	1,465	162	129,591
1929-30	35,493	29,682	10,739	7,924	10,419	1,779	65	96,101
1930-31	36,460	30,478	8,579	16,832	9,911	2,008	139	104,407

The production of honey and beeswax varies greatly from year to year according to the condition of the seasons. During the last five years New South Wales produced 9,764,956 lb. of honey and 141,688 lb. of beeswax, while the Victorian figures amounted to 15,446,732 lb. and 177,431 lb. respectively for honey and beeswax. These States together accounted for 63.84 per cent. of the total Australian production of honey, and 63.51 per cent. of the beeswax. Next in order of importance were South Australia, Queensland, and Western Australia.

3. **Oversea Trade in Bee Products.**—In normal years the local production of honey exceeds Australian requirements, and a small quantity is available for export. The imports into the United Kingdom average 70,000 cwt. annually, of which Australia supplies less than 1,000 cwt. At the Imperial Economic Conference at Ottawa in 1932, the representatives of the United Kingdom, on behalf of their Government, agreed to the imposition of an import duty of 7s. per cwt. on foreign honey, and Australia should, therefore, gain a larger proportion of the trade. During the past five years the value of the exports amounted to only £26,188, or an annual average of £5,238, owing to the decrease in production. The more general use of frame hives has affected the production of wax, and as a result the quantity imported has exceeded that exported during each of the past five years.

### BEE PRODUCTS.—IMPORTS, EXPORTS, ETC., AUSTRALIA.

Particulars.		1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
HONEY.						
Imports	.. lb.	657	922	11,142	13,950	9,177
"	.. £	20	43	349	332	250
Exports	.. lb.	402,745	281,090	83,418	122,524	138,491
"	.. £	9,157	6,912	2,856	3,631	3,632
Net Exports	.. lb.	402,088	280,168	72,276	108,574	129,314
"	.. £	9,137	6,869	2,507	3,299	3,382
BEESWAX.						
Imports	.. lb.	75,104	96,101	82,261	54,475	36,245
"	.. £	6,951	8,413	8,118	4,875	2,753
Exports	.. lb.	326	3,596	1,659	1,411	1,934
"	.. £	29	346	149	115	79
Net Exports	.. lb.	-74,778	-92,505	-80,602	-53,064	-35,211
"	.. £	-6,922	-8,067	-7,969	-4,760	-2,674

NOTE.—The minus sign (—) signifies net imports.

§ 7. Value of Farmyard, Dairy, and Bee Products.

The value of the farmyard, dairy and bee products raised in Australia in 1930-31 was as follows:—

FARMYARD, DAIRY, AND BEE PRODUCTS.—VALUE, 1930-31.

Products.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£	£
Milk, consumed as such ..	2,452,376	2,075,720	537,460	325,696	263,127	259,790	..	8,293	5,922,462
Butter ..	6,775,699	6,572,529	5,979,329	893,397	602,780	623,505	..	717	21,447,856
Cheese ..	227,952	328,960	385,416	112,528	15	27,828	..	..	1,032,699
Condensed & concentrated milk	(a)	b1,266,497	(a)	..	..	..	..	..	1,266,497
Bacon and ham	806,553	706,815	799,900	216,280	139,491	74,118	..	45	2,743,202
Pork ..	302,792	348,934	359,626	141,497	84,866	52,990	500	900	1,292,105
Lard ..	17,723	36,013	31,103	6,204	2,843	5,719	..	..	99,605
Live Stock ..	10,832	38,168	..	16,170	90,355	1,243	..	..	156,768
Poultry and eggs	2,886,000	3,926,000	556,620	831,020	399,430	300,000	..	5,530	8,904,600
Honey and wax	51,052	54,610	10,465	20,801	11,410	2,720	..	204	151,262
<b>Total ..</b>	<b>13,530,979</b>	<b>15,354,246</b>	<b>8,659,819</b>	<b>2,563,593</b>	<b>1,594,317</b>	<b>1,347,913</b>	<b>500</b>	<b>15,689</b>	<b>43,067,056</b>

(a) Included with milk consumed as such. (b) Includes casein £38,865, milk sugar and other milk products £14,408. (c) Includes condensed and concentrated milk.

§ 8. Exports of Australian Farmyard, Dairy, and Bee Products.

The quantities and values of Australian farmyard, dairy, and bee products exported during each of the last five years are shown below:—

AUSTRALIAN FARMYARD, DAIRY AND BEE PRODUCTS.—EXPORTS.

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
<b>QUANTITY.</b>					
Beeswax .. .. .	lb. 326	3,596	1,659	1,411	1,020
Butter .. .. .	76,516,497	99,164,946	102,442,843	107,663,114	163,180,695
Cheese .. .. .	3,643,832	6,926,691	8,330,972	3,089,382	8,594,693
Egg albumen and yolk .. .. .	(a)	(a)	(a)	(a)	(a)
Eggs .. .. .	doz. 3,151,965	1,104,005	2,915,338	3,570,219	5,970,606
Feathers undressed .. .. .	(a)	(a)	(a)	(a)	(a)
Honey .. .. .	lb. 402,745	281,090	83,418	122,524	138,491
Lard .. .. .	1,315,831	1,359,746	1,599,050	969,512	1,043,930
Meats—					
Bacon and Ham .. .. .	1,833,468	1,533,967	1,461,313	1,473,036	2,100,290
Frozen Poultry .. .. .	pair 19,980	9,570	12,419	13,888	14,553
Frozen Pork .. .. .	lb. 481,330	158,327	158,975	932,297	8,623,651
Milk, concentrated and preserved .. .. .	17,752,506	20,622,779	25,385,174	16,493,546	12,351,024
Pigs, living .. .. .	No. 418	28	201	325	280
Poultry, living .. .. .	1,833	2,569	2,116	2,158	1,526
<b>VALUE.</b>					
Beeswax .. .. .	£ 29	£ 346	£ 149	£ 115	£ 77
Butter .. .. .	5,447,224	6,905,933	7,545,430	7,001,540	8,120,165
Cheese .. .. .	131,168	260,235	329,700	124,716	244,066
Egg albumen and yolk .. .. .	56	13	9	198	5,099
Eggs .. .. .	233,670	85,844	218,926	255,571	321,627
Feathers, undressed .. .. .	774	457	398	1,132	1,036
Honey .. .. .	9,157	6,912	2,856	3,631	3,632
Lard .. .. .	37,995	37,318	41,373	26,664	26,189
Meats—					
Bacon and Ham .. .. .	147,861	129,073	122,742	116,159	115,278
Frozen Poultry .. .. .	30,259	8,930	15,341	17,109	11,729
Frozen Pork .. .. .	16,608	6,152	6,773	32,683	235,857
Milk, concentrated and preserved .. .. .	1,080,963	1,188,504	1,424,313	997,512	610,653
Pigs, living .. .. .	2,506	1,294	934	1,365	1,186
Poultry, living .. .. .	1,281	1,817	1,757	1,801	1,147
<b>Total .. .. .</b>	<b>7,139,551</b>	<b>8,632,828</b>	<b>9,710,702</b>	<b>8,580,196</b>	<b>9,697,741</b>

(a) Quantity not available.

Butter figures most largely in the list of exports shown above, the United Kingdom being the principal country of destination. During the year 1930-31, exports thereto amounted to 146,409,027 lb., or 90 per cent. of the total. Exports to Eastern countries were 9,826,062 lb., or 6 per cent. of the total. Canada during the same year took 2,799,440 lb. Consignments to the countries mentioned accounted for 97 per cent. of the total exports of butter for the year specified.

### § 9. British Imports of Dairy Products.

1. Quantities and Values.—The following table gives the quantities and values of the principal dairy products imported into the United Kingdom during the years 1926 to 1930:—

#### DAIRY PRODUCTS.—IMPORTS, UNITED KINGDOM.

Products.	1926.	1927.	1928.	1929.	1930.
Butter .. .. . cwt.	5,818,840	5,818,611	6,112,972	6,397,266	6,821,620
" .. .. . £	48,283,312	48,204,721	52,044,506	54,706,404	46,869,697
Cheese .. .. . cwt.	3,014,055	2,949,082	3,005,237	2,994,038	3,112,316
" .. .. . £	13,940,648	13,493,668	14,997,173	13,912,535	12,602,974
Milk, concentrated and preserved cwt.	2,556,890	2,684,019	2,907,225	2,935,151	2,869,229
" .. .. . £	5,420,167	5,561,726	5,978,958	5,608,354	5,033,570
Bacon and ham .. .. . cwt.	8,666,467	9,370,696	9,794,909	9,306,909	10,194,208
" .. .. . £	50,146,958	43,333,082	44,957,403	49,215,508	46,112,307
Pork (a) .. .. . cwt.	303,234	234,248	289,114	359,134	436,739
" .. .. . £	1,396,714	912,271	1,014,253	1,305,804	1,641,860

(a) Frozen, chilled, and salted.

2. Butter.—(i) Imports. Australia has for many years supplied a large proportion of the butter imported into the United Kingdom. The quantity shipped in 1930 amounted to 950,582 cwt., or 14 per cent. of the total importation. The Australian contribution was valued at £6,017,014, and was exceeded only by that shipped from Denmark and New Zealand.

#### BUTTER IMPORTS.—UNITED KINGDOM, 1930.

Country from which Imported.	Quantity.	Value.	Country from which Imported.	Quantity.	Value.
	cwt.	£		cwt.	£
Denmark .. .. .	2,318,525	17,102,544	Lithuania .. .. .	20,574	133,545
New Zealand .. .. .	1,564,436	10,785,724	Germany .. .. .	8,175	55,620
<b>Australia .. .. .</b>	<b>950,582</b>	<b>6,017,014</b>	France .. .. .	7,054	50,533
Irish Free State .. .. .	521,963	3,275,412	Norway .. .. .	2,077	16,655
Argentine Republic .. .. .	414,050	2,574,220	Canada .. .. .	210	1,466
Sweden .. .. .	279,565	1,970,773	United States of America .. .. .	134	998
Finland .. .. .	233,510	1,596,699	British Possessions, n.e.i. .. .. .		
Soviet Republics .. .. .	165,451	1,005,260	n.e.i. .. .. .	7,140	42,099
Netherlands .. .. .	89,094	659,401	Foreign Countries, n.e.i. .. .. .	2,720	17,830
Estonia .. .. .	96,338	640,875			
Poland .. .. .	64,997	398,526			
Latvia .. .. .	49,200	331,581			
Union of South Africa .. .. .	25,825	192,922	Total .. .. .	6,821,620	46,869,697

(ii) *London Prices.* The average price of the best quality Australian butter in London during the past ten years is shown in the following table :—

## AUSTRALIAN BUTTER.—LONDON PRICES.

Year.	Average Top Price per cwt.	Year.	Average Top Price per cwt.
	<i>s. d.</i>		<i>s. d.</i>
1919	(a) 252 0	1925	184 0
1920	(a) 299 9	1926	169 6
1921	234 0	1927	169 6
1922	183 0	1928	171 0
1923	184 6	1929	175 0
1924	189 6	1930	135 6

(a) Flat rate for all imported butter.

The surplus output of Australian butter was sold under contract to the British Government from 1st July, 1918, to 31st March, 1921, but thereafter it has been sold in the open market.

3. *Cheese.*—The value of cheese imported into the United Kingdom in 1930 was £12,602,974, of which £7,821,634 was received from New Zealand, and £2,699,918 from Canada. Small experimental shipments from Australia were made in 1908 and following years, fair prices being realized. The value of the imports from Australia during 1930 amounted to £174,439.

4. *Bacon and Ham.*—Of a total import of bacon and ham valued in 1930 at £46,112,307, the United Kingdom received imports to the value of £27,651,123 from Denmark, £6,156,693 from the United States, and £937,003 from Canada. The import from Australia was small, experimental shipments only having been made during recent years.

5. *Pork.*—The value of the United Kingdom imports of pork (frozen and salted only) was £1,641,860 in 1930. There was only a small importation from Australia, the bulk of the supplies being forwarded from New Zealand, the United States, and Argentine Republic.

6. *Other Products.*—The shipments to the United Kingdom from Australia of beeswax, poultry, game, lard, or honey in 1930 were unimportant, but frozen rabbits to the value of £435,227 and eggs to the value of £425,835 were exported during the year.



## CHAPTER XXII.

## FORESTRY.\*

## § 1. General.

1. **Objects of Forestry.**—Scientific forestry aims at the preservation and development of existing forest areas by safeguarding them against fire and other destructive agencies, by expert supervision of the removal of timber, by judicious thinning, and by reforestation of denuded areas with suitable forest crops of local or exotic origin. It provides also for the continuance of an indispensable form of national wealth by the afforestation of available bare lands adapted to the growth of various timbers. Only small areas of virgin forests still remain in Australia, as extensive inroads have been made by timber-getters, by agriculturists, and by pastoralists—who have destroyed large areas by “ring-barking”—and it is not unlikely that climatological changes have resulted therefrom. It is recognized that beneficial consequences follow on the planting of trees on denuded lands, or along eroding coasts, and that a forest covering tends to regulate to the best advantage the effects of rainfall. The existing virgin forests consist of hardwood jungle, or brush, with very little softwood, and the need for extensive softwood planting is urgent.

Efficient forestry is of particular interest in connexion with the Murray River Basin, where a large expenditure from the public funds has been incurred in the provision of locks and weirs and in the formation of irrigation settlements in the lower course of the river. The stability of the Murray's flow in so far as it can be assured by forest plantation may rightly be deemed a question of national importance.

Successful planting of exotics in various parts of Australia has demonstrated that both climate and soil are suitable for the cultivation of a number of highly serviceable softwoods.

2. **Extent of Forests.**—(i) *Australia.* The bulk of the present local timber supply comes from the thickly forested areas in the 30-inch and over rainfall belt south of the tropics, and the 70-inch and over rainfall belt within the tropics. The total forest area included in the divisions specified is comparatively small, and is confined to the following regions:—(a) The coastal belt in the extreme south-west of Western Australia, from a little north of Perth to Albany; (b) the Otway country in the south of Victoria, and the whole of the south-eastern portion of that State; (c) the mountain forests of Victoria and New South Wales; (d) the coastal districts of New South Wales and Queensland; (e) the greater portion of Tasmania; (f) the forests on the Murray River near Echuca; (g) the cypress pine belt from the Murray northward to Queensland and westward of the coastal belt.

Over 90 per cent. of the timber trees of Australia consists of hardwoods belonging to the genus *Eucalyptus* (Gum Trees). Including the mallees, over 400 species are now recognized, but the chief commercial varieties are confined to about 50 species.

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\* A specially contributed article dealing with Forestry in Australia appeared as part of this Chapter in Official Year Book No. 19 (*vide* pp. 701 to 712 therein).

In addition to the hardwood forests and the cypress pine belt, the coastal strip in Queensland and northern New South Wales provides "rain" or "brush" forests. These tropical forests furnish the serviceable hoop pine, and furniture timbers such as black bean, Queensland walnut and maple, silkwood, &c.

The drier wooded area of the continent contains a large number of xerophilous trees and woody shrubs which thrive in regions receiving less than 10 inches of rain per annum. Country devoid of tree growth is rare. Unsuitable soil conditions such as basalt formations, clay pans, rock exposures or sand dunes are as a rule more responsible for treeless areas than lack of rainfall. The 300-mile stretch of the Nullarbor Plain is a treeless area where the non-retentive limestone foundation accentuates the effects of a low rainfall. While, however, the major portion of Australia carries trees, and may be said to be wooded (the term "desert" applying to relatively small areas only), dense forest is confined to a very narrow fringe. The savannah forests of the interior yield minor products such as sandalwood and tan barks, but do not produce timber. These open, park-like formations carry scattered trees of low habit only. Practically the whole of Papua and New Guinea carry or have carried dense forests, the exceptions being certain small dry belts where the rainfall is less than 70 inches. Norfolk Island was, at one time, covered with thick jungle.

Special articles relating to Australian Eucalyptus timbers and the chemical products of Eucalypts will be found in *Official Year Book No. 10*, pp. 85-98.

Scientific surveys of the forests of the various States have not yet been completed, and there are, in consequence, conflicting reports regarding the total forest area of Australia. Expert foresters, however, estimate the forest area possible for permanent reservation at approximately 19,500,000 acres, distributed throughout the States as follows:—

#### ESTIMATED FOREST AREA.—AUSTRALIA.

State.	Total Forest Area.	Percentage on Total Area.
	Acres.	Per cent.
New South Wales .. .. .	4,000,000	.224
Victoria .. .. .	5,500,000	.301
Queensland .. .. .	6,000,000	.335
South Australia .. .. .	500,000	.028
Western Australia .. .. .	3,000,000	.167
Tasmania .. .. .	500,000	.028
Australia .. .. .	19,500,000	1.024

(ii) *Comparison with other countries.* The table hereunder shows the absolute and relative forest areas of Australia and other countries, and the respective areas publicly and privately owned.

The figures are based on information supplied to the International Institute of Agriculture and are the latest available. Comparisons of the returns for different countries are, however, subject to the qualification that the significance of the term "forest" is not identical in all cases. In older countries, and chiefly in Europe, scientific forestry has been practised for centuries, whereas in newer lands, such as Australia, Canada, &c., it is of comparatively recent origin. Further considerable areas included as forests in the newer countries contain indigenous growth of little or no commercial value, and effective comparison with countries where efficient forestry has been practised for many years is, therefore, unattainable.

## FORESTS.—AREA AND OWNERSHIP, VARIOUS COUNTRIES.

Country.	Forest Area.	Per cent. of	Publicly	Privately
		Total Area.	Owued.	Owued.
	sq. miles.	Per cent.	sq. miles.	sq. miles.
Soviet Republics .. ..	2,589,880	63.3	2,589,880	..
Canada .. ..	1,151,402	32.8	1,040,867	110,535
United States of America .. ..	733,539	24.7	(a)	(a)
India .. ..	307,928	27.5	253,816	54,112
Nigeria .. ..	234,990	63.8	8,486	226,504
Finland .. ..	97,538	73.5	39,733	57,805
Sweden .. ..	89,500	56.5	21,390	68,110
Japan .. ..	87,678	59.5	51,332	36,346
Germany .. ..	48,857	27.0	23,541	25,316
France .. ..	39,873	18.74	(a)	(a)
Poland .. ..	34,531	23.0	11,603	22,928
<b>Australia (b)</b> .. ..	<b>30,469</b>	<b>1.08</b>	(a)	(a)
Yugoslavia .. ..	29,289	30.5	19,545	9,744
Norway .. ..	28,955	24.2	5,646	23,309
Turkey .. ..	28,703	9.7	27,100	1,603
Rumania .. ..	27,544	24.2	7,929	19,615
Italy .. ..	21,309	17.81	(a)	(a)
New Zealand .. ..	20,778	20.2	15,033	5,745
Spain .. ..	18,965	9.74	(a)	(a)
Czechoslovakia .. ..	18,003	33.2	5,595	11,892
Union of South Africa .. ..	15,958	3.4	1,231	14,727
Algeria .. ..	12,257	10.7	9,195	3,062
Austria .. ..	12,112	37.4	2,925	9,187
Dutch East Indies .. ..	11,737	23.1	(a)	(a)
Bulgaria .. ..	11,143	28.0	3,043	8,100
Greece .. ..	9,291	18.5	6,442	2,849
Latvia .. ..	6,874	27.1	5,568	1,306
Great Britain .. ..	4,745	5.4	493	4,252

(a) Not available. (b) Estimate of forest area possible for permanent reservation.

3. **Requisite Proportion of Forest Area.**—It is generally held that when the forest area in any country falls below 0.86 acres per head of population, that country will be obliged to import timber. Australia possesses 3.19 acres of forest per head of population, and the excess of imports of timber over exports amounts to 28,000,000 cubic feet. There are two reasons for the excess. In the first place, the area of 19,500,000 acres given as the wooded area comprises all forest lands, reproductive or otherwise. The bulk of this area consists of cut-over forests swept by fire at frequent intervals, and the area of really productive forests has not been ascertained. Secondly, Australia does not possess a sufficient supply of softwoods, and must, therefore—with the exception of a small quantity produced in Queensland and New South Wales—import the bulk of its requirements from overseas. The figure 19,500,000 acres represents the total area that in the estimation of foresters should be reserved for forestry, and, taking the factor of 0.86, then, provided that the whole of the forest area of Australia has been brought under sylvicultural treatment, is yielding its maximum of hard and soft woods, and that there are no imports, the timber supply of Australia should be sufficient for a population of 22½ millions.

## § 2. Forestry Activities of the Commonwealth Government.

Forestry was not included amongst the matters transferred from the States to the control of the Commonwealth, and federal supervision, therefore, is restricted to the forests in the Commonwealth Territories. These territories cover a large area, and, with the exception of the Northern Territory, are capable of sound forestry development. It is only during the last few years, however, that any attempt has been made to take stock of the forestry position. The Commonwealth Forestry Bureau was instituted in 1925 to initiate sylvicultural and other forest research work and to take charge of the education and training of the professional staffs required by the Commonwealth and the State services. The Bureau received statutory powers under an Act passed in 1930,

In the meantime, the Australian Forestry School was established in 1926, and not only was the training of the State forest officers begun, but a nucleus of qualified officers was sent abroad to undergo special courses of instruction with the object of staffing the research side of the Bureau. The financial situation since 1930 has delayed progress on the research side, and the educational work of the Australian Forestry School is at present the Bureau's main activity.

The forest resources of the Commonwealth Territories of Papua, New Guinea, Norfolk Island, and the Federal Capital, have been investigated, and reports in connexion therewith have been furnished and published. In the case of the Federal Capital area an active forest policy has been inaugurated.

The investigation of the dead product of the forests is entrusted to the Council for Scientific and Industrial Research, which has established a Forest Products Division. Research work is being carried out by this institution in regard to various matters, e.g., paper pulp, seasoning, preservation, tan barks, the chemistry of woods, the utilization of forest products generally, including the substitution of local for imported woods for such purposes as butter boxes and fruit cases.

### § 3. State Forestry Departments.

1. **Functions.**—With the exception of Queensland, the powers and functions of State forest authorities are laid down under Forestry Acts and regulations. In each State there is a Department or Commission specially charged with forestry work. The functions of these administrations are as follows:—(a) The securing of an adequate reservation of forest lands; (b) The introduction of proper measures for scientific control and management of forest lands to include such measures for silvicultural treatment (i.e., regeneration treatment, thinnings, improvement, fellings, etc.), as are necessary; (c) The protection of forests; (d) The conversion, marketing and economic utilization of forest produce; (e) The establishment and maintenance of coniferous forests to remedy existing deficiency in softwoods.

Annual reports are issued by each State forest authority.

In Victoria a forestry school has been established at which recruits are trained for the forestry service of the State.

2. **Forest Reservations.**—At the Interstate Forestry Conference, held in Hobart in 1920, the State forestry authorities agreed in regard to the necessity of reserving an area of 19,500,000 acres of indigenous forest lands in order to meet the future requirements of Australia. This area was distributed among the States as set out in Section 1, 2 *ante*.

Having been endorsed by the Premiers' Conference held later in the same year, this area was adopted as the Australian forest desideratum towards the permanent reservation of which the authorities are now aiming. The progress made in the various States to the end of June, 1931, is set out in the following table:—

AREA OF FOREST RESERVATIONS, 30th JUNE, 1931.

Particulars.	New South Wales.	Victoria.	Queens- land.	South Australia.	Western Australia.	Tasmania.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Dedicated State forests ..	5,152,462	4,678,063	1,904,664	261,831	2,967,912	1,259,553	16,224,485
Timber and fuel reserves ..	1,523,715	735,889	3,439,679	..	2,851,215	950,000	8,500,498
Total ..	6,676,177	5,413,952	5,344,343	261,831	4,819,127	2,209,553	24,724,983

(a) Includes Timber and Fuel Reserves.

In addition to the work of permanently reserving their respective quotas, the State foresters are concerned with the surveying of all forest lands and the excising of those unsuitable for forestry. Considerable areas have been revoked in certain States, while dedications of new areas have resulted in gains to the permanent forest estate.

The area of State forests reserved in perpetuity amounted in June, 1931, to 16,224,485 acres, or 66.2 per cent. only of the quota adopted for Australia. Of this area a considerable proportion consists of inaccessible mountainous country and cut-over

lands, while the Australian quota recommended refers to merchantable forest only. The foresters of Australia are, therefore, faced with a difficult task in improving and preserving the existing forests, and in securing the reservation of further suitable forest country to ensure a permanent supply of accessible timber.

The Forestry Departments also control 8,500,498 acres of temporary timber and fuel reserves, but, while these areas contain some land of high value for forestry purposes, the greater proportion thereof is not adapted for permanent reservation.

3. **Sylvicultural Nurseries and Plantations.**—Recognition of the necessity for providing by systematic sylviculture for the future softwood timber needs has led to the creation in all of the States of a number of nurseries and plantations. A brief statement showing the locality of these establishments, and the nature of their activities, will be found in the previous issues of the Official Year Book. (See Official Year Book No. 6, pp. 451-3.) Details regarding forest plantations and employment are given hereunder :—

**FORESTRY.—AREAS AND EMPLOYMENT, 1930-31.**

Particulars.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Total.
Total area of indigenous forest improved or regenerated .. acres	852,195	571,086	74,148	8,255	131,200	..	1,636,884
Total area of Effective Plantations—							
Softwoods .. acres	27,300	27,056	5,621	40,590	4,940	1,170	106,677
Hardwoods .. acres	..	2,500	588	9,110	..	..	12,198
Number of persons employed in Forestry Departments—							
Office Staff .. No.	43	37	(b) 64	17	27	2	190
Field Staff .. No.	75	137	(b) 138	(a) 320	(a) 676	8	1,354

(a) Including casual hands. (b) Includes staff engaged in connexion with timber sales.

4. **Revenue and Expenditure.**—The revenue and expenditure of State Forestry Departments from 1926-27 to 1930-31 are given below :—

**STATE FORESTRY DEPARTMENTS.—REVENUE AND EXPENDITURE.**

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
<b>REVENUE.</b>					
	£	£	£	£	£
New South Wales ..	224,943	226,667	210,743	128,795	88,548
Victoria ..	156,700	140,715	129,684	128,645	74,583
Queensland ..	250,881	462,383	414,515	336,762	174,106
South Australia ..	24,376	37,586	34,666	48,423	33,437
Western Australia ..	222,507	228,614	191,023	173,219	94,895
Tasmania ..	18,600	17,790	14,810	10,545	10,616
Total ..	898,007	1,113,755	995,441	826,389	476,185
<b>EXPENDITURE.</b>					
	£	£	£	£	£
New South Wales ..	207,099	212,858	194,069	183,720	121,009
Victoria ..	320,217	285,271	240,191	220,875	267,055
Queensland ..	69,262	277,534	174,407	209,170	140,800
South Australia ..	120,036	105,279	166,903	141,633	111,759
Western Australia ..	103,319	125,745	157,827	142,376	93,974
Tasmania ..	12,098	11,017	8,895	10,091	13,480
Total ..	832,031	1,017,704	942,292	907,865	748,077

#### § 4. The Australian Forestry School.

The Australian Forestry School was established in 1926 by the Commonwealth Government to meet the demand of the States for an institution which would give a professional training at least equal to that afforded by the recognized forestry schools abroad.

Under existing arrangements the head of the State forestry service may nominate candidates for enrolment at the school. According to the system in vogue in each State, the nomination may be made either at school leaving age or after the candidate has successfully completed the specified university courses. In the first case, the youth is helped through his university career and is given employment in practical work during the long vacations to test his suitability as a forestry officer; in the second case he is chosen later, and the practical tests are not made until the long vacation immediately preceding his entry to the school. The possession of a nomination by a State government service is not, however, essential for enrolment, since any candidate possessing the necessary qualifications will be accepted for the diploma course, and in special cases applicants desirous of studying a particular branch of forestry will be allowed to follow certain lectures only. Refresher, or post graduate courses are arranged to meet the needs of senior foresters.

A candidate for enrolment in the diploma course must possess—(a) a degree of a University, or (b) a certificate that he has completed the special two years' preliminary course at a University.

The qualifications for enrolment may be waived to assist an applicant of exceptional ability with a record of long service in a State Forestry Department, who has been specially recommended by the head of that service. Such applicants must show proof of education equal to that required for a school leaving certificate.

The course of instruction extends over three years, the first two of which are spent at the school, and the third in one of the forestry services of the Commonwealth.

The Commonwealth diploma of forestry is awarded to students on the following conditions:—(a) Successful completion of theoretical course. (b) Satisfactory field work during the course. (c) One year's satisfactory practical forestry work following the school course.

Students who have passed the approved two-year preliminary science course at the Universities of Adelaide, Melbourne, Western Australia or Queensland, and two years of Diploma course at the School, may be granted the degree B.Sc.F. by their Universities, subject to certain conditions laid down, particulars of which may be obtained from the Registrar of the University concerned.

#### § 5. Forest Congresses.

Reference to the various Forestry Conferences held in Australia and elsewhere will be found in Official Year Book No. 22, p. 743, but owing to limitations of space, the information cannot be repeated herein. The Third British Empire Forestry Conference was held in Australia and New Zealand in 1928. Publications issued in connexion with this Conference are available on application to the various State and Commonwealth forestry authorities.

## § 6. Forestry Production.

1. Timber.—Particulars regarding the production of sawn timber from forest sawmills for the year 1930-31 are shown in the following table.

## SAWMILL OUTPUT OF NATIVE TIMBER, 1930-31.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Total.
LOGS MILLED.							
Hardwood—							
Quantity cub. ft.	5,454,143	(a)	3,843,215	(b)	18,686,770	(a)	(a)
Value.. £	221,824	(a)	214,829	(a)	124,730	(a)	(a)
Softwood—							
Quantity cub. ft.	1,911,977	(a)	3,274,762	(b)	(c)	(a)	(a)
Value.. £	79,525	(a)	280,202	(a)	(a)	(a)	(a)
Total—							
Quantity cub. ft.	7,366,120	(a)	7,117,977	684,282	18,686,770	(a)	(a)
Value.. £	301,349	(a)	495,031	(a)	124,730	(a)	(a)

## SAWN TIMBER PRODUCED.

Hardwood—								
Quantity sup. ft.	41,412,881	37,468,000	22,136,383	(b)	74,192,476	20,930,599	(d)	196,140,339
Value.. £	450,397	(b)	332,039	(b)	619,661	141,296	(e)	1,543,393
Softwood—								
Quantity sup. ft.	16,119,109	..	29,024,785	(b)	132,120	320,364	(d)	45,596,378
Value.. £	182,532	..	484,154	(b)	1,807	5,449	(d)	673,942
Unspecified—								
Quantity sup. ft.	..	4,806,000	7,608,712	(b)	..	9,326,919	(d)	21,741,631
Value.. £	..	(b)	175,827	(b)	..	62,395	(e)	238,222
Total—								
Quantity sup. ft.	57,531,990	42,274,000	58,769,880	3,411,728	74,324,596	30,577,882		266,890,076
Value.. £	632,929	310,430	992,020	44,881	621,468	209,140		2,810,868

(a) Not available. (b) Not available separately. (c) Included with Hardwood. (d) Exclusive of South Australia. (e) Exclusive of Victoria and South Australia.

The next table gives the sawmill output of native timber for the five years ending 1930-31.

## SAWMILL OUTPUT OF NATIVE TIMBER.

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	1,000 sup. feet.	1,000 sup. feet.	1,000 sup. feet.	1,000 sup. feet.	1,000 sup. feet.
New South Wales .. .. .	162,891	146,575	136,051	119,021	57,532
Victoria .. .. .	115,813	100,567	79,018	86,145	42,274
Queensland .. .. .	122,311	102,192	106,862	92,248	58,770
South Australia .. .. .	3,971	4,833	3,219	3,613	3,412
Western Australia .. .. .	156,087	163,180	145,043	123,572	74,324
Tasmania .. .. .	52,058	53,174	46,195	60,038	30,578
Total .. .. .	613,131	570,521	516,388	484,637	266,890

In addition to the sawn timber shown in the table, a large amount of other timber, e.g., sleepers, piles, poles, fencing material, timber used in mining, and fuel, is obtained from forest and other lands. Complete information in regard to the volume of this output is, however, not available. In Western Australia, particulars are obtained of the quantities of timber hewn by contractors for the Railway Department, Mines, etc., as

well as of the quantities sawn in establishments other than forest sawmills, but the figures have not been included in the two preceding tables. The quantities so produced in the past five years were as follows:—1926-27, 73,107,815 sup. feet; 1927-28, 64,451,395 sup. feet; 1928-29, 29,281,146 sup. feet; 1929-30, 36,071,054 sup. feet; 1930-31, 38,158,959 sup. feet. The annual reports of the Forest Departments in each State contain particulars concerning the output of timber from areas under departmental control, but owing to lack of uniformity in measurements accurate determination of total production cannot be made. Efforts, however, are being made to obtain more comparable information. Moreover, there is a fair quantity of hewn timber produced from privately owned land, but information regarding output is not available.

At the Conference of Statisticians in August, 1932, it was agreed that the computation of satisfactory statistics of timber production other than sawn timber necessitates a preliminary investigation which might with propriety be undertaken by the Forestry Departments. In the meantime, efforts are being made by the Statisticians to obtain more comprehensive information.

2. **Other Forest Products.**—(i) *Eucalyptus Oil.* Oil may be distilled from the foliage of all varieties of eucalyptus, and several of them furnish a product widely known for its commercial and medicinal uses. Complete information regarding Australian production and consumption of eucalyptus oil is not available, but large quantities are manufactured, particularly in Victoria. Oversea exports amounted in 1926-27 to £63,284, in 1927-28 to £90,729, in 1928-29 to £85,009, in 1929-30 to £63,388, and in 1930-31 to £47,090, the bulk of the product being shipped from Victoria to the United Kingdom, the United States, and Germany. Large quantities of the crude oil are used locally in flotation processes in connexion with the recovery of gold and other minerals.

(ii) *Sandalwood Oil.* The distillation of oil from Western Australian sandalwood has been characterized by improvement both in quality and in quantity within recent years. It is claimed that the Western Australian oil is at least as valuable medicinally as the well-known Mysore oil, besides having an extended use in the manufacture of perfumes. Overseas exports of essential oils from Western Australia amounted in 1926-27 to £26,307, in 1927-28 to £38,919, in 1928-29 to £63,307, in 1929-30 to £77,510, and in 1930-31 to £56,170. The bulk of the product consisted of sandalwood oil which was shipped principally to the United Kingdom, Eastern States of Australia, Germany, etc.

(iii) *Tan Barks.* The forests of Australia are capable of yielding a wealth of tannin materials, many species of eucalyptus and other genera containing varying proportions of tannin, chiefly in the bark, but in the wood and twigs also. Although many of these species contain higher percentages of tannin than is found in the bark of oak, chestnut and hemlock, formerly the chief source of tannin material in the northern hemisphere, scattered distribution has resulted in the richest tan-bearing species only being used in Australia. These are:—Golden wattle (*Acacia pycnantha*), black or green wattle (*Acacia decurrens* or *mollissima*), mallet (*Eucalyptus astringens*).

In pre-war days the production of wattle bark was more than sufficient for local requirements, and an export trade was built up. The supply diminished during the six years ending 1926-27, and Australia imported on the average about 2,900 tons each year from Natal, where the plantations were originally started from Australian seed. During the past four years, however, the excess of exports over imports averaged 2,930 tons, valued at £33,643, the chief exporting State being South Australia. The other valuable tan bark, mallet (*Eucalyptus astringens*) of Western Australia, is not extensively used in Australian tanneries, but is exported to Europe and other countries, where it is used for producing a tannin extract. A brief account of the work done by the Council for Scientific and Industrial Research in connexion with tanning materials will be found in Official Year Book No. 22, page 743. The production of extract from the bark of karri, (*Eucalyptus diversicolor*), of which very large quantities are available at karri sawmills, has passed the experimental stage, and private enterprise has recently started production on a commercial scale. The experimental work in kino impregnated marri (*Eucalyptus calophylla*) bark is not yet complete. The production of tan bark in Australia is estimated at about 25,000 tons per annum.



3. **Value of Production.**—Owing to the lack of complete information concerning hewn timber, referred to on a previous page, coupled with the difficulty in arriving at accurate values in respect of firewood, the figures showing total value of forest production inserted in the next table must be regarded as estimates.

#### VALUE OF FOREST PRODUCTION.—AUSTRALIA.

Production.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
Total ..	11,046,000	10,339,000	9,450,000	9,103,000	6,488,000

### § 7. Commercial Uses of Principal Australian Timbers.

1. **General.**—The uses of the more important Australian timbers are many and various, and are indicated in previous issues of this work. (See Official Year Book No. 6, pp. 454-6; and Official Year Book No. 10, Section III., § 7 and 8.)

A list of Australian timbers best known on the local markets appeared in Official Year Book No. 20, p. 713. [Further references are made in "Timber and Forest Products of Queensland (E. H. F. Swain), published in 1928.]

2. **Lack of Uniformity in Nomenclature.**—Unfortunately the vernacular names applied to the gums, ironbarks, etc., in the various States, and even in different parts of the same State, do not always refer to identical timbers. The resulting confusion has not only been productive of loss, but it has, to some extent, prejudicially affected the timber trade. This subject is referred to at some length in the special article "Australian Eucalyptus Timbers," in Section III., § 7 and 8, in Official Year Book No. 10. At the Forestry Conferences alluded to above, the matter came up for special consideration, and steps were taken to establish a uniform nomenclature.

### § 8. Oversea Trade.

1. **Imports.**—(i) *Dressed Timber.* The quantity and value of timber imported into Australia during the four years 1927-28 to 1930-31 inclusive are shown according to countries of origin in the following tables:—

#### DRESSED TIMBER.—IMPORTS, AUSTRALIA.

Country of Origin.	Quantity.				Value.			
	1927-28.	1928-29.	1929-30.	1930-31.	1927-28.	1928-29.	1929-30.	1930-31.
	sup. ft.	sup. ft.	sup. ft.	sup. ft.	£	£	£	£
United Kingdom ..	39,790	8,117	3,693	1,848	1,734	303	131	178
Canada ..	8,271,122	7,361,669	8,952,360	3,920,447	95,831	80,590	96,132	38,307
Other British Countries	21,823	212,733	104,437	92,498	490	2,124	898	870
Norway ..	21,397,756	36,184,991	22,459,688	3,200,306	258,707	391,159	212,565	30,862
Sweden ..	45,784,605	25,934,266	43,501,713	2,389,990	497,606	290,814	406,001	23,024
United States ..	6,878,065	7,851,388	8,022,251	3,952,219	65,002	86,289	88,836	30,958
Other Foreign Countries	1,636,579	358,136	1,278,267	285,008	25,209	7,312	17,154	5,229
Total ..	83,329,740	77,911,300	84,321,809	13,842,316	944,579	858,591	821,717	129,458

The figures in the table above are exclusive of items such as architraves, veneers, etc., quantities for which are either not shown, or are expressed in dissimilar units in the Customs entries. The total value of the items so excluded amounted to £40,006 in 1930-31, including plywood, veneered or otherwise, £11,272.

The bulk of the imports of dressed timber comes from Norway, Sweden, and the United States. Practically the whole of this timber consists of softwoods—deal and pine—used for lining, weatherboards, flooring, shelving, doors, box-making, etc.

(ii) *Undressed Timber.* Australian imports of undressed timber for the latest available four years are given hereunder:—

**UNDRESSED TIMBER, INCLUDING LOGS.(a)—IMPORTS, AUSTRALIA.**

Country of Origin.	Quantity.				Value.			
	1927-28.	1928-29.	1929-30.	1930-31.	1927-28.	1928-29.	1929-30.	1930-31.
	sup. ft.	sup. ft.	sup. ft.	sup. ft.	£	£	£	£
United Kingdom	1,540,112	502,310	97,258	1,635,051	15,248	10,496	9,591	11,768
Canada	29,247,286	12,199,601	43,715,830	21,299,710	240,233	97,384	305,569	84,610
India	509,256	442,651	62,123	30,148	17,252	14,246	2,647	1,882
Malaya (British)	165,788	149,388	169,360	101,577	1,372	2,113	1,452	778
New Zealand	35,635,337	37,320,809	37,172,537	15,918,061	436,648	484,856	459,095	191,193
Other British Countries	1,888,052	2,926,161	3,540,928	2,238,999	16,778	28,567	31,806	20,587
Japan	7,502,972	7,512,930	7,344,925	978,626	165,149	146,576	149,085	14,985
Netherlands East Indies	882,892	1,582,775	1,269,866	..	5,273	9,301	9,921	..
Norway	307,450	565,474	153,229	88,325	3,138	6,676	1,262	918
New Caledonia	2,276,101	1,461,433	1,181,507	911,724	20,334	12,719	11,622	10,374
Philippine Islands	4,041,218	3,943,433	5,779,971	433,041	59,614	60,956	79,212	5,865
Sweden	4,690,710	3,512,165	4,147,499	66,791	45,711	33,576	38,184	710
United States	340,466,618	250,803,732	233,538,575	61,561,589	2,697,717	2,144,665	1,811,759	276,964
Other Foreign Countries	2,698,764	165,646	287,739	1,235,299	29,821	3,366	4,407	8,501
<b>Total</b>	<b>431,852,556</b>	<b>323,088,698</b>	<b>338,461,347</b>	<b>106,498,941</b>	<b>3,754,288</b>	<b>3,054,597</b>	<b>2,915,619</b>	<b>629,135</b>

(a) Exclusive of timber not measured in super. feet.

By far the larger proportion of the undressed timber imports consists of softwoods such as oregon, redwood, hemlock, western red cedar and yellow pine from the United States and Canada; kauri, rimu, and white pine from New Zealand; and red and white deals from Norway and Sweden. Amongst the hardwoods imported, the principal are oak from the United States of America and Japan, teak from India, and furniture woods from the Pacific Islands.

2. *Exports.*—The quantity and value of undressed timber exported from 1926-27 to 1930-31 are given below, the countries of destination being also shown:—

**UNDRESSED TIMBER, INCLUDING LOGS.(a)—EXPORTS, AUSTRALIA.**

Country to which Exported.	Quantity					Value.				
	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	1,000 sup. ft.	1,000 sup. ft.	1,000 sup. ft.	1,000 sup. ft.	1,000 sup. ft.	£	£	£	£	£
United Kingdom	8,332	7,751	9,191	11,722	12,399	87,409	85,024	104,314	127,469	141,746
Canada	183	213	529	212	125	4,147	4,338	10,226	5,087	2,498
Ceylon	8,745	6,679	4,069	12,013	10,328	98,950	67,656	46,051	120,873	104,668
Hong Kong	927	184	478	28	820	12,566	2,818	5,813	440	7,307
India	12,971	10,946	6,124	1,391	32	130,772	119,192	70,202	15,607	316
Malaya (British)	6,575	4,840	574	39	103	67,347	49,879	5,745	410	1,147
Mauritius	293	1,380	1,240	382	1,017	2,927	13,796	12,434	3,840	10,160
New Zealand	28,793	18,350	23,041	24,256	22,671	369,920	262,422	308,057	318,671	271,244
Pacific Islands—										
Fiji	1,096	1,480	1,155	1,297	813	17,668	23,484	18,932	21,834	12,987
Territory of New Guinea	293	489	650	356	92	5,134	8,835	10,898	6,269	1,293
Other Islands	997	1,027	1,093	840	624	18,293	18,260	16,515	14,496	9,284
Papua	419	247	136	149	80	9,736	4,818	2,709	3,197	1,223
South African Union	50,278	41,519	24,981	17,447	5,843	554,298	467,922	269,522	188,678	65,972
Belgium	207	82	1,230	1,246	528	2,259	852	12,579	12,460	5,713
China	2,175	5	2,006	89	5,292	21,787	77	20,521	1,018	51,703
Egypt	19	355	..	1,039	..	192	3,793	..	10,385	..
Japan	35	7	219	50	..	618	155	3,380	768	..
Pacific Islands—										
New Caledonia	15	12	33	23	..	281	233	642	378	..
Other Islands	140	176	309	144	68	2,433	2,979	4,674	2,364	1,212
U.S. of America	800	1,480	6,427	5,737	1,332	18,160	26,313	105,352	85,860	22,897
Other Foreign Countries	1,361	1,786	9,211	3,901	1,000	15,182	19,757	96,928	42,569	11,581
<b>Total</b>	<b>124,654</b>	<b>99,008</b>	<b>92,606</b>	<b>82,361</b>	<b>63,167</b>	<b>1,440,379</b>	<b>1,182,603</b>	<b>1,125,494</b>	<b>982,673</b>	<b>722,951</b>

(a) Exclusive of timber not measured in sup. feet.

The bulk of the exports of undressed timber was consigned to South Africa, New Zealand, India, and the United Kingdom, and consisted largely of the Western Australian hardwoods, jarrah and karri, which have earned an excellent reputation for such purposes as railway sleepers, harbour works, wood paving, etc. Considerable quantities of pole, pile and girder timber are also exported from New South Wales to New Zealand.

3. Classification of Imports and Exports.—(i) *General.* The quantities of timber classified according to varieties imported and exported during the year 1930-31 are given in the next table :—

**TIMBER, VARIETIES IMPORTED AND EXPORTED.—QUANTITIES, AUSTRALIA, 1930-31.**

Description.	Unit of Quantity.	Imports.	Exports.	Excess of Imports over Exports.
Dressed .. .. .	Sup. ft.	13,842,316	1,284,719	12,557,597
Undressed, including logs .. .. .	"	106,498,941	63,166,867	43,332,074
Architraves, mouldings, etc. .. .. .	lin. ft.	261,327	37,967	223,360
Plywood, veneered or otherwise .. .. .	sq. ft.	1,336,704	(b)	(a)
Palings .. .. .	No.	..	146,760	-146,760
Pickets .. .. .	"	..	644	-644
Shingles .. .. .	"	61,500	..	61,500
Staves—				
Dressed, etc. .. .. .	"	347,475	..	347,475
Undressed .. .. .	"	604,247	16	604,231
Laths—				
For blinds .. .. .	"	(a)	(a)	(a)
Other .. .. .	"	277,990	4,500	273,490
Doors .. .. .	"	207	(a)	(a)
Wood pulp .. .. .	ton	22,327	(b)	(a)
Veneers .. .. .	—	(a)	(b)	(a)
Spokes, rims, felloes, etc. .. .. .	—	(a)	(a)	(a)
Other .. .. .	—	..	..	..

(a) Quantity not available. (b) Exports not recorded separately.  
NOTE.—The minus sign (-) denotes an excess of exports.

Similar particulars relative to the values of imports and exports during the year 1930-31 are shown hereunder :—

**TIMBER, VARIETIES IMPORTED AND EXPORTED.—VALUES, AUSTRALIA, 1930-31.**

Description.	Imports.		Exports.	
	£	£	£	£
Dressed .. .. .	129,458	20,892	108,566	
Undressed, including logs .. .. .	629,135	722,951	-93,816	
Architraves, mouldings, etc. .. .. .	1,262	334	928	
Plywood, veneered or otherwise .. .. .	11,272	(a)	11,272	
Palings .. .. .	..	1,537	-1,537	
Pickets .. .. .	..	25	-25	
Shingles .. .. .	120	..	120	
Staves—				
Dressed, etc. .. .. .	16,985	..	16,985	
Undressed .. .. .	10,543	2	10,541	
Laths—				
For blinds .. .. .	..	42	-42	
Other .. .. .	400	5	395	
Doors .. .. .	168	609	-441	
Wood pulp .. .. .	218,749	(a)	218,749	
Veneers .. .. .	9,068	(a)	9,068	
Spokes, rims, felloes, etc. .. .. .	845	866	-21	
Other .. .. .	930	..	930	
Total .. .. .	1,028,935	747,263	281,672	

NOTE.—The minus sign (-) denotes an excess of exports. (a) Exports not recorded separately.

(ii) *Sandalwood.* A considerable quantity of sandalwood is exported principally from Western Australia to Hong Kong and China, where it is highly prized, and largely used for artistic and ceremonial purposes. Particulars for the past five years are as follow :—

## SANDALWOOD.—EXPORTS, AUSTRALIA.

Country to which Exported.	Quantity.					Value.				
	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	ton.	ton.	ton.	ton.	ton.	£	£	£	£	£
United Kingdom ..	25	..	..	..	..	858	..	..	..	..
Hong Kong ..	3,984	4,856	5,432	2,482	50,193	116,408	142,890	156,086	57,688	62,741
India ..	246	314	352	288	1,621	8,871	11,434	12,310	9,437	2,585
Malaya (British) ..	346	397	150	63	520	10,784	13,610	4,418	1,716	770
Other British Countries ..	12	13	17	15	220	533	470	594	424	330
China ..	3,991	822	3,486	737	6,599	114,026	25,170	103,485	19,521	6,363
Other Foreign Countries ..	11	46	33	37	120	411	1,052	1,345	641	180
Total ..	8,615	6,448	9,470	3,622	59,273	252,491	194,626	278,238	89,427	72,969

(iii) *Tan Bark.* Tan bark figures both as an export and import in the Australian trade returns. The table hereunder refers to exports :—

## TAN BARK.—EXPORTS, AUSTRALIA.

Country to which Exported.	Quantity.					Value.				
	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	cwt.	cwt.	cwt.	cwt.	cwt.	£	£	£	£	£
United Kingdom ..	..	1,505	11,153	..	1,138	..	922	5,488	..	510
New Zealand ..	1,633	27,070	17,934	22,038	14,415	1,355	21,431	12,496	14,109	8,100
Other British Possessions ..	102	22	20	2	..	51	11	12	3	..
Germany ..	2,050	15,414	26,466	41,567	30,059	1,272	10,086	15,256	21,266	14,097
Other Foreign Countries ..	2,150	2,538	1,231	6,433	24,745	1,332	1,061	546	3,226	10,527
Total ..	5,935	46,549	56,804	70,040	70,357	4,010	33,511	33,798	38,604	33,234

The exports of tan bark from Australia during the past five years consisted largely of mallet bark from Western Australia. The shipments of this bark, exported mainly to Germany, are not so large as in pre-war days, owing to the cutting out of supplies. A considerable improvement, however, was shown during the past four years. A vigorous policy of reforestation is now in operation and an increased permanent annual export may be expected in the near future. New Zealand took 37 per cent. of the total exports. *Wattle bark* is exported chiefly from South Australia.

A comparison of the imports and exports of tan bark during the last five years is given in the next table:—

**TAN BARK.—IMPORTS AND EXPORTS, AUSTRALIA.**

Particulars.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	cwt.	cwt.	cwt.	cwt.	cwt.
<b>QUANTITIES—</b>					
Imports .. .. .	57,302	5,114	1,562	1,936	596
Exports .. .. .	5,935	46,549	56,804	70,040	70,357
Excess of exports over imports	-51,367	41,435	55,242	68,104	69,761
	£	£	£	£	£
<b>VALUES—</b>					
Imports .. .. .	27,680	2,633	755	950	236
Exports .. .. .	4,010	33,511	33,798	38,604	33,234
Excess of exports over imports	-23,670	30,878	33,043	37,654	32,998

NOTE.—The minus sign (–) denotes excess of imports.

The imports consist almost exclusively of wattle bark from the plantations in South Africa. One variety of Australian wattle is found to flourish in the sandy belts near the coast, but it is the *Acacia decurrens*, var. *mollis*, which is chiefly relied upon for the production of wattle bark in the South African plantations. Seed has been tried from New South Wales, Tasmania and Victoria, but it is stated that most of the seed is obtained from the best wattle bark areas in eastern Tasmania and western Victoria.

Two reasons are given to account for the success of the industry in South Africa. (a) It is found that the treeless, grassy highlands of Natal are specially suitable for wattle culture, and the trees can therefore be grown in rows and economically attended to, while the necessary bark sheds and other appurtenances can be placed in the most advantageous positions. (b) There is an abundance of cheap and efficient native labour available for employment on the plantations.

(iv) *Other Tanning Substances.* Considerable quantities of tanning substances other than bark are annually imported into the Commonwealth. The total value of the importations in 1930-31 was £43,253, and was composed as follows:—Wattle bark extract, £545; quebracho extract, £9,158; other extract, £8,669; and valonia, myrobalans, catch, etc., £24,881.

## CHAPTER XXIII.

## FISHERIES.\*

## § 1. General.

1. **Fish Stocks.**—Australia possesses an abundant and varied fish fauna, which embraces both tropical and temperate varieties and includes destructive as well as valuable species. In rivers and lakes both indigenous and imported varieties thrive. The latter have been introduced and acclimatized for industrial and sporting purposes by Governments and angling societies. Exploitation of the fishing areas—for some classes of fish for the whole year, for others during the breeding season only, or until a certain size is attained—is, where necessary, forbidden; proclaimed localities are closed against net-fishing, and a minimum size of mesh for nets is fixed. The sea-fishermen in some districts have made regulations in their own interests for the purpose of controlling the market supply.

2. **Progress of Industry.**—(i) *Transport and Marketing.* Despite the abundance of edible fish, the progress of the fishery industry in Australia has been slow, and transport and marketing of the proved supplies have not been satisfactorily dealt with.

In New South Wales, as shown in § 5 herein and § 6 of this Chapter in Official Year Book No. 17, the matter of exploiting trawlable fish was undertaken by the State Government, which also took steps to improve the conditions under which ordinary coastal fishing is carried on. In Queensland, State trawling was undertaken in 1919, and good trawling areas have been located and charted between Cape Moreton and Caloundra.

(ii) *Economic Investigations.* Although valuable work has been carried out by the State Governments in the way of experiment and culture, much yet remains to be done before the industry is at all commensurate in extent with the industrial progress or consuming capacities of the Commonwealth. All live fish imported into Australia are examined on shipboard in order to prevent the importation of undesirable fish. With the object of ascertaining the movements of oceanic fishes, and of estuarine fishes which make periodical oceanic migrations, reports are furnished regarding the various kinds of fishes, etc., and their movements along the coast. Details regarding the activities of the States in fish-culture were given in Official Year Book No. 6, pp. 471-2. By arrangement with the Commonwealth Fisheries Department some years ago members of the staff of the Australian Museum, Sydney, accompanied the F.I.S. *Endeavour* on various cruises. Specimens were collected, mounted for scientific purposes, and distributed to other Australian Museums, a considerable number being put aside for the Commonwealth Fishery Museum. As pointed out in § 4, however, this vessel was lost with all hands in 1914, and has not since been replaced.

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\* A specially contributed article dealing with the Marine and Fresh Water Fisheries of Australia appeared as § 6 of this Chapter in Official Year Book No. 17 (*vide* pp. 752 to 767 therein).

With the object of reviewing the potentialities of the fishing industry of Australia, the Development and Migration Commission convened a meeting of State and Commonwealth representatives. The Conference, which was held in Melbourne during September, 1927, affirmed :—

- (1) The importance of establishing a Marine Biological Institution to study the scientific problems connected with Australian fisheries, and to collect and disseminate authoritative information and give advice on matters concerning the fisheries.
- (2) The desirability of establishing an experimental trawling unit to explore the fisheries resources of Australia.

Committees were formed to deal with important problems concerning the preservation, transportation, marketing, and distribution of fish, canning and curing of fish, the production of fish by-products, factors of destruction in fisheries, the development of the oyster industry, etc. The reports submitted by these Committees to a further conference held in July, 1929, were adopted and forwarded to the Federal and State Governments, with a recommendation that the necessary action be taken to carry out the procedure outlined therein.

3. **Consumption of Fish.**—It has been said that the Australians are not an "ichthyophagous" race, seeing that the annual consumption of fish per head of population in Great Britain is set down at 42 lbs., while in Australia it has been estimated at only 13 lbs. The heavy imports of dried and preserved fish indicate, however, that there is scope for the development of the industry, which now seems to be ill-managed, the price to the consumer being high, while the fisherman's gain is uncertain, and the system of distribution lacks method.

4. **Oyster Fisheries.**—Natural oyster beds exist on the foreshores in the shallow waters of inlets and estuaries in several parts of Australia. By husbanding the natural crop, and by judicious transplanting, the output has been very materially augmented. The areas are leased by the Government to private persons, lengths of foreshore being taken up under oyster leases. In New South Wales and Queensland the industry has thriven, and small yields are obtained in South Australia, Victoria, and Tasmania.

5. **Pearl-Shell, Pearls, Bêche-de-Mer, etc.**—(i) *General.* Pearl-shelling is carried on in the tropical waters of Queensland, the Northern Territory, and Western Australia. The pearl oyster inhabits the northern and western coastal waters from Cape York to Shark Bay, a length of shore of over 2,000 miles. The shells are marketed in considerable quantities, and pearls are obtained in Queensland, Western Australia and the Northern Territory. The fishing is generally conducted with the aid of diving apparatus in water varying from 4 to 20 fathoms in depth. In Queensland and the Northern Territory the bêche-de-mer industry is carried on, and tortoise-shell is obtained on the coasts. Experiments have been made in cultivating the pearl oyster on suitable banks. In October, 1911, a pearl weighing 178 grains, and valued at £3,000, was obtained at Broome. Further details regarding pearl-shelling are given in Official Year Book No. 6, p. 463. Trochus-shell to the value of £76,116, £71,714, £44,515 and £44,682 was exported from Australia during 1927-28, 1928-29, 1929-30 and 1930-31 respectively.

(ii) *Royal Commission on Pearl-shelling Industry.* In accordance with the "White Australia" policy it was originally determined that the employment of Asiatic labour in the pearl-shelling industry should be restricted, and ultimately cease, and it was proposed that after 31st December, 1913, permits to bring in Asiatics for the pearling-fleet should no longer be issued. In view, however, of the disorganization of the industry occasioned by the war, the time was extended to the 30th June, 1918, after which date permits to introduce Asiatic labour were to be granted only in cases where the diver and tender of a boat were Europeans. The Royal Commission appointed in March, 1912, presented its final report in 1916. The Commissioners stated that, though it might be practicable, they did not consider it advisable or profitable to attempt to transfer the industry from Asiatics to Europeans. They further stated that, while the labour now employed is almost entirely Asiatic, they did not consider that the "White Australia" policy would be weakened or imperilled by allowing the industry to continue as at present conducted.

## § 2. The Fishing Industry.

1. Boats and Men Engaged, and Take.—(i) *General Fisheries.* The returns have been compiled from particulars supplied by the State Departments, and while the data do not generally lend themselves to presentation on a uniform basis, the principal facts have been incorporated in the tables hereunder:—

### GENERAL FISHERIES, 1930.

State or Territory.	No. of Boats Engaged.	Value of Boats and Equip-ment.	No. of Men Em-ployed.	Total Take of—		Value of Take.	
				Fish.	Spiny Lobster (Crayfish).	Fish.	Spiny Lobster (Crayfish).
	No.	£	No.	cwt.	doz.	£	£
New South Wales ..	1,381	257,962	3,797	215,871	17,287	604,438	(c)91,365
Victoria ..	962	137,207	1,643	113,757	14,203	159,300	7,100
Queensland ..	995	72,183	1,922	92,800	(d)11,635	150,807	(e)8,618
South Australia ..	760	150,000	852	6122,683	(a)	176,800	(f)
Western Australia..	313	55,453	692	42,400	12,294	125,260	4,917
Tasmania ..	264	55,900	367	26,308	36,586	52,650	21,950
Northern Territory	6	600	20	40	..	480	..
<b>Total ..</b>	<b>4,681</b>	<b>729,305</b>	<b>9,293</b>	<b>613,859</b>	<b>92,005</b>	<b>1,269,735</b>	<b>133,950</b>

(a) Not available.  
and 1,650 dozen crabs.

(b) Estimate.  
(d) Crabs.

(c) Including £65,435, the value of 9,289 cwt. prawns  
(e) Including 50 turtles valued at £25. (f) Included

Returns for the past five years are given in the table below:—

### GENERAL FISHERIES.—AUSTRALIA.

Particulars.	1926.	1927.	1928.	1929.	1930.
No. of boats engaged ..	4,940	4,843	5,213	4,546	4,681
No. of men employed ..	7,745	7,987	8,600	8,979	9,293
Fish obtained—					
Quantity ..	cwt. 403,156	443,984	546,949	650,518	613,859
Value ..	£ 1,059,039	1,139,218	1,435,427	1,439,355	1,269,735
Lobsters obtained—Value	£ 1108,092	1140,439	1155,890	1151,208	1133,950

(a) Exclusive of South Australia.

(ii) *Edible Oyster Fisheries.* The returns from oyster fisheries are given in the next table.

### EDIBLE OYSTER FISHERIES, 1930.

State or Territory.	Number of Boats Engaged.	Value of Boats and Equip-ment.	Number of Men Em-ployed.	Number of Leases.	Oysters Taken.	
					Quantity.	Value.
	No.	£	No.	No.	cwt.	£
New South Wales ..	718	36,807	638	5,142	44,576	82,784
Victoria ..	10	200	10	10	17	50
Queensland ..	61	4,285	92	398	10,071	17,308
South Australia (a)	..	..	..	..	..	..
Western Australia	..	..	..	..	..	..
Tasmania ..	(a)	(a)	(a)	(d)	510	(c) 6,270
Northern Territory	1	100	1	1	40	10
<b>Total (b) ..</b>	<b>790</b>	<b>41,392</b>	<b>741</b>	<b>5,551</b>	<b>55,214</b>	<b>106,422</b>

(a) Included with General Fisheries.  
value of scallops. (d) Not available.

(b) Exclusive of South Australia.

(c) Including £5,750.



Returns for Australia for the last five years are given in the appended table :—

**EDIBLE OYSTER FISHERIES.—(a) AUSTRALIA.**

Particulars.		1926.	1927.	1928.	1929.	1930.
No. of boats engaged ..		1,351	813	835	808	790
No. of men employed ..		752	790	833	804	741
Oysters obtained—						
Quantity ..	cwt.	65,992	67,422	64,991	70,773	55,214
Value ..	£	125,084	129,215	121,358	134,223	106,422

(a) Exclusive of South Australia.

(iii) *Pearls, Pearl-shell and Trepanng.* Figures regarding the production, trade, etc., for these items, so far as they are ascertainable, are given hereunder. As regards pearls, for obvious reasons no correct estimate can be obtained of the value of those found. Pearl-shell (*Margaritifera*) is widely distributed in North Australian waters over an area facing some thousands of miles of coastline, though not intensively over the whole distance. The north-west beds are the most prolific, but those around and to the north of Cape York are also of importance. There is need for further investigation into the occurrence of this valuable shell, as well as of trochus, green snail, window-pane shell (*Placuna*), the various types of trepanng or bêche-de-mer (*Holothuria*), both in tropical Australian waters and those of Papua and the mandated area of New Guinea. Particulars as returned for the year 1930 are as follow :—

**PEARL, PEARL-SHELL, AND BÊCHE-DE-MER FISHERIES, (a) 1930.**

State or Territory.	Number of Boats Engaged.	Value of Boats and Equip-ment.	Number of Men Em-ployed.	Quantity of Pearl-shell obtained.	Value of Pearl-shell obtained.	Value of Pearls obtained (b)	Value of Bêche-de-mer obtained.	Value of Tortoise shell obtained.
Queensland (c) ..	109	80,000	1,024	399	113,399	1,075	13,614	330
Western Australia(c)	127	58,524	777	671	104,299	7,597	470	55
Northern Territory	22	17,600	176	225	33,750	(d)	700	(d)
Australia ..	258	156,124	1,977	1,295	251,448	8,672	14,784	385

(a) No pearl-shelling industry in New South Wales, Victoria, South Australia, and Tasmania.  
 (b) Incomplete ; as returned. (c) Also trochus-shell to the value of £39,604 in Queensland and £35 in Western Australia. (d) No details available.

The figures for tortoise-shell and trochus-shell as returned are defective, as the necessary information is not collected in full detail. In the following summary of production during the past five years, export figures of Australian origin are inserted for both of these items :—

**PEARL, PEARL-SHELL, AND BÊCHE-DE-MER FISHERIES.—AUSTRALIA.**

Particulars.		1926.	1927.	1928.	1929.	1930.
No. of boats engaged ..		348	297	307	289	258
No. of men employed ..		2,893	2,062	2,407	2,334	1,977
Pearl-shell obtained—						
Quantity ..	tons	2,098	2,243	2,212	3,112	1,295
Value ..	£	302,848	332,739	345,227	455,578	251,448
Pearls obtained (a)—						
Value ..	£	39,655	22,863	29,615	23,017	8,672
Bêche-de-mer obtained—						
Quantity ..	tons	(b)	(b)	(b)	(b)	(b)
Value ..	£	31,186	14,693	17,893	24,706	14,784
Tortoise-shell exported—						
Value ..	£	3,364	2,894	3,113	693	921
Trochus-shell exported—						
Value ..	£	72,812	76,116	71,714	44,515	44,682

(a) Incomplete ; as returned.

(b) Not returned.

2. Fish Preserving.—To encourage the industry, the Federal Parliament provided a bounty of  $\frac{3}{4}$ d. per lb. for fish preserved as prescribed during the ten years 1907-8 to 1916-17. The payment, which amounted to only £3,005 during the period, or at the rate of £300 per annum, failed to develop the industry, and the bounty was not renewed on its expiration in 1916-17.

3. State Revenue from Fisheries.—The revenue from fisheries in each State during the year 1930 is given hereunder :—

## FISHERIES.—REVENUE, 1930.

State or Territory.	Licences.	Leases.	Fines and Forfeitures.	Other Sources.	Total.
	£	£	£	£	£
New South Wales ..	1,651	12,034	211	368	14,264
Victoria .. ..	1,382	126	341	..	1,849
Queensland .. ..	3,152	2,457	114	30	5,753
South Australia ..	1,716	..	23	..	1,739
Western Australia ..	1,746	63	188	68	2,065
Tasmania .. ..	949	..	..	91	1,040
Northern Territory ..	581	1	..	..	582
Total .. ..	11,177	14,681	877	557	27,292

Similar particulars for Australia for the last five years are given in the following table :—

## FISHERIES.—REVENUE, AUSTRALIA.

Particulars.	1926.	1927.	1928.	1929.	1930.
	£	£	£	£	£
Licences .. ..	9,890	11,769	12,864	11,614	11,177
Leases .. ..	16,439	16,531	16,498	16,332	14,681
Fines and Forfeitures ..	841	748	1,216	1,105	877
Other Sources .. ..	1,477	739	760	942	557
Total .. ..	28,647	29,787	31,338	29,993	27,292

## § 3. Oversea Trade in Fishery Products.

1. Imports of Fish.—The development of the local fishing industry leaves much to be desired, as is evident from the large imports. For the last five years the imports were as follow :—

## FISH.—IMPORTS, AUSTRALIA.

Classification.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Fresh (oysters) ..	cwt. 2,115	1,488	1,308	508	3,793
	£ 1,699	1,157	958	420	1,815
Fresh, or preserved by cold process	cwt. 61,151	75,835	72,866	67,503	43,370
	£ 180,773	232,894	221,999	206,357	113,317
Potted .. ..	(a) ..	(a)	(a)	(a)	4,515
	£ 146,782	148,424	158,797	137,046	76,154
Preserved in tins ..	cwt. 268,463	209,791	252,379	250,306	117,198
	£ 1,418,103	1,141,493	1,265,510	1,342,016	501,080
Smoked, dried, and n.e.i.	cwt. 17,793	13,837	14,007	13,280	9,702
	£ 62,984	51,723	48,430	46,556	27,148
Total .. ..	cwt. (b) 349,522	(b) 300,951	(b) 340,560	(b) 331,597	178,578
	£ 1,810,341	1,575,691	1,695,694	1,732,395	719,514

(a) Not available.

(b) Exclusive of potted fish.

Tinned fish constitutes by far the largest proportion of the imports, most of it consisting of salmon from Canada, the United States of America, Norway, and the United Kingdom. The potted fish comes chiefly from the United Kingdom, which also supplied the largest proportion of fresh fish in 1930-31; the bulk of the remainder coming from New Zealand and the Union of South Africa. The small import of oysters is supplied by New Zealand.

2. Exports of Fish.—The exports of local fish produce for the five years 1926-27 to 1930-31 are given hereunder :—

FISH (AUSTRALIAN PRODUCE).—EXPORTS.

Classification.		1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Fish, fresh, smoked, or preserved by cold process ..	cwt.	435	496	496	684	688
	£	4,072	4,857	3,674	5,161	6,006
Preserved, in tins, dried, salted, etc.	cwt.	184	283	27	121	101
	£	371	548	40	818	383
Total ..	cwt.	619	779	523	805	789
	£	4,443	5,405	3,714	5,979	6,389

The quantity of fresh fish exported from Australia during 1930-31 was small, amounting in value to only £1,137. The balance, consisting of smoked and dried fishery products, was exported chiefly to Hong Kong and Egypt.

3. Exports of Pearl and Other Shell.—The exports of pearl, tortoise, and trochus shell, of Australian origin, are given hereunder for the five years 1926-27 to 1930-31 :—

PEARL, TORTOISE, AND TROCHUS-SHELL.—EXPORTS, AUSTRALIA.

Article.		1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Pearl-shell ..	cwt.	45,451	44,119	45,058	58,503	48,353
	£	352,026	337,469	339,016	450,615	354,992
Tortoise-shell ..	lb.	3,662	4,506	4,311	1,541	2,160
	£	3,364	2,894	3,113	693	921
Trochus-shell ..	cwt.	22,851	21,968	18,814	11,184	14,056
	£	72,812	76,116	71,714	44,515	44,682

The bulk of the pearl-shell exported during 1930-31 was consigned to the United States of America and the United Kingdom, the respective values of the shipments amounting to £274,017 and £72,145, while trochus-shell to the value of £44,279 was dispatched to Japan.

#### § 4. The Commonwealth Department of Fisheries.

In 1907 the Commonwealth Government decided to demonstrate what might be attained commercially by the application of modern methods in fishery. A Federal Investigation Ship, the *Endeavour*, was constructed specially for the work, and a Director of Fisheries was appointed. Experimental cruises were undertaken, which showed that Australia possesses an asset of considerable value in her sea fisheries. The *Endeavour* was unfortunately lost at sea with all on board at the end of 1914. A description of the trawling grounds discovered, data regarding oceanography to the east of Australia, and a list of the publications of the Department will be found on pp. 333 to 335 of Year Book No. 14.

In accordance with the recommendations of the Australian Fisheries Conference of 1927-29 the Commonwealth Government decided to construct a vessel to continue investigations, but the project has been temporarily postponed.

**§ 5. Trawling in Australian Waters.**

The State Trawling Industry was established in New South Wales in 1915, and fishing operations were conducted with seven steel steam trawlers. The catches were landed at Sydney and Newcastle, and the fish distributed through retail shops, of which there were fourteen in the metropolitan area, one in Newcastle, and five in country towns. Early in the year 1923 the Government discontinued trawling operations, as the venture was not a commercial success. The operations of the trawlers, however, revealed some of the richest trawling areas in the world, and these localities are being successfully exploited by private enterprise.

## CHAPTER XXIV. MANUFACTURING INDUSTRY.

[NOTE.]—In all tables relating to employees—except where specially mentioned—“Number of Employees” includes working proprietors.

### § 1. Number and Classification of Factories.

1. **General.**—The number of factories in each State does not necessarily furnish an accurate indication of the extent or progress of manufacturing throughout Australia, since the larger establishments in many cases tend to absorb smaller enterprises, while on the other hand new factories are constantly springing up, and small plants are as numerous as large ones.

2. **Number of Factories in each State, 1926–27 to 1930–31.**—The following table gives the number of factories in each State for the years 1926–27 to 1930–31 :—

FACTORIES.—NUMBER IN EACH STATE.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1926–27 ..	8,222	7,690	1,877	1,807	1,216	767	21,579
1927–28 ..	8,362	8,245	2,118	1,860	1,398	792	22,775
1928–29 ..	8,465	8,197	2,156	1,844	1,469	785	22,916
1929–30 ..	8,208	8,195	2,172	1,814	1,466	845	22,700
1930–31 ..	7,544	8,199	2,104	1,644	1,455	805	21,751

3. **Classification of Factories, Australia, 1926–27 to 1930–31.**—The following table shows the number of factories in Australia for each year from 1926–27 to 1930–31 classified in the groups agreed upon by the Conference of Statisticians in 1930. The classification now adopted supersedes the grouping which had been used since 1902. The definition of a factory adopted at the Conference of Statisticians in 1902 is, however, still used, viz., “Any factory, workshop or mill where four or more persons are employed or power is used.” Details in regard to some of the principal industries included in the table will be found in § 9 hereinafter.

FACTORIES.—CLASSIFICATION, AUSTRALIA.

Class of Industry.	1926–27.	1927–28.	1928–29.	1929–30.	1930–31.
I. Treatment of Non-metalliferous Mine and Quarry Products .. .. .	369	376	362	374	361
II. Bricks, Pottery, Glass, &c. .. .. .	558	537	530	520	368
III. Chemicals, Dyes, Explosives, Paint, Oils, and Grease .. .. .	516	505	495	493	515
IV. Industrial Metals, Machines, Implements, and Conveyances .. .. .	5,242	5,345	5,452	5,469	5,362
V. Precious Metals, Jewellery and Plate .. .. .	269	264	273	264	242
VI. Textiles and Textile Goods .. .. .	537	542	546	557	520
VII. Skins and Leather .. .. .	474	466	444	451	460
VIII. Clothing .. .. .	4,232	4,278	4,337	4,186	3,915
IX. Food, Drink and Tobacco .. .. .	3,269	4,289	4,304	4,274	4,251
X. Woodworking and Basketware .. .. .	2,588	2,514	2,508	2,444	2,144
XI. Furniture, Bedding, &c. .. .. .	1,139	1,169	1,139	1,071	954
XII. Paper, Stationery, Printing, Bookbinding, &c. .. .. .	1,533	1,556	1,562	1,592	1,601
XIII. Rubber .. .. .	153	201	219	245	267
XIV. Musical Instruments .. .. .	55	55	56	54	46
XV. Miscellaneous Products .. .. .	219	234	249	256	274
XVI. Heat, Light and Power .. .. .	426	444	440	450	471
<b>Total .. .. .</b>	<b>21,579</b>	<b>22,775</b>	<b>22,916</b>	<b>22,700</b>	<b>21,751</b>

CLASSIFICATION OF FACTORIES ACCORDING TO NUMBER OF EMPLOYEES. 713

The addition of 1,196 factories during the year 1927-28 is due mainly to the inclusion of 951 bakeries, particulars regarding which industry were incorporated for the first time in the year named. The older tendency to increasing numbers has been checked by the depression and the weeding out of unprofitable enterprises. In spite of the stimulus of high protection and embargo, the number of factories in 1930-31 was less than in 1927-28.

4. Classification of Factories, States, 1930-31.—The following table shows the number of factories in each State during 1930-31, classified according to the nature of the industry:—

FACTORIES.—CLASSIFICATION, STATES, 1930-31.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
	No.	No.	No.	No.	No.	No.	No.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	139	148	23	17	23	11	361
II. Bricks, Pottery, Glass, &c. ..	159	93	26	45	32	13	368
III. Chemicals, Dyes, Explosives, Paint, Oils and Grease ..	221	189	22	43	24	16	515
IV. Industrial Metals, Machines, Implements and Conveyances ..	1,981	2,080	362	409	388	142	5,362
V. Precious Metals, Jewellery and Plate ..	74	113	19	17	13	6	242
VI. Textiles and Textile Goods ..	129	307	31	28	15	10	520
VII. Skins and Leather ..	182	189	38	21	21	9	460
VIII. Clothing ..	1,421	1,771	237	235	195	56	3,915
IX. Food, Drink and Tobacco ..	1,239	1,333	690	443	320	226	4,251
X. Woodworking and Basketware ..	714	616	320	118	148	228	2,144
XI. Furniture, Bedding, &c. ..	295	378	95	70	71	45	954
XII. Paper, Stationery, Printing, Book-binding, &c. ..	601	616	150	110	103	21	1,601
XIII. Rubber ..	88	113	9	26	21	10	267
XIV. Musical Instruments ..	18	18	1	4	5	..	46
XV. Miscellaneous Products ..	110	106	24	12	18	4	274
XVI. Heat, Light, and Power ..	173	129	57	46	58	8	471
Total .. ..	7,544	8,199	2,104	1,644	1,455	805	21,751

§ 2. Classification of Factories according to Number of Employees.

1. States, 1930-31.—The following table shows, for each State, the number of factories classified according to the number of hands employed during 1930-31:—

FACTORIES.—CLASSIFICATION ACCORDING TO NUMBER OF EMPLOYEES, 1930-31.

No. of Persons Employed in each Factory.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
NUMBER OF FACTORIES.							
Under 4 ..	2,773	3,182	503	456	646	250	7,810
4 ..	727	814	219	202	119	122	2,203
5 to 10 ..	1,976	2,015	701	549	386	276	5,903
11 to 20 ..	902	1,000	307	200	153	84	2,646
21 to 50 ..	742	763	216	159	104	47	2,031
51 to 100 ..	226	205	79	53	37	14	614
Over 100 ..	198	220	79	25	10	12	544
Total ..	7,544	8,199	2,104	1,644	1,455	805	21,751

Compared with the figures for 1929-30 there has been a considerable increase in the number of small factories. Establishments employing under four hands increased from 7,012 to 7,810, or 11 per cent., while all others showed a decrease, ranging from 6 per cent., in the case of factories employing four hands, to 28 per cent. in the case of those employing 51 to 100 hands. The number of large factories employing over 100 hands decreased 20 per cent.

The relative importance of large and small factories is better shown by a classification of hands employed according to the size of factory in which they work. As compared with the returns for 1929-30 the average number employed in small factories increased, but decreases were recorded in all other establishments.

FACTORIES.—CLASSIFICATION OF EMPLOYEES, ACCORDING TO SIZE OF FACTORY, 1930-31—*continued.*

No. of Persons Employed in each Factory.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
AVERAGE NUMBER OF HANDS EMPLOYED.							
Under 4 ..	5,439	5,933	1,102	962	1,193	561	15,190
4 ..	2,908	3,256	876	808	476	488	8,812
5 to 10 ..	13,592	13,736	4,824	3,661	2,577	1,953	40,343
11 to 20 ..	13,115	14,606	4,504	3,006	2,301	1,200	38,732
21 to 50 ..	23,465	24,286	6,718	5,103	3,203	1,492	64,267
51 to 100 ..	15,609	14,092	5,450	3,517	2,741	1,002	42,411
Over 100 ..	59,236	53,258	17,000	8,084	3,030	3,663	144,271
Total ..	133,364	129,167	40,474	25,141	15,521	10,359	354,026

2. Australia, 1926-27 to 1930-31.—The percentage of employees in factories with more than 100 hands on the total for all factories, increased up to the year 1926-27, but declined to 40.75 per cent. in 1930-31.

FACTORIES.—CLASSIFICATION ACCORDING TO NUMBER OF EMPLOYEES, AUSTRALIA.

Year.	Establishments Employing on the Average—							
	20 hands and under.		21 to 100 hands.		101 hands and upwards.		Total.	
	Es-tablishments.	Em-ployees.	Es-tablishments.	Em-ployees.	Es-tablishments.	Em-ployees.	Es-tablishments.	Em-ployees.
1926-27—								
Number .. ..	17,259	111,545	3,587	151,339	733	204,363	21,579	467,247
Average per establishment ..	..	6.46	..	42.19	..	278.80	..	21.65
Percentage on total ..	79.98	23.87	16.62	32.39	3.40	43.74	100.00	100.00
1927-28—								
Number .. ..	18,502	116,930	3,566	148,901	707	198,365	22,775	464,196
Average per establishment ..	..	6.32	..	41.76	..	280.57	..	20.38
Percentage on total ..	81.24	25.19	15.66	32.08	3.10	42.73	100.00	100.00
1928-29—								
Number .. ..	18,714	115,457	3,477	144,127	725	201,607	22,916	461,191
Average per establishment ..	..	6.17	..	41.45	..	278.08	..	20.13
Percentage on total ..	81.66	25.03	15.17	31.25	3.17	43.72	100.00	100.00
1929-30—								
Number .. ..	18,688	110,704	3,338	136,457	674	183,386	22,700	430,547
Average per establishment ..	..	5.92	..	40.88	..	272.09	..	18.97
Percentage on total ..	82.33	25.71	14.70	31.69	2.97	42.60	100.00	100.00
1930-31—								
Number .. ..	18,562	103,077	2,645	106,678	544	144,271	21,751	354,026
Average per establishment ..	..	5.55	..	40.33	..	265.20	..	16.28
Percentage on total ..	85.34	29.12	12.16	30.13	2.50	40.75	100.00	100.00

## § 3. Power used in Factories.

1. States, 1930-31.—The following table shows the number of factories using steam, gas, oil, electricity, or water power, and the horse-power used during 1930-31:—

## FACTORIES.—HORSE-POWER USED, 1930-31.

State.	Number of Establishments.			Horse-power Used.					
	Using Power.	Others.	Total.	Steam.	Gas.	Oil.	Elec- tricity.	Water.	Total.
	No.	No.	No.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
N.S.W. ..	7,126	418	7,544	466,599	11,078	21,719	237,274	12,346	749,016
Victoria ..	7,519	680	8,199	231,672	9,081	14,268	151,997	26,581	433,599
Queensland ..	1,769	335	2,104	126,630	12,400	15,713	84,853	15	239,611
S. Australia ..	1,500	144	1,644	115,648	4,973	10,659	42,173	..	173,453
W. Australia ..	1,317	138	1,455	57,782	3,785	5,993	24,804	20	92,384
Tasmania ..	745	60	805	5,051	98	1,422	56,883	76,900	140,354
Australia ..	19,976	1,775	21,751	1,003,382	41,415	69,774	597,984	115,862	1,828,417

Factories in Australia include electric light and power works. Most of the power in these works is, however, used in generating electric power and light, and the power so produced is counted again under the heading of electricity. The actual amount of duplication cannot be given for all States, but a fair measure of the amount of power used in factories (in the common sense) is given by deducting the total of Class XVI., Heat, Light and Power, from the gross total for all factories. This is done in the last column of the table below. It must not be inferred that the whole of this deduction is a duplication. Some of it represents the production of light for general purposes, and an appreciable amount of the power is not used in factories, but on farms or in private houses.

2. Australia, 1926-27 to 1930-31.—The following table shows the horse-power used in connexion with factories in Australia during each of the last five years:—

## FACTORIES.—HORSE-POWER USED, AUSTRALIA.

Year.	Number of Establishments.			Horse-power Used.					
	Using Power.	Others.	Steam.	Gas.	Oil.	Elec- tricity.	Water.	Total (a).	
								Gross.	Less Heat Light and Power Works.
	No.	No.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
1926-27 ..	18,916	2,663	853,265	55,722	32,459	461,789	71,881	1,475,116	695,230
1927-28 ..	19,926	2,849	879,082	52,351	43,133	507,163	74,580	1,556,309	730,454
1928-29 ..	20,304	2,612	932,483	49,781	50,197	537,670	109,183	1,679,314	753,991
1929-30 ..	20,456	2,244	1,101,741	43,695	60,629	568,289	114,828	1,889,182	769,576
1930-31 ..	19,976	1,775	1,003,382	41,415	69,774	597,984	115,862	1,828,417	745,689

(a) See preceding paragraph.

The last column of the above table, which may be called roughly the net power used in factories, shows an average increase of about 15,000 horse-power per annum or rather over 2 per cent. per annum for the last five years. The net horse-power per employee increased from 1.4 in 1924-25 to 1.6 in 1928-29, but the decline in persons employed in 1930-31 raised the proportion to 2.20 horse-power per employee in that year. The corresponding figure for the United States was 4.5.



3. **Classes of Industry.**—The following tables give a classification of the horse-power used in factories in each State during the year 1930-31. On account of the adoption of the new classification of factories referred to in § 1.3 *ante* comparable figures for previous years are not readily available.

**FACTORIES.—HORSE-POWER USED IN EACH CLASS, 1930-31.**

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aus- tralia.
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	22,092	19,218	2,555	2,303	2,100	6,353	54,621
II. Bricks, Pottery, Glass, &c. ..	9,958	10,629	1,933	2,162	1,788	449	26,919
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	10,441	10,450	1,322	4,766	2,363	321	29,663
IV. Industrial Metals, Machines, Implements and Conveyances ..	103,574	34,379	11,756	14,012	6,549	40,750	211,020
V. Precious Metals, Jewellery and Plate ..	469	827	58	144	17	13	1,528
VI. Textiles and Textile Goods ..	12,139	20,571	2,490	1,780	730	2,170	39,880
VII. Skins and Leather ..	5,492	4,818	664	343	406	196	11,919
VIII. Clothing ..	4,891	7,843	989	687	583	120	15,113
IX. Food, Drink and Tobacco ..	62,114	52,146	64,588	15,305	11,471	5,741	211,365
X. Woodworking and Basket-ware ..	21,793	15,920	9,804	4,242	7,694	4,655	64,108
XI. Furniture, Bedding, etc. ..	4,524	4,702	1,265	1,897	1,110	517	14,015
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	12,927	13,027	3,087	1,623	1,747	487	32,898
XIII. Rubber ..	14,222	11,926	434	113	70	1,114	27,879
XIV. Musical Instruments ..	1,798	591	3	97	8	..	2,497
XV. Miscellaneous Products ..	947	906	83	140	126	62	2,264
Total less Class XVI. ..	287,381	207,953	101,031	49,614	36,762	62,948	745,689
XVI. Heat, Light and Power ..	461,635	225,646	138,580	123,839	55,622	77,406	1,082,728
Grand Total ..	749,016	433,599	239,611	173,453	92,384	140,354	1,828,417

**§ 4. Employment in Factories.**

1. **Total Number Employed.**—Each person employed in and about a factory, in whatever capacity, is now included as a factory employee, consequently every proprietor who works in his own business is counted as an employee, and all "outworkers" (see subsection 5 (ii) hereinafter) are also included. The individuals embraced may be classed under the following heads:—(i) Working proprietors; (ii) managers and overseers (iii) accountants and clerks; (iv) engine-drivers and firemen; (v) skilled and unskilled workers in the factories, mills, or workshops; (vi) carters and messengers; and (vii) others.

The number of persons employed during the year 1930-31 has been computed in accordance with a resolution of the Conference of Statisticians held in 1928. This method shows the average number of persons employed over the whole year rather than the average over the period worked. Employment figures for previous years have also been recomputed on this basis for purposes of comparison. The tables relating to Classification of Factories according to the Number of Employees (see § 2 *ante*) are, however, on the old basis. In all other tables relating to employment, average salaries and wages paid, output per employee, etc., the factor used is the average obtained in accordance with the abovementioned resolution.

The following table shows, for each year from 1926-27 to 1930-31 inclusive, (a) the average numbers of persons (including both sexes and all ages) employed in manufacturing industries in each State, (b) the percentage of the numbers employed in each State on the total numbers employed in Australia; and (c) the numbers employed per ten thousand of the population in each State and Australia:—

## FACTORIES.—EMPLOYMENT.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
AVERAGE NUMBER.							
1926-27 ..	179,364	157,598	44,122	41,075	19,403	10,622	452,184
1927-28 ..	178,094	156,348	44,711	39,044	20,420	11,111	449,728
1928-29 ..	180,806	156,568	45,031	36,807	20,804	10,466	450,482
1929-30 ..	162,913	151,009	42,624	32,185	19,643	10,820	419,194
1930-31 ..	127,591	126,016	37,901	23,886	14,620	8,829	338,843

## PERCENTAGE ON AUSTRALIAN TOTAL.

	%	%	%	%	%	%	%
1926-27 ..	39.67	34.85	9.76	9.08	4.29	2.35	100.00
1927-28 ..	39.60	34.76	9.95	8.68	4.54	2.47	100.00
1928-29 ..	40.14	34.76	9.99	8.17	4.62	2.32	100.00
1929-30 ..	38.86	36.02	10.17	7.68	4.69	2.58	100.00
1930-31 ..	37.65	37.19	11.19	7.05	4.31	2.61	100.00

## PER 10,000 OF POPULATION.

1926-27 ..	744	906	490	708	496	483	726
1927-28 ..	727	888	486	673	498	485	711
1928-29 ..	729	880	484	635	495	476	703
1929-30 ..	658	850	458	555	471	494	654
1930-31 ..	510	704	400	410	348	400	523

2. Rates of Increase, 1926-27 to 1930-31.—The following table shows the percentage of increase or decrease on the average number of persons employed for the preceding year in each of the years from 1926-27 to 1930-31.

## FACTORY EMPLOYEES.—PERCENTAGE OF INCREASE.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	%	%	%	%	%	%	%
1925-26—1926-27..	5.66	5.67	7.21	5.19	6.11	4.68	3.64
1926-27—1927-28..	7.08	7.93	1.33	4.94	5.24	4.60	5.43
1927-28—1928-29..	1.52	0.14	0.72	5.73	1.88	5.81	0.17
1928-29—1929-30..	9.90	3.55	5.35	12.56	5.58	3.38	6.95
1929-30—1930-31..	21.70	16.56	11.08	25.76	25.57	18.40	19.20

NOTE.—The minus sign indicates decrease.

3. Employees in Classes of Industry, Australia, 1926-27 to 1930-31.—The table hereunder gives the average numbers of persons employed in factories under each group in Australia during the years 1926-27 to 1930-31 inclusive:—

## FACTORY EMPLOYEES.—CLASSES, AUSTRALIA.

Class of Industry.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
					0
I. Treatment of non-metalliferous mine and quarry products ..	7,898	8,055	7,692	6,889	4,536
II. Bricks, pottery, glass, etc. ..	14,105	13,738	12,990	11,085	5,684
III. Chemicals, dyes, explosives, paint, oils and grease ..	13,909	13,662	14,079	13,364	11,784
IV. Industrial metals, machines, implements and conveyances ..	131,581	127,706	130,321	116,869	89,506
V. Precious metals, jewellery and plate ..	2,138	2,180	2,191	2,073	1,701
VI. Textiles and textile goods ..	26,512	26,536	28,117	29,383	26,228
VII. Skins and leather ..	9,161	8,263	7,879	7,663	6,588
VIII. Clothing ..	83,093	80,950	81,770	74,002	60,069
IX. Food, drink and tobacco ..	63,862	69,968	68,617	67,189	62,294
X. Woodworking and basketware ..	33,114	30,241	26,775	24,169	15,628
XI. Furniture, bedding, etc. ..	14,204	14,110	13,852	11,899	7,770
XII. Paper, stationery, printing, book-binding etc. ..	32,771	32,948	33,837	33,095	29,441
XIII. Rubber ..	5,945	7,187	7,223	6,804	4,592
XIV. Musical instruments ..	1,831	1,713	1,895	1,658	1,067
XV. Miscellaneous products ..	2,384	2,629	2,920	3,172	3,388
XVI. Heat, light and power ..	9,676	9,842	10,324	9,880	8,567
Total ..	452,184	449,728	450,482	419,194	338,843

The number employed in factories, after being almost constant for three years, fell away in 1930-31 by 80,351, or 19 per cent. The only other decline in numbers recorded prior to the present depression was in the war years, when there was a decrease of 6 per cent. spread over three years.

Detailed examination of the returns for the years 1930-31 and 1926-27 reveals that the decline in employment was more severe in the industries connected with building, i.e., Class II. Bricks, etc., and Class X. Woodworking—where the employment declined approximately 60 per cent. Those least affected were connected with Food, Drink, etc., and Textiles. All classes of industry, however, showed fewer numbers in employment.

4. Employees in Classes of Industry, States, 1930-31.—The following table gives a classification of employees in manufacturing industries in each State during 1930-31:—

## FACTORY EMPLOYEES.—CLASSES, STATES, 1930-31.

Class of Industry.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia.
I. Treatment of non-metalliferous mine and quarry products ..	2,206	1,505	251	195	220	159	4,536
II. Bricks, pottery, glass, etc. ..	2,543	1,831	429	389	405	87	5,684
III. Chemicals, dyes, explosives, paint, oils and grease ..	4,979	4,723	363	1,084	534	101	11,784
IV. Industrial metals, machines, implements and conveyances ..	41,401	26,193	7,328	8,275	3,967	2,342	89,506
V. Precious metals, jewellery and plate ..	492	941	98	107	43	20	1,701
VI. Textiles and textile goods ..	8,361	14,719	820	608	336	1,384	26,228
VII. Skins and leather ..	2,760	2,738	474	369	183	64	6,588
VIII. Clothing ..	18,994	30,157	5,080	3,073	2,183	582	60,069
IX. Food, drink, and tobacco ..	20,139	20,024	13,137	4,469	2,675	1,850	62,294
X. Woodworking and basketware ..	4,338	4,483	3,477	882	1,575	873	15,628
XI. Furniture, bedding, etc. ..	2,694	2,674	1,137	547	431	287	7,770
XII. Paper, stationery, printing, bookbinding, etc. ..	11,443	10,641	3,528	1,878	1,334	617	29,441
XIII. Rubber ..	1,773	2,051	448	111	92	117	4,592
XIV. Musical instruments ..	717	298	11	21	20	..	1,067
XV. Miscellaneous products ..	1,509	1,052	231	239	180	177	3,388
XVI. Heat, light and power ..	3,242	1,986	1,089	1,639	442	169	8,567
Total ..	127,591	126,016	37,901	23,886	14,620	8,829	338,843

The decline in employment compared with 1929-30 for Australia as a whole amounted to 19 per cent. South Australia and Western Australia showed a loss of 26 per cent., New South Wales 22 per cent., Tasmania 18 per cent., Victoria 17 per cent., and Queensland 11 per cent.

5. **Employees According to Nature of Employment.**—(i) *General.* In the following table the average numbers of persons employed in each State during 1930-31 are classified according to the nature of their employment:—

**FACTORY EMPLOYEES.—NATURE OF EMPLOYMENT, 1930-31.**

State.	Average Number of Persons Employed.						Total.
	Working Proprietors.	Managers and Overseers.	Accountants and Clerks.	Engine-drivers and Firemen.	Workers, Skilled & Unskilled, in Factory Mill or Workshop (a)	Carters, Messengers and Others.	
New South Wales ..	5,753	5,696	8,354	2,160	104,023	1,605	127,591
Victoria ..	6,882	5,376	6,064	1,601	104,611	1,482	126,016
Queensland ..	1,549	1,685	2,472	1,614	27,979	2,602	37,901
South Australia ..	1,211	1,214	1,882	423	18,538	618	23,886
Western Australia ..	890	731	999	380	11,123	488	14,620
Tasmania ..	420	406	790	154	6,825	234	8,829
Australia ..	16,705	15,108	20,561	6,341	273,099	7,029	338,843

(a) Including Outworkers.

(ii) *Outworkers.* The term "outworker" or "homeworker" has acquired a special meaning in connexion with manufacturing industries, and technically embraces only those to whom work is given out by factory owners to be wrought upon in the employees' own homes. Individuals working for themselves are not included. The following table gives particulars of the average number of outworkers connected with factories in each State during each year from 1926-27 to 1930-31 inclusive:—

**FACTORIES.—OUTWORKERS.(a)**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1926-1927 ..	336	592	31	66	7	53	1,085
1927-1928 ..	333	380	40	51	5	67	876
1928-1929 ..	288	240	44	41	2	22	637
1929-1930 ..	217	182	49	28	2	31	509
1930-1931 ..	122	136	29	15	3	23	328

(a) In all tables relating to number of hands employed in factories, outworkers are included.

The Factories Acts in each State contain provisions regulating the employment of outworkers. Records of outwork, specifying the names and remuneration of workers, and stating the places where the work is done, must be kept by factory proprietors. Fuller information regarding the operation of the Factories Acts will be found in Official Year Book No. 16, pp. 540 to 566.

### § 5. Sex Distribution in Factories.

1. **Employment of Females.**—In all the States the employment of female labour in factories is regulated by Acts of Parliament. More extended reference to this matter will be found in Official Year Book No. 16, pp. 540 to 566.

2. **Distribution of Employees according to Sex.**—(i) *General.* In New South Wales the ratio of the number of females employed in factories to the number of males during 1886 was about one to seven; in 1891 one to six; in 1903 it became about one to four; and is now less than one to three. In Victoria the ratio of females to males during the year 1886 was about one to five. Five years later (1891) it was somewhat less, but in 1896 had increased to about one to three, and at present is nearly one to two. In the remaining States the ratio was roughly one female employed to every five males, while that for Australia as a whole was one to three. The employment of women is, however, mainly confined to a few trades.

Increasing activity in the clothing and textile industries is the principal cause of the growth in female employment. Certain occupations are regarded as specially suitable for women, such as clothing and textile manufacture, preparation of food, book-binding, and wrapping and packing connected with various industries. Considerable numbers of women clerks and typists are also included in the returns.

(ii) *Average Number of Males and Females Employed, 1926-27 to 1930-31.* The following table shows the average number of male and female employees in factories in each State from 1926-27 to 1930-31:—

#### FACTORIES.—MALES AND FEMALES EMPLOYED.

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
MALES.					
New South Wales .. ..	135,418	134,488	135,813	122,006	93,868
Victoria .. ..	106,245	105,366	104,648	100,135	82,949
Queensland .. ..	37,119	37,381	37,107	35,141	31,144
South Australia .. ..	34,076	32,214	30,385	26,485	19,332
Western Australia .. ..	15,959	16,710	16,993	15,921	11,729
Tasmania .. ..	8,616	8,730	8,164	8,547	6,922
<b>Australia .. ..</b>	<b>337,433</b>	<b>334,889</b>	<b>333,110</b>	<b>308,235</b>	<b>245,944</b>
FEMALES.					
New South Wales .. ..	43,946	43,606	44,993	40,907	33,723
Victoria .. ..	51,353	50,982	51,920	50,874	43,067
Queensland .. ..	7,003	7,330	7,924	7,483	6,757
South Australia .. ..	6,999	6,830	6,422	5,700	4,554
Western Australia .. ..	3,444	3,710	3,811	3,722	2,891
Tasmania .. ..	2,006	2,381	2,302	2,273	1,907
<b>Australia .. ..</b>	<b>114,751</b>	<b>114,839</b>	<b>117,372</b>	<b>110,959</b>	<b>92,899</b>

The maximum number of employees in factories was reached in 1926-27 when 452,184 persons were employed, of whom 337,433 were males, and 114,751 were females. Since that year there has been a decrease, amounting in 1930-31 to 91,489 or 27 per cent. in the case of males, and to 21,852 or 19 per cent. in respect of females.

3. *Rate of Variation for each Sex.*—The percentages of annual increase or decrease during the years 1926-27 to 1930-31 on the average number of males and females employed in factories are shown below :—

PERCENTAGES OF ANNUAL INCREASE, MALE AND FEMALE FACTORY EMPLOYEES.

State.	1925-26— 1926-27.	1926-27— 1927-28.	1927-28— 1928-29.	1928-29— 1929-30.	1929-30— 1930-31.
MALES.					
	%	%	%	%	%
New South Wales .. ..	5.03	-0.69	0.99	-10.17	-23.06
Victoria .. ..	4.27	-0.83	-0.68	-4.31	-17.16
Queensland .. ..	-7.36	0.71	-0.79	-5.30	-11.37
South Australia .. ..	5.53	-5.46	-5.68	-12.84	-27.01
Western Australia .. ..	-8.25	4.71	1.69	-6.31	-26.33
Tasmania .. ..	4.75	1.32	-6.48	4.69	-19.01
Total .. ..	2.63	-0.75	-0.53	-7.47	-20.21
FEMALES.					
New South Wales .. ..	7.67	-0.77	3.18	-9.08	-17.56
Victoria .. ..	8.72	-0.72	1.84	-2.01	-15.35
Queensland .. ..	-6.70	4.67	8.10	-5.57	-9.70
South Australia .. ..	3.52	-2.41	-5.97	-11.24	-20.11
Western Australia .. ..	5.19	7.72	2.72	-2.36	-22.33
Tasmania .. ..	4.37	18.69	-3.32	-1.26	-16.10
Total .. ..	6.73	0.77	2.20	-5.46	-16.28

NOTE.—The minus sign indicates decrease.

4. *Masculinity of Employees in Factories.*—The extent to which females are employed in the factories of Australia may perhaps be more clearly shown by giving the masculinity of employees for each State for a series of years. The following table furnishes particulars for each of the years 1926-27 to 1930-31 inclusive :—

MASCULINITY(a) OF FACTORY EMPLOYEES.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
1926-27 .. ..	308	207	530	487	463	430	294
1927-28 .. ..	308	207	510	472	450	367	292
1928-29 .. ..	302	202	468	473	446	355	284
1929-30 .. ..	298	197	470	465	428	376	278
1930-31 .. ..	278	193	461	425	406	363	265

(a) Number of males per 100 females.

During the period of five years covered by the table above there has been a decrease in masculinity in all the States. The decline was smallest in Victoria, where the greatest number of females is employed. The causes of the increasing employment of women workers have been dealt with in *2 ante*.

5. *Employment of Females in Particular Industries.*—A preponderance of women workers occurs in a few trades, of which the more important are comprised in Classes VI., VIII., IX., and XII., viz., in connexion with textiles, clothing, food, drink and tobacco, and paper, stationery, printing and bookbinding, etc. The following tables show the average number of females employed in each of these classes in 1930-31 and

the percentages of the average number so employed on the total average number of females employed in all classes :—

**FEMALES EMPLOYED IN PARTICULAR INDUSTRIES, AND PERCENTAGES ON AVERAGE TOTAL EMPLOYED, 1930-31.**

Class.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aus- tralia.
<b>AVERAGE NUMBER.</b>							
VI. Textiles and textile goods ..	5,427	9,268	359	228	171	916	16,369
VIII. Clothing .. ..	13,283	21,119	3,683	2,249	1,623	356	42,313
IX. Food and drink .. ..	5,943	4,726	1,004	699	440	323	13,135
XII. Paper, stationery, &c. ..	3,248	2,910	820	490	306	133	7,907
All other classes .. ..	5,822	5,044	891	888	351	179	13,175
Total .. ..	33,723	43,067	6,757	4,554	2,891	1,907	92,899
<b>PERCENTAGES ON AVERAGE TOTAL NUMBER OF FEMALE EMPLOYEES.</b>							
VI. Textiles and textile goods ..	16.10	21.52	5.31	5.00	5.92	48.03	17.62
VIII. Clothing .. ..	39.39	49.04	54.51	49.39	56.14	18.67	45.55
IX. Food and drink .. ..	17.62	10.97	14.86	15.35	15.22	16.94	14.14
XII. Paper, stationery, etc. ..	9.63	6.76	12.14	10.76	10.58	6.97	8.51
All other classes .. ..	17.26	11.71	13.18	19.50	12.14	9.39	14.18
Total .. ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00

The largest proportion of females is engaged in one or other of the four classes of industry indicated, Class VIII. being the most important. The classification of the employment of females in the several industries in that class, and the relation of their number to that of the males so employed, are shown in the following table :—

**FEMALES EMPLOYED IN EACH INDUSTRY IN CLASS VIII. DURING 1930-31.**

Industry.	New South Wales.			Victoria.			Other States.		
	Males	Females.	Femini- nity. (a)	Males.	Females.	Femini- nity. (a)	Males.	Females.	Femini- nity. (a)
Tailoring and slop clothing .. ..	1,431	5,184	362	1,586	4,726	298	1,175	3,562	303
Waterproof and oil-skin clothing ..	14	50	357	58	165	284	..	..	..
Dressmaking .. ..	30	1,048	3,493	348	4,915	1,412	35	1,420	2,977
Millinery .. ..	56	883	1,577	87	1,238	1,423	7	329	4,700
Shirts, collars and underclothing ..	227	2,311	1,018	469	3,934	839	128	1,568	1,225
Stays and corsets ..	56	542	968	44	343	780	3	19	633
Handkerchiefs, ties and scarves ..	65	473	728	32	307	959	..	..	..
Hats and caps .. ..	459	918	200	425	747	176	54	99	183
Gloves .. ..	..	..	..	21	65	310	..	..	..
Boots and shoes ..	1,963	1,535	78	4,664	3,958	85	1,070	716	29
Boot repairing (including bespoke work) ..	1,039	26	2,50	653	11	1.68	385	27	7
Boot accessories ..	70	21	30	339	113	33	..	..	..
Umbrellas and walking sticks .. ..	35	66	189	32	59	184	10	11	110
Dyeworks and cleaning (including re-novating and repairing) ..	266	224	84	229	214	93	138	154	112
Other .. ..	..	2	..	51	324	635	2	6	300
Total .. ..	5,711	13,283	233	9,038	21,119	234	3,007	7,911	263

(a) Number of females per 100 males.

**§ 6. Child Labour in Factories.**

**1. Conditions of Child Labour.**—The employment of young persons in factories in the States is regulated by Acts of Parliament, as is the case with the employment of female labour. Reference to the legislation regarding the employment of child labour in factories will be found in Official Year Book No. 16, pp. 540 to 566. The general object of the restrictions imposed is to assure that a proper period shall be devoted to primary education, and that the early years of toil shall not exhaust the worker before the attainment of full growth.

2. Average Number of Children Employed, 1926-27 to 1930-31.—In the statistical compilations of the various States, the term "child" is taken to denote any person under sixteen years of age. The following table shows the average number of children of each sex employed in manufacturing industries during the years 1926-27 to 1930-31:—

## CHILDREN EMPLOYED IN FACTORIES.

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
MALES.					
New South Wales .. ..	4,594	4,016	3,983	3,322	1,851
Victoria .. ..	4,567	4,231	4,209	3,748	2,543
Queensland .. ..	1,281	1,272	1,254	1,212	950
South Australia .. ..	1,215	1,073	883	654	411
Western Australia .. ..	614	677	647	575	324
Tasmania .. ..	311	343	290	261	203
Australia .. ..	12,582	11,612	11,266	9,772	6,282
FEMALES.					
New South Wales .. ..	5,001	4,747	5,085	4,196	2,757
Victoria .. ..	4,041	3,992	4,298	4,019	3,361
Queensland .. ..	927	850	921	906	619
South Australia .. ..	856	763	679	529	399
Western Australia .. ..	242	297	276	226	149
Tasmania .. ..	254	304	265	252	205
Australia .. ..	11,321	10,953	11,524	10,128	7,490
TOTAL.					
New South Wales .. ..	9,595	8,763	9,068	7,518	4,608
Victoria .. ..	8,608	8,223	8,507	7,767	5,904
Queensland .. ..	2,208	2,122	2,175	2,118	1,569
South Australia .. ..	2,071	1,836	1,562	1,183	810
Western Australia .. ..	856	974	923	801	473
Tasmania .. ..	565	647	555	513	408
Australia .. ..	23,903	22,565	22,790	19,900	13,772

3. Percentage of Children on Total Number of Employees.—The decrease in the number of children employed in factories is greater than that of adult workers, the percentage of child workers on the total number of employees declining from 4.75 per cent. in 1929-30 to 4.06 per cent. in 1930-31. The total decrease amounted to 3,490 in respect of males and 2,638 in respect of females.

## PERCENTAGE OF CHILDREN ON TOTAL NUMBER OF FACTORY EMPLOYEES.

State.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	%	%	%	%	%
New South Wales .. ..	5.35	4.92	5.02	4.61	3.61
Victoria .. ..	5.46	5.26	5.43	5.14	4.69
Queensland .. ..	5.00	4.75	4.81	4.97	4.14
South Australia .. ..	5.04	4.70	4.24	3.68	3.39
Western Australia .. ..	4.41	4.77	4.44	4.08	3.24
Tasmania .. ..	5.32	5.82	5.30	4.74	4.62
Australia .. ..	5.29	5.02	5.06	4.75	4.06



4. Industries Employing Child Labour.—The employment of children is largely confined to a limited number of industries, the most important of which are specified in the next table, which shows the average number employed in 1930-31.

CHILDREN EMPLOYED.—VARIOUS INDUSTRIES, 1930-31.

Class.	Industry.	N.S.W.		Victoria.		Q'land.		S. Aust.		W. Aust.		Tas.		Australia.	
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
II.	Earthenware, China, Porcelain, and Terra-Cotta	39	16	23	4	2	1	4	..	14	10	..	..	82	31
III.	Chemicals, Drugs and Medicines	38	77	11	27	..	2	5	30	3	1	..	..	57	137
IV.	Smelting, Converting, Refining and Rolling of Iron and Steel	73	..	93	7	13	..	34	8	..	..	..	..	213	15
"	Engineering (not Marine or Electrical)	59	..	66	7	17	..	13	2	18	..	..	..	173	9
"	Electrical Installations, Cables and Apparatus	55	23	47	11	..	..	2	..	2	..	..	..	106	34
"	Motor Vehicles and Cycles. (H) Repairs	60	..	71	2	33	..	24	..	18	1	7	..	213	3
"	Galvanized Ironworking and Tinsmithing	81	22	137	40	22	4	20	..	12	..	1	..	273	66
VI.	Cotton	32	66	7	15	4	..	..	..	..	..	..	..	43	81
"	Wool, Worsted and Shoddy	119	282	276	472	5	21	19	16	7	9	36	118	462	918
"	Hosiery and Other Knitted Goods	28	253	121	533	2	6	..	8	1	4	2	11	154	815
"	Rope and Cordage	6	8	54	31	5	..	7	..	..	..	..	..	72	39
VII.	Tanning, Currying and Leather Dressing	32	..	62	1	17	..	5	..	2	..	..	..	118	1
"	Bags, Trunks and Other Leather Goods	22	36	10	21	4	4	1	8	2	..	..	..	39	69
VIII.	Tailoring and Slop Clothing	31	293	47	180	40	86	4	61	2	19	2	5	126	644
"	Dressmaking	1	114	21	403	..	42	..	74	..	39	..	5	22	677
"	Millinery	..	87	3	193	..	2	..	30	..	4	..	..	3	316
"	Shirts, Collars and Underclothing	6	295	13	255	11	197	1	33	1	17	..	8	32	805
"	Hats and Caps	11	70	16	39	..	5	..	..	1	..	..	..	27	115
"	Boots and Shoes	100	177	229	309	18	46	17	26	13	..	4	5	381	563
"	Boot Repairing	31	1	23	..	15	4	5	..	1	4	..	..	85	6
IX.	Bakeries (including Cakes and Pastry)	24	5	54	8	31	20	14	3	15	..	38	33	176	69
"	Biscuits	57	100	86	29	1	2	13	9	17	14	..	..	174	154
"	Sugar Confectionery (including Chocolate)	67	189	47	73	8	24	11	30	..	7	..	..	133	323
"	Butter Factories, Creameries, etc.	4	2	39	25	24	1	3	2	4	1	1	..	75	31
"	Condiments, Coffee and Spices	25	64	5	24	..	..	21	3	12	..	..	..	63	91
"	Tobacco, Cigars, Cigarettes and Snuff	11	62	19	33	..	..	..	..	5	..	..	..	35	95
X.	Sawmills (Town and Forest)	10	1	15	..	72	..	4	..	16	..	3	..	120	1
XI.	Billiard Tables, Cabinet and Furniture making and Upholstery	42	8	52	5	35	1	20	..	6	..	7	1	162	15
XII.	Papermaking, etc.	32	98	3	..	..	..	..	..	..	..	..	..	35	98
"	Envelopes, Stationery, Paper Boxes, Bags, etc.	..	..	22	86	6	19	10	17	1	4	..	..	39	126
"	Newspapers and Periodicals	47	8	16	1	86	9	..	..	10	1	3	..	162	19
"	General Printing and Bookbinding (not including Government)	96	69	132	46	48	24	24	9	23	2	9	2	332	152
XIII.	Tyres, Motor and Cycle	15	31	15	23	2	..	3	..	4	..	5	4	44	58

5. Apprenticeship.—In all the States Acts are in force for the regulation of the age at which children may be employed in gainful occupations. Legislative provision is also made for the regulation of apprenticeship under the various State Factories Acts or Arbitration Acts. These Acts, while laying down general principles, leave to the wages tribunals the actual determination of the conditions under which apprentices may be employed.

### § 7. Salaries and Wages Paid and Value of Production.

[NOTE].—In all tables relating to Salaries and Wages paid in Factories the amounts given are exclusive of sums drawn by working proprietors.

1. *General.*—The importance of the manufacturing industries of Australia is indicated by the fact that the total value of the output for 1930-31 was £290,798,564, of which amount the sum of £162,104,646 represents the value of the materials used, and £10,383,795 the value of the power, fuel and light used. The difference between the sum of the two latter amounts and the value of the output, viz., £118,310,123, represents the value of production as defined by the Conference of Statisticians at Sydney in 1925, i.e., "The value of consumable commodities produced during the year, deducting, so far as possible, the value of goods consumed in process of production." The total amount of salaries and wages paid in factories during 1930-31 was £62,454,859. This figure shows a decline of £22,262,174, or 26 per cent., as compared with the total for the previous year.

2. *Salaries and Wages Paid.*—(i) *Total Amount, 1930-31.* The total amount of salaries and wages paid during the year 1930-31 in various classes of factories in Australia, is shown in the following table:—

SALARIES AND WAGES PAID IN FACTORIES, 1930-31.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treatment of Non-metalliciferous Mine and Quarry Products .. ..	572,443	315,613	57,435	41,473	48,428	45,743	1,081,133
II. Bricks, Pottery, Glass, etc. .. ..	546,019	356,504	70,071	65,400	80,468	15,905	1,134,367
III. Chemicals, Dyes, Explosives, Paint, Oils and Grease ..	1,027,377	946,156	70,518	226,472	122,280	18,853	2,411,656
IV. Industrial Metals, Machines, Implements and Conveyances .. ..	9,160,205	5,068,046	1,433,432	1,656,377	845,376	500,236	18,663,672
V. Precious Metals, Jewellery and Plate .. ..	79,274	140,018	16,132	14,743	7,558	2,138	259,863
VI. Textiles and Textile Goods .. ..	1,218,684	1,975,156	112,933	86,659	48,958	154,833	3,597,223
VII. Skins and Leather ..	524,720	484,531	74,099	52,197	29,821	8,413	1,173,801
VIII. Clothing .. ..	2,371,977	3,700,087	574,626	331,749	238,434	67,476	7,284,349
IX. Food, Drink and Tobacco .. ..	4,179,572	4,043,303	2,878,998	850,993	624,992	331,555	12,909,413
X. Woodworking and Basketware .. ..	841,339	809,428	571,677	150,945	312,140	138,624	2,824,153
XI. Furniture, Bedding, etc. .. ..	458,398	375,484	190,712	74,245	67,486	34,894	1,201,219
XII. Paper, Stationery, Printing, Book-binding, etc. .. ..	2,471,146	2,019,352	686,649	347,896	307,440	138,112	5,970,595
XIII. Rubber .. ..	433,756	375,739	56,211	16,175	11,860	22,370	916,111
XIV. Musical Instruments ..	150,139	58,100	1,869	2,968	4,000	..	217,076
XV. Miscellaneous Products .. ..	242,864	165,385	34,077	30,472	25,776	19,467	518,041
XVI. Heat, Light and Power .. ..	922,377	526,569	268,667	420,104	111,867	42,601	2,292,185
<b>Total .. ..</b>	<b>25,200,290</b>	<b>21,359,491</b>	<b>7,098,106</b>	<b>4,368,868</b>	<b>2,886,884</b>	<b>1,541,220</b>	<b>62,454,859</b>

(ii) *Totals and Averages, 1926-27 to 1930-31.* The following statement shows the total amount of salaries and wages paid, and the average amount paid per employee in each State, for the years 1926-27 to 1930-31. The average wage paid is not comparable with that shown in similar tables in Official-Year Books issued prior to No. 23, 1930, on account of the change in method of computing the average number of hands employed

as explained heretofore. The figures are exclusive of working proprietors and of the amounts drawn by them :—

**SALARIES AND WAGES PAID IN FACTORIES.—TOTAL AND AVERAGE PER ANNUM PER EMPLOYEE.**

Year.	Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
		£	£	£	£	£	£	£
1926-27	Total amount paid ..	37,092,196	29,889,557	9,298,370	8,390,603	3,922,923	1,981,517	90,575,166
	Average per employee ..	215.04	198.67	216.99	211.84	210.83	196.17	208.65
1927-28	Total amount paid ..	37,818,141	30,030,352	9,140,223	8,164,238	4,210,675	2,001,690	91,365,319
	Average per employee ..	220.75	201.83	212.33	217.34	216.60	189.30	212.12
1928-29	Total amount paid ..	38,544,687	29,466,767	9,097,624	7,609,813	4,373,090	1,894,927	90,986,908
	Average per employee ..	221.37	197.41	209.45	215.11	220.87	189.80	210.63
1929-30	Total amount paid ..	34,875,995	28,387,840	8,690,872	6,579,186	4,154,980	2,028,160	84,717,033
	Average per employee ..	222.67	197.07	211.80	213.62	222.32	195.80	210.97
1930-31	Total amount paid ..	25,200,290	21,359,491	7,098,106	4,368,868	2,886,884	1,541,220	62,454,859
	Average per employee ..	206.83	179.29	195.26	192.67	210.26	183.28	193.88

In comparing the figures in the preceding table, regard should be paid to the nature of certain industries which are carried on to a greater extent in some States than in others. In Victoria, for instance, there is a large number of hands employed in Class VIII., comprising a heavy percentage of women and children. The highest average wages per employee in 1930-31 were paid in New South Wales, and Western Australia.

The increase in rates of salaries and wages reached its maximum in 1927-28 when the average amounted to £212.12, as compared with £210.63 in 1928-29, £210.97 in 1929-30 and £193.88 in 1930-31. The fall in the cost of living on which the rates of wage are chiefly based began in the last quarter of 1929-30, and has since continued, with a consequent further reduction in the rate of wage. The average salary and wage fell approximately 8 per cent. in 1930-31 as compared with 1929-30.

(iii) *Earnings of Males and Females, 1930-31.* The following table shows the approximate amount paid in salaries and wages to males and females in each class of industry in each State during the year 1930-31 :—

**SALARIES AND WAGES.—MALE AND FEMALE FACTORY EMPLOYEES, 1930-31.**

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
MALES.							
I. Treatment of Non-metalliferous Mine and Quarry Products ..	565,099	312,765	56,694	41,007	47,276	45,415	1,068,256
II. Bricks, Pottery, Glass, etc. ..	524,680	347,373	68,900	64,890	77,296	15,598	1,098,737
III. Chemicals, Dyes, Explosives, Paint, Oils and Grease ..	862,377	763,461	64,025	210,882	117,796	17,546	2,036,087
IV. Industrial Metals, Machines, Implements and Conveyances ..	8,975,579	4,957,908	1,408,550	1,627,870	833,864	492,914	18,296,685
V. Precious Metals, Jewellery and Plate ..	72,594	126,442	15,344	14,321	7,413	2,096	238,210
VI. Textiles and Textile Goods ..	634,972	1,091,434	83,606	65,393	34,108	86,421	1,995,934
VII. Skins and Leather ..	476,321	433,158	68,100	40,210	26,536	7,374	1,051,699
VIII. Clothing ..	1,004,910	1,580,774	266,427	125,806	84,453	35,221	3,097,591
IX. Food, Drink and Tobacco ..	3,547,411	3,542,221	2,782,283	794,723	578,458	301,833	11,546,929
X. Woodworking and Basketware ..	821,338	798,127	561,967	147,019	310,782	136,096	2,775,329
XI. Furniture, Bedding, etc. ..	406,459	327,444	179,385	68,912	63,236	33,125	1,078,561
XII. Paper, Stationery, Printing, Book-binding, etc. ..	2,123,059	1,708,150	603,579	300,712	271,389	124,105	5,130,994
XIII. Rubber ..	344,070	285,303	33,857	15,339	11,469	21,081	711,119
XIV. Musical Instruments ..	127,367	54,875	1,735	2,853	4,000	..	190,830
XV. Miscellaneous Products ..	200,090	142,975	30,838	25,966	22,040	19,008	440,917
XVI. Heat, Light and Power ..	919,106	525,714	262,343	405,561	111,179	42,016	2,265,919
Total ..	21,605,432	16,998,124	6,487,633	3,951,464	2,601,295	1,379,849	53,023,797

SALARIES AND WAGES.—MALE AND FEMALE FACTORY EMPLOYEES,  
1930-31—continued.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
FEMALES.							
I. Treatment of Non-metalliferous Mine and Quarry Products ..	£ 7,344	£ 2,848	£ 741	£ 466	£ 1,152	£ 328	£ 12,879
II. Bricks, Pottery, Glass, etc. ..	21,339	9,131	1,171	510	3,172	307	35,630
III. Chemicals, Dyes, Explosives, Paint, Oils and Grease ..	165,000	182,695	6,493	15,590	4,484	1,307	375,569
IV. Industrial Metals, Machines, Implements and Conveyances ..	184,626	110,138	24,882	28,507	11,512	7,322	366,987
V. Precious Metals, Jewellery and Plate ..	6,680	13,576	788	422	145	42	21,653
VI. Textiles and Textile Goods ..	583,712	883,722	29,327	21,266	14,850	68,412	1,601,289
VII. Skins and Leather ..	48,399	51,393	5,999	11,987	3,285	1,039	122,102
VIII. Clothing ..	1,367,067	2,119,313	308,199	205,943	153,981	32,255	4,186,758
IX. Food, Drink and Tobacco ..	632,161	501,082	96,715	56,270	46,534	29,722	1,362,484
X. Woodworking and Basketware ..	29,001	11,301	9,710	3,926	1,358	2,528	48,824
XI. Furniture, Bedding, etc. ..	51,939	48,040	11,327	5,333	4,250	1,769	122,658
XII. Paper, Stationery, Printing, Book-binding, etc. ..	348,087	311,202	83,070	47,184	36,051	14,007	839,601
XIII. Rubber ..	89,686	90,436	22,354	830	391	1,289	204,992
XIV. Musical Instruments ..	22,772	3,225	134	115	..	..	26,246
XV. Miscellaneous Products ..	42,774	22,410	3,239	4,506	3,736	459	77,124
XVI. Heat, Light and Power ..	3,271	855	6,324	14,543	688	585	26,266
Total ..	3,594,858	4,361,367	610,473	417,404	285,589	161,371	9,431,062

(iv) Total and Average Earnings of Males and Females, 1926-27 to 1930-31.

Similar information for the last five years is given in the table hereunder:—

SALARIES AND WAGES.—MALE AND FEMALE FACTORY EMPLOYEES.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
MALES.							
1926-27. Amount paid ..	£ 32,319,649	24,199,245	8,529,729	7,700,633	3,560,698	1,794,371	78,104,325
Per cent. on total ..	87.13	80.96	91.73	91.78	90.77	90.56	86.23
Average per employee ..	£ 250.64	242.59	237.66	235.80	234.21	221.42	243.65
1927-28. Amount paid ..	£ 32,929,659	24,268,920	8,388,158	7,477,581	3,814,908	1,790,152	78,663,378
Per cent. on total ..	87.07	80.81	91.77	91.52	90.60	89.43	86.10
Average per employee ..	£ 257.11	246.31	234.24	242.65	241.80	218.07	248.00
1928-29. Amount paid ..	£ 33,508,975	23,684,594	8,331,045	6,955,931	3,970,744	1,678,420	78,149,709
Per cent. on total ..	86.94	80.38	91.79	91.41	90.80	88.57	85.89
Average per employee ..	£ 258.68	241.51	234.71	239.74	247.57	217.89	247.35
1929-30. Amount paid ..	£ 30,228,967	22,688,606	7,824,824	5,997,151	3,755,353	1,818,960	72,313,861
Per cent. on total ..	86.68	79.92	90.03	91.15	90.38	89.69	85.36
Average per employee ..	£ 260.41	241.87	232.69	238.47	250.17	224.65	247.85
1930-31. Amount paid ..	£ 21,605,432	16,998,124	6,487,633	3,951,464	2,601,295	1,379,849	53,023,797
Per cent. on total ..	85.73	79.58	91.40	90.45	90.11	81.40	84.90
Average per employee ..	£ 244.36	221.68	218.64	217.40	239.04	211.86	230.20

**SALARIES AND WAGES.—MALE AND FEMALE FACTORY EMPLOYEES—**  
*continued.*

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
<b>FEMALES.</b>							
1926-27. Amount paid .. £	4,772,547	5,690,312	768,641	689,970	362,225	187,146	12,470,811
Per cent. on total ..	12.87	19.04	8.27	8.22	9.23	9.44	13.77
Average per employee .. £	109.64	112.25	110.42	99.25	106.41	93.71	109.83
1927-28. Amount paid .. £	4,888,482	5,761,432	752,065	692,657	395,767	211,538	12,701,911
Per cent. on total ..	12.93	19.19	8.23	8.48	9.40	10.57	13.90
Average per employee .. £	113.06	114.64	103.92	102.27	108.04	89.45	111.88
1928-29. Amount paid .. £	5,035,712	5,732,173	746,579	653,882	402,346	216,507	12,837,199
Per cent. on total ..	13.06	19.62	8.21	8.59	9.20	11.43	14.11
Average per employee .. £	112.96	112.94	95.05	102.78	107.01	94.92	110.63
1929-30. Amount paid .. £	4,647,028	5,699,234	866,048	582,035	399,627	209,200	12,403,172
Per cent. on total ..	13.32	20.08	9.97	8.85	9.62	10.31	14.64
Average per employee .. £	114.61	113.44	116.92	103.02	108.65	92.53	112.88
1930-31. Amount paid .. £	3,594,858	4,361,367	610,473	417,404	285,589	161,371	9,431,062
Per cent. on total ..	14.27	20.42	8.60	9.55	9.89	10.47	15.10
Average per employee .. £	107.56	102.73	91.40	92.78	100.28	85.11	102.74

(v) *Managers, Overseers, and Other Employees.* A further analysis of salaries and wages paid is given in the following table, the amounts paid to managers, overseers, etc., being differentiated from those paid to other employees. As previously mentioned, amounts drawn by working proprietors are excluded in all cases.

**SALARIES AND WAGES.—MANAGERS, OVERSEERS, AND OTHER FACTORY EMPLOYEES, AUSTRALIA, 1930-31.**

Class of Industry.	Salaries and Wages Paid to—						
	Managers, Overseers, Accountants, and Clerks.		All Other Employees.		All Employees.		
	Males.	Females.	Males.	Females.	Males.	Females.	Total.
	£	£	£	£	£	£	£
I. Treatment of non-metalliferous mine and quarry products ..	190,343	11,639	877,913	1,240	1,068,256	12,879	1,081,135
II. Bricks, pottery, glass, etc. ..	227,721	16,064	871,016	19,566	1,098,737	35,630	1,134,367
III. Chemicals, dyes, explosives, paint, oils and grease ..	507,427	87,046	1,528,660	288,523	2,036,087	375,569	2,411,656
IV. Industrial metals, machines, implements and conveyances ..	2,632,960	219,553	15,663,725	147,434	18,296,685	366,987	18,663,672
V. Precious metals, jewellery and plate ..	27,927	6,668	210,283	14,985	238,210	21,653	259,863
VI. Textiles and textile goods ..	465,581	84,904	1,530,353	1,516,385	1,995,934	1,601,289	3,597,223
VII. Skins and leather ..	161,808	17,464	889,891	104,638	1,051,699	122,102	1,173,801
VIII. Clothing ..	533,037	291,991	2,504,554	3,894,767	3,097,591	4,186,758	7,284,349
IX. Food, drink and tobacco ..	2,274,974	296,026	9,271,955	1,066,458	11,546,929	1,362,484	12,909,413
X. Woodworking and basketware ..	447,417	36,566	2,327,912	12,258	2,775,329	48,824	2,824,153
XI. Furniture, bedding, etc. ..	143,914	29,789	934,647	92,869	1,078,561	122,658	1,201,219
XII. Paper, stationery, printing and book-binding, etc. ..	930,669	194,822	4,200,325	644,779	5,130,994	839,601	5,970,595
XIII. Rubber ..	175,282	25,545	535,837	179,447	711,119	204,992	916,111
XIV. Musical instruments ..	48,357	13,190	142,473	13,056	190,830	26,246	217,076
XV. Miscellaneous products ..	87,800	17,135	353,117	59,989	440,917	77,124	518,041
XVI. Heat, light and power ..	504,702	24,966	1,761,217	1,300	2,265,919	26,266	2,292,185
<b>Total .. ..</b>	<b>9,359,919</b>	<b>1,373,368</b>	<b>43,663,878</b>	<b>8,057,694</b>	<b>53,023,797</b>	<b>9,431,062</b>	<b>62,454,859</b>
<b>Average paid per employee</b>	<b>361.55</b>	<b>140.41</b>	<b>198.42</b>	<b>96.94</b>	<b>215.59</b>	<b>101.52</b>	<b>184.32</b>

3. Value of Power, Fuel and Light Used.—(i) *Total Amount, 1930-31.* The expenditure in factories on power, fuel and light is of considerable importance; in 1930-31 it amounted to £10,383,795, a decline of £3,218,959 as compared with the figures for the previous year. The following table shows the value of power, fuel and light used in the different classes of industry during 1930-31 :—

VALUE OF POWER, FUEL AND LIGHT USED(a) IN FACTORIES, 1930-31.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treatment of Non-metalliferous Mine and Quarry Products ..	199,663	157,437	14,601	18,780	24,219	40,311	455,011
II. Bricks, Pottery, Glass, etc. ..	148,421	120,814	18,501	17,428	23,456	4,815	333,435
III. Chemicals, Dyes, Explosives, Paint, Oils and Grease ..	167,645	165,855	12,406	41,620	25,779	4,712	418,017
IV. Industrial Metals, Machines, Implements and Conveyances ..	1,331,645	346,147	71,395	329,382	47,411	299,197	2,425,177
V. Precious Metals, Jewellery and Plate ..	4,634	7,998	943	1,122	275	78	15,050
VI. Textiles and Textile Goods ..	121,865	223,294	15,692	14,969	7,661	48,532	432,013
VII. Skins and Leather ..	61,726	50,868	4,160	2,402	2,281	925	122,362
VIII. Clothing ..	69,719	110,578	13,640	11,298	6,295	2,936	214,466
IX. Food, Drink and Tobacco ..	780,612	733,071	449,016	174,240	123,800	94,955	2,355,694
X. Woodworking and Basketware ..	52,531	45,160	29,846	9,674	13,545	14,308	165,064
XI. Furniture, Bedding, etc. ..	20,425	20,860	9,127	4,724	2,945	2,279	60,360
XII. Paper, Stationery, Printing, Book-binding, etc. ..	125,275	125,309	31,078	14,618	11,693	5,814	313,787
XIII. Rubber ..	76,044	77,300	4,337	2,188	2,033	5,292	167,194
XIV. Musical Instruments ..	12,898	3,275	24	133	28	..	16,358
XV. Miscellaneous Products ..	13,447	8,683	955	1,598	992	6,902	32,577
XVI. Heat, Light and Power ..	1,541,123	639,477	199,609	211,113	259,687	6,221	2,857,230
<b>Total</b> ..	<b>4,727,673</b>	<b>2,836,126</b>	<b>875,330</b>	<b>855,289</b>	<b>552,100</b>	<b>537,277</b>	<b>10,383,795</b>

(a) Including lubricants and water.

(ii) *Total Amount, 1926-27 to 1930-31.* The following table gives the sums expended on power, fuel and light during the past five years :—

VALUE OF POWER, FUEL AND LIGHT USED IN FACTORIES.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
1926-27 ..	6,919,014	3,392,448	990,618	1,384,937	549,796	487,234	13,724,047
1927-28 ..	6,791,285	3,712,886	1,032,303	1,366,853	566,965	483,685	13,973,977
1928-29 ..	6,773,214	3,641,148	1,006,627	1,287,729	624,031	550,657	13,883,406
1929-30 ..	6,471,071	3,714,072	950,194	1,255,146	617,758	594,513	13,602,754
1930-31 ..	4,727,673	2,836,126	875,330	855,289	552,100	537,277	10,383,795

4. Value of Materials Used.—(i) *Total Amount, 1930-31.* The value of materials used (which includes the value of containers, packing, etc., the cost of tools replaced and repairs to plant) in factories in Australia during 1930-31 was £162,104,646, which represents 55.74 per cent. of the total value of the final output. (See next sub-section.)

The following table shows the value of the materials used in various classes of industry in each State :—

VALUE OF MATERIALS USED IN FACTORIES, 1930-31.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treatment of Non-metalliferous Mine and Quarry Products ..	938,250	473,561	85,900	62,254	62,324	59,455	1,681,744
II. Bricks, Pottery, Glass, etc. ..	313,758	179,427	22,035	41,810	46,061	6,911	610,002
III. Chemicals, Dyes, Explosives, Paint, Oils and Grease ..	4,377,937	3,277,766	329,443	870,847	1,019,968	124,296	10,000,257
IV. Industrial Metals, Machines, Implements and Conveyances	15,564,774	5,096,046	1,032,056	3,020,021	567,032	673,751	25,953,680
V. Precious Metals, Jewellery and Plate	53,230	151,260	8,071	11,800	3,070	162	227,593
VI. Textiles and Textile Goods ..	2,515,459	4,103,898	1,180,742	362,753	180,095	255,011	8,597,958
VII. Skins and Leather ..	2,153,193	1,725,572	205,217	94,107	79,459	18,526	4,276,074
VIII. Clothing ..	3,766,372	6,764,089	785,665	384,136	435,185	76,507	12,211,954
IX. Food, Drink and Tobacco	26,554,180	23,438,599	20,417,384	5,329,925	3,132,503	1,168,995	80,041,586
X. Woodworking and Basketware ..	1,937,061	1,089,269	905,169	426,074	489,112	150,962	4,997,647
XI. Furniture, Bedding, etc. ..	770,858	653,479	237,028	109,786	108,975	33,080	1,913,206
XII. Paper, Stationery, Printing, Book-binding, etc. ..	2,852,953	2,415,754	527,783	339,937	243,275	83,277	6,482,979
XIII. Rubber ..	813,753	668,171	79,374	30,824	20,787	62,289	1,675,198
XIV. Musical Instruments	182,951	61,382	2,017	3,292	379		250,021
XV. Miscellaneous Products ..	419,257	282,150	31,873	55,019	33,104	16,446	837,849
XVI. Heat, Light and Power ..	1,018,104	795,278	169,109	224,469	98,813	41,125	2,346,898
Total ..	64,232,090	51,175,701	26,018,866	11,387,054	6,520,142	2,770,793	162,104,646

Amongst the various classes the largest value of materials used was in Class IX., "Food, Drink and Tobacco," the total being £80,041,586. The next in order of importance was Class IV., "Industrial Metals, Machines, Implements and Conveyances", in which raw materials valued at £25,953,680 were used. The minimum value appears in Class V., "Precious Metals, Jewellery and Plate," the total being only £227,593.

(ii) *Total Amount, 1926-27 to 1930-31.* The following table gives the value of materials used in factories for the past five years :—

VALUE OF MATERIALS USED IN FACTORIES.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
1926-27 ..	102,534,388	71,102,047	25,067,489	21,848,126	8,067,569	4,023,899	232,643,518
1927-28 ..	102,807,287	70,954,166	28,620,664	20,571,650	8,579,656	4,083,837	235,617,260
1928-29 ..	104,897,920	71,231,036	29,882,434	19,821,262	8,736,849	4,369,065	238,938,566
1929-30 ..	93,931,937	67,837,659	28,005,241	18,080,989	8,685,647	4,403,714	220,945,187
1930-31 ..	64,232,090	51,175,701	26,018,866	11,387,054	6,520,142	2,770,793	162,104,646

5. *Total Value of Output.*—(i) *Total, 1930-31.* The value of the output of new goods manufactured and of repairs effected in factories of various classes in each State during 1930-31 is shown in the following table. The figures given represent not only the increase in value due to the process of manufacture, but include also the value of the raw materials, and the power, fuel and light used. The difference between the sum of the values of the materials and the fuel and light used, and the total output (see subsection 6 hereof) is the real value of production from factories.

TOTAL VALUE OF OUTPUT OF FACTORIES, 1930-31.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treatment of non-metaliferous mine and quarry products ..	2,201,222	1,308,408	256,308	173,849	187,438	175,888	4,303,113
II. Bricks, pottery, glass, etc. ..	1,261,467	921,949	152,284	138,241	189,515	36,507	2,699,963
III. Chemicals, dyes, explosives, paint, oils, and grease ..	8,692,550	6,158,919	599,176	1,395,743	1,419,554	168,579	18,434,521
IV. Industrial metals, machines, implements and conveyances ..	29,830,729	12,910,719	3,323,750	5,784,464	1,741,916	1,910,743	55,502,321
V. Precious metals, jewellery and plate goods ..	185,307	400,555	36,129	36,795	16,800	2,973	678,559
VI. Textiles and textile goods ..	4,721,252	7,707,588	1,354,768	487,742	276,120	597,846	15,145,316
VII. Skins and leather ..	3,046,609	2,658,212	344,099	160,693	136,666	26,341	6,372,620
VIII. Clothing ..	7,691,313	12,833,584	1,711,448	874,348	835,958	185,820	24,132,471
IX. Food, drink and tobacco ..	38,231,677	33,579,814	26,815,115	7,318,236	4,766,761	1,817,688	112,529,291
X. Woodworking and basketware ..	3,322,185	2,448,485	1,761,107	692,724	966,271	350,959	9,541,731
XI. Furniture, bedding, etc. ..	1,493,115	1,315,774	541,184	223,581	221,420	92,333	3,887,407
XII. Paper, stationery, printing, book-binding, etc. ..	7,303,119	5,779,796	1,722,349	901,495	720,737	282,501	16,709,997
XIII. Rubber ..	1,615,309	1,412,297	178,229	64,366	56,511	108,863	3,435,575
XIV. Musical instruments ..	402,652	156,315	6,816	7,923	5,588	..	579,294
XV. Miscellaneous products ..	831,926	585,712	84,055	122,665	73,532	42,370	1,740,260
XVI. Heat, light and power ..	7,653,104	3,247,668	1,536,041	1,614,599	736,566	316,156	15,106,125
<b>Total ..</b>	<b>118,483,536</b>	<b>93,425,795</b>	<b>40,422,858</b>	<b>19,997,455</b>	<b>12,353,353</b>	<b>6,115,567</b>	<b>290,798,564</b>

(ii) Totals, 1926-27 to 1930-31. The following statement shows the value of output of factories in each State during the five years ended 1930-31:—

TOTAL VALUE OF OUTPUT OF FACTORIES.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
1926-27 ..	179,302,446	127,397,951	41,327,767	36,888,469	15,671,660	8,104,545	408,092,838
1927-28 ..	181,403,084	128,465,317	46,462,840	35,426,174	16,998,184	8,238,410	416,994,009
1928-29 ..	185,298,575	127,897,463	47,641,536	33,677,368	17,454,430	8,475,916	420,445,288
1929-30 ..	167,250,618	122,811,099	45,085,938	30,312,784	16,891,482	8,560,452	390,912,373
1930-31 ..	118,483,536	93,425,795	40,422,858	19,997,455	12,353,353	6,115,567	290,798,564

6. Value of Production.—The value of production for any industry was defined by the Conference of Statisticians at Sydney in 1925, as “the value of consumable commodities produced during the year, deducting, so far as possible, the value of goods consumed in process of production.”

In accordance with this principle, a rate was adopted for the valuation of factory production by deducting from the value of the output the cost of raw material, containers, power, fuel, light, lubricants, water, tools replaced, repairs to plant and depreciation. All these, except depreciation, are included in the two items “Value of materials used” and “Value of fuel used” as defined above. On account of the difficulty in obtaining accurate figures for depreciation, it was agreed that for the present no deduction should be made on this account. The value of production as given in the following tables is obtained, therefore, by deducting “Value of materials used” and “Value of fuel used” from the value of the output, and this method of valuing factory production is now in use in all the Australian States.

The figure thus obtained is, therefore, not the net value of production. The deduction for depreciation should probably be about 8 per cent. on the capital value, or approximately £19,000,000 in 1930-31. Many miscellaneous expenses, also, such as insurance and advertising, were not taken into account. Hence, it must not be inferred that when wages and salaries are deducted from value of production, the whole of the “surplus” is available for interest and profit.



(i) *Total in Classes, 1930-31.* The following table shows the value of production during 1930-31 in each State for the various classes of factories.

VALUE OF PRODUCTION, 1930-31.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treatment of Non-metaliferous Mine and Quarry Products ..	1,063,309	677,410	155,807	92,815	100,895	76,122	2,166,358
II. Bricks, Pottery, Glass, etc. ..	799,288	621,708	111,748	79,003	119,998	24,781	1,756,526
III. Chemicals, Dyes, Explosives, Paint, Oils and Grease ..	4,146,968	2,715,298	257,327	483,276	373,807	39,571	8,016,247
IV. Industrial Metals, Machines, Implements and Conveyances ..	12,934,310	7,468,526	2,220,299	2,435,061	1,127,473	937,795	27,123,464
V. Precious Metals, Jewellery and Plate ..	127,443	241,297	27,115	23,873	13,455	2,733	435,916
VI. Textiles and Textile Goods ..	2,083,928	3,380,396	158,334	110,020	88,364	294,303	6,115,345
VII. Skins and Leather ..	831,690	881,772	134,722	64,184	54,026	6,890	1,974,184
VIII. Clothing ..	3,855,222	5,958,917	912,143	478,914	394,478	106,377	11,706,051
IX. Food, Drink and Tobacco ..	10,896,885	9,408,144	5,948,715	1,814,071	1,510,458	553,738	30,132,011
X. Woodworking and Basketware ..	1,332,593	1,314,056	826,092	256,976	463,614	185,689	4,379,020
XI. Furniture, Bedding, etc. ..	701,832	641,435	295,029	109,071	109,500	56,974	1,913,841
XII. Paper, Stationery, Printing, Book-binding, etc. ..	4,324,891	3,238,733	1,163,488	526,940	465,769	193,410	9,913,231
XIII. Rubber ..	725,512	666,826	94,518	31,354	33,691	41,282	1,593,183
XIV. Musical Instruments ..	206,803	91,658	4,775	4,498	5,181	..	312,915
XV. Miscellaneous Products ..	399,222	294,879	51,227	66,048	39,436	19,022	869,834
XVI. Heat, Light and Power ..	5,093,877	1,812,913	1,167,323	1,179,008	380,066	268,810	9,901,997
Total ..	49,523,773	39,413,968	13,528,662	7,755,112	5,281,111	2,807,497	118,310,123

(ii) *Totals and Averages, 1926-27 to 1930-31.* The value of production and the amount per employee and per head of population are shown in the following table for the years 1926-27 to 1930-31 :—

FACTORIES.—VALUE OF PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
VALUE.							
	£	£	£	£	£	£	£
1926-27 ..	69,849,044	52,903,456	15,269,660	13,655,406	7,054,295	3,593,412	162,325,273
1927-28 ..	71,804,512	53,798,265	16,809,873	13,487,671	7,831,563	3,670,888	167,402,772
1928-29 ..	73,627,441	53,025,279	16,752,475	12,568,377	8,093,550	3,556,194	167,623,316
1929-30 ..	66,847,610	51,259,368	16,130,503	10,976,649	7,588,077	3,562,225	156,364,432
1930-31 ..	49,523,773	39,413,968	13,528,662	7,755,112	5,281,111	2,807,497	118,310,123
PER EMPLOYEE.(a)							
	£	£	£	£	£	£	£
1926-27 ..	389	336	346	332	364	338	359
1927-28 ..	403	344	376	345	384	330	372
1928-29 ..	407	339	372	341	389	340	372
1929-30 ..	410	339	378	341	386	329	373
1930-31 ..	388	313	357	325	361	318	349
PER HEAD OF POPULATION.							
	£	£	£	£	£	£	£
1926-27 ..	29.75	30.90	17.31	24.11	18.63	16.73	26.56
1927-28 ..	29.92	30.89	18.69	23.43	19.96	17.01	26.85
1928-29 ..	30.11	30.11	18.27	21.69	19.94	16.43	26.45
1929-30 ..	26.98	28.84	17.33	18.92	18.21	16.26	24.38
1930-31 ..	19.81	22.01	14.27	13.32	12.56	12.72	18.27

(a) Including Working Proprietors.

7. Value of Output and Cost of Production.—As the total value of the output for Australia for 1930-31 was estimated at £290,798,564, there remained, after payment of £162,104,646, the value of the materials used, of £62,454,859 for salaries and wages, and of £10,383,795 for fuel, the sum of £55,855,264 to provide for all other expenditure and profits. The following table gives corresponding particulars for each State expressed absolutely, and as percentages on the total value of the output for the year 1930-31 :—

FACTORIES.—VALUE OF OUTPUT AND COST OF PRODUCTION, 1930-31.

State.	Materials Used. (a)	Power, Fuel and Light. (b)	Salaries and Wages.	All other Expenditure, Interest, and Profits.	Total value of Output.
VALUE AND COST, ETC.					
	£	£	£	£	£
New South Wales ..	64,232,090	4,727,673	25,200,290	24,323,483	118,483,536
Victoria ..	51,175,701	2,836,126	21,359,491	18,054,477	93,425,795
Queensland ..	26,018,866	875,330	7,098,106	6,430,556	40,422,858
South Australia ..	11,387,054	855,289	4,368,868	3,386,244	19,997,455
Western Australia ..	6,520,142	552,100	2,886,884	2,394,227	12,353,353
Tasmania ..	2,770,793	537,277	1,541,220	1,266,277	6,115,567
Australia ..	162,104,646	10,383,795	62,454,859	55,855,264	290,798,564

PERCENTAGE OF COSTS, ETC., ON TOTAL VALUE.

	%	%	%	%	%
New South Wales ..	54.21	3.99	21.27	20.53	100.00
Victoria ..	54.78	3.04	22.86	19.32	100.00
Queensland ..	64.37	2.17	17.56	15.90	100.00
South Australia ..	56.94	4.28	21.85	16.93	100.00
Western Australia ..	52.78	4.47	23.37	19.38	100.00
Tasmania ..	45.31	8.78	25.20	20.71	100.00
Australia ..	55.74	3.57	21.48	19.21	100.00

(a) Including the values of containers, packing, etc., also the cost of tools replaced and repairs to plant.

(b) Including lubricants and water.

§ 8. Value of Land, Buildings, Plant, and Machinery.

1. General.—The values of land and buildings and of plant and machinery used in the factories increased rapidly up to the year 1929-30, but in 1930-31, owing to trade depression, the figures decreased by nearly £9,000,000. For the whole of Australia, however, the total value of land and buildings and plant and machinery increased from 1926-27 to 1930-31 by £16,615,943, i.e., from £220,092,363 to £236,708,306, or at the rate of £4,153,986 per annum.

The following statement shows the value of land and buildings and of plant and machinery used in connexion with manufacturing industries during the year 1930-31 :—

VALUE OF LAND, BUILDINGS, PLANT, AND MACHINERY, 1930-31.

Value of—	N.S.W.	Victoria.	Q'land.	S.A.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
Land and buildings	49,822,312	36,218,384	9,355,106	8,418,702	5,656,833	2,739,272	112,210,609
Plant and machinery	50,865,884	34,771,687	16,100,004	10,182,855	6,134,766	6,442,501	124,497,697
Total	100,688,196	70,990,071	25,455,110	18,601,557	11,791,599	9,181,773	236,708,306

The values recorded in this section are in general the values apportioned in the books of the individual firms. Depreciation has been allowed for in most cases, often on a generous scale. The totals shown in the table consequently do not represent the actual amount of capital invested in the items specified. Information is not available in regard to the total capital expenditure, but it may be some 70 or 80 per cent. greater than the capital value as here recorded.

2. Value of Land and Buildings.—(i) *Total, Australia, 1926-27 to 1930-31.* The following table shows for Australia as a whole the approximate value of land and buildings occupied in connexion with manufacturing industries from 1926-27 to 1930-31 inclusive :—

VALUE OF LAND AND BUILDINGS.—AUSTRALIA.

Class of Industry.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
I. Treatment of non-metalliferous mine and quarry products ..	2,391,664	2,471,346	2,545,729	2,565,373	2,561,418
II. Bricks, pottery, glass, etc. ..	2,787,163	2,903,116	3,019,723	3,020,979	2,405,960
III. Chemicals, dyes, explosives, paint, oils and grease ..	5,033,880	5,491,497	5,687,978	5,986,996	5,866,714
IV. Industrial metals, machines, implements and conveyances ..	26,593,793	27,346,706	28,293,793	28,957,846	27,679,331
V. Precious metals, jewellery and plate ..	666,618	682,038	659,734	658,936	557,662
VI. Textiles and textile goods ..	4,504,175	4,653,315	4,879,036	5,065,228	4,884,218
VII. Skins and leather ..	1,965,330	1,879,955	1,862,509	1,936,107	1,873,402
VIII. Clothing ..	12,241,968	12,786,472	13,094,838	12,539,163	10,669,755
IX. Food, drink and tobacco ..	22,290,103	25,092,521	26,385,520	26,996,483	26,760,444
X. Woodworking and basketware ..	4,501,048	4,623,841	4,633,459	4,514,789	3,866,980
XI. Furniture, bedding, etc. ..	2,844,012	2,888,080	2,955,609	2,733,336	2,283,528
XII. Paper, stationery, printing, bookbinding, etc. ..	8,544,071	9,310,538	9,526,079	9,974,734	9,764,623
XIII. Rubber ..	1,054,734	1,612,280	1,878,848	2,250,302	2,213,432
XIV. Musical instruments ..	427,333	450,506	466,710	444,875	391,144
XV. Miscellaneous products ..	613,652	689,174	895,617	923,403	1,037,221
XVI. Heat, light and power ..	6,885,634	7,145,008	7,870,879	9,499,679	9,366,777
Total .. ..	103,345,178	110,026,393	114,656,061	118,068,229	112,210,609

(ii) *Value in each State, 1930-31.* The following table gives similar information for each State for the past year:—

VALUE OF LAND AND BUILDINGS.—STATES, 1930-31.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australin.
	£	£	£	£	£	£	£
I. Treatment of non-metalliferous mine and quarry products ..	1,247,670	843,432	98,196	128,934	62,996	180,190	2,561,418
II. Bricks, pottery, glass, etc. ..	1,314,046	684,504	91,530	152,818	137,516	25,546	2,405,960
III. Chemicals, dyes, explosives, paint, oils and grease ..	2,429,376	2,245,324	119,094	494,033	502,744	76,143	5,866,714
IV. Industrial metals, machines, implements and conveyances ..	13,784,835	7,591,173	1,619,529	2,657,667	1,351,009	675,118	27,679,331
V. Precious metals, jewellery and plate ..	198,211	250,275	26,536	38,955	22,830	20,895	557,662
VI. Textiles and textile goods ..	1,595,016	2,574,679	167,099	144,061	113,216	290,147	4,884,218
VII. Skins and leather ..	753,339	868,550	75,125	56,539	99,860	19,989	1,873,402
VIII. Clothing ..	4,265,062	4,675,477	556,970	535,109	495,887	119,250	10,697,755
IX. Food, drink and tobacco ..	9,976,058	7,805,344	4,387,945	2,186,687	1,588,345	816,065	26,760,444
X. Woodworking and basketware ..	1,693,936	1,004,477	479,321	258,480	310,333	120,433	3,866,980
XI. Furniture, bedding, etc. ..	905,616	862,904	200,680	142,662	124,929	46,737	2,283,528
XII. Paper, stationery, printing, book-binding, etc. ..	4,401,750	3,120,518	917,805	759,264	444,002	121,284	9,764,623
XIII. Rubber ..	1,038,508	848,651	43,102	86,125	55,267	141,779	2,213,432
XIV. Musical instruments ..	204,261	162,600	850	15,193	8,240	..	391,144
XV. Miscellaneous products ..	554,207	312,281	55,781	68,520	38,209	8,223	1,037,221
XVI. Heat, light and power ..	5,460,421	2,368,195	515,543	643,655	301,450	77,513	9,366,777
Total ..	49,822,312	36,218,384	9,355,106	8,418,702	5,656,833	2,739,272	112,210,609

(iii) *Value in each State, 1926-27 to 1930-31.* The total value of factory land and buildings at the end of each year from 1926-27 to 1930-31 is given hereunder.

VALUE OF LAND AND BUILDINGS.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
1926-27 ..	46,950,706	32,269,655	8,645,580	8,207,999	4,822,145	2,449,093	103,345,178
1927-28 ..	49,414,310	34,761,340	9,123,821	8,786,280	5,381,864	2,558,778	110,026,393
1928-29 ..	51,375,003	36,184,460	9,665,239	8,934,405	5,808,539	2,688,415	114,656,061
1929-30 ..	53,785,319	36,988,485	9,690,313	8,937,039	5,670,214	2,996,859	118,068,229
1930-31 ..	49,822,312	36,218,384	9,355,106	8,418,702	5,656,833	2,739,272	112,210,609

A decline of £5.9 million on the previous year's figures occurred in 1930-31, the returns for New South Wales showing a loss of nearly £4 million.

Of the total increase of £3.4 million in the value of land and buildings in 1929-30, the greater part (£2.4 million) was provided by New South Wales. It was in this State, however, that the value of manufacturing production and the number employed decreased most seriously in the same year. The figures quoted in 3 (ii) below show that in recent years most of the increase in value of plant and machinery has taken place in New South Wales. The growth is chiefly in Class XVI., Heat, Light and Power, but was not accompanied by an increase in the power used by other factories.

3. Value of Plant and Machinery.—(i) *Total, Australia, 1926-27 to 1930-31.* The following table shows for Australia as a whole the approximate value of plant and machinery used in factories during each year from 1926-27 to 1930-31 inclusive:—

VALUE OF PLANT AND MACHINERY.—AUSTRALIA.

Class of Industry.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	£	£	£	£	£
I. Treatment of non-metaliferous mine and quarry products ..	5,120,815	4,996,010	5,029,438	4,926,370	5,959,537
II. Bricks, pottery, glass, etc. ..	3,138,437	3,140,732	3,158,347	3,093,832	2,331,332
III. Chemicals, dyes, explosives, paint, oils and grease ..	5,070,938	5,247,463	5,566,514	5,814,275	5,738,555
IV. Industrial metals, machines, implements and conveyances ..	26,038,238	25,863,988	26,528,636	26,797,812	25,385,254
V. Precious metals, jewellery and plate ..	139,185	147,984	136,632	150,733	139,827
VI. Textiles and textile goods ..	6,325,406	6,154,214	5,986,828	6,181,931	5,935,393
VII. Skins and leather ..	890,545	830,170	783,886	902,544	862,012
VIII. Clothing ..	2,476,140	2,443,769	2,456,949	2,399,663	2,174,238
IX. Food, drink and tobacco	26,545,864	27,645,444	28,281,311	28,261,873	28,948,702
X. Woodworking and basketware ..	5,206,555	4,862,571	4,650,821	4,384,656	3,762,029
XI. Furniture, bedding, etc.	817,076	850,378	895,732	898,333	732,590
XII. Paper, stationery, printing, bookbinding, etc.	8,114,407	8,187,155	8,422,027	8,317,935	7,768,633
XIII. Rubber ..	1,259,479	1,744,011	1,871,976	2,275,868	2,175,851
XIV. Musical instruments ..	195,203	197,703	218,124	210,365	189,854
XV. Miscellaneous products ..	254,878	232,547	326,758	349,512	493,597
XVI. Heat, light and power ..	25,154,019	28,653,676	30,378,809	32,662,044	31,900,293
Total ..	116,747,185	121,227,815	124,692,788	127,627,691	124,497,697

Up to the year 1929-30 there had been a steady and substantial net increase amounting in all to £15 million for the previous four years, or an annual average of £3.8 million. In 1930-31, however, there was a decrease of £3.2 million, for which Class IV., Machinery, etc., with a loss of £1.4 million, was mainly responsible.

(ii) *Value in each State, 1926-27 to 1930-31.* The figures in the previous table refer to Australia as a whole. In the following table results are shown for each State, and until 1929-30 the increase was general throughout the States. In 1930-31, however, as pointed out in (i) *ante* a total decrease of £3.2 million was recorded. New South Wales showed a loss of £2.7 million, and smaller losses were shown in the other States, except Queensland and Western Australia, where slight increases were recorded.

VALUE OF PLANT AND MACHINERY.—STATES.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£	£	£	£	£	£	£
1926-27 ..	48,659,375	31,580,350	16,043,679	8,322,025	5,310,140	6,411,712	116,747,185
1927-28 ..	50,489,675	32,745,680	16,592,358	8,741,929	5,553,295	6,425,605	121,227,815
1928-29 ..	51,365,710	33,724,910	16,719,349	9,421,202	6,154,115	6,346,447	124,692,788
1929-30 ..	53,515,368	35,022,535	15,723,983	10,286,674	6,112,186	6,966,945	127,627,691
1930-31 ..	50,865,884	34,771,667	16,100,004	10,182,855	6,134,766	6,442,501	124,497,697

(iii) *Value according to Industry, 1930-31.* The following table shows the value of plant and machinery used in factories in each State during 1930-31, classified according to industry.

VALUE OF PLANT AND MACHINERY.—INDUSTRIES, 1930-31.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treatment of non-metalliferous mine and quarry products ..	3,350,634	1,568,987	191,111	351,024	164,163	333,618	5,959,537
II. Bricks, pottery, glass, etc. ..	1,239,351	636,841	119,167	141,562	165,408	29,003	2,331,334
III. Chemicals, dyes, explosives, paint, oils and grease ..	1,613,373	2,384,958	95,831	786,944	797,417	60,032	5,738,555
IV. Industrial metals, machines, implements and conveyances ..	13,911,235	5,330,389	1,239,169	2,732,348	873,184	1,298,929	25,385,254
V. Precious metals, jewellery and plate ..	53,756	67,137	6,658	8,522	2,548	1,206	139,827
VI. Textiles and textile goods ..	1,822,533	3,230,222	177,735	226,151	134,173	344,579	5,935,393
VII. Skins and leather ..	345,822	408,259	35,057	22,798	37,014	12,462	802,012
VIII. Clothing ..	718,673	1,157,734	133,420	87,177	62,341	14,893	2,174,238
IX. Food, drink and tobacco ..	8,779,890	6,666,593	9,701,858	1,777,719	1,555,184	467,458	28,948,702
X. Woodworking and basketware ..	1,042,056	894,585	647,373	178,273	794,566	205,176	3,762,029
XI. Furniture, bedding, etc. ..	250,635	251,711	89,325	75,125	44,297	21,497	732,590
XII. Paper, stationery, printing, book-binding, etc. ..	3,469,410	2,587,085	646,531	590,330	354,080	121,197	7,768,633
XIII. Rubber ..	929,121	1,043,099	17,853	11,878	10,622	163,278	2,175,851
XIV. Musical instruments ..	133,025	50,005	140	5,679	1,005	..	189,854
XV. Miscellaneous products ..	213,513	230,736	12,497	14,982	15,885	5,984	493,597
XVI. Heat, light and power ..	12,992,857	8,263,346	2,986,279	3,172,343	1,122,279	3,363,189	31,900,293
Total ..	50,865,884	34,771,687	16,100,004	10,182,855	6,134,766	6,442,501	124,497,697

### § 9. Individual Industries.

I. *General.*—The preceding remarks and tabulations afford a general view of the development of industries in the sixteen groups adopted by the Conference of Statisticians in 1930. While it is not possible, within the limits of this work, to give a detailed account in respect of all industries, particular industries which are of special importance by reason of the number of persons employed, the number of factories, the amount of capital invested therein, the value of the production, or other features of special interest, are dealt with hereunder. In cases where there are only one or two establishments of a particular class in any State, returns of output are not published, in order to avoid disclosing information as to the operations of individual concerns.

Reference has already been made to the change in method of computing the average number of persons employed in manufacturing industries. (See § 4 *ante*.) In the following tables relating to individual industries the number of employees shown in each case for the years 1928-29, 1929-30 and 1930-31 have been computed by the new method, while those for previous years are on the old basis. The employment figures for each of the years 1926-27 and 1927-28 are, therefore, somewhat in excess of the average for the twelve months.

2. **Tanning, Currying and Leather Dressing.**—(i) *Details for each State, 1930-31.* In Class VII. the most important industry is tanning. Formerly the production of tanneries in Australia was confined to the coarser class of leathers, but there are now very few kinds which cannot be produced locally, and an export trade has been built up in some varieties.

**TANNING, CURRYING, AND LEATHER DRESSING, 1930-31.**

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A.	Tas.	Australia.
Number of factories .. ..	65	53	14	8	7	1	148
Number of employees .. ..	1,046	1,406	232	110	70	21	2,885
Actual horse-power of engines used .. ..	2,849	3,676	615	294	(a)	(a)	7,943
Approx. value of land and buildings £ .. ..	246,634	455,415	33,091	20,684	(a)	(a)	804,063
Approx. value of plant and machinery £ .. ..	157,763	309,960	26,090	16,816	(a)	(a)	29,609
Wages paid .. ..	£ 218,146	293,918	41,954	22,908	(a)	(a)	595,155
Value of fuel used .. ..	£ 25,640	35,203	3,447	1,819	(a)	(a)	68,733
Value of materials used .. ..	£ 881,035	999,437	147,731	41,903	(a)	(a)	2,132,437
Total value of output .. ..	£ 1,282,015	1,517,087	225,865	62,439	(a)	(a)	3,183,138
Value of production .. ..	£ 375,310	483,447	74,687	18,717	(a)	(a)	981,968

(a) Particulars not available for publication.

(b) Including Western Australia and Tasmania.

(ii) *Development in Australia, 1926-27 to 1930-31.* The development of the tanning industry during the period 1926-27 to 1930-31 is shown in the following table:—

**TANNING, CURRYING AND LEATHER DRESSING.—AUSTRALIA.**

Items.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Number of factories .. ..	152	142	142	143	148
Number of employees .. ..	4,206	3,607	(a) 3,688	(a) 3,572	(a) 2,885
Actual horse-power of engines used .. ..	8,392	8,041	8,379	8,224	7,948
Approx. value of land and buildings £ .. ..	917,997	835,376	835,135	824,415	804,063
Approx. value of plant and machinery £ .. ..	730,857	609,575	628,295	603,083	29,609
Wages paid .. ..	£ 945,598	825,811	828,078	812,772	595,155
Value of fuel used .. ..	£ 81,274	87,748	82,788	81,660	68,733
Value of materials used .. ..	£ 3,701,332	3,835,412	4,027,700	3,071,761	2,132,437
Total value of output .. ..	£ 5,443,334	5,435,810	5,593,756	4,407,175	3,183,138
Value of production .. ..	£ 1,660,728	1,512,650	1,483,268	1,313,754	981,968

(a) See § 9. 1.

Decreases were recorded in both the number of factories and employees in the tanning industry during the past four years. For the years 1929-30 and 1930-31 the output of leather was shown in greater detail than for previous years, and comparisons on similar lines with earlier years cannot be made.

(iii) *Raw Material Used and Production, 1930-31.* The quantities of raw material used and leather produced in tanneries in each State are shown in the following table:—

**TANNERIES.—RAW MATERIAL USED AND PRODUCTION, 1930-31.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Hides .. .. No.	361,395	520,953	78,257	34,321	34,099	6,769	1,035,794
Skins—							
Calf .. ..	328,464	276,672	42,487	1,481	526	..	649,630
Goat .. ..	512,247	304,843	58,817	1,569	..	..	877,476
Sheep .. ..	1,116,528	620,008	73,741	91,111	4,239	..	1,905,627
Marsupial .. ..	..	..	46,000	615	..	..	46,615
Reptile .. ..	4,000	3,121	256	..	..	..	7,377
Other .. ..	1,991,362	80,506	13	1,341	4,901	..	2,078,123
Bark used—							
Wattle .. .. ton	8,365	6,841	1,313	521	448	190	17,678
Other .. ..	103	1,884	35	143	..	..	2,165
Tanning extract used lb.	1,167,256	494,762	(a)	96,610	..	(a)	1,758,628
Leather made—							
Sole .. ..	7,629,163	10,334,659	1,988,580	487,982	1,066,655	243,684	21,750,723
Harness .. ..	554,504	293,500	231,680	60,670	109,114	..	1,249,468
Upholstery .. .. sq. ft.	..	732,095	..	..	..	..	732,095
Patent and other .. ..	4,314,622	8,725,541	498,233	..	192,274	..	13,730,670
Waxed kip and other lb.	141,577	125,396	143,799	290,196	10,097	..	711,065
Dressed from skins—							
Calf .. .. sq. ft.	2,776,477	2,154,329	(a)	5,345	..	..	4,936,151
Goat .. ..	1,938,270	1,167,198	(a)	3,850	..	..	3,109,318
Sheep .. ..	5,871,091	4,550,610	(a)	4	..	..	10,421,705
Marsupial .. .. No.	..	..	43,020	..	..	..	43,020

(a) Not available.

(b) Incomplete.

3. **Fellmongering.**—The next industry in importance in Class VII. is fellmongering, one of the earliest industries established in Australia. Hitherto woolscouring had been included with this industry, but under the new classification it was separated for the year 1930-31 and shown under Wool, Worsted, etc., in Class VI. Difficulty has been experienced in obtaining separate particulars in cases where the industries are carried on conjointly, and it was agreed at the Statisticians Conference in 1932 that in future woolscouring would be included under both classes in those cases where separation was impracticable. For reasons above stated, the data in respect of the year 1930-31 are not comparable with those previously published, and it is not proposed to include the returns in this issue.

*Development in Australia, 1925-26 to 1929-30.* The following table furnishes particulars of fellmongering and wool-scouring establishments in Australia for the five years ending 1929-30.

#### FELLMONGERING AND WOOL-SCOURING WORKS.—AUSTRALIA.

Items.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.
Number of factories .. .. .	93	93	90	87	85
Number of employees .. .. .	2,195	2,175	1,901	(a) 1,738	(a) 1,474
Actual horse-power of engines used .. .. .	5,734	4,993	4,798	4,987	5,868
Approx. value of land and buildings £	537,540	527,306	485,521	462,548	474,419
Approx. value of plant and machinery £	704,789	595,632	468,054	460,385	445,733
Wages paid .. .. .	£ 398,278	£ 463,313	£ 387,696	£ 335,860	£ 338,515
Value of fuel used .. .. .	£ 85,308	£ 94,866	£ 82,748	£ 71,348	£ 77,453
Value of materials used .. .. .	£ 6,324,429	£ 7,224,472	£ 6,989,508	£ 5,400,300	£ 3,349,727
Total value of output .. .. .	£ 7,130,008	£ 8,031,769	£ 7,363,212	£ 5,844,511	£ 4,033,176
Value of production .. .. .	£ 720,271	£ 712,431	£ 290,956	£ 372,863	£ 605,996

(a) See § 9. 1.

4. **Soap and Candle Factories.**—(i) *Details for each State, 1930-31.* The manufacture of these two products is frequently carried on in the same factory, so that separate returns cannot be obtained; it may, however, be noted that the manufacture of soap is the more important. The following table gives particulars of soap and candle factories in each State during the year 1930-31:—

#### SOAP AND CANDLE FACTORIES, 1930-31.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A. (c)	Tas.	Australia.
Number of factories .. .. .	23	18	9	5	..	1	56
Number of employees .. .. .	971	625	182	180	..	27	1,985
Actual horse-power of engines used .. .. .	1,125	569	165	(a)	..	(a) b	2,202
Approx. value of land and buildings £	322,320	193,835	49,044	(a)	..	(a) b	650,000
Approx. value of plant and machinery £	272,248	225,097	27,839	(a)	..	(a) b	604,767
Wages paid .. .. .	£ 196,737	£ 119,578	£ 36,099	(a)	..	(a) b	388,558
Value of fuel used .. .. .	£ 31,516	£ 29,558	£ 3,423	(a)	..	(a) b	71,395
Value of materials used .. .. .	£ 694,382	£ 519,967	£ 90,837	(a)	..	(a) b	1,448,411
Total value of output .. .. .	£ 1,228,607	£ 1,030,955	£ 215,069	(a)	..	(a) b	2,768,214
Value of production .. .. .	£ 562,709	£ 481,430	£ 120,807	(a)	..	(a) b	1,248,408

(a) Particulars not available for publication. (b) Including South Australia and Tasmania.  
(c) Not available. Included with boiling down, tallow refining, etc.



(ii) *Development in Australia, 1926-27 to 1930-31.* The following table gives similar particulars for the last five years as regards Australia as a whole :—

**SOAP AND CANDLE FACTORIES.—AUSTRALIA.**

Items.	1926-27.a	1927-28.a	1928-29.a	1929-30.a	1930-31.c
Number of factories .. .. .	66	66	67	62	56
Number of employees .. .. .	2,507	2,362	(b) 2,333	(b) 2,148	(b) 1,985
Actual horse-power and engines used .. .. .	2,933	3,084	3,550	2,595	2,202
Approx. value of land and buildings .. .. .	£ 636,116	£ 743,823	£ 701,125	£ 681,818	£ 650,000
Approx. value of plant and machinery .. .. .	£ 843,399	£ 689,718	£ 718,611	£ 654,647	£ 604,767
Wages paid .. .. .	£ 493,505	£ 473,550	£ 489,341	£ 426,608	£ 388,558
Value of fuel used .. .. .	£ 112,885	£ 98,745	£ 100,555	£ 82,239	£ 71,395
Value of materials used .. .. .	£ 1,949,717	£ 1,988,098	£ 2,133,004	£ 1,797,688	£ 1,448,411
Total value of output .. .. .	£ 3,421,879	£ 3,452,912	£ 3,661,958	£ 3,143,838	£ 2,768,214
Value of production .. .. .	£ 1,359,277	£ 1,366,069	£ 1,428,399	£ 1,263,911	£ 1,248,408

(a) Including other small establishments in Western Australia.

(b) See § 9. r.

(c) Excluding Western Australia.

(iii) *Raw Material Used and Production, 1926-27 to 1930-31.* The following statement shows the quantities of certain raw material used, together with the production, in soap and candle factories in Australia during the years 1926-27 to 1930-31 :—

**SOAP AND CANDLE FACTORIES.—RAW MATERIAL USED, AND PRODUCTION, AUSTRALIA.**

Particulars.	1926-27.a	1927-28.a	1928-29.	1929-30.	1930-31.
Tallow used .. .. .	cwt. 473,787	502,903	548,112	491,603	467,446
Alkali used .. .. .	188,785	204,003	226,156	219,648	187,408
Coconut oil used .. .. .	gal. 800,140	807,941	1,012,246	920,531	995,234
Soap made .. .. .	cwt. 1,001,378	1,020,192	1,130,947	1,026,373	976,771
Candles made .. .. .	75,444	66,091	70,526	49,812	51,582

(a) Exclusive of Western Australia.

The output for the year 1930-31 comprised the following quantities of the various kinds of soap manufactured :—Household, 790,652 cwt. ; toilet, 96,898 cwt. ; sand, 73,934 cwt. ; soft, 10,350 cwt. ; and other, 4,937 cwt.

5. *Saw-mills, etc.—(i) Details for States, 1930-31.* The most important industry in Class X. is that of saw-milling. As separate particulars of forest saw-mills are not available for some of the States, both forest and other saw-mills, as well as plywood mills, have been combined in the following table :—

**SAW-MILLS, FOREST AND OTHER ; PLYWOOD MILLS, 1930-31.**

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. .. .	374	266	236	23	78	183	1,160
Number of employees .. .. .	1,805	2,293	2,683	376	1,300	622	9,079
Actual horse-power of engines used .. .. .	14,470	9,876	7,907	1,534	6,622	3,615	44,024
Approximate value of land and buildings .. .. .	£ 795,599	£ 430,040	£ 330,858	£ 136,473	£ 237,306	£ 59,304	£ 1,989,580
Approximate value of plant and machinery .. .. .	£ 655,286	£ 588,800	£ 555,048	£ 100,150	£ 756,210	£ 165,937	£ 2,821,431
Wages paid .. .. .	£ 366,870	£ 412,467	£ 441,808	£ 80,074	£ 276,194	£ 98,227	£ 1,675,640
Value of fuel used .. .. .	£ 29,919	£ 23,245	£ 22,203	£ 3,332	£ 11,273	£ 9,349	£ 99,321
Value of materials used .. .. .	£ 1,060,103	£ 497,187	£ 680,256	£ 228,676	£ 393,857	£ 94,949	£ 2,955,028
Total value of output .. .. .	£ 1,674,217	£ 1,152,095	£ 1,306,630	£ 361,875	£ 791,679	£ 225,654	£ 5,512,150
Value of production .. .. .	£ 584,195	£ 631,663	£ 604,171	£ 129,867	£ 386,549	£ 121,356	£ 2,457,801

(ii) *Development in Australia, 1926-27 to 1930-31.* The development of forest and other saw-mills, etc., since 1926-27 is shown in the following table. Joinery works have been excluded in the year 1930-31.

## SAW-MILLS, FOREST AND OTHER.—AUSTRALIA.

Items.	1926-27. (b)	1927-28. (b)	1928-29. (b)	1929-30. (b)	1930-31.
Number of establishments .. ..	2,244	2,168	2,164	2,109	1,160
Number of employees .. ..	30,217	27,399	(a) 24,975	(a) 20,957	(a) 9,079
Actual horse-power of engines used .. ..	69,813	69,912	68,330	69,301	44,024
Approx. value of land and buildings .. ..	£ 3,757,056	3,878,828	3,877,292	3,802,885	1,989,580
Approx. value of plant and machinery .. ..	£ 4,760,400	4,428,949	4,184,260	3,950,279	2,821,431
Wages paid .. ..	£ 6,074,006	5,571,162	5,017,539	4,477,491	1,675,640
Value of fuel used .. ..	£ 214,842	221,108	204,033	202,329	99,321
Value of materials used .. ..	£ 11,097,006	10,751,059	10,139,429	8,471,366	2,955,028
Total value of output .. ..	£ 20,712,673	19,705,157	18,178,153	15,605,706	5,512,150
Value of production .. ..	£ 9,400,825	8,732,990	7,834,691	6,932,011	2,457,801

(a) See § 9. 1.

(b) Including joinery works.

The effect of the depression is reflected in the decreases recorded in the returns during the past three years. The saw-mill output of native timber declined from 739,799,000 super. feet in 1925-26 to 484,637,000 super feet in 1929-30 and 266,891,000 super. feet in 1930-31. Further reference is made to the saw-milling industry in Chapter XXII.—Forestry.

6. *Agricultural Implement Works.*—(i) *General.* The manufacture of agricultural implements is an important industry in Australia, and is of particular interest, owing to the fact that it was one of the first to which it was sought to apply the so-called "New Protection." The articles manufactured include stripper-harvesters, header harvesters or reaper thrashers, strippers, reapers and binders, stump-jump and other ploughs, harrows, disc and other cultivators, winnowers, corn-shellers and baggers, drills, kerosene and petrol engines, and other implements employed in agriculture. The stripper harvester, which combines the stripper with a mechanism for winnowing and bagging grain, is an Australian invention, and is universally employed in agriculture.

(ii) *Details for States, 1930-31.* The following table gives details respecting agricultural implement works in each State for the year 1930-31 :—

## AGRICULTURAL IMPLEMENT WORKS, 1930-31.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	27	73	5	35	8	..	148
Number of employees .. ..	319	2,034	122	453	115	..	3,043
Actual horse-power of engines used .. ..	400	2,590	24	1,116	219	..	4,349
Approx. value of land and buildings .. ..	£ 124,591	314,200	44,218	155,396	55,644	..	694,049
Approx. value of plant and machinery .. ..	£ 54,834	309,770	11,945	196,654	28,815	..	602,018
Wages paid .. ..	£ 77,283	401,681	33,965	78,144	22,948	..	607,421
Value of fuel used .. ..	£ 3,275	31,679	1,879	6,291	1,156	..	44,280
Value of materials used .. ..	£ 79,007	366,313	41,230	101,105	7,447	..	596,002
Total value of output .. ..	£ 184,060	938,990	97,657	215,203	37,263	..	1,473,173
Value of production .. ..	£ 100,878	540,998	54,548	107,807	28,660	..	832,891

(iii) *Development in Australia, 1926-27 to 1930-31.* This industry declined considerably during the war years, but great progress was made thereafter. The fall in world prices of agricultural products resulted, however, in a considerable slackening in employment and output in 1929-30 and 1930-31 as compared with 1926-27. Details for the past five years are as follow:—

#### AGRICULTURAL IMPLEMENT WORKS.—AUSTRALIA.

Items.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Number of factories .. .. .	155	157	150	148	148
Number of employees .. . . .	6,636	5,729	(a) 5,480	(a) 4,463	(a) 3,043
Actual horse-power of engines used .. . . .	6,002	6,355	4,808	4,737	4,349
Approx. value of land and buildings .. . . .	767,817	789,966	771,805	756,954	694,049
Approx. value of plant and machinery .. . . .	686,821	682,270	662,119	640,800	602,018
Wages paid .. . . .	£ 1,591,725	£ 1,291,330	£ 1,227,720	£ 985,369	£ 607,421
Value of fuel used .. . . .	£ 82,651	£ 87,996	£ 77,612	£ 68,320	£ 44,280
Value of materials used .. . . .	£ 1,574,492	£ 1,335,986	£ 1,266,128	£ 919,842	£ 596,002
Total value of output .. . . .	£ 3,819,449	£ 3,303,557	£ 3,167,332	£ 2,397,562	£ 1,473,173
Value of production .. . . .	£ 2,162,306	£ 1,879,575	£ 1,823,562	£ 1,499,400	£ 832,891

(a) See § 9. 1.

7. *Engineering Works.*—Formerly, it was impossible to show separate details for the engineering industry owing to the limited classification adopted by some of the States, but since 1926-27 these particulars have been obtained, and with one or two duplications of minor importance, the following figures are representative of the engineering industry excepting the marine and electrical branches.

#### ENGINEERING WORKS, (a) 1930-31.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. . . .	263	299	44	54	85	14	759
Number of employees .. . . .	4,292	4,287	1,014	633	707	172	11,105
Actual horse-power of engines used .. . . .	7,584	7,148	2,711	1,386	1,738	315	20,882
Approximate value of land and buildings .. . . .	£ 1,438,341	£ 1,253,492	£ 193,656	£ 124,576	£ 241,291	£ 42,074	£ 3,293,430
Approximate value of plant and machinery .. . . .	£ 1,166,341	£ 1,237,010	£ 243,149	£ 166,885	£ 221,953	£ 37,779	£ 3,073,117
Wages paid .. . . .	£ 935,994	£ 904,699	£ 194,590	£ 111,588	£ 142,479	£ 33,930	£ 2,323,280
Value of fuel used .. . . .	£ 53,853	£ 60,309	£ 12,460	£ 8,944	£ 12,713	£ 4,778	£ 153,057
Value of materials used .. . . .	£ 915,009	£ 1,064,922	£ 145,953	£ 113,827	£ 131,131	£ 15,378	£ 2,386,220
Total value of output .. . . .	£ 2,270,259	£ 2,480,840	£ 450,934	£ 271,871	£ 347,714	£ 62,454	£ 5,884,072
Value of production .. . . .	£ 1,301,397	£ 1,355,609	£ 292,521	£ 149,100	£ 203,870	£ 42,298	£ 3,344,795

(a) Excluding marine and electrical.

In addition to engineering works which supply ordinary requirements, many establishments manufacture special classes of machinery and implements. The manufacture of mining, smelting, and textile machinery and apparatus forms an important section of this industry.

8. *Smelting, Converting, Refining, and Rolling of Iron and Steel.*—The extension of the classification noted in the preceding sub-section has made possible the separate publication of details for the group of industries comprised herein. This grouping includes ironworks, foundries, the making of iron safes and doors, steel castings, iron

bedsteads, sash weights, steel window frames and sashes, nuts and bolts, springs, horse-shoes, screws, lifts, tools, brickmakers' implements, and oxy-acetylene welding. Particulars for the year 1930-31 are as follow:—

**SMELTING, CONVERTING, REFINING, AND ROLLING OF IRON AND STEEL, 1930-31.**

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	161	188	23	27	..	..	399
Number of employees .. ..	5,302	2,724	464	592	..	..	9,082
Actual horse-power of engines used .. ..	41,819	7,011	759	1,331	..	..	50,950
Approximate value of land and buildings .. ..	£ 1,919,004	£ 664,439	£ 62,477	£ 112,453	..	..	£ 2,758,373
Approximate value of plant and machinery .. ..	£ 4,528,243	£ 673,007	£ 107,219	£ 66,080	..	..	£ 5,375,460
Wages paid .. ..	£ 1,388,496	£ 480,333	£ 80,927	£ 105,526	..	..	£ 2,055,282
Value of fuel used .. ..	£ 725,320	£ 59,485	£ 10,430	£ 10,461	..	..	£ 805,696
Value of materials used .. ..	£ 5,362,083	£ 573,992	£ 91,723	£ 105,719	..	..	£ 6,133,517
Total value of output .. ..	£ 8,295,022	£ 1,360,440	£ 197,995	£ 241,105	..	..	£ 10,094,562
Value of production .. ..	£ 2,207,619	£ 726,963	£ 95,842	£ 124,925	..	..	£ 3,155,349

9. **Railway and Tramway Workshops.**—(i) *Details for each State, 1930-31.* The railway and tramway workshops which form an important item in Class IV. are chiefly State-owned institutions. The following table giving details concerning them includes, in addition, municipal establishments for manufacturing and repairing rolling-stock. Private institutions to the number of 4 in 1930-31, have, however, been excluded.

**TRAMCARS, RAILWAY ROLLING-STOCK AND CARRIAGES, ETC.,(a) 1930-31.**

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	35	24	12	15	20	6	112
Number of employees .. ..	12,133	5,826	3,295	2,663	1,757	381	26,055
Actual horse-power of engines used .. ..	15,214	4,671	5,007	3,834	2,795	431	31,952
Approximate value of land and buildings .. ..	£ 2,837,557	£ 1,502,774	£ 690,463	£ 876,301	£ 454,503	£ 31,837	£ 6,393,435
Approximate value of plant and machinery .. ..	£ 2,100,118	£ 1,224,668	£ 487,615	£ 793,663	£ 421,728	£ 91,686	£ 5,329,478
Wages paid .. ..	£ 2,852,290	£ 1,352,678	£ 728,780	£ 571,956	£ 440,469	£ 87,781	£ 6,033,954
Value of fuel used .. ..	£ 90,477	£ 75,340	£ 21,912	£ 24,970	£ 19,295	£ 7,788	£ 239,782
Value of materials used .. ..	£ 1,686,791	£ 1,213,238	£ 359,938	£ 404,486	£ 231,396	£ 34,234	£ 3,930,083
Total value of output .. ..	£ 5,268,437	£ 3,037,441	£ 1,338,427	£ 1,078,521	£ 765,069	£ 138,966	£ 11,626,861
Value of production .. ..	£ 3,491,169	£ 1,748,863	£ 950,577	£ 649,065	£ 514,378	£ 96,944	£ 7,456,996

(a) Government and Municipal.

A railway workshop in the Northern Territory is chiefly engaged in making repairs to rolling-stock, etc., no new goods being manufactured. Particulars in regard to this establishment are not included in any of the tables in this chapter.

(ii) *Development in Australia, 1926-27 to 1930-31.* The following table shows the development of railway and tramway workshops in Australia since 1926-27:—

**TRAMCARS, RAILWAY ROLLING-STOCK AND CARRIAGES, ETC.—  
AUSTRALIA.**

Items.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31. (b)
Number of factories .. ..	125	122	122	120	112
Number of employees .. ..	30,713	31,315	(a) 31,658	(a) 29,339	(a) 26,055
Actual horse-power of engines used .. ..	28,938	31,819	32,346	31,600	31,952
Approx. value of land and buildings .. ..	£ 5,062,626	£ 5,345,963	£ 5,836,151	£ 6,230,511	£ 6,393,435
Approx. value of plant and machinery .. ..	£ 5,722,784	£ 5,338,210	£ 5,726,039	£ 5,872,138	£ 5,329,478
Wages paid .. ..	£ 7,815,202	£ 7,967,515	£ 8,058,200	£ 7,599,005	£ 6,033,954
Value of fuel used .. ..	£ 278,508	£ 294,913	£ 322,936	£ 295,415	£ 239,782
Value of materials used .. ..	£ 6,043,377	£ 6,319,442	£ 6,667,634	£ 5,709,328	£ 3,930,083
Total value of output .. ..	£ 15,589,846	£ 16,338,583	£ 17,072,999	£ 15,615,590	£ 11,626,861
Value of production .. ..	£ 9,267,961	£ 9,724,228	£ 10,082,129	£ 9,610,847	£ 7,456,996

(a) See § 9. 1.

(b) Government and Municipal only.

The growth of the railway and tramway systems, conjointly with heavy increases in passenger and goods traffic throughout Australia, has resulted in corresponding activity in workshops engaged in the manufacture or repair of rolling-stock, etc. During the five years prior to 1929-30, the number of employees increased by more than 5,000, and the output rose from £12,384,177 to £17,072,699, but in 1930-31 there was a decrease of over 3,000 employees, with a consequent heavy fall in output.

10. **Extracting and Refining of Other Metals and Alloys.**—The following table gives particulars of metal extraction and ore reduction works, other than those connected with iron and steel. The classification of these works is not uniform throughout the States, and the tabulation is, therefore, somewhat unsatisfactory. The returns do not include particulars of plants used on mines.

#### EXTRACTING AND REFINING OF OTHER METALS AND ALLOYS, 1930-31.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A. (a)	Tas.	Australia.
Number of factories .. ..	10	4	7	1	..	3	25
Number of employees .. ..	672	22	132	1,127	..	1,139	3,092
Actual horse-power of engines used ..	7,834	38	1,272	(b)	..	(b)	51,308
Approx. value of land and buildings ..	£ 223,272	7,220	4,591	(b)	..	(b)	705,100
Approx. value of plant and machinery ..	£ 525,364	6,660	8,757	(b)	..	(b)	2,344,228
Wages paid .. ..	£ 196,996	3,713	33,491	(b)	..	(b)	858,124
Value of fuel used .. ..	£ 163,947	819	7,741	(b)	..	(b)	706,090
Value of materials used .. ..	£ 2,294,914	16,551	64,240	(b)	..	(b)	4,758,814
Total value of output .. ..	£ 2,881,248	23,599	142,498	(b)	..	(b)	7,351,822
Value of production .. ..	£ 422,387	6,229	70,517	(b)	..	(b)	1,886,918

(a) In Western Australia all the plants are worked on the mines, and are therefore not included.  
 (b) Information not available for publication. (c) Including South Australia and Tasmania.

11. **Bacon-curing Factories.**—(i) *Details for each State, 1930-31.* The following table gives particulars of factories engaged in bacon-curing in each State for the year 1930-31:—

#### BACON-CURING FACTORIES, 1930-31.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aus- tralia.
Number of factories .. ..	23	19	8	8	5	6	69
Number of employees .. ..	306	498	526	167	50	38	1,585
Actual horse-power of engines used ..	1,053	1,974	1,456	376	191	101	5,151
Approximate value of land and buildings .. ..	£ 158,225	226,800	177,543	58,596	17,059	17,678	655,901
Approximate value of plant and machinery .. ..	£ 56,375	122,395	97,786	25,267	8,533	6,393	316,749
Wages paid .. ..	£ 92,363	120,994	123,824	39,707	11,480	6,952	395,320
Value of fuel used .. ..	£ 14,778	23,701	19,244	4,616	2,652	4,306	69,387
Value of materials used .. ..	£ 699,092	652,719	723,723	226,628	116,309	39,823	2,458,294
Total value of output .. ..	£ 899,541	954,873	1,092,740	304,708	148,638	56,617	3,457,117
Value of production .. ..	£ 185,671	278,453	349,773	73,464	29,677	12,398	929,436

(ii) *Quantity and Value of Production.* The number of pigs killed and the quantity and value of the production of bacon-curing factories in each State for the year 1930-31 are given hereunder:—

**BACON-CURING FACTORIES.—PIGS KILLED, AND PRODUCTION, 1930-31.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
<b>PIGS KILLED.</b>							
Number .. ..	245,965	208,593	248,897	50,405	28,717	14,873	797,450
<b>PRODUCTS.</b>							
Bacon and ham ..	lb. 20,984,266	17,340,287	19,842,633	5,208,597	4,212,772	1,213,343	67,501,898
Lard .. ..	601,268	969,256	993,936	180,131	96,214	112,094	2,952,899
<b>VALUE.</b>							
Bacon and ham ..	£ 772,786	672,242	786,622	197,261	133,535	45,318	2,607,764
Lard .. ..	£ 16,981	34,251	30,587	5,658	2,722	3,497	93,696
Other products ..	£ 96,981	206,436	268,737	101,789	12,251	7,802	693,996

(a) A portion of the bacon and ham treated was imported or purchased.

Bacon and ham and other pig products are dealt with more fully in Chapter XXI, *Farmyard, Dairy, and Bee Products.*

12. *Butter, Cheese, and Condensed Milk Factories.*—(i) *Details for each State, 1930-31.* The subjoined table gives particulars of butter, cheese and condensed milk factories in each State during the year 1930-31:—

**BUTTER, CHEESE, AND CONDENSED MILK FACTORIES, 1930-31.**

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.A.	Tas.	Australia.
Number of factories .. ..	138	165	117	39	15	32	506
Number of employees .. ..	1,253	2,235	1,096	262	122	161	5,129
Actual horse-power of engines used .. ..	8,509	7,994	8,477	853	567	443	26,843
Approximate value of land and buildings .. ..	£ 700,566	1,013,314	542,231	165,238	72,279	37,233	2,530,861
Approximate value of plant and machinery .. ..	£ 814,061	1,011,953	731,445	106,614	58,492	43,662	2,766,227
Wages paid .. ..	£ 331,955	536,654	259,326	52,572	27,338	29,254	1,228,100
Value of fuel used .. ..	£ 87,308	155,065	48,464	14,021	7,241	16,130	328,229
Value of materials used .. ..	£ 6,339,122	6,650,539	5,457,680	670,989	395,006	411,677	19,925,013
Total value of output .. ..	£ 7,112,512	8,077,608	6,199,117	798,611	500,472	512,389	23,200,709
Value of production .. ..	£ 686,082	1,272,004	692,973	113,601	98,225	84,582	2,947,467

(ii) *Development in Australia, 1926-27 to 1930-31.* The progress of this industry during the past five years is set out hereunder:—

**BUTTER, CHEESE, AND CONDENSED MILK FACTORIES.—AUSTRALIA.**

Items.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Number of factories .. ..	579	563	523	509	506
Number of employees .. ..	5,419	5,520	(a) 5,441	(a) 5,276	(a) 5,129
Actual horse-power of engines used .. ..	20,148	22,668	24,219	25,223	26,843
Approx. value of land and buildings .. ..	£ 2,297,656	2,392,225	2,366,789	2,538,589	2,530,861
Approx. value of plant and machinery .. ..	£ 2,649,044	2,604,018	2,598,702	2,735,185	2,766,227
Wages paid .. ..	£ 1,242,813	1,298,540	1,289,000	1,291,259	1,228,100
Value of fuel used .. ..	£ 315,004	342,404	334,556	355,811	328,229
Value of materials used .. ..	£ 17,907,326	20,520,240	22,623,740	21,791,835	19,925,013
Total value of output .. ..	£ 21,737,110	24,788,248	25,365,690	25,153,846	23,200,709
Value of production .. ..	£ 3,514,780	3,916,601	3,407,391	3,006,209	2,947,467

(a) See § 9. i.

(iii) *Quantity and Value of Production.* The next table shows the quantity and value of butter, cheese, and condensed milk produced, and the quantity of milk used in butter, cheese, and condensed milk factories in each State for the year 1930-31:—

**BUTTER, CHEESE AND CONDENSED MILK FACTORIES.—PRODUCTION, 1930-31.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
MILK USED (,000 OMITTED).							
Butter factories .. gals.	228,375	235,284	191,597	18,725	13,783	18,429	706,193
Cheese factories .. "	6,947	7,642	13,438	3,646	..	867	32,540
Condensed milk factories .. "	(a)	12,115	(a)	..	..	..	(b) 12,115

PRODUCTS (,000 OMITTED).							
Butter .. .. lb.	109,292	106,246	92,896	9,696	7,102	7,550	332,782
Cheese .. .. "	6,425	7,846	13,642	3,897	..	881	32,691
Condensed and concentrated milk .. .. lb.	(a)	33,521	(a)	..	..	..	(b) 33,521
Powdered milk .. .. "	(a)	12,144	..	..	..	..	(b) 12,144

VALUE (,000 OMITTED).							
Butter .. .. £	6,510	6,318	5,803	668	491	480	20,333
Cheese .. .. £	225	320	335	113	..	25	1,068
Condensed and concentrated milk .. .. £	(a)	775	(a)	..	..	..	(b) 775
Powdered milk .. .. £	(a)	438	..	..	..	..	(b) 438

(a) Information not available for publication.

(b) Victoria only.

The butter, cheese, and condensed milk industries are dealt with more fully in the Chapter entitled *Farmyard, Dairy, and Bee Products*.

13. *Meat and Fish Preserving Works.*—These industries are now of considerable importance. Works have been established at many ports for the purpose of freezing produce chiefly for export, while insulated space for the carriage of frozen produce is provided by steamship companies trading between Australia and other parts of the world.

**MEAT AND FISH PRESERVING WORKS,(c) 1930-31.**

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	8	18	9	..	..	3	40
Number of employees .. ..	194	1,023	1,865	..	115	13	3,215
Actual horse-power of engines used .. ..	219	4,367	7,834	..	(a)	(a)	(b) 13,125
Approximate value of land and buildings .. .. £	58,489	644,290	1,279,808	..	(a)	(a)	(b) 2,353,461
Approximate value of plant and machinery .. .. £	22,591	377,110	765,458	..	(a)	(a)	(b) 1,551,067
Wages paid .. .. £	43,684	247,142	587,681	..	(a)	(a)	(b) 954,993
Value of fuel used .. .. £	7,371	31,229	93,066	..	(a)	(a)	(b) 141,520
Value of materials used .. .. £	137,607	1,637,210	3,208,990	..	(a)	(a)	(b) 5,091,610
Total value of output .. .. £	195,532	2,118,757	3,808,412	..	(a)	(a)	(b) 6,342,229
Value of production .. .. £	50,554	450,318	506,356	..	(a)	(a)	(b) 1,106,060

(a) Not available for publication. (b) Including Western Australia and Tasmania. (c) Including meat extracts.

Particulars regarding the quantities and values of beef, mutton, and lamb preserved by cold process, exported from Australia over a series of years, will be found in Chapter XIX., *Pastoral Production*.

14. Bakeries.—Information regarding establishments in which the manufacture of bread, cakes, etc., was carried on during the year 1930–31 is given in the table below.

**BAKERIES (INCLUDING CAKES AND PASTRY), 1930–31.**

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	Australia.
Number of factories .. ..	369	468	233	97	85	45	1,297
Number of employes .. ..	2,946	2,871	1,591	702	409	726	9,245
Actual horse-power of engines used .. ..	2,585	1,980	761	650	406	1,358	7,740
Approximate value of land and buildings .. ..	£ 1,586,911	£ 1,036,675	£ 386,012	£ 209,146	£ 152,966	£ 292,256	£ 3,663,966
Approximate value of plant and machinery .. ..	£ 495,372	£ 366,796	£ 169,767	£ 89,495	£ 41,715	£ 80,473	£ 1,243,618
Wages paid .. ..	£ 649,787	£ 516,021	£ 259,774	£ 123,028	£ 72,690	£ 115,910	£ 1,737,210
Value of fuel used .. ..	£ 93,022	£ 81,793	£ 31,580	£ 17,433	£ 9,958	£ 18,939	£ 252,725
Value of materials used .. ..	£ 1,688,293	£ 1,580,141	£ 650,758	£ 362,228	£ 221,312	£ 219,963	£ 4,722,695
Total value of output .. ..	£ 3,005,069	£ 2,745,322	£ 1,311,738	£ 599,284	£ 381,401	£ 393,785	£ 8,436,599
Value of production .. ..	£ 1,223,754	£ 1,083,388	£ 629,400	£ 219,623	£ 150,131	£ 154,883	£ 3,461,179

(a) Includes Biscuits and Confectionery.

15. Jam and Fruit Preserving, Pickles, Sauces, and Vinegar Factories.—(i) *Details for each State, 1930–31.* The subjoined table gives particulars of factories included in this class for the year 1930–31.

**JAM AND FRUIT PRESERVING, PICKLES, ETC., FACTORIES, 1930–31.**

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	32	40	11	15	6	7	111
Number of employes .. ..	1,110	1,647	256	355	45	390	3,803
Actual horse-power of engines used .. ..	1,344	2,034	253	383	105	1,189	5,308
Approximate value of land and buildings .. ..	£ 294,787	£ 455,929	£ 36,603	£ 80,465	£ 15,362	£ 101,318	£ 984,464
Approximate value of plant and machinery .. ..	£ 133,531	£ 283,697	£ 29,587	£ 64,248	£ 4,937	£ 30,362	£ 546,362
Wages paid .. ..	£ 180,919	£ 268,886	£ 45,890	£ 54,379	£ 6,427	£ 70,708	£ 627,209
Value of fuel used .. ..	£ 18,821	£ 26,595	£ 2,886	£ 5,684	£ 572	£ 7,030	£ 61,588
Value of materials used .. ..	£ 674,884	£ 1,034,783	£ 249,071	£ 171,312	£ 30,896	£ 193,088	£ 2,354,034
Total value of output .. ..	£ 1,134,634	£ 1,617,563	£ 324,192	£ 269,343	£ 44,907	£ 295,694	£ 3,686,333
Value of production .. ..	£ 440,929	£ 556,185	£ 72,235	£ 92,347	£ 13,439	£ 95,576	£ 1,270,711

(ii) *Development in Australia, 1926–27 to 1930–31.* Particulars in connexion with these establishments in Australia for the last five years are given hereunder.

**JAM AND FRUIT PRESERVING, PICKLES, ETC., FACTORIES.—AUSTRALIA.**

Items.	1926–27.	1927–28.	1928–29.	1929–30.	1930–31.
Number of factories .. ..	164	167	121	121	111
Number of employes .. ..	6,119	6,627	(a) 5,478	(a) 4,780	3,803
Actual horse-power of engines used .. ..	4,528	5,215	5,198	6,101	5,308
Approx. value of land and buildings .. ..	£ 1,084,835	£ 1,177,963	£ 1,058,445	£ 1,064,661	£ 984,464
Approx. value of plant and machinery .. ..	£ 634,771	£ 748,888	£ 601,229	£ 567,833	£ 546,362
Wages paid .. ..	£ 974,224	£ 1,049,136	£ 869,144	£ 873,508	£ 627,209
Value of fuel used .. ..	£ 79,311	£ 92,373	£ 78,422	£ 83,634	£ 61,588
Value of materials used .. ..	£ 3,511,388	£ 3,793,161	£ 3,030,762	£ 3,290,268	£ 2,354,034
Total value of output .. ..	£ 5,480,065	£ 5,967,876	£ 5,054,595	£ 5,178,438	£ 3,686,333
Value of production .. ..	£ 1,889,366	£ 2,172,342	£ 1,945,411	£ 1,804,536	£ 1,270,711

(a) See § 9. 1.

The progress of the jam-making industry was very marked during the war years, when large quantities were exported overseas for the supply of army requirements. With the loss of this trade on the termination of the war, production declined considerably, and in 1930–31 amounted to only 66,120,340 lb., compared with 142,290,204 in 1918–19. The output of preserved fruit has greatly increased, and during 1930–31, 50,739,348 lb. were processed. The production of pickles and sauces, however, showed a further decline.



(iii) *Production.* The following table shows the quantity and value of jams, pickles and sauces manufactured in each State during 1930-31 :—

**JAMS, PRESERVED FRUIT, PICKLES AND SAUCES.—OUTPUT, 1930-31.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
QUANTITY (,000 OMITTED).							
Jams .. .. lb.	17,492	27,582	7,185	5,085	365	7,511	66,120
Pulp .. .. "	2,385	17,828	860	3,158	204	5,130	29,574
Fruit, preserved .. .. "	15,442	27,517	4,383	1,082	..	2,315	50,739
Pickles .. .. plnts	645	1,050	252	711	(a)	(a)	(b) 2,873
Sauces .. .. "	4,619	6,737	884	2,248	(a)	(a)	(b) 14,999
VALUE.							
Jams .. .. £	439,233	578,637	159,924	113,857	7,311	167,762	1,466,724
Pulp .. .. £	12,062	83,284	22,623	17,086	546	61,058	196,659
Fruit, preserved .. .. £	239,377	442,566	93,681	16,198	..	63,082	854,844
Pickles .. .. £	23,118	40,337	9,587	26,287	(a)	(a)	(b) 104,875
Sauces .. .. £	272,600	213,651	25,232	67,351	(a)	(a)	(b) 594,196

(a) Particulars not available for publication.

(b) Including Western Australia and Tasmania.

16. *Confectionery Factories.*—(i) *Details for each State, 1930-31.* At the close of the year 1900 there were in New South Wales 16 establishments, with 706 employees, and in Victoria 16 establishments, employing 731 persons, the plant and machinery in the former State being valued at £2,815, and in the latter at £19,070. The figures for the year 1930-31 given hereunder show the remarkable development since 1900 :—

**SUGAR CONFECTIONERY FACTORIES,(d) 1930-31.**

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	Australia.
Number of factories .. ..	67	114	11	16	10	2	220
Number of employees .. ..	2,597	2,650	435	324	232	3	6,241
Actual horse-power of engines used .. ..	3,414	6,055	543	638	(b)	(b)	c 11,014
Approximate value of land and buildings .. .. £	1,021,280	445,001	169,867	91,787	(b)	(b)	c1,788,358
Approximate value of plant and machinery .. .. £	1,016,205	667,052	145,163	80,376	(b)	(b)	c1,987,197
Wages paid .. .. £	407,522	389,271	58,836	37,360	(b)	(b)	c 931,991
Value of fuel used .. .. £	47,460	50,131	6,265	9,895	(b)	(b)	c 118,245
Value of materials used .. .. £	1,144,081	1,095,819	100,215	117,213	(b)	(b)	c2,590,032
Total value of output .. .. £	2,211,315	1,931,766	279,361	183,899	(b)	(b)	c4,832,952
Value of production .. .. £	1,019,774	785,816	172,881	56,791	(b)	(b)	c2,124,675

(a) Ice Cream factories—Other Confectionery included in Bakeries.

(b) Not available for publication.

(c) Includes Western Australia and Tasmania.

(d) Including Chocolate and Ice Cream.

(ii) *Development in Australia, 1926-27 to 1930-31.* The growth of the confectionery industry during the past five years is exhibited in the following table :—

**SUGAR CONFECTIONERY FACTORIES.—AUSTRALIA, 1930-31.**

Items.	1926-27. (a)	1927-28. (a)	1928-29. (a)	1929-30. (c)	1930-31. (d)
Number of factories .. ..	286	293	(b) 320	254	220
Number of employees .. ..	9,048	8,616	(b) 8,386	7,260	6,241
Actual horse-power of engines used .. ..	14,166	14,241	12,737	12,432	11,014
Approx. value of land and buildings .. .. £	2,084,233	2,074,074	2,201,885	2,007,192	1,788,358
Approx. value of plant and machinery .. .. £	2,311,513	2,332,479	2,368,208	2,248,470	1,987,197
Wages paid .. .. £	1,426,779	1,365,241	1,335,997	1,167,654	931,991
Value of fuel used .. .. £	165,181	186,323	183,787	167,526	118,245
Value of materials used .. .. £	3,918,090	4,054,201	3,998,906	3,549,673	2,590,032
Total value of output .. .. £	7,097,911	7,300,429	7,455,428	6,567,759	4,832,952
Value of production .. .. £	3,014,640	3,059,905	3,272,735	2,850,500	2,124,675

(a) Including Biscuits and Bakeries in Tasmania.

(b) See § 9. 1.

(c) Figures for Tasmania

included in Bakeries. (d) See note (a) in table above.

The confectionery industry has expanded considerably during recent years, largely as a result of the stimulus afforded by the embargo placed on the importation of luxuries during the period of the war. The establishments engaged therein found employment for 6,241 persons in 1930-31, and the value of the output amounted to £4,832,952. The decline in the value of output, etc., in 1929-30 and 1930-31 is due to the exclusion of the returns for Tasmania, which have been incorporated with bakeries to avoid disclosing confidential information. Production is sufficient to supply local requirements, and an export trade is being developed. Several large British manufacturers of confectionery have established branch works in Australia.

17. Grain Milling.—(i) *Details for States, 1930-31.* The following table shows the position of the flour-milling industry in each State in 1930-31:—

## GRAIN MILLING, 1930-31.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust. (a)	W. Aust.	Tas. (a)	Australia.
Number of factories	52	35	9	32	10	8	155
Number of employees	1,086	888	294	388	386	106	3,148
Actual horse-power of engines used	7,355	5,422	1,421	3,099	2,722	514	20,533
Approximate value of land and buildings	£ 754,623	£ 421,723	£ 154,958	£ 203,527	£ 230,689	£ 58,698	£ 1,824,218
Approximate value of plant and machinery	£ 822,369	£ 527,055	£ 198,679	£ 318,038	£ 256,578	£ 39,960	£ 2,162,699
Wages paid	£ 291,843	£ 216,969	£ 77,425	£ 92,625	£ 91,890	£ 26,813	£ 797,565
Value of fuel used	£ 73,705	£ 57,493	£ 14,339	£ 28,212	£ 24,129	£ 4,704	£ 202,492
Value of materials used	£ 3,735,355	£ 2,818,483	£ 842,122	£ 918,304	£ 924,083	£ 215,513	£ 9,454,160
Total value of output	£ 4,722,855	£ 3,461,548	£ 983,928	£ 1,124,900	£ 1,155,910	£ 271,232	£ 11,719,373
Value of production	£ 913,795	£ 585,662	£ 127,167	£ 177,384	£ 207,698	£ 51,015	£ 2,062,721

(a) The manufacture of cornflour, oatmeal, etc., was also carried on in some of these establishments.

(ii) *Production of Flour and By-products, 1926-27 to 1930-31.* The production of flour by the mills in each State for the years 1926-27 to 1930-31 was as follows:—

## GRAIN MILLING.—PRODUCTION OF FLOUR, AUSTRALIA.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	Tons.(a)	Tons.(a)	Tons.(a)	Tons.(a)	Tons.(a)	Tons.(a)	Tons.(a)
1926-27 ..	431,532	360,051	52,959	140,426	133,919	22,861	1,141,748
1927-28 ..	400,363	367,383	53,858	122,107	127,246	21,675	1,092,632
1928-29 ..	449,011	390,286	54,433	137,202	119,550	21,277	1,171,759
1929-30 ..	432,472	364,682	61,102	138,115	120,595	19,899	1,136,865
1930-31 ..	449,439	369,966	71,994	136,346	132,090	19,863	1,179,698

(a) Tons of 2,000 lb.

The production of flour in Australia for the last year, viz., 1,179,698 tons was valued at £9,037,763. In addition, 499,490 tons of bran and pollard, valued at £2,431,695, were made. The quantity of wheat ground was 56,575,940 bushels.

18. Sugar Mills.—(i) *Details for 1930-31.* The following table shows the position of the cane-crushing branch of the sugar-making industry in Queensland and New South Wales in 1930-31. Sugar-cane is not grown in the other States. Details regarding the area, yield, etc., of sugar-cane will be found in Chapter XX., *Agricultural Production.*

## SUGAR MILLS, 1930-31.

Items.	N.S.W.	Queensland.	Australia.
Number of factories	3	35	38
Number of employees	135	5,138	5,273
Actual horse-power of engines used	2,094	35,251	37,345
Approximate value of land and buildings	£ 134,000	£ 766,447	£ 900,447
Approximate value of plant and machinery	£ 540,809	£ 6,540,306	£ 7,081,115
Wages paid	£ 63,585	£ 1,144,133	£ 1,207,718
Value of fuel used	£ 10,549	£ 138,880	£ 149,429
Value of materials used	£ 314,368	£ 7,545,632	£ 7,860,000
Total value of output	£ 455,625	£ 10,067,549	£ 10,523,174
Value of production	£ 130,708	£ 2,383,037	£ 2,513,745

The products of the sugar mill are raw sugar and molasses, the former being sent to the refineries in different parts of Australia for further treatment. Part of the molasses produced is used for distillation, part is prepared for human consumption, part is turned into food-cake for cattle, part is used for manuring land, and the balance is either burnt as fuel or is allowed to run to waste. This latter quantity, however, is being reduced each year.

(ii) *Progress of Industry.* (a) *New South Wales.* The following table shows the progress of this industry in New South Wales since 1926-27 :—

## SUGAR MILLS.—NEW SOUTH WALES.

Items.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Number of factories ..	3	3	3	3	3
Number of employees ..	447	413	(a) 375	(a) 170	(a) 135
Cane crushed .. tons	230,254	208,612	147,414	174,110	160,209
Sugar produced .. tons	26,604	23,349	16,954	19,568	18,841
Molasses produced .. gals.	1,371,700	1,196,700	914,000	1,064,405	918,800

(a) See § 9. 1.

The number of mills in New South Wales was reduced to three during recent years owing chiefly to the tendency towards concentration of cane-crushing in establishments fitted with modern machinery, and the consequent closing of the small home mill. The stability afforded the industry by the Government assistance referred to in the chapter dealing with Agriculture, has resulted in considerable progress in the cultivation of sugar cane, and increased activity in milling. Particulars regarding cane crushed and sugar produced embodied in these tables refer to the quantities treated during the twelve months ending 30th June in each year, irrespective of the season in which the cane was grown. The figures relating to cane crushed and sugar produced shown hereunder, differ therefore, from those given in Chapter XX., *Agriculture*, which refer to harvest years.

(b) *Queensland.* Details for Queensland from 1911 onwards are given hereunder.

## SUGAR MILLS.—QUEENSLAND, 1911 TO 1930-31.

Items.	1911.	1927-28.	1928-29.	1929-30.	1930-31.
Number of factories ..	49	35	35	35	35
Number of employees ..	4,295	6,005	(a) 6,077	(a) 5,459	(a) 5,138
Cane crushed .. tons	1,534,451	3,570,743	3,741,715	3,572,068	3,539,475
Sugar produced .. tons	173,296	479,803	516,081	513,551	514,296
Molasses—					
Sold to distillers					
and others .. gals.	2,393,669	4,823,728	5,676,821	5,854,398	4,529,352
Used as fodder .. gals.	789,564	2,523,390	2,524,136	2,382,192	2,342,609
Used as manure .. gals.	223,000	473,260	7,200	298,395	714,670
Run to waste .. gals.					
Burnt as fuel .. gals.					
In stock .. gals.					
Total Molasses .. gals.	1,847,333	3,495,063	3,044,889	2,253,083	1,311,453
		3,204,997	5,131,726	4,202,588	4,354,350
	1,197,626	1,335,366	488,600	871,292	1,206,050
Total Molasses .. gals.	6,451,192	15,855,804	16,873,372	15,861,948	14,458,484

(a) See § 9. 1.

19. **Sugar Refineries.**—The establishment of the sugar-refining industry considerably antedates the establishment of the sugar-milling industry, the raw material operated on in the earlier years coming chiefly from Mauritius and the East. In 1930-31 there were two sugar refineries in each of the States of Victoria and Queensland, and one in each of the States of New South Wales, South Australia, and Western Australia. The quantity of raw sugar treated amounted to 319,219 tons, for a yield of 317,135 tons of refined sugar, valued at £11,155,699.

20. **Breweries.**—(i) *Details for each State, 1930-31.* The following table gives particulars concerning breweries in each State:—

**BREWERIES, 1930-31.**

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	Australia.
Number of breweries .. ..	7	9	9	6	8	4	43
Number of employees .. ..	974	1,083	349	264	339	100	3,109
Actual horse-power of engines used .. ..	5,624	4,006	1,975	1,358	1,960	635	15,558
Approx. value of land and buildings .. .. £	905,320	699,267	282,975	182,104	215,268	162,708	2,447,642
Approx. value of plant and machinery .. .. £	978,438	1,007,249	266,395	202,612	269,353	141,940	2,865,987
Wages paid .. .. £	285,004	369,463	100,776	85,467	123,683	28,305	992,698
Value of fuel used .. .. £	76,649	64,664	24,004	18,135	16,727	30,779	230,958
Value of materials used .. .. £	711,563	808,792	182,245	159,482	229,893	54,356	2,146,331
Total value of output .. .. £	2,248,544	1,935,542	469,079	399,373	621,841	153,814	5,828,193
Value of production .. .. £	1,460,332	1,062,086	262,830	221,756	375,221	68,679	3,450,904

(a) Includes malting.

(ii) *Development in Australia, 1926-27 to 1930-31.* The next table shows the progress of this industry for the last five years:—

**BREWERIES.—AUSTRALIA.**

Items.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Number of breweries .. ..	48	46	(a) 45	(a) 45	(a) 43
Number of employees .. ..	3,844	3,881	(a) 3,874	(a) 3,590	(a) 3,109
Actual horse-power of engines used .. ..	13,143	14,688	14,217	14,800	15,558
Approx. value of land and buildings .. .. £	2,205,779	2,347,851	2,476,207	2,457,428	2,447,642
Approx. value of plant and machinery .. .. £	2,710,319	2,853,623	2,912,078	2,956,907	2,865,987
Wages paid .. .. £	1,173,086	1,208,091	1,208,699	1,165,380	992,698
Value of fuel used .. .. £	248,780	272,151	295,908	276,199	230,958
Value of materials used .. .. £	3,315,441	3,318,521	3,310,659	2,887,251	2,146,331
Total value of output .. .. £	7,941,978	7,964,626	7,921,010	7,258,933	5,828,193
Value of production .. .. £	4,377,757	4,373,954	4,314,443	4,095,483	3,450,904

(a) See § 9. 1.

The main feature in the history of the brewing industry, which was established at an early date in Australia, was the change from the small local brewery in every township of moderate size to the large centralized city brewery. During the period embraced in the above table, however, the reduction in the number of establishments was mainly due to amalgamations. The value of the output of breweries in Australia decreased from £7,941,978 in 1926-27 to £5,828,193 in 1930-31, and the quantity of ale and stout brewed fell from 73,667,050 to 55,654,484 gallons during the same period. The consumption of ale and stout per head of the population remained fairly steady for several years at about 11.25 gallons. In 1929-30 the average fell to 10.25 gallons, and in 1930-31 to 8.14 gallons.

(iii) *Materials Used and Production.* The table below shows the quantity of raw material used and the quantity and value of ale and stout brewed in each State during the year 1930-31.

**BREWERIES.—MATERIALS USED AND PRODUCTION, 1930-31.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
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**RAW MATERIAL USED.**

Malt .. bushels	642,849	648,248	171,603	135,490	162,658	37,725	1,798,573
Hops .. lb.	619,397	602,277	153,720	138,956	157,007	28,470	1,699,827
Sugar .. cwt.	70,788	83,153	22,402	16,667	21,868	3,899	218,777

**RAW MATERIAL USED PER 1,000 GALLONS OF ALE AND STOUT PRODUCED.**

Malt .. bushels	32.51	31.55	32.36	34.60	32.35	34.59	32.32
Hops .. lb.	31.33	29.31	28.99	35.48	31.23	26.11	30.54
Sugar .. cwt.	3.58	4.05	4.22	4.26	4.35	3.58	3.93

**ALE AND STOUT BREWED.**

Quantity gallons	19,771,075	20,545,800	5,302,433	3,916,428	5,028,182	1,090,566	55,654,481
Value (a) £	2,227,909	1,935,542	469,079	396,297	621,841	141,785	5,792,453

(a) Exclusive of excise duty.

21. *Distilleries.*—Distilleries are located in all the States with the exception of Western Australia and Tasmania. Complete details, however, are not obtainable, as the particulars for New South Wales factories are not available. The materials used in distilleries other than those in New South Wales, during 1930-31 comprised 289,016 cwt. of molasses, 300,267 bushels of malt, and 6,596,444 gallons of wine, while the output of spirits in proof gallons was as follows:—Brandy, 291,391; Gin, 58,066; Whisky, 507,502; Rum, 683,727; Methylated Spirits, 401,394; Other Spirits, 2,088,789.

22. *Tobacco, etc., Factories.*—(i) *Details for each State, 1930-31.* During the year 1930-31 there were twenty-two establishments in which the manufacture of tobacco, cigars, and cigarettes was carried on. There were no factories engaged in this industry in Queensland and Tasmania.

**TOBACCO, CIGAR, AND CIGARETTE FACTORIES, 1930-31.**

Items.	N.S.W.	Victoria.	S. Aust.	W. Aust.	Australia.
Number of factories .. ..	8	12	1	1	22
Number of employees .. ..	2,351	1,700		86	4,154
Actual horse-power of engines used .. ..	1,168	793	(a)	(a)	b 2,000
Approx. value of land and buildings .. ..	£ 523,517	320,550	(a)	(a)	b 857,540
Approx. value of plant and machinery .. ..	£ 388,736	219,319	(a)	(a)	b 618,377
Wages paid .. ..	£ 452,406	339,490	(a)	(a)	b 807,348
Value of fuel used .. ..	£ 14,659	9,611	(a)	(a)	b 24,685
Value of materials used .. ..	£ 3,503,651	1,297,779	(a)	(a)	b 4,831,775
Total value of output .. ..	£ 4,589,275	2,160,007	(a)	(a)	b 6,842,391
Value of production .. ..	£ 1,070,905	852,617	(a)	(a)	b 1,985,931

(a) Not available for publication.

(b) Including South Australia and Western Australia.

(ii) *Development in Australia.* This industry was among the first to be established in Australia. In 1861, New South Wales had 11 factories, producing 177,744 lb. of manufactured tobacco; in the same year there was one factory in Victoria, but the quantity of tobacco manufactured is not available. The Australian market has

for many years been largely supplied with local manufactures. Imports during 1930-31 comprised—manufactured tobacco 330,545 lb., cigars 13,218 lb., and cigarettes 189,617 lb., while the quantities manufactured in Australian factories were respectively 14,241,779 lb., 223,884 lb., and 4,224,837 lb. The following tables show the development of the industry in Australia for the last five years:—

## TOBACCO, CIGAR, AND CIGARETTE FACTORIES.—AUSTRALIA.

Items.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Number of factories .. .. .	24	23	(a) 23	(a) 23	(a) 22
Number of employes .. .. .	4,286	4,217	(a) 4,137	(a) 4,096	(a) 4,154
Actual horse-power of engines used .. .. .	1,645	1,684	1,946	1,986	2,009
Approx. value of land and buildings .. .. .	£ 675,689	783,895	794,421	857,787	857,540
Approx. value of plant and machinery .. .. .	£ 512,441	500,651	543,462	565,536	618,377
Wages paid .. .. .	£ 812,300	818,985	808,865	818,342	807,348
Value of fuel used .. .. .	£ 22,032	21,991	24,115	24,941	24,685
Value of materials used .. .. .	£ 4,523,086	4,492,363	4,427,806	5,111,443	4,831,775
Total value of output .. .. .	£ 6,800,026	6,817,391	6,812,791	7,523,114	6,842,391
Value of production .. .. .	£ 2,251,908	2,303,037	2,360,870	2,386,730	1,985,934

## LEAF USED AND PRODUCTION.

Leaf used .. .. .	1,000 lb.	18,610	18,620	19,136	19,175	16,456
Tobacco made .. .. .	"	15,008	15,097	15,678	16,064	14,242
Cigars made .. .. .	"	410	390	339	307	224
Cigarettes made .. .. .	"	5,309	5,391	5,358	5,371	4,225

(a) See § 9. 1.

Although the manufacture side of tobacco is firmly established in Australia, hitherto the production of locally-grown leaf was comparatively small, and manufacturers were dependent on imported leaf for the supply of their raw material. Increased duties stimulated local production, and the quantity of Australian leaf used by manufacturers rose from 1.2 million lb. in 1929-30 to over 6 million lb. in 1931-32, with a resultant decrease in the amount of imported leaf used. In this connexion, however, see item "Tobacco" in Chapter XX., Agricultural Production. The respective quantities of Australian and imported leaf used during 1930-31 were 3,128,684 lb., and 13,327,414 lb.

23. *Woollen and Tweed Mills.*—(i) *Details for each State. 1930-31.* The manufacture of woollens and tweeds was established at an early period in Australian history and was under Government control, the first record in New South Wales dating back to 1801, when a few blankets were made by convicts, while manufacture in Victoria dates from 1867. The following table, which gives particulars for 1930-31, shows that the industry is well established:—

## WOOLLEN AND TWEED (INCLUDING WOOLSCOURING) MILLS, 1930-31.

Items.	N.S.W. (c)	Victoria.	Q'land.	S. Aust.	W.A.	Tas.	Australia.
Number of factories .. .. .	14	46	14	8	4	6	92
Number of employes .. .. .	3,046	6,182	532	407	116	1,268	11,551
Actual horse-power of engines used .. .. .	7,378	14,539	(a)	(a)	(a)	2,124 <sup>b</sup>	27,453
Approx. value of land and buildings .. .. .	£ 616,693	1,183,670	(a)	(a)	(a)	271,184 <sup>b</sup>	2,305,858
Approx. value of plant and machinery .. .. .	£ 1,020,443	1,781,097	(a)	(a)	(a)	329,383 <sup>b</sup>	3,567,670
Wages paid .. .. .	£ 442,571	889,088	(a)	(a)	(a)	145,540 <sup>b</sup>	1,633,432
Value of fuel used .. .. .	£ 69,714	153,258	(a)	(a)	(a)	46,228 <sup>b</sup>	301,428
Value of materials used .. .. .	£ 793,451	1,676,768	(a)	(a)	(a)	236,019 <sup>b</sup>	3,756,418
Total value of output .. .. .	£ 1,584,811	3,289,288	(a)	(a)	(a)	563,789 <sup>b</sup>	6,758,788
Value of production .. .. .	£ 721,646	1,459,262	(a)	(a)	(a)	281,542 <sup>b</sup>	2,700,942

(a) Information not available for publication. (b) Including Queensland, South Australia, and Western Australia. (c) Woolscouring not included.

(ii) *Development in Australia, 1926-27 to 1930-31.* The progress of woollen and tweed milling in Australia in the last five years is shown in the following table :—

**WOOLLEN AND TWEED MILLS (INCLUDING WOOLSCOURING).—AUSTRALIA.**

Items.	1926-27. (b)	1927-28. (b)	1928-29. (b)	1929-30. (b)	1930-31.
Number of factories .. ..	53	57	53	58	92
Number of employees .. ..	11,068	11,638	(a) 11,430	(a) 11,843	(a) 11,531
Actual horse-power of engines used .. ..	22,441	23,158	24,748	26,407	27,453
Approx. value of land and buildings .. ..	£ 1,892,168	1,933,654	1,984,124	2,124,486	2,305,858
Approx. value of plant and machinery .. ..	£ 3,779,316	3,688,023	3,487,795	3,553,493	3,567,670
Wages paid .. ..	£ 1,607,595	1,755,538	1,766,820	1,780,514	1,633,432
Value of fuel used .. ..	£ 251,093	272,578	270,995	298,212	301,428
Value of materials used .. ..	£ 3,681,164	4,172,120	4,363,482	3,758,577	3,756,418
Total value of output .. ..	£ 6,986,296	7,601,435	7,477,295	6,964,160	6,758,788
Value of production .. ..	£ 3,954,039	3,156,737	2,842,818	2,907,371	2,700,942

(a) See § 9. i.

(b) Excluding Woolscouring.

(iii) *Quantity and Value of Production.* The production consists chiefly of tweed cloths, flannels, rugs, blankets and yarn, all of which have acquired a reputation for purity and durability. Detailed particulars for the several States are not available for publication. The total length of tweed and cloth manufactured in Australia during 1930-31 was 10,732,123 yards. In New South Wales 4,666,993 yards, and in Victoria 5,431,704 yards of tweed and cloth were manufactured. The production of flannel amounted to 6,557,623 yards, while blankets, shawls, and rugs to the number of 643,689 were made. The output of yarn reported was 5,739,955 lb., most of which was produced in Victoria.

In addition to the woollen and tweed factories, there were 276 hosiery and knitting mills operating in Australia in 1930-31. These establishments provided employment for 10,878 persons, of whom 8,036 were females, and the value of their output amounted to £5,290,034.

Cotton ginning has been carried on intermittently in the Northern States, and the recent development in cotton growing has led to the establishment of modern ginning plants at convenient centres in Queensland. In New South Wales the first establishment for the manufacture of cotton goods was erected in 1923-24. There were twenty-two establishments treating cotton in Australia during 1930-31, and these employed 1,204 hands, while the value of the output was £1,906,654.

24. *Boot Factories.*—(i) *Boot and Shoe Factories, 1930-31.* Among the factories of Australia, the boot and shoe industry holds an important place in regard to employment afforded and extent of output. The operations of these factories have been rather obscured in recent years by the inclusion of a large number of repair establishments in the returns, but this difficulty has been avoided by the collection of separate statistics for each industry, and in the following table the details relate to boot and shoe factories, as distinct from those devoted to repairing and bespoke work :—

**BOOT AND SHOE FACTORIES, 1930-31.**

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	93	175	18	15	8	5	314
Number of employees .. ..	3,498	8,622	967	417	280	122	13,906
Actual horse-power of engines used .. ..	1,580	2,812	297	265	212	60	5,226
Approx. value of land and buildings .. ..	£ 432,156	775,725	76,430	72,709	43,924	15,240	1,416,184
Approx. value of plant and machinery .. ..	£ 223,509	442,929	46,508	23,192	19,144	6,012	761,294
Wages paid .. ..	£ 542,944	1,312,626	135,990	61,387	39,776	16,816	2,109,539
Value of fuel used .. ..	£ 11,837	32,821	2,646	1,517	950	649	50,420
Value of materials used .. ..	£ 819,692	1,953,178	174,474	90,563	79,388	31,006	3,148,301
Total value of output .. ..	£ 1,583,381	3,974,195	366,923	168,405	145,877	60,352	6,301,133
Value of production .. ..	£ 753,852	1,988,196	189,803	76,325	65,539	28,697	3,102,412

(ii) *Boot Repairing, including Bespoke Work.* The introduction of small power plants in repairing shops has brought this class of establishment within the meaning of a factory for statistical purposes. These shops have spread rapidly throughout the Commonwealth, and in 1930-31 the number recorded amounted to 1,166, in which 2,141 hands were employed. The sum of £160,128 was distributed in salaries and wages, and the output was valued at £775,432.

(iii) *Quantity and Value of Production.* The number and value of boots, shoes, and slippers made at factories in each State are shown in the following table:—

**BOOT AND SHOE FACTORIES.—OUTPUT, 1930-31.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
<b>QUANTITY (,000 OMITTED).</b>							
Boots and shoes pairs	2,638	7,238	580	314	275	85	11,130
Slippers .. ..	1,451	2,548	6	21	154	3	4,183
Uppers (a) .. ..	41	13	180	7	..	2	243
<b>VALUE.</b>							
Boots and shoes	£ 1,412,659	3,646,626	346,245	161,053	127,727	57,294	5,751,604
Slippers .. ..	£ 148,695	295,008	1,993	2,474	19,121	970	468,261
Uppers (a) .. ..	£ 11,378	6,369	17,801	3,254	93	780	39,675

(a) Made for other than factory use.

25. *Tailoring, and Slop Clothing Factories.*—(i) *Details for each State, 1930-31.* The importance of this industry in the several States is shown in the following table:—

**TAILORING AND SLOP CLOTHING FACTORIES, 1930-1931.**

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	359	438	114	97	76	28	1,112
Number of employees .. ..	6,615	6,312	2,214	1,323	888	312	17,664
Actual horse-power of engines used .. ..	666	603	206	94	86	28	1,683
Approx. value of land and buildings .. ..	£ 1,432,564	1,035,820	268,112	252,567	209,085	74,100	3,272,248
Approx. value of plant and machinery .. ..	£ 109,283	98,169	32,530	20,918	13,726	4,070	278,696
Wages paid .. ..	£ 814,383	725,021	244,591	136,869	103,026	34,707	2,058,597
Value of fuel used .. ..	£ 16,983	19,728	5,777	4,215	2,362	1,652	50,717
Value of materials used .. ..	£ 1,138,794	1,344,121	306,357	123,418	173,026	33,367	3,119,083
Total value of output .. ..	£ 2,348,901	2,469,228	743,338	317,635	336,760	91,399	6,307,261
Value of production .. ..	£ 1,193,124	1,105,379	431,204	190,002	161,372	56,380	3,137,461

(ii) *Development in Australia, 1926-27 to 1930-31.* The tailoring and slop branch of the clothing industry made little progress during the four years ended 1928-29. The number of factories and number of persons employed decreased, but the value of raw material used and output remained fairly constant. The considerable decline in the industry, in 1929-30 and 1930-31 was due to a decrease in the purchasing power of the community. Details for the past five years are as follow:—

**TAILORING, AND SLOP CLOTHING FACTORIES.—AUSTRALIA.**

Items.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Number of factories .. ..	1,465	1,422	1,440	1,327	1,112
Number of employees .. ..	28,409	27,401	(a) 26,953	(a) 23,016	(a) 17,664
Actual horse-power of engines used .. ..	1,833	1,954	1,802	2,062	1,683
Approx. value of land and buildings .. ..	£ 4,368,772	4,364,779	4,389,473	4,151,355	3,272,248
Approx. value of plant and machinery .. ..	£ 367,923	370,757	337,057	328,676	278,696
Wages paid .. ..	£ 3,664,940	3,616,157	3,524,994	3,190,686	2,058,597
Value of fuel used .. ..	£ 64,742	65,946	65,100	63,011	50,717
Value of materials used .. ..	£ 5,456,963	5,121,106	5,092,739	4,473,949	3,119,083
Total value of output .. ..	£ 11,118,283	10,827,374	10,602,874	9,222,505	6,307,261
Value of production .. ..	£ 5,596,578	5,640,322	5,445,935	4,685,545	3,137,461

(a) See § 9. 1.



26. Dressmaking and Millinery Establishments.—(i) *Details for each State, 1930–31.* Particulars of dressmaking and millinery establishments are given separately in the following tables :—

## DRESSMAKING ESTABLISHMENTS, 1930–31.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. .. .	96	366	35	35	35	13	580
Number of employees .. .. .	1,078	5,263	517	482	385	71	7,796
Actual horse-power of engines used .. .. .	74	542	32	43	39	3	733
Approx. value of land and buildings .. .. .	£ 280,615	964,875	54,383	87,069	67,057	11,925	1,465,924
Approx. value of plant and machinery .. .. .	£ 14,698	82,307	7,975	7,621	6,226	836	119,663
Wages paid .. .. .	£ 109,210	561,862	47,218	46,363	33,570	6,063	804,286
Value of fuel used .. .. .	£ 1,901	10,763	760	1,211	757	110	15,502
Value of materials used .. .. .	£ 121,077	1,191,769	55,246	72,423	57,344	4,529	1,502,388
Total value of output .. .. .	£ 282,308	2,077,261	119,410	142,817	114,970	11,899	2,748,764
Value of production .. .. .	£ 159,420	874,729	63,413	69,183	56,869	7,260	1,230,874

## MILLINERY ESTABLISHMENTS, 1930–31.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. .. .	44	76	4	9	11	(a)	144
Number of employees .. .. .	939	1,325	33	201	102	(a)	2,600
Actual horse-power of engines used .. .. .	66	95	2	9	2	(a)	174
Approx. value of land and buildings .. .. .	£ 197,298	205,823	1,470	21,040	13,270	(a)	438,901
Approx. value of plant and machinery .. .. .	£ 7,086	22,560	216	1,411	515	(a)	31,797
Wages paid .. .. .	£ 94,855	136,358	3,714	17,052	10,173	(a)	262,152
Value of fuel used .. .. .	£ 1,460	3,123	8	438	126	(a)	5,155
Value of materials used .. .. .	£ 199,514	252,345	2,061	23,294	13,866	(a)	491,580
Total value of output .. .. .	£ 376,593	472,016	8,296	48,209	27,010	(a)	932,154
Value of production .. .. .	£ 175,619	216,048	6,227	24,477	13,048	(a)	435,419

(a) Included in Dressmaking.

(ii) *Development in Australia, 1926–27 to 1930–31.* The development of dressmaking and millinery establishments in Australia for the past five years is shown in the following table :—

## DRESSMAKING AND MILLINERY ESTABLISHMENTS.—AUSTRALIA.

Items.	1926–27.	1927–28.	1928–29.	1929–30.	1930–31.
Number of factories .. .. .	912	916	897	816	724
Number of employees .. .. .	15,051	15,019	(a) 14,778	(a) 12,709	(a) 10,396
Actual horse-power of engines used .. .. .	906	898	1,182	971	907
Approx. value of land and buildings .. .. .	£ 2,498,532	2,596,384	2,570,963	2,310,358	1,904,825
Approx. value of plant and machinery .. .. .	£ 171,235	170,653	175,151	157,951	151,460
Wages paid .. .. .	£ 1,507,373	1,525,947	1,532,734	1,399,256	1,066,438
Value of fuel used .. .. .	£ 22,171	25,054	24,056	23,842	20,657
Value of materials used .. .. .	£ 2,840,827	2,500,753	2,724,074	2,501,600	1,993,968
Total value of output .. .. .	£ 5,294,399	5,034,713	5,227,620	4,753,906	3,680,918
Value of production .. .. .	£ 2,431,401	2,418,906	2,478,590	2,228,464	1,666,293

(a) See § 9. 1.

27. *Printing and Binding Works.*—(i) *Details for each State, 1930–31.* Printing and binding works rank high in importance among the industries of Australia, and in 1930–31 afforded employment for about 24,000 employees, and paid more than £5,000,000 in salaries and wages, while the value of output amounted to £12,880,000.

The following table gives particulars of establishments engaged in general printing and bookbinding in each State for the year 1930-31. Government printing works are included, but establishments producing newspapers and periodicals are shown separately in the next table.

## GENERAL PRINTING AND BOOKBINDING ESTABLISHMENTS, 1930-31.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	263	351	65	91	59	14	843
Number of employees ..	5,008	5,210	1,683	1,421	649	255	14,226
Actual horse-power of engines used ..	3,651	4,154	710	1,270	591	144	10,523
Approx. value of land and buildings ..	£ 1,484,344	£ 1,120,008	£ 355,036	£ 620,394	£ 205,074	£ 37,527	£ 4,122,383
Approx. value of plant and machinery ..	£ 1,132,035	£ 985,770	£ 206,173	£ 455,712	£ 181,807	£ 37,500	£ 2,998,997
Wages paid ..	£ 969,626	£ 917,862	£ 294,661	£ 266,066	£ 125,709	£ 47,690	£ 2,621,614
Value of fuel used ..	£ 27,518	£ 25,815	£ 8,428	£ 10,032	£ 3,824	£ 2,184	£ 80,831
Value of materials used ..	£ 908,995	£ 825,192	£ 210,230	£ 268,168	£ 100,286	£ 22,519	£ 2,335,390
Total value of output ..	£ 2,479,696	£ 2,352,385	£ 722,092	£ 668,984	£ 297,385	£ 94,601	£ 6,615,953
Value of production ..	£ 1,543,153	£ 1,498,378	£ 504,244	£ 390,784	£ 193,275	£ 69,898	£ 4,199,732

## ESTABLISHMENTS PRODUCING NEWSPAPERS AND PERIODICALS, 1930-31.

Items.	N.S.W.	Vic.	Q'land.	S. Aust. (a)	W.A.	Tas.	Australia.
Number of establishments ..	220	122	71	..	33	7	453
Number of employees ..	3,297	2,115	1,591	..	549	362	7,914
Actual horse-power of engines used ..	5,792	3,337	2,217	..	1,088	343	12,777
Approx. value of land and buildings ..	£ 1,820,267	£ 784,790	£ 492,313	..	£ 207,517	£ 83,757	£ 3,388,644
Approx. value of plant and machinery ..	£ 1,609,136	£ 804,695	£ 403,903	..	£ 159,003	£ 83,697	£ 3,060,434
Wages paid ..	£ 956,573	£ 577,946	£ 348,791	..	£ 158,153	£ 90,422	£ 2,131,885
Value of fuel used ..	£ 44,906	£ 20,064	£ 20,669	..	£ 7,237	£ 3,630	£ 102,506
Value of materials used ..	£ 946,576	£ 734,044	£ 255,036	..	£ 127,106	£ 60,758	£ 2,123,520
Total value of output ..	£ 2,648,134	£ 1,500,393	£ 858,866	..	£ 366,287	£ 187,900	£ 5,561,570
Value of production ..	£ 1,656,652	£ 740,285	£ 583,151	..	£ 231,944	£ 123,512	£ 3,335,544

(a) Included in General Printing and Bookbinding.

28. **Motor Vehicles and Cycles.**—The industries catering for the motor trade are now included in Class IV.—Industrial Metals, Machines, Implements and Conveyances. An amendment of the statistical classification now permits the separation of the assembling and repairing of motors from the body building section. Returns in regard to assembling and repairing are shown hereunder for the year 1930-31:—

## ASSEMBLING AND REPAIRING OF MOTOR VEHICLES AND CYCLES, 1930-31.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	848	778	111	116	167	71	2,091
Number of employees ..	3,941	3,285	803	731	566	376	9,702
Actual horse-power of engines used ..	3,383	2,623	527	651	632	240	8,056
Approx. value of land and buildings ..	£ 2,189,484	£ 1,361,479	£ 335,055	£ 467,497	£ 336,221	£ 187,224	£ 4,876,960
Approx. value of plant and machinery ..	£ 386,637	£ 314,752	£ 68,386	£ 90,442	£ 81,020	£ 25,157	£ 966,394
Wages paid ..	£ 683,673	£ 532,044	£ 141,098	£ 102,170	£ 97,922	£ 57,447	£ 1,614,354
Value of fuel used ..	£ 42,545	£ 36,936	£ 7,546	£ 6,276	£ 5,967	£ 4,290	£ 103,560
Value of materials used ..	£ 780,716	£ 50,492	£ 25,051	£ 77,945	£ 56,622	£ 18,627	£ 1,009,453
Total value of output ..	£ 1,949,409	£ 933,767	£ 385,367	£ 248,815	£ 221,133	£ 102,508	£ 3,840,999
Value of production ..	£ 1,126,148	£ 846,339	£ 352,770	£ 164,594	£ 158,544	£ 79,591	£ 2,727,986

Particulars in regard to motor body building for the year 1930-31 are as follows:—

**MOTOR BODY BUILDING, 1930-31.**

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	43	61	14	14	28	..	160
Number of employees .. ..	454	987	167	1,022	147	..	2,777
Actual horse-power of engines used	510	1,426	128	1,815	146	..	4,025
Approx. value of land and buildings .. .. £	208,566	610,430	49,693	534,983	69,469	..	1,473,141
Approx. value of plant and machinery .. .. £	26,569	529,205	12,597	742,004	16,300	..	1,326,675
Wages paid .. .. £	74,497	206,377	17,183	190,607	20,358	..	509,022
Value of fuel used .. .. £	2,764	7,476	774	8,253	1,396	..	20,663
Value of materials used .. .. £	64,693	223,643	16,251	201,949	19,311	..	525,847
Total value of output .. .. £	176,046	522,007	46,882	483,518	58,242	..	1,286,695
Value of production .. .. £	108,589	290,888	29,857	273,316	37,535	..	740,185

The output of motor bodies for Australia is shown in the next table.

**MOTOR BODIES PRODUCED IN AUSTRALIA.**

Items.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
Motor Bodies—(a)					
Number .. ..	88,876	58,955	72,193	46,409	10,417
Value .. .. £	4,830,014	3,436,674	4,357,841	3,118,987	864,209

(a) Excluding Queensland and Tasmania.

29. Furniture and Cabinet Making and Billiard Table Making Factories.—These industries constitute the principal manufactures in Class XI. The following table gives particulars for each State:—

**BILLIARD TABLES, FURNITURE AND CABINET MAKING AND UPHOLSTERY FACTORIES, 1930-31.**

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	215	306	74	52	63	35	745
Number of employees .. ..	1,941	2,008	975	461	382	245	6,012
Actual horse-power of engines used	3,607	3,441	1,036	1,648	991	450	11,173
Approx. value of land and buildings .. .. £	621,833	620,619	164,303	105,479	116,455	39,211	1,667,900
Approx. value of plant and machinery .. .. £	200,048	181,321	75,607	68,389	39,544	18,798	583,707
Wages paid .. .. £	350,690	277,702	169,606	64,574	60,069	29,645	952,286
Value of fuel used .. .. £	16,391	15,630	7,602	3,916	2,600	2,044	48,183
Value of materials used .. .. £	461,158	406,499	205,966	38,292	96,992	23,983	1,282,890
Total value of output .. .. £	988,840	895,596	461,565	182,185	195,356	75,102	2,798,644
Value of production .. .. £	511,291	473,467	247,997	89,977	95,764	49,075	1,467,571

30. Electric Light and Power Works.—The increased demand for electrical energy has been responsible for considerable development in electric light and power works during recent years. Since 1926-27 the production of electric light and power has increased from 2,194,000,000 to 2,446,000,000 British units, or by more than 11 per cent. The value of land and buildings and plant and machinery remained practically the same

as for the year 1929-30, indicating that no new works of importance were completed during 1930-31. Particulars for the year 1930-31 are as follow :—

**ELECTRIC LIGHT AND POWER WORKS, 1930-31.**

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	126	91	41	40	53	6	357
Number of employees ..	1,846	1,162	772	1,006	336	83	5,205
Actual horse-power of engines used	456,673	221,767	137,675	121,489	55,397	77,250	1,070,251
Approx. value of land and buildings .. £	4,564,534	1,928,180	365,189	600,624	219,405	28,270	7,706,202
Approx. value of plant and machinery .. £	9,931,602	6,411,935	2,342,865	1,972,575	947,321	3,199,658	24,805,956
Wages paid .. £	532,582	305,443	187,595	254,785	84,693	20,099	1,385,197
Value of fuel used .. £	1,344,286	508,619	184,397	166,657	244,627	927	2,449,513
Total value of output .. £	5,200,072	1,605,138	945,897	988,073	576,644	231,642	9,547,466

31. **Gas Works.**—(i) *Details for each State, 1930-31.* Gas works are in operation in the majority of important towns in Australia. New South Wales returned nine coke factories and Queensland one, working as separate industries, but under the new classification these have been excluded from Class XVI. and included in Class I. The subjoined table gives particulars of gas works in each State for the year 1930-31 :—

**GAS WORKS, 1930-31.**

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	47	37	16	6	5	2	113
Number of employees ..	1,396	822	317	633	106	86	3,360
Actual horse-power of engines used	4,962	3,049	905	2,350	225	156	11,647
Approx. value of land and buildings .. £	895,887	437,015	150,354	43,031	82,045	49,243	1,657,575
Approx. value of plant and machinery .. £	3,061,255	1,834,881	643,414	1,199,768	174,958	163,531	7,077,807
Wages paid .. £	389,795	220,627	81,072	165,319	27,174	22,502	906,489
Value of fuel used .. £	196,837	127,511	15,212	44,456	15,060	5,294	404,370
Value of materials used .. £	824,651	252,724	138,994	187,856	70,763	28,877	2,003,865
Total value of output .. £	2,453,032	1,633,839	590,144	626,517	161,922	84,514	5,549,968
Value of production .. £	1,431,544	753,604	435,938	394,205	76,099	50,343	3,141,733

(ii) *Coal Used and Production, 1930-31.* The following table gives details for the year 1930-31 :—

**GAS WORKS.—COAL USED AND PRODUCTION, 1930-31.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
<b>COAL USED.</b>							
Coal .. .. tons	551,634	334,874	87,667	87,672	20,674	13,561	1,096,082
<b>PRODUCTS.</b>							
Gas .. 1,000 cubic feet	9,784,531	5,869,257	1,305,930	1,327,436	423,549	181,996	18,892,699
Coke .. .. tons	370,234	211,224	54,680	51,126	12,316	4,288	703,868
<b>VALUE.</b>							
Gas .. .. £	1,786,933	1,324,075	531,438	490,097	135,400	68,287	4,336,230
Coke .. .. £	385,726	311,719	41,145	89,754	18,933	9,590	856,867

The production of gas increased from 19,478,569 cubic feet in 1926-27 to 20,929,569 cubic feet in 1929-30, but fell to 18,892,700 cubic feet in 1930-31.

## CHAPTER XXV.

## WATER CONSERVATION AND IRRIGATION.

## § 1. Artesian Water.

1. **General.**—In every country subject to droughts, the provision of adequate systems of water conservation is a matter of prime importance. Much has been done in Australia so far as the supply of water to centres of population is concerned, and a description of the principal water-works in each State will be found in Chapter IV., "Local Government".

Interstate Conferences on the subject of artesian water were held in 1912, 1914, 1921, 1924, and 1928, when combined Governmental action was agreed upon with reference to delimitation of the artesian basins, hydrographic surveys, reason for decrease in flow, analyses and utilization of artesian water, etc. A map showing the extent of the known artesian basins will be found on page 761.

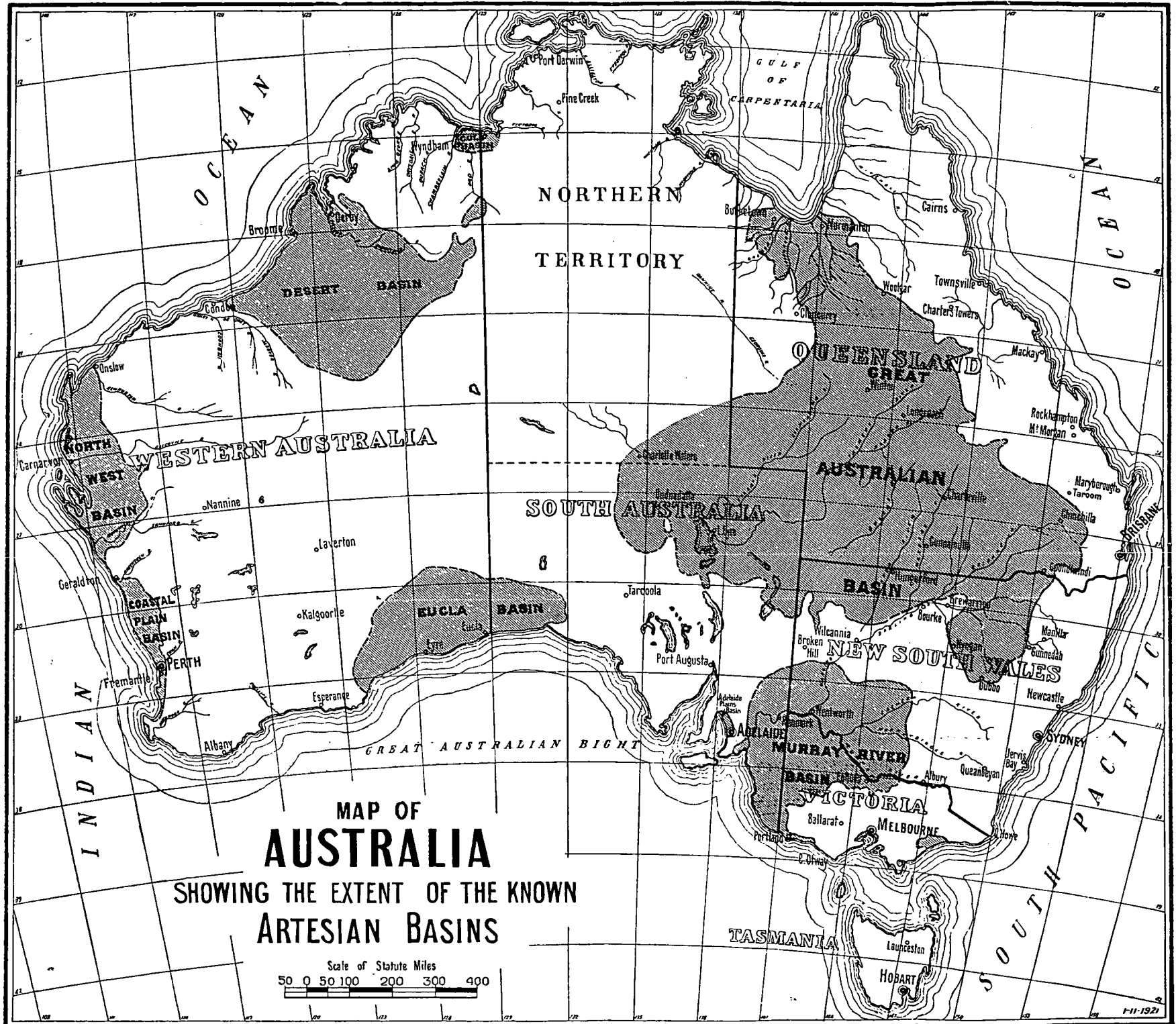
2. **The Great Australian Artesian Basin.**—The area known as the "Great Australian Artesian Basin," includes (a) considerably more than one-half of Queensland, taking in practically all that State lying west of the Great Dividing Range, with the exception of an area in the north-west contiguous to the Northern Territory; (b) a considerable strip of New South Wales along its northern boundary and west of the Great Dividing Range; and (c) the north-eastern part of South Australia proper, together with the extreme south-eastern corner of the Northern Territory. This basin (shown approximately by the map on page 761) is said to be the largest yet discovered, and measures about 600,000 square miles, of which 376,000 square miles are in Queensland, 118,000 square miles in South Australia, 80,000 square miles in New South Wales, and 25,000 square miles in the Northern Territory. The area of the intake beds is estimated at 60,010 square miles, viz., 50,000 square miles in Queensland and 10,010 square miles in New South Wales. A description of the basin and its geological formation will be found in previous issues of the Year Book (see No. 6, p. 569).

3. **The Western Australian Basins.**—The Western Australian Basins fall naturally within five distinct groups, viz., the Eucla Basin, in the extreme south-east of the State, extending well into South Australia along the shores of the Great Australian Bight; the Coastal Plain Basin, west of the Darling Range; the North-West Basin, between the Murchison and Ashburton Rivers; the Gulf Basin, between Cambridge Gulf and Queen's Channel; and the Desert Basin, between the De Grey and Fitzroy Rivers.

The Recent and Tertiary strata which enter Western Australia at its eastern border, and which have a prevailing dip towards the Great Australian Bight, form the Eucla artesian water area. Where boring operations have been undertaken, the water has been found to be salt or brackish, and there are other conditions affecting the supply, such as local variations in the thickness of the beds, their relative porosity, and the unevenness of the floor upon which they rest, which, so far, have not been examined with sufficient thoroughness to enable many particulars to be given in regard to this basin.

In the Coastal Plain Basin to the west of the Darling Ranges, artesian boring has, on the other hand, been carried on successfully for many years.

4. **The Murray River Basin.**—The Murray River basin extends over south-western New South Wales, north-western Victoria, and south-eastern South Australia. It is bounded on the west by the azoic and palæozoic rocks of the Mount Lofty and other



This map was included in the Report of the Third Interstate Conference on Artesian Water held in Adelaide during September, 1921. The area has been slightly extended since the year named. See also letterpress on page 760.

ranges extending northwards from near the mouth of the Murray to the Barrier Range, and on the east and north-east by the ranges of Victoria and New South Wales. This tertiary water-basin is occupied by a succession of sedimentary formations, both porous and impervious. It is of interest to note that the waters of the Murray River are partly supplied by influx from the water-bearing beds of this basin; this is proved by the fact that, at low water, springs are observed at certain places flowing into the river bed from beneath the limestone cliffs from Pyap Bend downwards. Similar springs exist along the courses of other branches of the River Murray system, where they cut through the tertiary formation. On the Victorian side, bores have been put down, and water has been struck at various levels.

5. **Plutonic or Meteoric Waters.**—In previous Year Books will be found a statement of the theory of Professor Gregory\* as to the origin of the water in the Australian artesian basins, together with the objections held thereto by a former Government Geologist of New South Wales.† (See Official Year Book No. 6, p. 570).

6. **Artesian and Sub-Artesian Bores.**—(i) *General.* The following table gives particulars regarding artesian and sub-artesian bores in each State and in the Northern Territory :—

#### ARTESIAN AND SUB-ARTESIAN BORES, 1930-31.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust. (c)	W. Aust.	N. Ter.	Total.
Bores existing . . . No.	575	380	41,424	207	245	191	3,022
Total depth of existing bores . . . feet	940,484	101,200	4,159,902	122,657	224,849	62,375	5,611,467
Daily flow . . . 1,000 gals.	475,795	(b)	4281,836	412,971	72,142	7,723	6450,467
Depth at which artesian water was struck—							
Maximum . . . feet	4,338	1,190	6,000	4,851	3,325	1,760	6,000
Minimum . . . feet	100	125	10	233	39	42	10
Temperature of flow—							
Maximum . . . °Fahr.	142	(b)	212	208	140	(b)	212
Minimum . . . °Fahr.	94	(b)	78	82	75	(b)	74

(a) Flowing bores only. (b) Not available. (c) Government bores only. (d) Total depth of all bores. (e) Incomplete.

(ii) *Details for States.*—Considerations of space preclude the insertion of separate particulars of operations in the States during the year 1930-31. Details for earlier years will, however, be found in issues of the Official Year Book prior to No. 24, 1931.

## § 2. Irrigation.

1. **General.**—Australia's first experiments in irrigation were made with the object of bringing under cultivation areas in which an inadequate rainfall rendered agricultural and even pastoral occupations precarious and intermittent, and, although these original settlements have generally proved fairly successful, most of the States, instead of promoting new settlement in unoccupied regions, are adopting the policy of making existing settlements closer, by repurchasing large estates, subdividing them into holdings of suitable sizes for cultivation, and selling the land upon easy terms of payment. It is in connexion with this Closer Settlement policy that the special value of irrigation is recognized. Information regarding the various irrigation schemes in operation was given in some detail in preceding issues of the Official Year Book (See No. 23, pages 637 to 661).

\* See J. W. Gregory, F.R.S., D.Sc.: "The Dead Heart of Australia," London, John Murray, 1906; and "The Flowing Wells of Central Australia," Geogr. Journ., July and August, 1911.

† E. F. Pittman, A.R.S.M., formerly Government Geologist of New South Wales: "Problems of the Artesian Water Supply of Australia, with special reference to Professor Gregory's Theory." (Clarke Memorial Lecture, delivered before the Royal Society of New South Wales, 31st October, 1907); "The Great Australian Artesian Basin," Sydney, 1914; and "The Composition and Porosity of the Intake Beds of the Great Australian Artesian Basin," Sydney, 1915.

2. Areas Irrigated.—The following table gives the area irrigated in each State during the years 1921–22 to 1930–31. Victoria shows the largest irrigated acreage, the area so returned in 1930–31 amounting to 463,098 acres, or 68.0 per cent. of the total for Australia. New South Wales for the same year returned an area of 135,121 acres, or 19.8 per cent. of the total. The areas under irrigation in the remaining States are relatively very small.

## IRRIGATION.—AREAS IRRIGATED.

Season.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1921–22	35,481	287,907	11,264	22,636	2,535	10,500	370,323
1922–23	46,273	359,727	14,314	26,307	2,772	7,059	447,452
1923–24	57,242	324,558	18,417	27,866	3,035	7,402	438,520
1924–25	73,432	373,593	18,235	35,373	3,126	7,267	512,876
1925–26	83,795	343,683	21,669	36,409	3,551	7,361	496,470
1926–27	89,528	406,532	38,044	35,443	3,756	7,882	581,185
1927–28	102,533	477,500	21,411	38,379	4,292	7,016	651,131
1928–29	123,129	471,695	25,344	39,236	4,907	7,051	(a)671,475
1929–30	126,321	566,577	26,282	40,002	4,943	6,603	770,818
1930–31	135,121	463,098	26,947	43,538	5,661	6,488	680,853

(a) Including 100 acres, Northern Territory and 10 acres, Federal Capital Territory.

3. Crops on Irrigated Areas.—A classification of the crops grown on the irrigated areas in each State during the year 1930–31, together with the averages for Australia during the quinquennium 1925–26 to 1929–30, will be found in the table hereunder. Lucerne, grasses and green forage accounted for 52 per cent., cereals for 23 per cent., orchards and vineyards for 19 per cent., and root crops, market gardens, &c., for about 6 per cent. of the total area under irrigation in 1930–31.

## IRRIGATION.—CROPS ON IRRIGATED AREAS, 1930–31 AND 1925–26 TO 1929–30.

Crop.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Total.	Average 1925–26 to 1929–30.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Cereals	82,172	(a)76,141	12	..	133	..	158,458	131,383
Lucerne, Grasses and Green Forage	21,029	311,192	123	13,582	1,727	4,904	352,557	333,959
Orchards and Vineyards	24,956	68,426	4,252	26,816	2,509	451	127,410	125,077
Root Crops, Market Gardens and other Crops	6,964	7,339	(b)22,560	3,140	1,292	(c) 1,133	42,428	43,796
Total	135,121	463,098	26,947	43,538	5,661	6,488	680,853	634,215

(a) Including Fallow, 6,447 acres.

(b) Including Sugar Cane, 21,102 acres, and Cotton, 1,258 acres.

(c) Including Hops, 964 acres.



CHAPTER XXVI.—LABOUR, WAGES, AND PRICES.

A.—PRICES.

§ 1. Wholesale Prices.

1. General.—The results of an investigation into wholesale prices in Melbourne from 1871 to the end of September, 1912, were given in some detail in Report No. 1 of the Labour and Industrial Branch. Since 1912, a monthly index-number has been published. Details of monthly figures are to be found in the Labour Reports and in the Quarterly Summaries of Australian Statistics issued by this Bureau.

2. Index-Numbers.—The index-numbers for eight groups of commodities and for all groups together are shown in the following table, with the prices in the year 1911 as base. The index-numbers are not comparable horizontally.

INDEX-NUMBERS.—WHOLESALE PRICES, MELBOURNE.

(Base 1911 = 1,000.)

Year.	I. Metals and Coal.	II. Jute, Leather, Wool, etc.	III. Agri- cultural Produce, etc.	IV. Dairy Produce.	V. Gro- ceries.	VI. Meat.	VII. Building Materials.	VIII. Chem- icals.	All Com- modities together.
1861	.. 1,438	1,381	1,583	1,008	1,963	..	1,070	2,030	1,538
1871	.. 1,996	1,257	1,236	864	1,586	..	1,044	1,499	1,229
1881	.. 1,178	1,115	1,012	935	1,421	..	1,091	1,587	1,121
1891	.. 895	847	1,024	995	1,032	888	780	1,194	945
1901	.. 1,061	774	928	1,029	1,048	1,345	841	917	974
1902	.. 1,007	756	1,193	1,215	945	1,447	837	881	1,051
1903	.. 923	834	1,209	1,059	936	1,443	875	921	1,049
1904	.. 821	885	754	876	916	1,427	845	875	890
1905	.. 772	850	894	980	942	1,209	801	859	910
1906	.. 882	978	916	972	923	1,110	896	864	948
1907	.. 1,037	1,017	973	1,020	948	1,294	968	961	1,021
1908	.. 1,033	901	1,312	1,198	968	1,335	935	891	1,115
1909	.. 1,014	907	1,000	1,119	978	1,088	911	815	993
1910	.. 1,004	1,052	969	1,100	999	1,008	996	898	1,003
1911	.. 1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1912	.. 1,021	991	1,370	1,206	1,052	1,357	1,057	978	1,172
1913	.. 1,046	1,070	1,097	1,054	1,024	1,252	1,128	995	1,086
1914	.. 1,099	1,032	1,207	1,137	1,021	1,507	1,081	1,253	1,149
1915	.. 1,284	1,017	2,162	1,530	1,133	2,435	1,275	1,528	1,604
1916	.. 1,695	1,423	1,208	1,485	1,322	2,515	1,491	1,760	1,504
1917	.. 2,129	2,008	1,157	1,423	1,343	2,403	1,884	2,171	1,662
1918	.. 2,416	2,360	1,444	1,454	1,422	2,385	2,686	3,225	1,934
1919	.. 2,125	2,363	1,985	1,651	1,516	2,348	2,851	2,898	2,055
1920	.. 2,298	2,624	2,439	2,209	1,918	3,279	3,226	2,825	2,480
1921	.. 2,173	1,362	1,767	2,000	1,976	2,158	2,733	2,303	1,903
1922	.. 1,942	1,681	1,628	1,648	1,869	1,787	2,005	1,965	1,758
1923	.. 1,826	2,148	1,778	1,837	1,746	2,579	2,025	1,933	1,944
1924	.. 1,835	2,418	1,647	1,655	1,721	2,223	1,815	1,806	1,885
1925	.. 1,852	1,967	1,797	1,636	1,723	2,212	1,711	1,790	1,844
1926	.. 1,938	1,582	2,001	1,784	1,731	1,931	1,665	1,816	1,832
1927	.. 1,962	1,650	1,826	1,823	1,724	2,111	1,624	1,866	1,817
1928	.. 1,912	1,781	1,726	1,751	1,707	2,015	1,744	1,923	1,792
1929	.. 1,912	1,556	1,792	1,853	1,690	2,246	1,754	1,942	1,803
1930	.. 1,866	1,127	1,484	1,627	1,666	2,025	1,875	1,982	1,596
1931	.. 1,826	1,039	1,121	1,399	1,794	1,508	2,025	2,166	1,428

NOTE.—The figures given in this table are comparable in the vertical columns, but are not directly comparable horizontally. The index-numbers are reversible.

The index-numbers up to the year 1911 are based on the prices of eighty commodities, but since that year the number has been increased to ninety-two.\* The commodities taken into account are given in detail in each annual Labour Report, with the average prices for the year. The commodities included are chiefly basic foods and raw materials, so that the index is more akin to the "Economist" or "Statist" index-numbers in England than to the official index-numbers of the United States or of Canada. The prices are weighted according to the estimates of Australian consumption per head in the years 1901 to 1911. For this purpose data were incomplete, and consumption in the State of Victoria was the basis for a number of commodities. The prices for farm and station products have been taken from market reports, and those of other commodities from trade journals or from information supplied by representative firms.

**3. Revision of the Index.**—Changes that have taken place since 1912 have altered considerably the relative consumption of different commodities. New commodities which should be taken into account have come into use, and in a number of other respects, the index-number requires revision. It is, moreover, desirable, to give index-numbers for different classes of commodities, for farm products and for manufactured goods, and again for imported commodities and for those produced in Australia. Revision on these lines is now proceeding, and it is hoped that results will be ready for publication in the course of the year 1933.

## § 2. Retail Prices and House Rents.

**1. Introduction.**—Reference must be made generally to the annual Labour Reports for explanations and full tables of retail price index-numbers. In Report No. 1 (1912) will be found a general description of method, which is summarized in succeeding issues. Report No. 9, Appendix I. (1919) contains an extensive memorandum on price indexes by the late Sir George Knibbs.

**2. Index-Numbers.**—There are several index-numbers of retail prices, covering different ranges of commodities. They may be grouped as follows:—

(a) *Food and Groceries*, subdivided into groceries, dairy produce and meat.

Index-numbers are computed monthly for five representative towns in each State (the "30 towns"), for Canberra, and for a few other special towns (see para. 5). Index-numbers are computed annually in November for 200 towns, including those referred to above (see § 4, following).

(b) *Food and Housing*. Figures for rents are collected as at the middle of each quarter and combined with food prices to give a quarterly index of food and rent. For the 30 towns, there are two index-numbers, one taking into account the rents of houses of four and five rooms only, and the other rents of all houses, commonly called the Arbitration Court index. The first is usually given with the period 1923-1927 as base, and the second with 1911 as base. For the 200 towns, four-roomed and five-roomed houses are used separately, but the base is 1911.

(c) *All Household Expenditure*. Since 1919, prices have been collected quarterly in the "30 towns" for other household expenditure in two groups, "Clothing" and "Miscellaneous", the latter including household gear, fuel, light, tobacco and a number of other items. These prices are combined with food prices and rents (four and five-roomed houses) to give the "all-items" index of retail prices. The base is the period 1923 to 1927 (see § 3 following).

For all these index-numbers full information is given in the annual Labour Reports. The latest available information is to be found in the Quarterly Summaries of Australian Statistics.

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\* In the computation of the index-numbers for years prior to 1911, the aggregate expenditure on 80 commodities in 1911 is taken as base (= 1,000), while for later years the aggregate expenditure on 92 commodities is taken.

3. Food and Housing : Six Capital Cities.—(i) *Food and Groceries.* The index-numbers for the three groups comprising groceries and food are shown in the following table.

RETAIL PRICE INDEX-NUMBERS, FOOD AND GROCERIES.—CAPITAL CITIES.

(Base : 1923-27 (= 1,000).)

City.	1907.	1911.	1914.	1921.	1927.	1928.	1929.	1930.	1931.
Sydney .. .. .	523	533	646	1,062	1,032	1,021	1,090	984	876
Melbourne .. .. .	517	523	610	1,063	969	942	1,004	913	791
Brisbane .. .. .	530	569	603	1,014	940	935	951	844	778
Adelaide .. .. .	532	570	679	1,066	1,030	993	1,055	937	789
Perth .. .. .	670	753	728	1,116	1,004	1,053	1,084	961	836
Hobart .. .. .	565	592	678	1,133	1,000	966	1,025	952	816
Weighted Average (a) ..	533	559	640	1,064	1,000	985	1,044	941	826

(a) For all capital cities.

(ii) *Housing.* In issues of the Official Year Book prior to No. 19, the computations of index-numbers of housing accommodation were based upon the rentals of all houses from under four rooms to seven rooms and over. Since 1920, houses of four and five rooms only have been taken into account, in accordance with a resolution of the Conference of Statisticians at Adelaide in 1924. The following table is on this basis, but the old index is still computed for the use of the Commonwealth Arbitration Court (see Appendix).

INDEX-NUMBERS.—HOUSING,(a) CAPITAL CITIES.

(Base : 1923-27 (= 1,000).)

City.	1907.	1911.	1914.	1921.	1927.	1928.	1929.	1930.	1931.
Sydney .. .. .	593	701	760	989	1,109	1,143	1,162	1,197	1,026
Melbourne .. .. .	455	569	628	820	1,046	1,087	1,094	1,011	867
Brisbane .. .. .	283	373	466	630	832	839	841	775	680
Adelaide .. .. .	510	706	655	809	942	1,022	986	916	755
Perth .. .. .	458	524	589	739	922	941	955	979	881
Hobart .. .. .	405	452	518	881	966	939	932	914	901
Weighted Average (b) ..	497	612	662	862	1,030	1,066	1,073	1,047	901

(a) 4 and 5 roomed houses. (b) For all capital cities.

(iii) *Food, Groceries, and Housing (4 and 5-roomed Houses) combined.* The following table shows the index-numbers for groceries, food, and house rent (4 and 5-roomed houses) for each capital city, the weighted average cost for the six capitals in the five-yearly period 1923-1927 being taken as base (= 1,000) :—

RETAIL PRICE INDEX-NUMBERS—FOOD, GROCERIES, AND HOUSING.(a)—CAPITAL CITIES.

City.	1907.	1911.	1914.	1921.	1927.	1928.	1929.	1930.	1931.
Sydney .. .. .	548	606	687	1,036	1,060	1,064	1,115	1,059	929
Melbourne .. .. .	495	539	616	977	995	993	1,036	948	818
Brisbane .. .. .	442	500	554	877	902	901	912	819	743
Adelaide .. .. .	524	618	671	975	999	1,003	1,030	929	777
Perth .. .. .	594	672	679	982	975	1,013	1,038	968	852
Hobart .. .. .	508	542	621	1,044	988	956	992	939	846
Weighted Average (b) ..	520	578	648	992	1,011	1,014	1,054	978	852

(a) 4 and 5 roomed houses. (b) For all capital cities.

4. Retail Price Index-Numbers in Terms of Currency.—The tables previously given are now converted into money units by substituting 20s. od. for the base of 1,000. The figures for the last six quarters are added to the yearly figures. The figures show the sums which would have to be paid in each city and in each year in order to purchase such quantities of the several commodities, and such housing as would in the aggregate cost £1, according to the weighted average prices and rents in the six capitals in the five-yearly base period—1923-1927.

RETAIL PRICES.—AMOUNTS NECESSARY ON THE AVERAGE IN EACH YEAR FROM 1907 TO 1932 TO PURCHASE IN EACH CAPITAL CITY WHAT WOULD COST ON THE AVERAGE £1 IN THE FIVE-YEARLY BASE PERIOD—1923-1927 IN THE AUSTRALIAN CAPITALS REGARDED AS A WHOLE.

Year.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Weighted Average of 6 Capital Cities.
FOOD AND GROCERIES (46 COMMODITIES).							
1907 .. ..	s. d. 10 6	s. d. 10 4	s. d. 10 7	s. d. 10 8	s. d. 13 5	s. d. 11 4	s. d. 10 8
1911 .. ..	11 1	10 6	11 5	11 5	15 1	11 10	11 2
1914 .. ..	12 11	12 2	12 1	13 7	14 7	13 7	12 10
1921 .. ..	21 3	21 3	20 3	21 4	22 4	22 8	21 3
1927 .. ..	20 8	19 5	18 10	20 7	20 1	20 0	20 0
1928 .. ..	20 5	18 10	18 8	19 10	21 1	19 4	19 8
1929 .. ..	21 10	20 1	19 0	21 1	21 8	20 6	20 11
1930 .. ..	19 8	18 3	16 11	18 9	16 3	19 1	18 10
1931 .. ..	17 6	15 10	15 7	15 9	16 9	16 4	16 6
1931 { 1st Quarter ..	18 0	16 8	16 0	16 8	17 7	17 3	17 2
2nd " ..	17 9	15 10	15 9	16 2	17 4	16 6	16 9
3rd " ..	17 2	15 4	15 2	15 1	16 1	15 8	16 1
4th " ..	17 3	15 4	15 2	15 2	15 10	15 10	16 1
1932 { 1st Quarter ..	17 5	15 9	15 3	15 9	16 6	16 3	16 5
2nd " ..	17 3	15 5	14 11	15 7	16 8	16 3	16 2

HOUSING ACCOMMODATION (WEIGHTED AVERAGE—4 AND 5 ROOMED HOUSES).

1907 .. ..	11 10	9 1	5 8	10 2	9 2	8 1	9 11
1911 .. ..	14 0	11 5	7 6	14 1	10 6	9 0	12 3
1914 .. ..	15 2	12 7	9 4	13 1	11 9	10 4	13 3
1921 .. ..	19 9	16 5	12 7	16 2	14 9	17 7	17 3
1927 .. ..	22 2	20 11	16 8	18 10	18 5	19 4	20 7
1928 .. ..	22 10	21 9	16 9	20 5	18 10	18 9	21 4
1929 .. ..	23 3	21 11	16 10	19 9	19 1	18 8	21 6
1930 .. ..	23 11	20 3	15 6	18 4	19 7	18 3	20 11
1931 .. ..	20 6	17 4	13 7	15 1	17 7	18 0	18 0
1931 { 1st Quarter ..	22 2	18 1	13 10	16 2	18 6	18 4	19 1
2nd " ..	21 2	17 6	13 9	15 2	18 0	18 6	18 4
3rd " ..	20 3	16 11	13 7	14 8	17 4	17 9	17 8
4th " ..	18 7	16 10	13 2	14 5	16 8	17 7	16 11
1932 { 1st Quarter ..	18 3	16 7	13 0	13 11	16 4	17 3	16 7
2nd " ..	18 1	16 5	12 11	13 11	16 3	17 7	16 5

FOOD, GROCERIES, AND HOUSING (4 AND 5 ROOMS ONLY) COMBINED.

1907 .. ..	11 0	9 11	8 10	10 6	11 11	10 2	10 5
1911 .. ..	12 1	10 9	10 0	12 4	13 5	10 10	11 7
1914 .. ..	13 9	12 4	11 1	13 5	13 7	12 5	13 0
1921 .. ..	20 9	19 6	17 6	19 6	19 8	20 11	19 10
1927 .. ..	21 2	19 11	18 0	20 0	19 6	19 9	20 3
1928 .. ..	21 3	19 10	18 0	20 1	20 3	19 1	20 3
1929 .. ..	22 4	20 9	18 3	20 7	20 9	19 10	21 1
1930 .. ..	21 2	18 11	16 5	18 7	19 4	18 9	19 7
1931 .. ..	18 7	16 4	14 10	15 7	17 1	16 11	17 1
1931 { 1st Quarter ..	19 6	17 2	15 2	16 6	17 11	17 8	17 10
2nd " ..	19 0	16 5	15 1	15 10	17 7	17 2	17 4
3rd " ..	18 3	15 11	14 7	14 11	16 7	16 5	16 8
4th " ..	17 8	15 11	14 7	14 11	16 2	16 5	16 5
1932 { 1st Quarter ..	17 8	16 0	14 5	15 1	16 6	16 7	16 6
2nd " ..	17 6	15 9	14 2	15 1	16 6	16 8	16 3

5. Food and Housing, Thirty Towns.—The following table shows the food and housing index-numbers for five representative towns (not necessarily the largest) in each State for the years 1929 to 1931. It shows also the amount of each index-number which is due to food and the amount due to housing.

INDEX-NUMBERS, THIRTY TOWNS, SHOWING RELATIVE EXPENDITURE ON FOOD AND GROCERIES AND ON HOUSING (4 AND 5 ROOMS) SEPARATELY, AND ON THESE ITEMS COMBINED.

(Basis of Table—Weighted Average Expenditure on Food, Groceries, and Housing (4 and 5 Rooms) in the Six Capital Cities in the Five-yearly Base Period—1923-1927 = 1,000.)

Town.	1929.			1930.			1931.		
	Food and Groceries.	Housing, 4 and 5-roomed houses.	Food, Groceries and Housing.	Food and Groceries.	Housing, 4 and 5-roomed Houses.	Food, Groceries, and Housing.	Food and Groceries.	Housing, 4 and 5-roomed Houses.	Food, Groceries, and Housing.
<b>NEW SOUTH WALES—</b>									
Sydney .. .. .	703	112	1,115	635	424	1,050	565	364	929
Newcastle .. .. .	684	384	1,068	628	370	998	560	317	877
Broken Hill .. .. .	830	248	1,073	763	258	1,021	652	249	901
Goulburn .. .. .	706	440	1,146	631	419	1,050	544	338	882
Bathurst .. .. .	675	312	987	622	347	969	553	316	869
Weighted Average ..	705	405	1,110	637	415	1,052	567	350	923
<b>VICTORIA—</b>									
Melbourne .. .. .	648	388	1,036	589	359	948	510	308	818
Ballarat .. .. .	664	250	914	614	247	861	526	220	746
Bendigo .. .. .	672	290	962	618	266	884	532	232	764
Geelong .. .. .	651	334	985	586	314	900	504	280	793
Warrnambool .. .. .	639	301	940	602	307	909	523	292	815
Weighted Average ..	649	377	1,026	591	349	940	512	300	812
<b>QUEENSLAND—</b>									
Brisbane .. .. .	614	298	912	544	275	819	502	241	743
Toowoomba .. .. .	600	255	855	546	258	804	493	223	716
Rockhampton .. .. .	652	225	877	589	243	832	544	221	765
Charters Towers .. .. .	711	264	975	624	255	879	582	223	805
Warwick .. .. .	627	240	867	566	237	803	515	230	745
Weighted Average ..	620	286	906	552	269	821	508	237	745
<b>SOUTH AUSTRALIA—</b>									
Adelaide .. .. .	681	349	1,030	604	325	929	509	268	777
Kadina, &c. .. .. .	734	157	891	669	141	810	561	142	793
Port Pirie .. .. .	717	246	963	658	253	911	551	239	790
Mount Gambier .. .. .	667	199	860	596	208	804	500	207	707
Peterborough .. .. .	752	290	1,042	674	287	961	557	254	811
Weighted Average ..	685	335	1,020	609	313	922	513	261	774
<b>WESTERN AUSTRALIA—</b>									
Perth, &c. .. .. .	699	339	1,038	620	348	968	539	313	852
Kalgoorlie, &c. .. .. .	817	193	1,010	734	207	941	641	233	874
Northam .. .. .	746	326	1,072	672	320	992	570	302	872
Bunbury .. .. .	757	239	996	690	278	968	572	274	846
Geraldton .. .. .	741	349	1,090	681	377	1,058	593	367	960
Weighted Average ..	715	321	1,036	636	331	967	552	305	857
<b>TASMANIA—</b>									
Hobart .. .. .	662	330	992	614	325	939	526	320	846
Launceston .. .. .	642	295	937	605	286	891	524	276	800
Burnie .. .. .	695	277	972	646	258	904	545	252	797
Devonport .. .. .	670	260	930	605	275	880	533	258	791
Queenstown .. .. .	735	185	920	689	201	890	603	212	815
Weighted Average ..	660	310	970	615	304	919	529	299	828
Weighted Average for 30 Towns .. .. .	676	368	1,044	610	360	970	536	311	847
Weighted Average 6 Capital Cities .. .. .	673	381	1,054	607	371	978	533	319	852

### § 3. Variations in the Cost of Food, Groceries, Rent, Clothing, and Miscellaneous Expenditure.

1. **General.**—The index-numbers in § 2 show the variations in the cost of food, groceries and house rent. The expenditure on these items covers approximately 60 per cent. of the total expenditure of the ordinary household. The balance is expended on clothing, boots, fuel, light, and such miscellaneous items as renewals of furniture, furnishings, drapery, crockery, lodge dues, trade union dues, recreation, newspapers, etc. The Royal Commission on the Basic Wage in 1920 recommended in its report that a method should be adopted of ascertaining from time to time the rise and fall in the purchasing-power of money in its relation to the total household expenditure. The Government adopted the recommendation, and the duty of carrying out the necessary investigations was entrusted to the Bureau of Census and Statistics, which adopted the methods hereunder described.

2. **Methods Adopted.**—After careful investigation it was decided to adopt for food, groceries, and house rent, the commodities, method, and weighting used by this Bureau. The commodities and quantities adopted for food and groceries conform very closely to those given in the Indicator Lists of the Commission. With regard to rent, the Commission adopted a certain type of five-roomed house as its standard for determining the amount allowed for housing. The investigations made by this Bureau are not confined to a particular type of house, but the average rentals paid for houses of four and five rooms are taken. The results can be used with safety to show the variations in the type of house described by the Commission.

The investigations of this Bureau advisedly had been confined to food, groceries, and house rent, and it was necessary, therefore, to make investigations into the cost of clothing and miscellaneous expenditure. With regard to clothing, the Basic Wage Commission collected a large amount of information as to prices and life of articles, and this has been utilized in computing the index-numbers given in the following tables.

With regard to Miscellaneous Expenditure, which covers a very wide field, inquiries were made as to variations in cost of fuel and light, household utensils, drapery, crockery, etc., also with regard to other items included in the Indicator Lists for Miscellaneous Expenditure, and the aggregate expenditure on these items has been computed in the same manner as that for clothing.

3. **Period Selected as Base.**—For the new series of index-numbers November, 1914, was adopted as base, owing to the difficulty of securing information with regard to prices of clothing and miscellaneous items for earlier years. Prior to and including the 4th Quarter, 1929, the index-numbers were computed to this base, but in accordance with the decision of the Conference of Statisticians to adopt a post-war period as base, the index-numbers since 1st Quarter, 1930, have been computed to the five-yearly period—1923–1927—as base (= 1,000), and the figures for past years have been re-computed to the same base.

4. **Variations in Cost in the Capital Cities.**—The following table gives the combined index (sometimes called the "all-items" index) for all household expenditure, for the capital cities of the States.

#### INDEX-NUMBERS, TOTAL HOUSEHOLD EXPENDITURE, CAPITAL CITIES.

(NOTE.—Weighted average cost in the five-yearly period—1923–1927—for all items in the six capital cities taken as base = 1,000.)

Cities.	November.		Year.						1st Quarter 1932.
	1914.	1921.	1923–27. Base.	1927.	1928.	1929.	1930.	1931.	
Sydney	712	1,046	1,020	1,029	1,012	1,073	1,026	922	883
Melbourne	671	1,003	990	990	992	1,017	956	846	829
Brisbane	611	923	927	922	917	923	859	798	777
Adelaide	699	989	1,019	1,018	1,027	1,037	952	837	816
Perth	707	1,008	986	984	1,012	1,026	977	885	853
Hobart	687	1,070	1,031	998	980	1,000	956	875	852
Weighted Average	687	1,013	1,000	1,002	1,009	1,033	975	873	846

### § 4. Retail Price Index-Numbers, 200 Towns.

1. **General.**—To supplement the information collected each month for the 30 towns specified in § 2.5 *ante*, a special investigation was initiated in November, 1913, into retail price index-numbers in 70 additional towns. This investigation was repeated in November, 1914, and again in November, 1915, when the number of additional towns was increased to 120. In November, 1923, the number of additional towns was further increased to 170, and it is intended to institute inquiries in November in each year, thus making information available annually for 200 towns. The results of the first investigation were published in Labour Bulletin No. 5 (Section IV., pages 26 to 33), where a description was given of the methods adopted in making the investigation and in computing the index-numbers. The results of the succeeding yearly investigations have appeared in the Labour Bulletins and Reports of this Bureau.

2. **Detailed Results, 1929 to 1931.**—The results of the investigations made in November, 1929, to 1931, are set out in the following table. Column B gives the food-and-rent index for a four-roomed house; column C the food-and-rent index for a five-roomed house. Column A gives the part in these two index-numbers which is due to food (and groceries) alone. The base is the weighted average for the six capitals, in 1911, of food-and-rent (all houses), so that the index-numbers cannot be compared with those given elsewhere for the same towns.

**INDEX-NUMBERS.—COST OF FOOD AND GROCERIES, AND OF FOOD, GROCERIES AND HOUSING IN 200 TOWNS, COMPARED WITH THE WEIGHTED AVERAGE COST OF FOOD, GROCERIES, AND RENT FOR ALL HOUSES IN THE SIX CAPITAL CITIES IN 1911 AS BASE (= 1,000).**

State and Town.	1929. November.			1930. November.			1931. November.		
	Food and Groceries only.	Food, Groceries and Rent of 4-Roomed Houses.	Food, Groceries, and Rent of 5-Roomed Houses.	Food and Groceries only.	Food, Groceries, and Rent of 4-Roomed Houses.	Food, Groceries, and Rent of 5-Roomed Houses.	Food and Groceries only.	Food, Groceries, and Rent of 4-Roomed Houses.	Food, Groceries, and Rent of 5-Roomed Houses.
	A	B	C	A	B	C	A	B	C
<b>New SOUTH WALES—</b>									
Sydney .. ..	1,186	1,751	1,897	980	1,537	1,682	913	1,375	1,471
Newcastle .. ..	1,159	1,649	1,852	956	1,453	1,602	889	1,277	1,388
Broken Hill .. ..	1,406	1,772	1,892	1,169	1,551	1,671	1,031	1,339	1,459
Goulburn .. ..	1,200	1,801	1,939	944	1,491	1,582	852	1,288	1,355
Bathurst .. ..	1,140	1,519	1,616	930	1,339	1,446	879	1,213	1,300
Albury .. ..	1,161	1,822	1,962	930	1,536	1,653	873	1,343	1,461
Armidale .. ..	1,127	1,603	1,701	937	1,375	1,463	885	1,290	1,363
Ballina .. ..	1,191	1,684	1,809	1,000	1,395	1,527	880	1,226	1,364
Bega .. ..	1,181	1,506	1,622	957	1,313	1,431	954	1,322	1,427
Berry .. ..	1,175	1,504	1,635	973	1,302	1,394	899	1,215	1,288
Blackheath .. ..	1,272	1,733	1,812	1,036	1,463	1,582	943	1,321	1,425
Bourke .. ..	1,374	1,611	1,684	1,089	1,418	1,484	1,018	1,380	1,478
Bowral .. ..	1,219	1,794	1,956	991	1,478	1,636	938	1,320	1,431
Casino .. ..	1,164	1,690	1,836	916	1,443	1,574	888	1,327	1,414
Cessnock .. ..	1,164	1,503	1,576	935	1,307	1,420	874	1,179	1,254
Colar .. ..	1,312	1,510	1,519	1,119	1,333	1,386	1,008	1,224	1,293
Cooma .. ..	1,256	1,599	1,816	1,053	1,382	1,571	1,026	1,335	1,473
Coomamble .. ..	1,250	1,614	1,753	1,033	1,388	1,523	984	1,302	1,408
Cootamundra .. ..	1,166	1,712	1,866	942	1,446	1,615	900	1,383	1,510
Corrimal .. ..	1,159	1,613	1,751	974	1,459	1,510	929	1,350	1,447
Cowra .. ..	1,189	1,680	1,817	899	1,347	1,504	887	1,262	1,362
Cronulla .. ..	1,275	1,827	1,998	1,060	1,601	1,710	934	1,390	1,480
Deniliquin .. ..	1,208	1,583	1,734	1,053	1,516	1,667	893	1,274	1,380
Dulibo .. ..	1,196	1,854	1,941	913	1,604	1,673	858	1,441	1,549
Forbes .. ..	1,196	1,781	1,990	918	1,512	1,632	879	1,391	1,459
Gilgandra .. ..	1,268	1,643	1,692	979	1,321	1,436	912	1,223	1,295
Glen Innes .. ..	1,112	1,546	1,697	881	1,302	1,427	877	1,243	1,366
Grafton .. ..	1,060	1,516	1,705	876	1,404	1,574	873	1,291	1,461
Grenfell .. ..	1,173	1,568	1,766	961	1,395	1,553	918	1,327	1,428
Griffith .. ..	1,293	2,214	2,441	1,083	2,021	2,251	1,011	1,807	1,998

INDEX-NUMBERS.—COST OF FOOD, GROCERIES, AND HOUSING IN 200 TOWNS, ETC.—*continued.*

State and Town.	1929. November.			1930. November.			1931. November.		
	Food and Groceries only.	Food, Groceries, and Rent of 4-Roomed Houses.	Food, Groceries, and Rent of 5-Roomed Houses.	Food and Groceries only.	Food, Groceries, and Rent of 4-Roomed Houses.	Food, Groceries, and Rent of 5-Roomed Houses.	Food and Groceries only.	Food, Groceries, and Rent of 4-Roomed Houses.	Food, Groceries, and Rent of 5-Roomed Houses.
<b>NEW SOUTH WALES—<i>continued.</i></b>									
	A	B	C	A	B	C	A	B	C
Gulgong .. .. .	1,207	1,512	1,622	982	1,344	1,431	893	1,169	1,241
Gunnedah .. .. .	1,131	1,567	1,684	897	1,349	1,401	861	1,246	1,336
Hay .. .. .	1,273	1,677	1,871	1,026	1,420	1,618	966	1,297	1,439
Inverell .. .. .	1,255	1,682	1,737	930	1,445	1,522	943	1,351	1,463
Junee .. .. .	1,205	1,869	1,896	963	1,587	1,687	943	1,495	1,584
Katoomba .. .. .	1,250	1,848	1,980	1,048	1,691	1,778	984	1,537	1,641
Kempsey .. .. .	1,037	1,517	1,607	837	1,226	1,403	866	1,227	1,361
Kiama .. .. .	1,211	1,612	1,724	1,027	1,373	1,601	983	1,279	1,509
Kurri Kurri .. .. .	1,163	1,510	1,603	978	1,372	1,442	884	1,176	1,273
Leeton .. .. .	1,284	2,003	2,060	1,018	1,724	1,788	965	1,571	1,656
Lismore .. .. .	1,111	1,676	1,837	959	1,485	1,691	877	1,282	1,483
Lithgow .. .. .	1,196	1,643	1,716	981	1,412	1,506	898	1,237	1,289
Maitland .. .. .	1,142	1,504	1,609	919	1,311	1,441	870	1,201	1,315
Moree .. .. .	1,243	1,712	1,973	1,004	1,596	1,793	977	1,515	1,573
Moss Vale .. .. .	1,191	1,787	1,868	959	1,439	1,584	894	1,250	1,399
Mudgee .. .. .	1,196	1,701	1,802	898	1,424	1,490	888	1,305	1,415
Narrabri .. .. .	1,205	1,658	1,799	1,009	1,486	1,607	920	1,309	1,395
Narrandera .. .. .	1,205	1,730	1,961	1,053	1,580	1,744	1,010	1,486	1,598
Nowra .. .. .	1,198	1,659	1,761	1,019	1,446	1,571	972	1,323	1,410
Orange .. .. .	1,147	1,700	1,873	960	1,503	1,656	892	1,303	1,407
Parkes .. .. .	1,213	1,761	1,912	916	1,436	1,549	903	1,284	1,386
Penrith .. .. .	1,145	1,592	1,698	926	1,334	1,456	851	1,179	1,269
Port Kembla .. .. .	1,216	1,777	1,920	1,023	1,549	1,689	952	1,355	1,478
Portland .. .. .	1,234	1,641	1,763	1,024	1,418	1,484	941	1,204	1,276
Queanbeyan .. .. .	1,235	1,690	1,781	986	1,432	1,525	950	1,363	1,470
Quirindi .. .. .	1,169	1,493	1,686	1,046	1,352	1,596	984	1,258	1,450
Richmond .. .. .	1,140	1,535	1,732	944	1,372	1,519	847	1,233	1,329
Scone .. .. .	1,077	1,537	1,675	941	1,415	1,533	943	1,371	1,466
Singleton .. .. .	1,148	1,543	1,684	976	1,419	1,568	913	1,282	1,370
Tamworth .. .. .	1,109	1,537	1,725	889	1,336	1,474	848	1,231	1,337
Taree .. .. .	1,149	1,682	1,833	960	1,509	1,625	924	1,393	1,475
Temora .. .. .	1,222	1,782	1,913	1,005	1,565	1,663	932	1,458	1,599
Tenterfield .. .. .	1,199	1,642	1,673	954	1,408	1,494	858	1,222	1,313
Tumut .. .. .	1,136	1,639	1,778	938	1,465	1,629	926	1,420	1,552
Umarra .. .. .	1,126	1,508	1,653	973	1,427	1,565	939	1,378	1,465
Wagga Wagga .. .. .	1,182	1,911	1,923	937	1,627	1,792	898	1,424	1,560
Walcha .. .. .	1,198	1,666	1,758	962	1,302	1,488	921	1,250	1,379
Wellington .. .. .	1,237	1,598	1,704	945	1,274	1,379	900	1,229	1,368
Weston .. .. .	1,157	1,618	1,684	957	1,333	1,425	868	1,159	1,257
Windsor .. .. .	1,142	1,622	1,767	941	1,501	1,583	881	1,341	1,440
Wollongong .. .. .	1,173	1,724	1,785	985	1,508	1,640	928	1,376	1,457
Wyalong .. .. .	1,236	1,631	1,697	997	1,359	1,425	892	1,205	1,260
Yass .. .. .	1,247	1,765	1,896	1,032	1,593	1,602	912	1,306	1,394
Young .. .. .	1,204	1,769	1,862	1,008	1,556	1,666	908	1,350	1,457
Weighted Average for State (74 Towns) .. .. .	1,187	1,727	1,871	978	1,513	1,652	912	1,354	1,453
<b>VICTORIA—</b>									
Melbourne .. .. .	1,084	1,647	1,795	895	1,380	1,518	812	1,246	1,360
Ballarat .. .. .	1,127	1,440	1,624	923	1,213	1,407	834	1,095	1,279
Bendigo .. .. .	1,130	1,503	1,651	908	1,241	1,383	853	1,149	1,268
Geelong .. .. .	1,099	1,572	1,691	903	1,305	1,448	813	1,181	1,368
Warrnambool .. .. .	1,103	1,537	1,698	928	1,363	1,526	850	1,259	1,429
Ararat .. .. .	1,161	1,551	1,695	969	1,360	1,535	871	1,216	1,378
Bacchus Marsh .. .. .	1,153	1,613	1,686	980	1,421	1,559	887	1,316	1,423
Bairnsdale .. .. .	1,167	1,528	1,732	984	1,350	1,544	912	1,209	1,401
Beechworth .. .. .	1,178	1,481	1,517	990	1,287	1,352	923	1,219	1,285
Benalla .. .. .	1,151	1,546	1,592	935	1,305	1,385	859	1,242	1,306



INDEX-NUMBERS.—COST OF FOOD, GROCERIES, AND HOUSING IN 200 TOWNS, ETC.—*continued.*

State and Town.	1929. November.			1930. November.			1931. November.		
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	A	B	C	A	B	C	A	B	C
<b>VICTORIA—<i>continued.</i></b>									
Camperdown .. ..	1,135	1,549	1,705	1,017	1,435	1,593	891	1,286	1,424
Casterton .. ..	1,113	1,508	1,639	936	1,265	1,462	880	1,235	1,340
Castlemaine .. ..	1,108	1,397	1,527	941	1,170	1,342	867	1,120	1,228
Colac .. ..	1,102	1,683	1,771	912	1,481	1,576	851	1,318	1,453
Creswick .. ..	1,115	1,234	1,293	930	1,128	1,141	842	974	1,000
Daylesford .. ..	1,076	1,372	1,438	938	1,218	1,279	831	1,087	1,175
Dunolly .. ..	1,118	1,272	1,361	920	1,081	1,150	854	1,002	1,058
Echuca .. ..	1,113	1,548	1,715	934	1,294	1,460	843	1,189	1,294
Euroa .. ..	1,156	1,504	1,666	1,023	1,354	1,508	850	1,416	1,238
Hamilton .. ..	1,162	1,633	1,774	1,038	1,511	1,596	864	1,287	1,410
Healesville .. ..	1,173	1,504	1,594	942	1,245	1,327	822	1,105	1,194
Horsham .. ..	1,218	1,731	1,885	948	1,395	1,611	875	1,265	1,401
Kerang .. ..	1,155	1,748	1,870	969	1,495	1,627	842	1,306	1,434
Koroit .. ..	1,102	1,362	1,448	937	1,213	1,279	880	1,143	1,209
Korumburra .. ..	1,153	1,614	1,679	899	1,376	1,508	855	1,223	1,364
Kyneton .. ..	1,122	1,458	1,583	947	1,341	1,447	847	1,163	1,294
Lilydale .. ..	1,179	1,567	1,732	970	1,383	1,484	874	1,240	1,361
Maffra .. ..	1,106	1,561	1,763	959	1,520	1,670	851	1,240	1,371
Maldon .. ..	1,124	1,279	1,325	961	1,093	1,145	888	1,019	1,072
Maryborough .. ..	1,160	1,524	1,623	921	1,264	1,359	847	1,123	1,222
Mildura .. ..	1,217	1,843	2,000	1,000	1,584	1,804	915	1,458	1,652
Morwell .. ..	1,115	1,628	1,723	964	1,455	1,567	858	1,279	1,371
Nhill .. ..	1,248	1,748	1,906	971	1,366	1,557	884	1,213	1,345
Orbost .. ..	1,182	1,560	1,757	989	1,371	1,575	917	1,272	1,373
Portland .. ..	1,162	1,475	1,656	967	1,305	1,434	886	1,217	1,325
Port Fairy .. ..	1,109	1,409	1,507	948	1,211	1,333	895	1,154	1,270
St. Arnaud .. ..	1,206	1,535	1,812	1,038	1,357	1,538	896	1,225	1,357
Sale .. ..	1,110	1,450	1,661	960	1,266	1,507	867	1,217	1,355
Seymour .. ..	1,186	1,581	1,673	969	1,371	1,479	915	1,247	1,375
Shepparton .. ..	1,172	1,785	1,874	960	1,502	1,659	856	1,266	1,432
Stawell .. ..	1,232	1,550	1,721	993	1,305	1,414	900	1,199	1,314
Swan Hill .. ..	1,139	1,819	1,929	937	1,521	1,792	845	1,371	1,592
Terang .. ..	1,137	1,480	1,683	984	1,340	1,537	937	1,304	1,459
Traralgon .. ..	1,082	1,489	1,643	931	1,322	1,483	842	1,197	1,267
Wangaratta .. ..	1,195	1,636	1,832	967	1,461	1,592	854	1,316	1,418
Warracknabeal .. ..	1,210	1,676	1,838	947	1,332	1,495	875	1,220	1,362
Warragul .. ..	1,075	1,573	1,746	922	1,428	1,633	830	1,344	1,513
Wonthaggi .. ..	1,088	1,468	1,614	922	1,323	1,442	842	1,232	1,359
Weighted Average for State (48 Towns) .. ..	1,096	1,623	1,770	905	1,366	1,507	822	1,235	1,356
<b>QUEENSLAND—</b>									
Brisbane .. ..	1,010	1,409	1,542	818	1,164	1,281	815	1,125	1,235
Toowoomba .. ..	1,010	1,310	1,475	835	1,112	1,297	791	1,102	1,173
Rockhampton .. ..	1,074	1,355	1,474	886	1,195	1,310	892	1,178	1,261
Charters Towers .. ..	1,122	1,521	1,561	945	1,311	1,360	937	1,222	1,286
Warwick .. ..	1,042	1,392	1,452	856	1,185	1,262	827	1,156	1,222
AYR .. ..	1,197	1,688	1,771	996	1,404	1,522	967	1,423	1,481
Barcoladine .. ..	1,265	1,669	1,728	1,062	1,447	1,569	1,078	1,447	1,543
Bowen .. ..	1,197	1,592	1,731	1,002	1,355	1,490	982	1,344	1,447
Bundaberg .. ..	1,011	1,384	1,478	877	1,203	1,298	875	1,167	1,212
Cairns .. ..	1,192	1,766	1,904	947	1,483	1,698	937	1,421	1,574
Charleville .. ..	1,181	1,604	1,839	1,005	1,487	1,742	968	1,435	1,626
Chillagoe .. ..	1,279	1,542	1,595	1,168	1,379	1,431	1,194	1,392	1,451
Cloncurry .. ..	1,310	1,705	1,836	1,141	1,540	1,658	1,059	1,409	1,591
Cooktown .. ..	1,249	1,440	1,499	1,169	1,367	1,452	1,050	1,247	1,313
Cunnamulla .. ..	1,251	1,711	1,803	1,054	1,501	1,580	982	1,399	1,464

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State and Town.	1929. November.			1930. November.			1931. November.		
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	A	B	C	A	B	C	A	B	C
<b>QUEENSLAND—continued.</b>									
Dalby .. .. .	1,099	1,415	1,570	872	1,227	1,464	872	1,240	1,370
Gayndah .. .. .	1,161	1,477	1,556	960	1,262	1,361	971	1,287	1,373
Gladstone .. .. .	1,105	1,414	1,499	948	1,245	1,369	878	1,192	1,289
Goondiwindi .. .. .	1,187	1,603	1,648	990	1,385	1,425	938	1,333	1,373
Gympie .. .. .	1,100	1,464	1,525	886	1,234	1,362	878	1,185	1,269
Hughenden .. .. .	1,287	1,748	1,868	1,082	1,516	1,595	1,060	1,494	1,595
Innisfail .. .. .	1,328	1,940	2,118	1,017	1,544	1,708	999	1,576	1,681
Ipswich .. .. .	1,027	1,357	1,457	855	1,159	1,246	838	1,004	1,183
Longreach .. .. .	1,266	1,575	1,776	1,066	1,371	1,607	1,092	1,408	1,566
Mackay .. .. .	1,147	1,707	1,851	956	1,442	1,547	951	1,368	1,478
Maryborough .. .. .	1,106	1,418	1,619	876	1,238	1,428	887	1,216	1,347
Mount Morgan .. .. .	1,189	1,321	1,387	970	1,102	1,168	963	1,128	1,161
Nambour .. .. .	1,120	1,485	1,610	923	1,289	1,406	911	1,240	1,319
Roma .. .. .	1,145	1,531	1,705	941	1,321	1,461	922	1,253	1,373
Stanthorpe .. .. .	1,135	1,531	1,595	935	1,369	1,461	901	1,335	1,454
Townsville .. .. .	1,158	1,631	1,730	917	1,372	1,456	984	1,399	1,460
Winton .. .. .	1,286	1,746	1,834	1,064	1,380	1,498	1,063	1,374	1,503
Weighted Average for State (32 Towns) .. .. .	1,057	1,439	1,564	863	1,211	1,330	859	1,178	1,276
<b>SOUTH AUSTRALIA—</b>									
Adelaide .. .. .	1,124	1,619	1,740	894	1,323	1,443	793	1,152	1,274
Kadina, etc. .. .. .	1,235	1,432	1,475	998	1,186	1,226	879	1,068	1,112
Port Pirie .. .. .	1,198	1,569	1,675	986	1,361	1,490	862	1,207	1,310
Mount Gambier .. .. .	1,102	1,360	1,465	902	1,160	1,281	802	1,047	1,192
Peterborough .. .. .	1,258	1,664	1,780	977	1,389	1,461	872	1,188	1,329
Freeling .. .. .	1,112	1,441	1,556	892	1,207	1,319	832	1,095	1,161
Gawler .. .. .	1,134	1,428	1,520	882	1,177	1,264	831	1,114	1,182
Kapunda .. .. .	1,172	1,418	1,435	937	1,147	1,182	813	1,008	1,080
Kooringa .. .. .	1,164	1,493	1,559	959	1,275	1,354	891	1,094	1,251
Millicent .. .. .	1,052	1,477	1,559	875	1,279	1,358	842	1,207	1,280
Murray Bridge .. .. .	1,128	1,506	1,613	899	1,250	1,340	791	1,054	1,153
Port Augusta .. .. .	1,323	1,710	1,790	1,086	1,503	1,583	941	1,278	1,298
Quorn .. .. .	1,287	1,561	1,654	1,005	1,294	1,378	871	1,156	1,210
Victor Harbour .. .. .	1,153	1,734	1,898	925	1,479	1,626	869	1,329	1,467
Renmark .. .. .	1,287	1,780	1,923	1,116	1,577	1,752	951	1,345	1,477
Weighted Average for State (15 Towns) .. .. .	1,136	1,601	1,717	907	1,317	1,431	805	1,150	1,266
<b>WESTERN AUSTRALIA—</b>									
Perth and Fremantle .. .. .	1,095	1,567	1,721	902	1,363	1,502	839	1,259	1,358
Kalgoorlie and Boulder .. .. .	1,279	1,580	1,657	1,080	1,398	1,493	1,038	1,475	1,509
Northam .. .. .	1,186	1,619	1,803	987	1,434	1,571	907	1,341	1,453
Bunbury .. .. .	1,229	1,566	1,677	995	1,416	1,502	881	1,300	1,341
Geraldton .. .. .	1,198	1,678	1,881	969	1,541	1,700	951	1,462	1,629
Albany .. .. .	1,195	1,513	1,616	983	1,337	1,409	961	1,289	1,349
Beverley .. .. .	1,187	1,493	1,549	987	1,307	1,382	921	1,250	1,342
Bridgetown .. .. .	1,266	1,649	1,693	1,072	1,427	1,516	1,042	1,359	1,437
Broome .. .. .	1,456	1,932	2,114	1,325	1,801	1,983	1,276	1,752	1,934
Carnarvon .. .. .	1,347	1,808	1,956	1,188	1,683	1,774	1,117	1,606	1,670
Collie .. .. .	1,234	1,712	1,817	999	1,462	1,568	906	1,277	1,375
Greenbushes .. .. .	1,234	1,477	1,550	1,046	1,250	1,342	1,020	1,197	1,243
Katanning .. .. .	1,173	1,565	1,745	929	1,323	1,494	891	1,252	1,391
Leonora and Gwalia .. .. .	1,412	1,609	1,675	1,247	1,444	1,510	1,135	1,397	1,464
Meekatharra .. .. .	1,378	1,642	1,734	1,229	1,466	1,624	1,098	1,467	1,592
Narrogin .. .. .	1,173	1,711	1,826	943	1,491	1,601	884	1,315	1,421
Wagin .. .. .	1,124	1,535	1,606	1,007	1,434	1,464	970	1,282	1,367
York .. .. .	1,130	1,466	1,568	940	1,275	1,377	864	1,193	1,272
Weighted Average for State (18 Towns) .. .. .	1,132	1,576	1,719	937	1,378	1,508	875	1,292	1,384

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<b>TASMANIA—</b>									
Hobart .. .. .	1,096	1,573	1,712	932	1,390	1,557	834	1,281	1,419
Launceston .. .. .	1,087	1,492	1,692	911	1,308	1,474	826	1,212	1,359
Burnie .. .. .	1,163	1,586	1,731	994	1,355	1,489	881	1,267	1,348
Devonport .. .. .	1,116	1,565	1,603	935	1,379	1,402	844	1,265	1,329
Queenstown .. .. .	1,215	1,527	1,557	1,068	1,387	1,444	961	1,288	1,369
Beaconsfield .. .. .	1,052	1,144	1,183	919	997	1,050	871	977	1,003
Campbelltown .. .. .	1,079	1,266	1,315	971	1,183	1,238	884	1,116	1,151
Deloraine .. .. .	1,019	1,393	1,440	881	1,213	1,276	823	1,113	1,218
Franklin .. .. .	1,118	1,328	1,381	950	1,187	1,239	952	1,162	1,215
New Norfolk .. .. .	1,067	1,382	1,461	923	1,292	1,318	832	1,148	1,214
Scottsdale .. .. .	1,084	1,374	1,466	913	1,209	1,286	787	1,090	1,151
Ulverstone .. .. .	1,080	1,409	1,511	883	1,217	1,348	841	1,150	1,269
Zeehan .. .. .	1,293	1,490	1,523	1,103	1,301	1,334	1,002	1,200	1,233
Weighted Average for State (13 Towns) .. .. .	1,102	1,529	1,666	935	1,349	1,492	843	1,246	1,371
Weighted Average for Australia (200 Towns) .. .. .	1,133	1,634	1,773	932	1,400	1,535	864	1,271	1,378

By deducting the index-number in column A from those in column B or C, the relative aggregate expenditure on housing accommodation can be ascertained. Thus for November, 1931, the index-number for food and groceries in Melbourne (column A) is 812. Subtracting this from 1,246 (column B) gives a difference of 434, which is the relative cost of house rent for houses of 4 rooms, and from 1,360 (column C) gives a difference of 548, which is the relative cost of house rent for houses of 5 rooms. Similarly the relative cost of housing accommodation can be ascertained for each of the towns included.

**B.—WAGES.**

**§ 1. Operations under Wages Board and Industrial Arbitration Acts.**

1. *General.*—Particulars of the operations of Wages Boards and Industrial and Arbitration Courts under the Commonwealth and State Acts for the regulation of wages, hours, and conditions of labour were first compiled for the year 1913, and reviews to the end of each annual period appear in Labour Reports and Quarterly Summaries to the 31st December, 1931.

2. Awards, Determinations, Industrial Agreements.—The following table gives a summary for each of the years 1927 to 1931 :—

**AWARDS AND DETERMINATIONS MADE AND INDUSTRIAL AGREEMENTS FILED.**

State.	1927.		1928.		1929.		1930.		1931.	
	Awards or Determinations made.	Agreements Filed.	Awards or Determinations made.	Agreements Filed.	Awards or Determinations made.	Agreements Filed.	Awards or Determinations made.	Agreements Filed.	Awards or Determinations made.	Agreements Filed.
New South Wales .. .. .	163	33	93	36	55	27	31	16	46	40
Victoria .. .. .	74	..	73	..	46	..	83	..	204	..
Queensland .. .. .	56	18	34	27	21	16	14	44	48	28
South Australia .. .. .	15	4	14	4	13	9	17	1	64	15
Western Australia .. .. .	6	57	19	28	15	29	8	38	7	10
Tasmania .. .. .	4	..	10	3	4	2	10	1	31	3
Commonwealth Court Commonwealth Public Service Arbitrator .. .. .	34	25	40	30	29	26	17	10	11	16
	1	..	6	..	4	..	5	..	1	..
Total .. .. .	353	137	289	128	187	109	185	110	412	112

3. Boards Authorized, Awards, etc., in Force.—(i) *Totals for Australia.* The following table gives particulars at the dates specified for all States of Boards authorized, and including operations under the Commonwealth and State Arbitration Acts, of the number of awards, determinations, and industrial agreements in force :—

**BOARDS AUTHORIZED, AWARDS, ETC.—AUSTRALIA.**

Dates.	Boards Authorized.	Boards which had made Awards or Determinations.	Awards or Determinations in Force.(a)	Industrial Agreements in Force.
31st December, 1913 .. .. .	505	387(b)	575(c)	401
31st December, 1915 .. .. .	573	498	663	546
31st December, 1920 .. .. .	475	440	1,041	972
31st December, 1925 .. .. .	575	524	1,181	607
31st December, 1930 .. .. .	644	582	1,285	601
31st December, 1931 .. .. .	651	583	1,317	614

(a) Including awards made by Arbitration Courts and the Commonwealth Public Service Arbitrator. (b) Owing to the fact that a number of awards under the New South Wales Industrial Disputes Act (1908) were still in force, the Boards constituted for such industries under the Industrial Arbitration Act (1912) had not made any awards. (c) Excluding awards or determinations which expired in New South Wales (under the Act of 1908) on 31st December, 1913.

Considerable expansion of the principle of the fixation of a legal minimum rate of wage and of working conditions took place during the period under review. At the end of 1931, the number of awards or determinations and industrial agreements\* in force had increased by 742 and 213 respectively over the number in force at the 31st December, 1913.

\* The registration of industrial agreements is not provided for under the Victorian Act, but such agreements may be registered and filed under the provisions of the Commonwealth Conciliation and Arbitration Act, and are operative within the State.

(ii) *Summary for States.* The following table gives particulars for each State and the Commonwealth of the number of Boards authorized, etc., for the years specified :—

**BOARDS AUTHORIZED, AWARDS, ETC.—SUMMARY, 1913, AND 1931.**

Particulars.	At 31st Dec.	Commonwealth.		N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
		Court.	Pub. Ser. Arb.							
<i>Industrial and Wages—</i>										
Boards authorized ..	{ 1913 ..	..	..	216	135	75	56	..	23	505
	{ 1931 ..	..	..	(a) 316	186	2	76	17	54	651
Boards which have made Determinations ..	{ 1913 ..	..	..	123	123	74	47	..	19	386
	{ 1931 ..	..	..	277	175	2	66	12	51	583
<i>Awards and Determinations—</i>										
In force ..	{ 1913 ..	17	..	265	127	73	54	18	21	575
	{ 1931 ..	152	43	477	177	267	71	79	51	1,317
<i>Industrial Agreements—</i>										
In force ..	{ 1913 ..	228	..	75	..	5	11	82	..	401
	{ 1931 ..	140	..	134	..	130	30	175	5	614
<i>Commonwealth Court Awards—</i>										
Number in force in each State ..	{ 1913 ..	..	..	13	17	15	16	9	13	..
	{ 1931 ..	..	..	98	109	30	77	32	63	..
<i>Commonwealth Agreements—</i>										
Number in force in each State ..	{ 1913 ..	..	..	132	129	68	62	57	61	..
	{ 1931 ..	..	..	37	62	12	23	12	35	..
<i>Commonwealth Public Service Arbitrator—</i>										
Number of Determinations in force in each State ..	1931 ..	..	..	38	35	30	32	29	29	..

(a) Under Industrial Arbitration Act, (1926), Conciliation Committees have been appointed, and at the end of 1931, 184 Committees were in force.

**§ 2. Rates of Wage and Hours of Labour.**

1. *General.*—The collection of information respecting the current rates of wage payable in different callings and in occupations in various industries was first undertaken by the Bureau in the early part of the year 1913. The particulars are obtained primarily from awards, determinations and agreements, under Commonwealth and State Industrial Acts, and therefore are the minimum rates prescribed. They refer generally to the capital city in each State, but in industries which obviously are not carried on in the capital cities, e.g., mining, agriculture, etc., the rates in the more important centres are taken. In cases where no award, determination, or agreement is in force, particulars are taken of the ruling union or predominant rate. During recent years the number of predominant rates of wage included in the tabulations has been reduced considerably, since most of the industries and occupations are now covered by awards, determinations, or industrial agreements.

The index-numbers for male adult workers are computed with the weighted average wage in 1911 as base (= 1,000) in order that comparisons might more readily be made between these index-numbers and the retail price index-numbers (food, groceries and rent—all houses) which are also computed to the year 1911 as base. In the case of females, however, it has not been possible to secure information for years prior to 1914, and the index-numbers are therefore computed with the weighted average rate of wage payable to adult female workers in Australia at 30th April, 1914, as base (= 1,000).

An extensive tabular presentation of the minimum rates of wage for adult male and female workers in the main occupations in the capital city of each State is given each year in the Appendix to the Annual Labour Report.

2. **Weekly Rates of Wage, 1927 to 1931.**—(i) *General.* The arithmetical average of the rates of wage given in the Appendix referred to is taken for each industrial group. These averages are weighted in accordance with census results to give the average of all occupations for the States and for Australia.

(ii) *Adult Males—States.* The following table gives the weighted average nominal weekly rates of wage payable to adult male workers at the dates specified.

**WAGES.—ADULT MALES—WEIGHTED AVERAGE NOMINAL WEEKLY RATE PAYABLE FOR A FULL WEEK'S WORK, AND WAGE INDEX-NUMBERS.**

NOTE.—Index-numbers based on the average wage for Australia in 1911 (51s. 3d.) as base (= 1,000). The index-numbers in this table are comparable throughout.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia. (a)
No. of Occupations included ..	874	909	627	567	489	482	3,948

**RATES OF WAGE.**

	s. d.		s. d.		s. d.		s. d.		s. d.					
31st December, 1927 ..	101	10	100	3	100	1	96	7	98	10	93	10	100	2
31st December, 1928 ..	102	7	99	8	101	2	96	2	99	6	93	3	100	5
31st December, 1929 ..	102	11	101	1	101	2	97	2	100	7	94	8	101	2
31st December, 1930 ..	99	1	96	11	92	5	92	8	99	7	92	1	96	9
31st March, 1931 ..	96	6	92	2	92	1	85	6	91	9	87	6	93	0
30th June, 1931 ..	95	1	86	7	92	0	82	4	91	2	84	0	90	5
30th September, 1931 ..	94	6	84	1	89	6	81	0	90	4	81	10	88	11
31st December, 1931 ..	93	5	82	2	89	0	75	0	84	1	79	9	86	10

**INDEX-NUMBERS.**

31st December, 1927 ..	1,988	1,957	1,953	1,885	1,928	1,832	1,955
31st December, 1928 ..	2,001	1,944	1,974	1,877	1,941	1,820	1,959
31st December, 1929 ..	2,007	1,972	1,975	1,896	1,963	1,848	1,974
31st December, 1930 ..	1,933	1,891	1,803	1,807	1,943	1,797	1,887
31st March, 1931 ..	1,882	1,798	1,797	1,668	1,789	1,708	1,814
30th June, 1931 ..	1,855	1,689	1,795	1,607	1,779	1,640	1,764
30th September, 1931 ..	1,843	1,641	1,746	1,580	1,769	1,597	1,735
31st December, 1931 ..	1,823	1,603	1,737	1,463	1,641	1,556	1,694

(a) Weighted average.

The results show that at the 31st December, 1931, the weighted average nominal weekly rate of wage was highest in New South Wales, followed in the order named by Queensland, Western Australia, Victoria, Tasmania and South Australia. The average rates of wage declined rapidly during 1931, the results at the end of each quarter in all States showing lower average rates than those for the previous quarter. The weighted average nominal rate of wage for Australia at the end of the year was 86s. 10d., as compared with 96s. 9d. at 31st December, 1930, a reduction of 9s. 11d. per week. The greatest fall occurred in South Australia where the average wage declined 17s. 8d. per week. The highest weighted average rate for Australia was recorded during the third quarter of 1929 when the average wage was 101s. 5d. per week.

(iii) *Adult Males—Industrial Groups.* The following table shows the average weekly rates of wage and index-numbers in each industrial group, and for all groups at the periods specified.

**WAGES.—ADULT MALES—WEIGHTED AVERAGE NOMINAL WEEKLY RATES FOR A FULL WEEK'S WORK, AND WAGE INDEX-NUMBERS IN EACH INDUSTRIAL GROUP.**

NOTE.—Index-numbers for each industrial group and all industrial groups, based on the average wage for all groups in 1911 (51s. 3d.) as base (= 1,000). The index-numbers in this table are comparable throughout.

Industrial Group.		Weighted Average Nominal Weekly Rate of Wage, and Index-Number at—							
		31st Dec., 1927.	31st Dec., 1928.	31st Dec., 1929.	31st Dec., 1930.	31st March, 1931.	30th June, 1931.	30th Sept., 1931.	31st Dec., 1931.
I. Wood, Furniture, etc.	Wage	s. d. 104/6	s. d. 103/11	s. d. 104/10	s. d. 100/3	s. d. 94/4	s. d. 90/4	s. d. 87/11	s. d. 85/7
	Index-No.	2,039	2,028	2,046	1,956	1,841	1,763	1,716	1,669
II. Engineering, etc.	Wage	102/10	102/1	103/6	99/1	92/10	90/3	88/8	86/3
	Index-No.	2,006	1,993	2,019	1,933	1,811	1,762	1,730	1,683
III. Food, Drink, etc.	Wage	99/8	99/9	100/10	97/1	95/2	91/9	90/2	88/6
	Index-No.	1,944	1,947	1,967	1,894	1,853	1,790	1,759	1,727
IV. Clothing, Boots, etc.	Wage	98/3	99/4	99/6	99/5	89/7	88/10	84/6	83/11
	Index-No.	1,917	1,939	1,942	1,940	1,748	1,732	1,648	1,638
V. Books, Printing, etc.	Wage	113/7	117/10	119/1	116/5	113/4	108/10	105/7	102/0
	Index-No.	2,216	2,299	2,323	2,271	2,212	2,124	2,061	1,991
VI. Other Manufacturing	Wage	101/4	100/8	102/2	97/10	93/4	89/6	87/7	85/4
	Index-No.	1,977	1,964	1,994	1,909	1,821	1,746	1,709	1,664
VII. Building	Wage	112/10	112/4	113/0	109/8	106/10	102/8	101/2	98/9
	Index-No.	2,202	2,191	2,205	2,139	2,085	2,001	1,974	1,926
VIII. Mining, etc.	Wage	109/9	109/10	110/7	107/10	105/8	104/1	103/6	102/5
	Index-No.	2,142	2,143	2,157	2,104	2,061	2,031	2,019	1,999
IX. Railways, etc.	Wage	103/1	102/2	105/2	100/2	92/1	91/2	87/6	86/7
	Index-No.	2,012	1,994	2,052	1,955	1,797	1,780	1,707	1,690
X. Other Land Transport	Wage	97/4	96/3	96/9	92/10	90/11	87/0	85/7	83/11
	Index-No.	1,900	1,878	1,888	1,812	1,774	1,697	1,670	1,638
XI. Shipping, etc.(a)	Wage	103/7	103/3	107/0	99/6	89/4	86/0	84/1	81/10
	Index-No.	2,021	2,014	2,087	1,941	1,743	1,678	1,641	1,596
XII. Agricultural, etc.(b)	Wage	94/3	95/9	95/6	87/5	83/9	83/5	83/0	80/6
	Index-No.	1,839	1,869	1,863	1,706	1,634	1,627	1,619	1,563
XIII. Domestic, etc.(b)	Wage	93/3	93/3	92/6	91/3	89, 8	87/2	86/8	85/3
	Index-No.	1,820	1,820	1,804	1,780	1,750	1,701	1,691	1,663
XIV. Miscellaneous	Wage	96/0	96/1	96/8	93/7	91/7	87/11	86/2	83/11
	Index-No.	1,872	1,874	1,886	1,826	1,788	1,716	1,681	1,637
All Industrial Groups (c)	Wage	100/2	100/5	101/2	96/9	93/0	90/5	88/11	86/10
	Index-No.	1,955	1,959	1,974	1,887	1,814	1,764	1,735	1,694

(a) Including the value of victualling and accommodation where supplied. (b) Including the value of board and lodging where supplied. (c) Weighted average.

The foregoing table shows that the highest average weekly wage at 31st December, 1931, was recorded in Group VIII. (Mining), 102s. 5d. per week, followed by Group V. (Books, Printing, etc.), 102s. per week, Group VII. (Building), 98s. 9d. per week, and Group III. (Food, Drink, etc.), 88s. 6d. per week. The lowest average rate was recorded in Group XII. (Agricultural, etc.), 80s. 3d. per week. During the year rates of wage declined in all groups, the greatest decreases occurring in the following groups:—Shipping, etc., 17s. 8d. per week; Clothing, Boots, etc., 15s. 6d. per week; Wood, Furniture, etc., 14s. 8d. per week; and Books, Printing, etc., 14s. 5d. per week. The decrease during the year in the weighted average rate for all groups was 9s. 11d. per week. Compared with the average rates at 31st December, 1927, wages at the end of the year 1931 were lower in all industrial groups. The weighted average rate for all groups showed a decrease of 13s. 4d. per week.

(iv) *Adult Females—States.* The following table shows the weighted average weekly rate of wage payable to adult female workers for a full week's work in each State and Australia at the dates specified.

**WAGES.—ADULT FEMALES—WEIGHTED AVERAGE NOMINAL WEEKLY RATE PAYABLE FOR A FULL WEEK'S WORK, AND WAGE INDEX-NUMBERS.**

NOTE.—Index-numbers based on the average wage for Australia at the 30th April, 1914 (27s. 2d.) as base (= 1,000). The index-numbers in this table are comparable throughout.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aus- tralia.(a)
No. of Occupations Included ..	85	87	37	47	24	28	308

**RATES OF WAGE.**

	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st December, 1927 ..	53 0	52 7	53 5	49 11	58 8	52 7	52 10
31st December, 1928 ..	53 7	53 9	54 10	50 11	58 10	53 4	53 10
31st December, 1929 ..	53 11	54 1	54 10	51 4	58 10	53 9	54 1
31st December, 1930 ..	53 8	53 6	52 11	51 2	60 1	53 8	53 7
31st March, 1931 ..	51 3	50 2	49 7	46 1	55 10	50 6	50 5
30th June, 1931 ..	51 0	48 10	49 7	45 9	55 10	49 1	49 8
30th September, 1931 ..	49 11	46 9	47 11	43 11	55 10	45 11	48 1
31st December, 1931 ..	49 8	45 10	47 11	43 11	51 7	45 8	47 5

**INDEX-NUMBERS.**

31st December, 1927 ..	1,950	1,934	1,966	1,838	2,160	1,935	1,945
31st December, 1928 ..	1,973	1,979	2,017	1,875	2,164	1,964	1,980
31st December, 1929 ..	1,983	1,990	2,020	1,888	2,165	1,978	1,990
31st December, 1930 ..	1,974	1,968	1,947	1,884	2,211	1,976	1,971
31st March, 1931 ..	1,886	1,847	1,826	1,695	2,055	1,859	1,854
30th June, 1931 ..	1,876	1,796	1,825	1,685	2,055	1,808	1,828
30th September, 1931 ..	1,838	1,720	1,765	1,616	2,055	1,690	1,771
31st December, 1931 ..	1,828	1,688	1,765	1,584	1,900	1,681	1,746

(a) Weighted average.

During 1927 rates of wage for female employees increased in all States, with the exception of South Australia, and the average rate for Australia rose from 51s. 8d. to 52s. 10d. per week.

There was a further increase in the nominal rates of wage in all States during 1928, with the result that the average wage for females for Australia increased from 52s. 10d. at 31st December, 1927, to 53s. 10d. by the end of 1928. Increases were recorded in four States during the third quarter of 1929, raising the average nominal wage for Australia to 54s. 2d. per week, the highest average rate recorded. There was very little movement in the average rates of wage for female employees during 1930, the average nominal rate at the end of the year being 53s. 7d. as compared with 54s. 1d. per week at the end of the year 1929. Wages for female employees showed a steady decline during 1931, and at the end of the year the weighted average for Australia was 47s. 5d., as compared with 53s. 7d. per week at the end of 1930, a decrease of 6s. 2d. per week.

(v) *Adult Females—Industrial Groups.* The following table gives particulars of the weighted average weekly rate of wage payable to adult female workers in the industrial groups in which they are mainly employed, and in all groups combined.



**WAGES.—ADULT FEMALES—WEIGHTED AVERAGE NOMINAL WEEKLY RATE PAYABLE FOR A FULL WEEK'S WORK, AND WAGE INDEX-NUMBERS IN EACH INDUSTRIAL GROUP.**

NOTE.—Index-numbers for each Industrial Group and all Industrial Groups, based on the average wage for all groups at 30th April, 1914 (27s. 2d.) as base (= 1,000). The index-numbers in this table are comparable throughout.

Date.	Industrial Group.					
	III. Food, Drink, etc.	IV. Clothing, Boots, etc.	I., II., V., and VI., All Other Manufacturing.	XIII. Domestic, etc.(a)	XIV. Miscel- laneous.	All Groups. (b)
<b>RATES OF WAGE.</b>						
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
31st December, 1927	48 9	52 7	53 2	54 5	52 8	52 10
31st December, 1928	49 3	54 2	53 1	55 1	52 10	53 10
31st December, 1929	49 4	54 4	53 11	54 9	53 10	54 1
31st December, 1930	48 4	54 2	52 7	54 2	52 10	53 7
31st March, 1931 ..	48 0	48 9	51 1	52 8	52 3	50 5
30th June, 1931 ..	45 8	48 5	48 0	52 6	51 6	49 8
30th September, 1931	45 3	45 11	47 3	52 1	50 6	48 1
31st December, 1931	44 4	45 5	46 11	50 9	49 10	47 5

**INDEX-NUMBERS.**

31st December, 1927	1,793	1,936	1,958	2,001	1,937	1,945
31st December, 1928	1,813	1,993	1,954	2,029	1,946	1,980
31st December, 1929	1,815	1,999	1,984	2,015	1,982	1,990
31st December, 1930	1,777	1,994	1,934	1,994	1,945	1,971
31st March, 1931 ..	1,768	1,795	1,879	1,940	1,923	1,854
30th June, 1931 ..	1,679	1,781	1,768	1,932	1,897	1,828
30th September, 1931	1,666	1,690	1,739	1,917	1,858	1,771
31st December, 1931	1,630	1,672	1,728	1,869	1,834	1,746

(a) Including the value of board and lodging, where supplied. (b) Weighted average.

During the year 1931 rates of wage for female employees in all industrial groups showed a decline as compared with those for the previous year. The decrease in the rates in Group IV. (Clothing, Boots, etc.) was 8s. 9d. per week, followed by the Group covering All Other Manufacturing, 5s. 8d. per week and Group III. (Food, Drink, etc.) 4s. per week. The smallest decrease was in Group XIV. (Miscellaneous), 3s. per week. The weighted average for all groups decreased by 6s. 2d. per week.

3. **Relative Hours of Labour and Hourly Rates of Wage, 1927 to 1931.**—(i) *General.* The rates of wage referred to in preceding paragraphs relate to the minimum payable for a full week's work. The number of hours constituting a full week's work differs, however, in many instances between various trades and occupations in each State, and between the same trades and occupations in the several States. In order to secure what may be for some purposes a more adequate standard of comparison, it is desirable to reduce the comparison to a common basis, viz., the rate of wage per hour. Particulars are given in the following table classified according to States, for male and female occupations separately, at the end of the years 1927 to 1931. These particulars relate to (a) the weighted average nominal weekly wage, (b) the weighted average number of working hours constituting a full week's work, and (c) the weighted average hourly wage. The weighted average weekly wage relates to all industrial groups combined, and includes the value of

board and lodging where supplied in land occupations, and the value of victualling in marine occupations, whereas the number of working hours and the hourly wage relate to all industrial groups other than Groups XI. (Shipping), and XII. (Agricultural, Pastoral, etc.). Many of the occupations included in these two groups are of a casual or seasonal nature, and the hours of labour in the agricultural and dairying industry are not generally regulated either by awards or determinations of industrial tribunals or otherwise, hence the necessary data for the computation of the average number of working hours are not available.

The general effect of reducing the rates of wage to a common basis (i.e., per hour) is to eliminate on comparison any apparent difference between the several States which may be due to unequal working time.

(ii) *Adult Males and Females.* Particulars of the weekly and hourly wages and hours of labour for adult males and females for the last five years are given in the table hereunder:—

WEEKLY AND HOURLY WAGES AND HOURS OF LABOUR.—ADULT WORKERS.

Date.	Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aus.
MALE WORKERS.								
31st Dec., 1927	Weekly Wage (a) ..	101/10	100/3	100/1	96/7	98/10	93/10	100/2
	Working Hours (b) ..	44.44	46.82	43.96	46.78	45.75	47.16	45.46
	Hourly Wage (b) ..	2/3¼	2/2¼	2/4	2/1¼	2/2¼	2/0¼	2/2¼
31st Dec., 1928	Weekly Wage (a) ..	102/7	99/8	101/2	96/2	99/6	93/3	100/5
	Working Hours (b) ..	44.17	46.70	43.96	46.67	45.39	46.85	45.27
	Hourly Wage (b) ..	2/4	2/2	2/4	2/1	2/2¼	2/0	2/3
31st Dec., 1929	Weekly Wage (a) ..	102/11	101/7	101/2	97/2	100/7	94/8	101/2
	Working Hours (b) ..	44.14	46.83	43.96	46.83	45.58	47.09	45.34
	Hourly Wage (b) ..	2/4	2/2½	2/4	2/1¼	2/2¼	2/0½	2/3
31st Dec., 1930	Weekly Wage (a) ..	99/1	96/11	92/5	92/8	99/7	92/1	96/9
	Working Hours (b) ..	45.64	46.85	44.43	46.83	45.55	47.09	45.98
	Hourly Wage (b) ..	2/2¼	2/1¼	2/1¼	2/0	2/2¼	1/11¼	2/1¼
31st Dec., 1931	Weekly Wage (a) ..	93/5	82/2	89/0	75/0	84/1	79/9	86/10
	Working Hours (b) ..	44.22	46.88	44.98	46.83	45.55	46.76	45.51
	Hourly Wage (b) ..	2/2¼	1/9¼	2/0¼	1/7¼	1/10¼	1/8¼	1/11¼
FEMALE WORKERS.								
31st Dec., 1927	Weekly Wage ..	53/0	52/7	53/5	49/11	58/8	52/7	52/10
	Working Hours ..	44.02	45.58	44.01	46.10	45.57	47.36	44.94
	Hourly Wage ..	1/2¼	1/1¼	1/2¼	1/1	1/3½	1/1¼	1/2
31st Dec., 1928	Weekly Wage ..	53/7	53/9	54/10	50/11	58/10	53/4	53/10
	Working Hours ..	43.93	45.40	44.01	46.03	45.57	46.07	44.79
	Hourly Wage ..	1/2¼	1/2¼	1/3	1/1¼	1/3½	1/2	1/2½
31st Dec., 1929	Weekly Wage ..	53/11	54/1	54/10	51/4	58/10	53/9	54/1
	Working Hours ..	43.93	45.40	44.01	46.03	45.57	46.07	44.79
	Hourly Wage ..	1/2¼	1/2¼	1/3	1/1¼	1/3½	1/2	1/2½
31st Dec., 1930	Weekly Wage ..	53/8	53/6	52/11	51/2	60/1	53/8	53/7
	Working Hours ..	45.85	45.44	44.01	46.03	45.57	46.07	45.48
	Hourly Wage ..	1/2	1/2	1/2½	1/1¼	1/3½	1/2	1/2¼
31st Dec., 1931	Weekly Wage ..	49/8	45/10	47/11	43/11	51/7	45/8	47/5
	Working Hours ..	43.93	45.44	44.56	46.03	45.57	46.07	44.88
	Hourly Wage ..	1/1¼	1/0	1/1	0/11¼	1/1¼	1/0	1/0¼

(a) Weighted average weekly rate in all industrial groups combined. (b) Weighted average working hours per week, and computed hourly rates of wage for all industrial groups excepting Groups XI. (Shipping, etc.), and XII. (Agricultural, Pastoral, etc.). Working hours have not been generally regulated by industrial tribunals for occupations classified in industrial groups XI. and XII.

(iii) *Index-Numbers.* The tendency in a majority of the States during the years 1924 to 1928 has been towards a slight reduction in hours of labour, particularly in Queensland and New South Wales, where a 44-hour week became operative on 1st July, 1925, and on 4th January, 1926, respectively. Further decreases were recorded in the hours of work per week for male employees during 1927 in all States excepting Queensland, where hours remained stationary. The decline in the other States was due mainly to the reduction of the standard hours of labour in Group II. (Engineering, etc.) from 48 to 44 hours per week, as awarded by the Commonwealth Court of Conciliation and Arbitration. The decline in the weekly hours in New South Wales, Victoria, South Australia, and Tasmania in 1928 was due mainly to the reduction of the standard hours of labour in Group V (Books, Printing, etc.). During 1929 the hours of work per week for timber workers in certain States were increased by the Commonwealth Court, with the result that the weighted average hours for Australia were slightly increased. The repeal of the Acts in New South Wales and Queensland providing for a 44-hour week tended to increase the average number of hours of labour per week in those States during the year 1930. The reduction in the average number of hours of work per week in New South Wales in 1931 was due to the restoration of the 44 hours per week by an Act which came into operation on 5th January, 1931. The effect of these changes on the hourly rate of wage as compared with the general increase in the weekly wage is readily seen from the comparative index-numbers given in the following table:—

WEEKLY AND HOURLY WAGE INDEX-NUMBERS.—ADULT WORKERS.

NOTE.—Weighted average for Australia at 30th April, 1914 as base (= 1,000).

Date.	Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aus-tralia.
<b>MALE WORKERS.</b>								
31st Dec., 1927	{ Weekly Wage ..	1,848	1,819	1,816	1,753	1,792	1,703	1,817
	{ Hourly Wage (a) ..	1,980	1,880	1,998	1,800	1,882	1,731	1,920
31st Dec., 1928	{ Weekly Wage ..	1,860	1,808	1,835	1,745	1,805	1,692	1,821
	{ Hourly Wage (a) ..	2,004	1,867	2,001	1,788	1,916	1,728	1,928
31st Dec., 1929	{ Weekly Wage ..	1,866	1,834	1,836	1,763	1,825	1,718	1,835
	{ Hourly Wage (a) ..	2,011	1,895	2,001	1,808	1,923	1,751	1,940
31st Dec., 1930	{ Weekly Wage ..	1,797	1,758	1,677	1,681	1,807	1,671	1,755
	{ Hourly Wage (a) ..	1,912	1,813	1,846	1,724	1,922	1,708	1,851
31st Dec., 1931	{ Weekly Wage ..	1,695	1,490	1,615	1,360	1,526	1,447	1,575
	{ Hourly Wage (a) ..	1,873	1,527	1,749	1,383	1,617	1,480	1,676

FEMALE WORKERS.

31st Dec., 1927	{ Weekly Wage ..	1,950	1,934	1,966	1,838	2,160	1,935	1,945
	{ Hourly Wage ..	2,175	2,084	2,193	1,958	2,327	1,985	2,125
31st Dec., 1928	{ Weekly Wage ..	1,973	1,979	2,017	1,875	2,164	1,964	1,980
	{ Hourly Wage ..	2,205	2,140	2,250	2,003	2,333	2,092	2,172
31st Dec., 1929	{ Weekly Wage ..	1,983	1,990	2,020	1,888	2,165	1,978	1,990
	{ Hourly Wage ..	2,218	2,154	2,252	2,015	2,333	2,108	2,182
31st Dec., 1930	{ Weekly Wage ..	1,974	1,968	1,947	1,884	2,211	1,976	1,971
	{ Hourly Wage ..	2,113	2,127	2,172	2,011	2,383	2,105	2,128
31st Dec., 1931	{ Weekly Wage ..	1,828	1,688	1,765	1,584	1,900	1,681	1,746
	{ Hourly Wage ..	2,044	1,822	1,943	1,685	2,045	1,791	1,910

(a) See footnote to following table.

4. **Weighted Average Nominal Weekly Hours of Labour, Adult Males.**—The following table shows the weighted average nominal hours of labour (exclusive of overtime) in a full working week for male workers in each State and Australia at the 31st December, 1927 to 1931.

## HOURS OF LABOUR.—WEEKLY INDEX-NUMBERS, ADULT MALES.

NOTE.—Index-numbers based on the average hours of labour for Australia at the 30th April, 1914 (48.93) as base (= 1,000). The index-numbers in this table are comparable throughout. Overtime is excluded.

Date.	Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aus- tralia.
31st Dec., 1927	Weighted average weekly hours of labour (a) ..	44.44	46.82	43.96	46.78	45.75	47.16	45.46
	Index-numbers	908	957	898	956	935	964	929
31st Dec. 1928	Weighted average weekly hours of labour (a) ..	44.17	46.70	43.96	46.67	45.30	46.85	45.27
	Index-numbers	903	954	898	954	926	957	925
31st Dec., 1929	Weighted average weekly hours of labour (a) ..	44.14	46.83	43.96	46.83	45.58	47.09	45.34
	Index-numbers	902	957	898	957	932	962	927
31st Dec., 1930	Weighted average weekly hours of labour (a) ..	45.64	46.85	44.43	46.83	45.55	47.09	45.98
	Index-numbers	933	958	908	957	931	962	940
31st Dec., 1931	Weighted average weekly hours of labour (a) ..	44.22	46.88	44.98	46.83	45.55	46.76	45.51
	Index-numbers	904	958	919	957	931	956	930

(a) Weighted average working hours per week for all industrial groups excepting Groups XI. (Shipping), and XII. (Agricultural, Pastoral, etc.), in which working hours have not been generally regulated by industrial tribunals.

During the four years, 1926 to 1929, the average number of hours of labour per week showed little variation, the figure at the end of the year 1926 being 45.57 as compared with 45.34 at 31st December, 1929. In 1930, however, increases were recorded in New South Wales and Queensland, but in the other States the hours remained practically constant, the result of the changes being that the weighted average hours of labour for all States increased to 45.98 per week. At the end of 1931 the weighted average for Australia had declined to 45.51 per week, due to the reduction in hours in New South Wales caused by the restoration of the 44 hours of work per week. In Queensland, average hours increased slightly owing to revision by the Industrial Court of the standard hours in some industries and callings.

5. Nominal and Real Wages, 1901 to 1931.—(i) *Nominal Weekly Wage Index-numbers—States.* The following table shows the progress in nominal weekly rates of wage for all industries in each State, the weighted average rate for Australia in 1911 being taken as the base (= 1,000). These results are based generally upon rates of wage prevailing in the capital city of each State, but in certain industries, such as mining, rates necessarily are taken for places other than the capital cities. For the year 1914 and subsequent years the index-numbers in the following table are based on the average wage for the four quarters of each year.

## NOMINAL WAGE INDEX-NUMBERS, ADULT MALES.

(WEIGHTED AVERAGE WAGE FOR AUSTRALIA IN 1911 = 1,000.)

States.	Number of Occupations included.		1901.	1911.	1914.	1921.	1924.	1925.	1926.	1927.	1928.	1929.	1930.	1931.
	1901 to 1912.	1913 to 1930.												
New South Wales	158	874	858	1,003	1,093	1,862	1,832	1,846	1,909	1,974	2,003	2,012	1,983	1,851
Victoria	150	909	796	985	1,002	1,803	1,868	1,873	1,926	1,951	1,956	1,964	1,937	1,683
Queensland	87	627	901	997	1,035	1,879	1,856	1,905	1,955	1,953	1,971	1,976	1,898	1,769
South Australia	134	567	819	1,013	1,061	1,697	1,779	1,819	1,871	1,869	1,884	1,891	1,857	1,580
Western Australia	69	489	1,052	1,152	1,223	1,832	1,834	1,878	1,910	1,925	1,938	1,960	1,955	1,745
Tasmania	54	482	719	799	1,027	1,745	1,805	1,815	1,844	1,835	1,825	1,840	1,829	1,625
Australia (a)	652	3,948	848	1,000	1,081	1,827	1,840	1,861	1,914	1,946	1,963	1,972	1,939	1,752

(a) Weighted average.

NOTE.—The figures in the above table are comparable both horizontally and vertically.

During the period 1911 to the end of the year 1929 the average weekly rate of wage increased in New South Wales and Victoria, 100 per cent., in Queensland, 98 per cent., in South Australia, 87 per cent., in Western Australia, 70 per cent., and in Tasmania, 130 per cent., while the weighted average weekly rate for Australia increased 97 per cent. Comparing the yearly average rates for 1929 and 1931 nominal wages declined in all States during the period, South Australia showing the greatest fall with 16.4 per cent., followed by Victoria, 14.3 per cent., and Tasmania, 11.7 per cent. The smallest decline was recorded in New South Wales, 8 per cent. The weighted average weekly rate for Australia declined 11.2 per cent. Compared with 1911 the average weekly nominal wage for Australia was 75 per cent. higher in 1931.

(ii) *Real Weekly Wage Index-numbers—States.* In comparing wages, two elements are of obvious importance, viz., (i) hours worked per day or week, and (ii) the cost of commodities and housing. Thus, 60s. per week of 60 hours represents the same hourly rate as 48s. per week for 48 hours. Similarly, if the cost of commodities and housing increases 25 per cent., e.g., if the prices index-number rises from 1,000 to 1,250, then 60s. per week (the index-number being 1,250) is effectively equal only to 48s. (when the index-number was 1,000). Or, again, if the prices index-number falls from 1,000 to 750, then 60s. per week when the index-number is 750, would have the same purchasing power as 80s. when the index-number was 1,000. Ignoring for the present the number of hours worked, and assuming that the real value of the average wages is to be measured by their purchasing power, the actual average wages paid may be reduced to their effective value by applying the prices index-numbers to the nominal wages index-numbers. The following table shows the "real" wage index-numbers so ascertained in each State for each of the years indicated from 1901 to 1931.

In computing these real wage index-numbers for the respective years, the nominal wage index-numbers given in the preceding table have been divided by the retail price index-numbers, food, groceries and rent (all houses) for the capital cities. The resulting index-numbers show for each State and for Australia for the years specified the variations in real wages. The nominal wage index-numbers for the early years are based on rates of wage current at the end of December, the only data available. For the years 1914 onward, however, the nominal wage index-numbers used are based on the average wage for the four quarters in each year, while those in the preceding sub-sections relate to the December quarter. However, so far as the years 1901 and 1911 are concerned, as the movement in wages during any one year prior to 1914 was very slight, the December figures may stand for the yearly average without appreciable error.

REAL WEEKLY WAGE INDEX-NUMBERS.—ADULT MALES.

States.	1901.	1911.	1914.	1921.	1924.	1925.	1926.	1927.	1928.	1929.	1930.	1931.
New South Wales	961	973	906	1,079	1,069	1,048	1,035	1,079	1,089	1,050	1,107	1,160
Victoria	915	1,037	961	1,038	1,097	1,073	1,069	1,095	1,120	1,084	1,158	1,162
Queensland	1,172	1,090	1,038	1,244	1,232	1,241	1,183	1,222	1,236	1,220	1,317	1,345
South Australia	948	957	929	1,027	1,051	1,053	1,076	1,073	1,089	1,067	1,166	1,178
Western Australia	1,024	1,023	1,070	1,139	1,161	1,162	1,165	1,199	1,156	1,143	1,229	1,232
Tasmania	827	838	942	977	1,017	1,044	1,037	1,072	1,099	1,064	1,111	1,104
Australia (a)	964	1,000	948	1,076	1,095	1,081	1,072	1,102	1,115	1,082	1,152	1,185

(a) Weighted average.

In the table above, the real wage index-numbers are computed to the one base, that of Australia for 1911. Subject to the qualification already referred to, which, as has been pointed out, does not materially affect the figures, the index-numbers are comparable in all respects, and comparisons may be made as to the increase or decrease in the real wage index-number for any State over a period of years. Thus, comparing 1931 with 1901, and also with 1911, there has been an increase in the real wage in all States.

(iii) *Real Wages, allowing for Unemployment.* In the preceding table particulars are given as to variations in real wages in each State, due allowance having been made for variations in retail prices of commodities, though not for unemployment.

For years prior to 1913 the data available as to unemployment (*vide* C. Employment—sub-section 2, following) are so meagre that comparative results allowing for variations both in prices of commodities and in unemployment cannot be accurately computed for the several States. In the next table, for these earlier years the percentage of unemployment in Australia and the nominal wage index-numbers relate to the end of the year. For 1914 and subsequent years the wages index-numbers, percentages of unemployment, and retail prices index-numbers are the average for the year. Column I. shows the nominal wage index-numbers, and Column II. the relative percentages unemployed. These percentages of unemployment are applied to the index numbers in Column I. to obtain rate of wage index-numbers allowing for unemployment, which are shown in Column III., computed with the year 1911 as base = 1,000. In Column IV. the retail prices index-numbers are shown, and in Columns V. and VI. the real wage index-numbers are given, firstly, for full work, and secondly, allowing for lost time. These are obtained by dividing the figures in Columns I. and III. respectively by the corresponding figure in Column IV.

A comparison between the figures in Columns I. and V. gives the relation between the nominal rates of wage and the purchasing efficiency of these rates. The figures in Column VI. show variations in real wages after allowing not only for variations in purchasing power of money, but for the relative extent of unemployment also.

#### NOMINAL AND REAL WAGE INDEX-NUMBERS.

Year.	I.	II.	Rate of Wage Index-Numbers. Allowing for Lost Time.	IV.	Real Wage Index-Numbers.	
	Nominal Wage-Index-Numbers.	Percentage Unemployed.	III. Re-computed. (1911 = 1,000).	Retail Price Index-Numbers. (Food, Groceries, Rent—all houses.)	V. Full Work.	VI. Allowing for Unemployment.
1901 ..	848	6.6	832	880	964	945
1906 ..	866	6.7	848	902	960	940
1907 ..	893	5.7	884	897	996	986
1908 ..	900	6.0	888	951	946	934
1909 ..	923	5.8	913	948	974	963
1910 ..	955	5.6	945	970	985	974
1911 ..	1,000	4.7	1,000	1,000	1,000	1,000
1912 ..	1,051	5.5	1,042	1,101	955	946
1913 ..	1,076	5.3	1,071	1,104	975	970
1914 ..	1,081	8.3	1,040	1,140	948	912
1915 ..	1,092	9.3	1,039	1,278	854	813
1916 ..	1,144	5.8	1,131	1,324	864	854
1917 ..	1,226	7.1	1,195	1,318	930	907
1918 ..	1,270	5.8	1,255	1,362	932	921
1919 ..	1,370	6.6	1,343	1,510	907	889
1920 ..	1,627	6.5	1,596	1,785	911	894
1921 ..	1,826	11.2	1,701	1,697	1,076	1,002
1922 ..	1,801	9.3	1,715	1,600	1,126	1,072
1923 ..	1,805	7.1	1,760	1,700	1,062	1,035
1924 ..	1,840	8.9	1,759	1,681	1,095	1,046
1925 ..	1,861	8.8	1,781	1,722	1,081	1,034
1926 ..	1,914	7.1	1,866	1,786	1,072	1,045
1927 ..	1,946	7.0	1,899	1,766	1,102	1,075
1928 ..	1,963	10.8	1,837	1,760	1,115	1,044
1929 ..	1,972	11.1	1,839	1,822	1,082	1,009
1930 ..	1,939	19.3	1,642	1,683	1,152	976
1931 ..	1,752	27.4	1,335	1,479	1,185	903

NOTE.—For years prior to 1914, the nominal wage index-numbers and the percentage unemployed relate to the end of the year only, but from 1914 onward these figures, in addition to those for retail prices, are averages for the whole year.

Nominal wages and retail prices fell rapidly during 1931, but as prices declined to the greatest extent, the real wage index for full work increased from 1152 to 1185, the highest point recorded in the investigation. Unemployment was worse in 1931 than during the previous year, with the result that the index allowing for unemployment declined sharply from 976 to 903, the lowest point recorded since 1921. Comparison with 1911 shows that the real wage for full time work was 18.5 per cent. higher, but allowing for unemployment was 9.7 lower during 1931.

### § 3. The Basic Wage and Child Endowment in Australia.

1. **The Basic Wage.**—(i) *General.* The “basic wage” in Australia is understood to mean the lowest wage which can be paid to an unskilled labourer on the basis of “the normal needs of an average employee regarded as a human being living in a civilized community.”\* This wage is fixed by various industrial tribunals in Australia operating under Federal and State Arbitration Acts, and is varied from time to time according to changes in cost of living, constitution of the family unit, etc. In addition to the “basic” wage, these tribunals also determine what is known as the “secondary” wage—“the extra payment to be made for trained skill or other exceptional qualities necessary for an employee exercising the functions required.”†

(ii) *History in Australia.* The doctrine of a basic wage was propounded as far back as 1890 by Sir Samuel Griffith, Premier of Queensland, and the same principle was enunciated in the New South Wales Arbitration Court in somewhat similar terms by Mr. Justice Heydon in 1905. In spite, however, of these pronouncements and the fact that wage-fixing tribunals had been in operation as early as 1896 (in the State of Victoria) it was not until the year 1907 that the first basic wage, as such, was declared by a Court in Australia. This declaration was made by Mr. Justice Higgins, President of the Commonwealth Court of Conciliation and Arbitration, and is popularly known as the “Harvester Judgment” on account of its having been determined in connexion with H. V. McKay’s Sunshine Harvester Works. The rate of wage declared in this case was 7s. per diem or £2 2s. per week for Melbourne, the amount considered reasonable for “a family of about five.” The constituent parts of this amount were £1 5s. 5d. for food, 7s. for rent, and 9s. 7d. for all other expenditure.

The above rate has been varied from time to time in accordance with the retail price index-numbers (food, groceries and rent (all houses) ) prepared by the Commonwealth Bureau of Census and Statistics for the city or town in which the persons affected are employed, and the rate so obtained has been taken by the Commonwealth Court of Conciliation and Arbitration as the minimum rate of wage for an unskilled male worker. The weekly wage rates (at 1st May, 1932) for the various capital cities as so varied are as follows:—

					£	s.	d.
Sydney	..	..	..	*..	..	3	16 6
Melbourne	..	..	..	..	..	3	11 0
Brisbane	..	..	..	..	..	3	5 0
Adelaide	..	..	..	..	..	3	5 6
Perth	..	..	..	..	..	3	8 6
Hobart	..	..	..	..	..	3	12 6
Six Capitals (Weighted Average)	..	..	..	..	..	3	12 0

The above amounts include the sum of 3s. per week known as the “Powers’ three shillings”, which was added in 1921 for the purpose of securing to the worker during a period of rising prices the full equivalent of the “Harvester” standard. The weekly rates given in the above table are the “Harvester” equivalents plus the “Powers’ 3s.” per week, but in accordance with the judgment of the Full Arbitration Court on 22nd January, 1931, such rates are subject to the ten per cent. reduction referred to in the following paragraphs.

\* Mr. Justice Higgins—*A New Province of Law and Order.*

† *Ibid.*

The adequacy or otherwise of the amount allotted under the "Harvester" judgment has been the subject of much discussion, the author of the judgment himself urging on several subsequent occasions the need for its review. Frequent references as to the desirability of an investigation have been made by Judges of the Court, but it was not decided to hold an inquiry into the method of determining the basic wage until the latter portion of the year 1930.

On 15th August, 1930, application was made by the Victorian and New South Wales Railways Commissioners for variation of current awards in the railway industry. The application sought variations in the basic wage as follows:—the abolition of the "Powers' 3s", the adoption of the Statistician's "all items" purchasing power of money figures in lieu of the figures now in use (food, groceries and rent—all houses) for determining the basic wage and adjustments thereof. On 5th November, by direction of the Court, all organizations bound by awards of the Court were notified that the matters in issue affected the basic wage, and were advised that they could intervene in the hearing. Employers and employees selected representatives and the Full Arbitration Court held a Basic Wage Inquiry. The hearing commenced in November, 1930, and concluded on 19th January, 1931. Judgment was delivered on 22nd January. The Court refused to make any variations in the basic wage or in the present method of calculation thereof without further inquiry, but was forced to the conclusion, after considering the evidence relating to the decline in the national income, the reduction in spending power due to the cessation of loans, and the general depressed state of industry, that for a period of twelve months and thereafter until further order a general reduction of wages was necessary. With a few exceptions, orders were made for variations of the awards covered by the applications before the Court by the reduction of all wage rates therein prescribed by ten per cent. for a period of twelve months, and thereafter until further order, such variations to operate from 1st February, 1931. Additional applications for variation of awards and industrial agreements were largely successful, and rates of wage in practically all awards of the Court and agreements filed under the provisions of the Commonwealth Act are subject to the ten per cent. reduction.

Application for cancellation of these Orders of the Court were lodged by organizations of employees, and the case came on for hearing before the Full Arbitration Court on 7th March, 1932, and subsequent dates. A mass of evidence was submitted to the Court by economic and financial experts and by the union advocates, relating to the method of calculating and adjusting the basic wage; the wage paying capacity of Australia; monetary reform; the national income; the high wage rate and increased purchasing power theory; equality of sacrifice; production, and unemployment. After an exhaustive inquiry which occupied the Court for some weeks judgment was delivered on 17th June. After a close review of the evidence submitted and arguments advanced by the parties the judgment concludes as follows:—"The Court, after giving close attention to the material and arguments submitted by the parties to these applications, has, in view of the foregoing considerations, arrived at the conclusion that the general abrogation at present of the Orders in question would be detrimental, and it is therefore refused. After the expiration of the present year circumstances may justify further consideration, particularly as to those who have no margins above the basic wage."

(iii) *State Basic Wage Rates in Operation.* The basic wage rates fixed by State arbitration tribunals differ from those obtaining in the Federal sphere not only as regards amount, but also in respect of constitution of family unit whose needs it purports to supply.

The awards of various State tribunals in operation at the present moment are shown in the following statement. The Industrial Commission in New South Wales and the Industrial Court in Western Australia revised the living or basic rates of wage to be paid in the respective States during 1929. Particulars of these judgments are given in Labour Report, No. 20. The pronouncements of the Industrial Commission in New South Wales are published in the *New South Wales Industrial Gazette*, Vol. XXXVI., No. 6, and deal exhaustively with matters relating to basic wages. The living wage of £4 2s. 6d. per week for adult males determined in 1929 by the Industrial Commission in New South Wales was not altered during the years 1930 and 1931. On 26th August, 1932, the Commission declared the following rates—£3 10s. per week for adult males, and £1 13s. per week for



adult females. The declarations and reasons for the judgments of the Industrial Court in Western Australia are published in the *Western Australian Industrial Gazette*. A revision of the basic wage in this State was made in June, 1930, when the rate for adult male employees in the metropolitan area was determined at £4 6s., and for adult female employees at £2 6s. 5d. per week. These rates were reduced in March, 1931, to £3 18s. and £2 2s. 2d. respectively. On 5th November, 1931, the rates for the metropolitan area were declared at £3 13s. 6d. for adult male employees, and at £1 19s. 8d. for adult female employees. These rates remained in force until 1st March, 1932, when the basic rates for the metropolitan area were declared at £3 12s. per week for adult male employees, and at £1 18s. 11d. per week for adult female employees. The rates were not altered by the declaration of 10th June, 1932. The Court of Arbitration declares also basic rates of wage for areas outside the metropolitan area. The rates declared for these areas on 10th June were—Agricultural areas, adult male employees, £3 13s. 6d. per week; adult female employees, £1 19s. 8d. per week; Gold-fields area, etc., adult male employees, £3 18s. per week; adult female employees, £2 2s. 2d. per week.

The Industrial Court in Queensland reviewed the basic rates of wage for that State during 1930, and reduced the rate for adult male employees from £4 5s. to £4 per week as from 1st August, 1930. A further revision during the year reduced the rate for adult males to £3 17s. per week as from 1st December, 1930. The Industrial Court fixed the basic rates as from 1st July, 1931, at £3 14s. per week for adult male employees, and at £1 19s. per week for adult female employees. These rates were in operation at the end of June, 1932. The declarations of the Court are published in the *Queensland Industrial Gazette*.

In 1925 the Board of Industry in South Australia determined the living wage for adult male employees in the metropolitan area at £4 5s. 6d. per week; and at £1 19s. 6d. per week for adult female employees. These rates were in operation for more than five years. On 11th October, 1930, after a public inquiry, the Board of Industry determined the living wage to be paid to adult male employees in the metropolitan area at 12s. 6d. per day or £3 15s. per week; and on 22nd December, 1930, the living wage for adult female employees in the metropolitan area was declared at £1 15s. per week. These rates were reduced by the Board of Industry on 17th August, 1931, after a public inquiry, to 10s. 6d. per day or £3 3s. per week for adult male employees; and on 4th December, 1931, to £1 11s. 6d. per week for adult female employees. These declarations are published in Bulletin No. 9 of Reports of the Board of Industry, South Australia.

A State basic rate of wage is not declared in Victoria and Tasmania. In these States the Wages Board system of wage fixation is in operation, and each Board determines the minimum rate of wage to be paid in the industry or calling under review.

**BASIC WEEKLY WAGE RATES FIXED BY STATE INDUSTRIAL TRIBUNALS.**

State.	Basic Wage.		Date of Operation.	Family Unit (for Male Rate).
	Males.	Females.		
	£ s. d.	£ s. d.		
New South Wales ..	(a) 3 10 0	1 18 0	26.8.32	Man, wife and child
Victoria ..	(b)	(b)	(b)	(b)
Queensland ..	3 14 0	1 19 0	1.7.31	Man, wife and three children
South Australia ..	(d) 3 3 0	(e) 1 11 6	..	" "
Western Australia ..	(f) 3 12 0	1 18 11	10.6.32	(c)
Tasmania ..	(b)	(b)	(b)	(b)

(a) Plus child allowances. (b) None declared, but follow Federal rates to a large extent. (c) Although the family unit is not specifically defined in the legislation of this State, the tribunal appointed to determine the basic wage has adopted the unit of man wife and two children. (d) Judgment dated 17th August, 1931. (e) Judgment dated 4th December, 1931. (f) Metropolitan Area. Basic wage for Goldfields Areas and other portions of State exclusive of the S.W. Land Division—males, £3 18s.; females, £2 2s. 2d.; S.W. Land Division—males, £3 13s. 6d.; females, £1 19s. 8d. Under the provisions of the "Financial Emergency Act," the Court of Arbitration has made orders, on the application of employers in a number of industries and callings, reducing the basic wage rate to 71s. 4d. per week (82 per cent. of 87s. per week, the basic wage rate in 1929-30).

(iv) *Royal Commission on the Basic Wage, 1920.* The Federal basic wage referred to in (ii) *ante* was made operative in other parts of Australia on the basis of the relative retail price index-numbers applicable to the locality, but only one comprehensive attempt has been made by the Federal authorities to ascertain specifically what the actual requirements were in the various States according to reasonable standards of comfort, including all matters comprised in the ordinary expenditure of a household in respect of a family consisting of a man, wife and three children under fourteen years of age.

The attempt referred to was made by a Royal Commission, and its report, issued in 1920, recommended the following amounts for the various capital cities, viz. :—

						£	s.	d.
Sydney	..	..	..	..	..	5	17	1
Melbourne	..	..	..	..	..	5	16	6
Brisbane	..	..	..	..	..	5	6	2
Adelaide	..	..	..	..	..	5	16	1
Perth	..	..	..	..	..	5	13	11
Hobart	..	..	..	..	..	5	16	11
Six Capitals (Weighted Average)	..	..	..	..	..	5	15	8

The recommendations of this Commission were not given effect to owing to the marked advance of the amounts suggested over ruling rates\* and the grave doubts expressed as to the ability of industry to pay such rates.

2. *Child Endowment.*—(i) *General.* The principle of supplementing wages by a payment in respect of dependent children under fourteen years of age has become very prominent in Australia in recent years, and is actually in operation in certain instances. The system has been in force in various forms in England and on the Continent as far back as 1795, the first instance occurring in England in that year.†

(ii) *The New South Wales Scheme.* The earliest attempt made in Australia to institute the system was in New South Wales in 1919, when a Bill was introduced into the State Parliament to provide a flat basic wage for a man and wife, and an allowance of 5s. per week for each child, the latter rate to be reduced on a sliding scale and to cease automatically when the income reached an amount of £3 per week above the basic wage. The Bill was rejected, and the matter dropped until the session of 1926-27, when measures providing for the payment of child allowances became law.‡ These measures provided for (a) the declaration of a basic wage for a man and wife,|| and (b) the payment of an allowance of 5s. per week in respect of each dependent child, subject to the provision that child allowances would be paid only to the extent by which the total earnings of the worker and his family fall short of the sum represented by the *basic wage* plus child allowance at the rate of 5s. per week for each child under the age of fourteen years. Thus, a worker with three dependent children receiving £5 by way of wages would not be entitled to the allowance, but would receive it in respect of a fourth child. These payments in New South Wales commenced to operate from 1st September, 1927. An amending Act, assented to on the 23rd December, 1929, provides that child endowment shall be 5s. per week for each child under the age of fourteen years except one in the family. The basic or living wage for adult male workers was determined by the Industrial Commission on the 20th December, 1929, at £4 2s. 6d. per week for a family unit consisting of a man, wife and one child. The fund from which child endowment payments are made is created by a levy on the wages bill of employers. The rate of tax to be collected by the Government from employers during the year 1930, was fixed at 1 per cent. This rate was in operation to 30th June, 1931. From 1st July, 1931, the rate was fixed at 2 per cent.

\* The "Harvester" equivalent for Melbourne at the time (September quarter, 1920) was £4 13s. per week, but only £3 18s. to £4 2s. was being paid on the basis of an annual index-number.

† A complete survey of the systems in force in various countries is contained in Elinor Rathbone's *Disinherited Family: A plea for the Endowment of the Family.*

‡ *Family Endowment Act 1927; Finance (Family Endowment Tax) Act 1927; Industrial Arbitration (Living Wage Declaration) Act 1927* and subsequent amendments.

|| This was subsequently declared at £4 5s. per week for adult males and £2 6s. per week for adult females. A separate rate for rural employees was declared later at £4 4s. per week.

(iii) *Commonwealth Public Service.* The first payment of child endowment allowances in Australia was in connexion with the Commonwealth Public Service. From 1st November, 1920, child endowment at the rate of 5s. per week for each dependent child under fourteen years of age was paid to officers, with a limitation of salary plus allowance. Details regarding the introduction and method of calculating the payments under this scheme have been published in previous issues of the *Official Year-Book* and will be found also in the Labour Reports issued by this Bureau.

(iv) *National Scheme.* The Federal Government, in June, 1927, called a conference at Melbourne of the Premiers of the several States to consider the question from a national standpoint. The Prime Minister submitted various estimates of cost of endowing dependent children under fourteen years of age in Australia at 5s. per week. After discussion, it was decided to refer the matter to a Royal Commission, to be appointed by the Commonwealth Government.

The Commission was not unanimous in its findings, and the opinions and recommendations of the members were embodied in two separate reports, which dealt exhaustively with the constitutional aspects, existing systems, industrial legislation, the basic wage, standard of living, regulation of wages, working conditions and cognate matters.

At the conference of Commonwealth and State Ministers held at Canberra during May, 1929, the Prime Minister stated that the Commission had submitted its report. The minority report recommended a scheme of child endowment financed entirely from the proceeds of taxation. For reasons stated to the Conference, the Government was not prepared to adopt this scheme. The Commonwealth Government agreed with the majority of the Commission that child endowment could not be separated from the control of the basic wage—a power which the Commonwealth did not possess and which the States were not prepared to relinquish to the Commonwealth. The Government, therefore, did not propose to establish any system of child endowment. It was generally agreed that any scheme which would increase the charges upon industry would be unwise at the present time. The result of the discussion was that it was agreed that the matter of child endowment was one to be dealt with as the State Governments should think proper.

The findings and recommendations in the *majority* and *minority* reports are given in Labour Report, No. 19.

#### § 4. Changes in Rates of Wage.

The collection of detailed information relating to changes in rates of wage was discontinued at the end of the year 1929, owing to the difficulty of securing reliable data. Officials of employers' organizations and trade unions reported that they were unable to supply definite particulars as to the number of workpeople affected by Commonwealth and State awards and determinations. In order to secure comprehensive and reliable data it would have been necessary to extend considerably the field of collection, and after serious consideration, and in view of the fact that the demand for the figures had been limited, it was decided that the additional expense and work involved were too heavy to justify the continuance of the tabulation.

### C.—EMPLOYMENT.

#### § 1. Industrial Disputes.

1. *General.*—Information with regard to the collection of particulars and the methods of tabulation of industrial disputes involving stoppage of work has appeared in previous issues of the *Year Book*, and is also given in the annual Labour Reports of this Bureau.

In *annual* tabulations, particulars are included of all disputes which either *commenced* or were *current* during the year under review. As regards "number of disputes", "establishments involved", and "workpeople involved", therefore, duplication will take place in respect of those disputes which started in and were unsettled at the end of a preceding year: the number involved will, however, be indicated in a footnote, to permit of due allowance being made in any calculations made from the tables.

2. *Industrial Disputes Involving Stoppage of Work, Classified in Industrial Groups, 1931.\**—The following tables give particulars of industrial disputes which either commenced or were current during the year 1931, classified according to industrial groups. Similar information for the years 1914 to 1930 was published in previous issues of the Year Book and in Labour Reports Nos. 6 to 21.

### INDUSTRIAL DISPUTES CLASSIFIED ACCORDING TO INDUSTRIAL GROUPS, 1931.

Class.	Industrial Group.	Number.	Establishments Involved.	Workpeople Involved.			Working Days Lost.	Estimated Loss in Wages.
				Directly.	Indirectly.	Total.		
NEW SOUTH WALES.								
II.	Engineering, metal works, etc.	1	1	68	..	68	68	£ 70
III.	Food, drink, etc.	2	2	206	..	206	334	286
VII.	Building .. .. .	2	2	71	..	71	96	74
VIII.	{ (a) Coal-mining .. .. .	69	69	19,229	1,348	20,577	106,368	111,378
	{ (b) Other mining, quarries, etc.	1	1	421	151	572	18,304	14,640
X.	Other land transport .. .. .	1	1	11	..	11	44	50
XI.	Shipping, wharf labour, etc.	3	8	351	302	653	8,387	4,753
XIII.	Domestic, hotels, etc.	1	40	93	..	93	930	698
XIV.	Miscellaneous .. .. .	7	7	552	..	552	1,506	1,119
	Total .. .. .	87	131	21,002	1,801	22,803	136,037	133,068
VICTORIA.								
I.	Wood, saw-mill, timber, etc.	1	2	50	..	50	150	144
III.	Food, drink, etc.	4	83	1,802	460	2,262	19,032	18,807
VII.	Building .. .. .	1	1	21	7	28	70	71
VIII.	{ (a) Coal-mining .. .. .	1	1	1,700	..	1,700	1,700	1,500
XI.	Shipping, wharf labour, etc.	2	4	101	50	151	1,486	837
XIV.	Miscellaneous .. .. .	1	1	348	104	452	5,424	3,525
	Total .. .. .	10	92	4,022	621	4,643	27,862	24,884
QUEENSLAND.								
III.	Food, drink, etc.	4	10	1,901	261	2,162	8,046	7,653
VIII.	{ (a) Coal-mining .. .. .	4	4	545	8	553	8,532	6,715
	{ (b) Other mining, quarries, etc.	3	3	433	43	476	8,292	7,374
IX.	Railway and tramway services	1	1	1,616	..	1,616	9,696	7,760
XII.	Pastoral, agricultural, etc.	3	340	584	330	914	16,530	17,913
	Total .. .. .	15	338	5,079	642	5,721	51,096	47,415
SOUTH AUSTRALIA.								
I.	Wood, saw-mill, timber, etc.	1	1	11	6	17	442	426
III.	Food, drink, etc.	1	1	60	..	60	60	48
XI.	Shipping, wharf labour, etc.	2	2	64	..	64	128	87
XIV.	Miscellaneous .. .. .	1	1	25	..	25	25	21
	Total .. .. .	5	5	160	6	166	655	582

\* Five disputes in Australia (involving 24 establishments and 1,022 workers) commenced in 1930 and were uncompleted at the end of that year, and in respect of number of disputes, number of establishments and workpeople involved, are duplicated in the figures for 1931.

INDUSTRIAL DISPUTES CLASSIFIED ACCORDING TO INDUSTRIAL GROUPS, 1931—*continued.*

Class.	Industrial Group.	Number.	Establishments Involved.	Workpeople Involved.			Working Days Lost.	Estimated Loss in Wages.
				Directly.	Indirectly.	Total.		
WESTERN AUSTRALIA.								
V.	Books, printing, binding, etc. . .	1	3	180	..	180	900	£ 1,260
VII.	Building . . . . .	1	6	60	..	60	840	756
VIII.	{ (a) Coal-mining . . . . .	3	3	360	..	360	2,080	1,664
	{ (b) Other mining, quarries, etc. . . . .	4	5	967	..	967	9,416	7,235
XI.	Shipping, wharf labour, etc. . .	1	1	20	..	20	120	66
XIV.	Miscellaneous . . . . .	3	8	2,291	50	2,341	10,666	4,848
	Total . . . . .	13	26	3,878	50	3,928	24,022	15,829
TASMANIA.								
VIII.	(a) Coal-mining . . . . .	2	2	155	6	161	5,409	5,278
NORTHERN TERRITORY.								
XIV.	Miscellaneous . . . . .	2	2	245	..	245	910	675
AUSTRALIA.								
I.	Wood, saw-mill, timber, etc. . .	2	3	61	6	67	592	570
II.	Engineering, metal works, etc. .	1	1	68	..	68	68	70
III.	Food, drink, etc., manufacturing and distribution . . . . .	11	96	3,969	721	4,690	27,472	26,794
V.	Books, printing, binding, etc. . .	1	3	180	..	180	900	1,260
VII.	Building . . . . .	4	9	152	7	159	1,006	901
VIII.	{ (a) Coal-mining . . . . .	79	79	21,989	1,362	23,351	124,089	126,535
	{ (b) Other mining, quarries, etc. . . . .	8	9	1,821	194	2,015	36,012	29,249
IX.	Railway and tramway services . .	1	1	1,616	..	1,616	9,606	7,760
X.	Other land transport . . . . .	1	1	11	..	11	44	50
XI.	Shipping, wharf labour, etc. . .	8	15	536	352	888	10,121	5,743
XII.	Pastoral, agricultural, etc. . . .	3	340	584	330	914	16,530	17,913
XIII.	Domestic, hotels, etc. . . . .	1	40	93	..	93	930	608
XIV.	Miscellaneous . . . . .	14	19	3,461	154	3,615	18,531	10,188
	Total—Australia . . . . .	134	616	34,541	3,126	37,667	245,991	227,731

3. Industrial Disputes, Australia, 1927 to 1931.—The following table gives particulars of the number of industrial disputes, the number of workpeople involved, and the losses in working days and wages caused by disputes which either commenced or were current during each of the years 1927 to 1931, classified according to industrial groups.

Satisfactory comparisons of the frequency of industrial disputes in classified industries can be made only after omitting those which are recorded for coal-mining (Group VIII.). For the year 1913 the proportion of disputes in the mining industry represented practically 50 per cent. of the total number recorded. In subsequent years the proportion remained high, ranging from 45 per cent. in 1917 and 1918 to as much as 81 per cent. in 1921 and 1924. During the year 1931 disputes in the coal-mining industry represented 59 per cent. of the total, as compared with 69 per cent. during 1930. During the past five years working days lost through dislocations involving work-people engaged in coal-mining numbered 5,112,203, representing 59 per cent. of the total loss of working days during the period.

## INDUSTRIAL DISPUTES.—AUSTRALIA.

Year.	Manu- facturing. (Groups I. to VI.)	Building. (Group VII.)	Mining (Group VIII.)		Transport, Land and Sea. (Groups IX. to XI.)	Miscel- laneous. (Groups XII. to XIV.)	ALL GROUPS.
			Coal Mining.	Other Mining, etc.			
1927 ..	60	19	271	14	41	36	441
1928 ..	28	6	190	4	42	17	287
1929 ..	29	8	193	11	9	9	239
1930 ..	27	..	126	4	5	21	183
1931 ..	15	4	79	8	10	18	134
1927 to 1931 ..	159	37	859	41	107	101	1,304

## NUMBER.

1927 ..	60	19	271	14	41	36	441
1928 ..	28	6	190	4	42	17	287
1929 ..	29	8	193	11	9	9	239
1930 ..	27	..	126	4	5	21	183
1931 ..	15	4	79	8	10	18	134
1927 to 1931 ..	159	37	859	41	107	101	1,304

## WORKPEOPLE INVOLVED.

1927 ..	11,368	9,690	130,911	1,855	42,487	4,446	200,757
1928 ..	3,304	290	72,267	237	17,992	2,332	96,422
1929 ..	25,364	732	63,751	8,015	1,286	456	104,604
1930 ..	6,034	..	49,336	851	2,610	4,391	54,222
1931 ..	5,005	159	23,351	2,015	2,515	4,622	37,667
1927 to 1931 ..	51,075	10,871	335,616	12,973	66,890	16,247	493,672

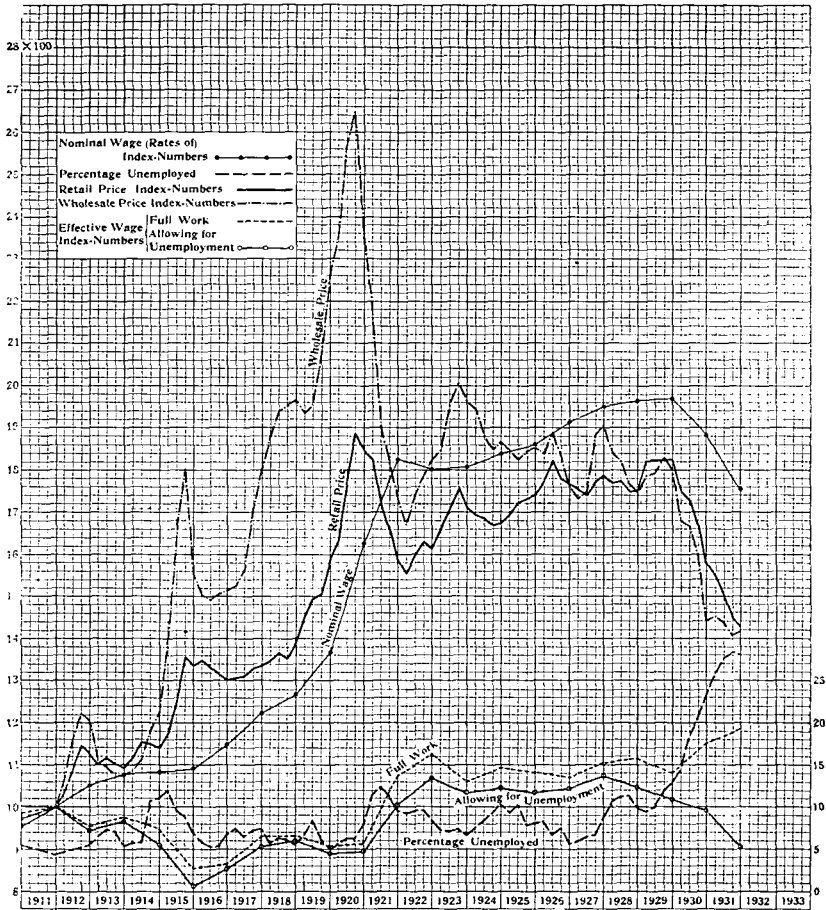
## WORKING DAYS LOST.

1927 ..	168,432	342,649	848,823	19,956	304,586	29,135	1,713,581
1928 ..	71,803	3,419	315,121	1,124	367,271	18,540	777,278
1929 ..	1,896,091	4,456	2,496,028	31,748	39,237	2,918	4,461,478
1930 ..	77,232	..	1,328,142	3,798	46,427	55,642	1,511,241
1931 ..	29,032	1,006	124,089	36,012	19,861	35,991	245,991
1927 to 1931 ..	2,242,590	351,530	5,112,203	92,638	768,382	142,226	8,709,569

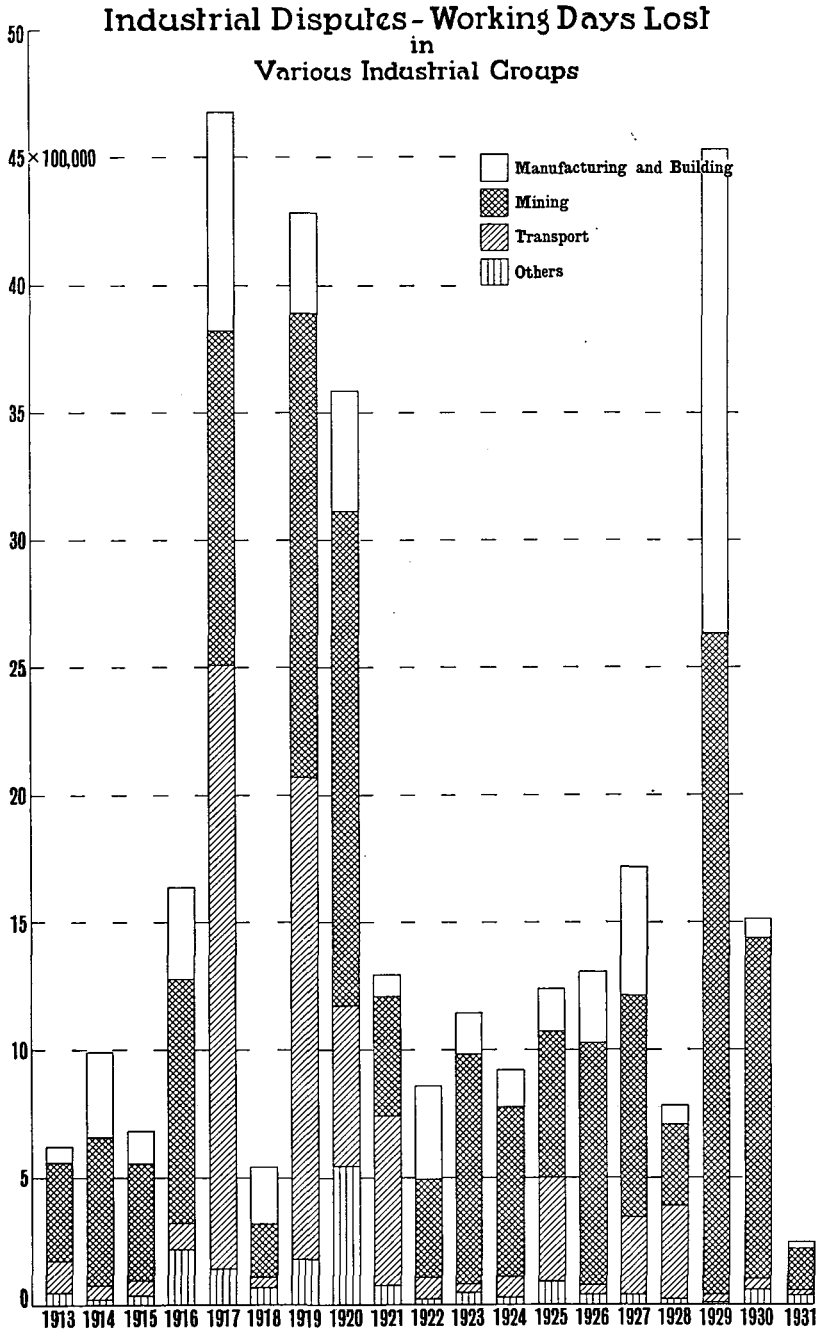
## ESTIMATED LOSS IN WAGES.

	£	£	£	£	£	£	£
1927 ..	138,418	293,792	995,891	13,689	210,214	24,692	1,676,696
1928 ..	61,160	3,225	377,586	1,069	317,337	14,982	775,359
1929 ..	1,680,629	5,060	2,810,623	36,468	33,971	2,554	4,569,305
1930 ..	73,126	..	1,398,706	5,111	48,304	67,095	1,592,342
1931 ..	28,694	901	126,535	29,249	13,553	28,799	227,731
1927 to 1931 ..	1,982,027	302,978	5,709,341	85,586	623,379	138,122	8,841,433

RETAIL AND WHOLESALE PRICES, NOMINAL AND EFFECTIVE OR REAL WAGE INDEX NUMBERS, AND PERCENTAGE OF UNEMPLOYED.—AUSTRALIA 1911 TO 1931.



NOTE.—The figures on the right represent the scale for the percentage unemployed according to trade-union returns. The figures on the left represent the scale for the several index-numbers, the year 1911 being taken in each case as base (= 1000). Since the end of the year 1911, the Retail Price Index-numbers (weighted average cost of food, groceries, and house rent (all houses) for the six capital cities), and the Wholesale Price Index-number (Melbourne) are shown in each quarter, while unemployment percentages are shown quarterly since the end of the year 1912 only. The other index-numbers since 1913 refer to the average for the whole year, but for purposes of convenience are plotted on the graph as at the end, not the middle, of the year. Retail Price and Wholesale Price Index-numbers show the average level during the whole of each quarter, and they also for convenience are plotted at the end, and not the middle, of each quarter. Average nominal wage for adult males, and real wage (full work) and (allowing for unemployment) for adult males.



EXPLANATION.—The scale refers to working days lost in hundred thousands. Thus taking the year 1917, and comparing the shaded and blank sections with the scale, it will be observed that about 870,000 working days were lost in Manufacturing and Building, over 1,300,000 in Mining, over 2,300,000 in Transport, and about 150,000 in other industries.



4. Summary of Disputes (involving Stoppage of Work), 1927 to 1931.—The following table gives particulars of the number of industrial disputes in each State in various years from 1927 to 1931, together with the workpeople involved, the working days lost, and the estimated loss in wages.

## INDUSTRIAL DISPUTES.—SUMMARY.

State or Territory.	Year.	Number.	Establishments Involved.	Workpeople Involved.			Working Days Lost.	Estimated Loss in Wages.
				Directly.	In-directly.	Total.		
							£	
New South Wales	1927	339	470	108,116	40,425	148,541	1,133,963	1,230,060
	1928	230	313	70,303	10,119	80,422	480,394	521,768
	1929	231	513	75,197	4,152	79,349	3,146,038	3,421,412
	1930	156	381	46,418	2,151	48,569	1,443,366	1,516,296
	1931	87	131	21,002	1,801	22,803	136,037	133,068
Victoria	1927	24	36	8,937	284	9,221	54,367	44,470
	1928	21	51	4,309	1,567	5,876	110,659	96,454
	1929	11	320	8,893	12,719	21,612	1,296,676	1,130,505
	1930	5	5	385	23	408	7,744	7,228
	1931	10	92	4,022	621	4,643	27,862	24,884
Queensland	1927	30	376	29,594	640	30,234	428,135	325,884
	1928	12	329	2,958	670	3,628	70,764	62,008
	1929	4	23	1,691	8	1,699	3,143	3,379
	1930	10	31	1,561	70	1,631	9,881	11,059
	1931	15	358	5,079	642	5,721	51,096	47,415
South Australia	1927	19	24	6,517	1,359	7,876	51,284	40,266
	1928	8	40	2,257	1,211	3,468	54,835	45,999
	1929	2	21	532	40	572	9,040	7,910
	1930	7	246	2,870	6	2,876	22,778	22,987
	1931	5	5	160	6	166	655	582
Western Australia	1927	20	25	3,345	47	3,392	23,819	19,944
	1928	11	62	2,106	422	2,528	54,896	43,472
	1929	4	8	827	50	877	2,672	2,771
	1930	2	26	468	..	468	27,072	34,378
	1931	13	26	3,878	50	3,928	24,022	15,829
Tasmania	1927	6	6	354	421	775	14,950	9,182
	1928	4	8	371	84	455	5,595	5,508
	1929	6	40	333	142	475	3,409	3,068
	1930	3	3	270	..	270	400	394
	1931	2	2	155	6	161	5,409	5,278
Northern Territory	1927	2	2	338	..	338	5,163	4,753
	1928	1	1	45	..	45	135	150
	1929	..	..	..	..	..	..	..
	1930	..	..	..	..	..	..	..
	1931	2	2	245	..	245	910	675
Fed. Cap. Territory	1927	1	5	380	..	380	1,900	2,137
	1928	..	..	..	..	..	..	..
	1929	1	1	20	..	20	200	200
	1930	..	..	..	..	..	..	..
	1931	..	..	..	..	..	..	..
Australia	1927	441	944	157,581	43,176	200,757	1,713,581	1,676,696
	1928	287	804	82,349	14,073	96,422	777,278	775,359
	1929	259	926	87,493	17,111	104,604	4,401,478	4,599,395
	1930	183	695	51,972	2,250	54,222	1,511,241	1,592,342
	1931	(a) 134	616	34,541	3,126	37,667	245,991	227,731

(a) See footnote on page 792.

Detailed information in regard to the disputes during these and previous years is given in the Labour Reports issued by this Bureau.

The number of industrial disputes recorded during 1931 was 134, as compared with 183 during the previous year. In New South Wales 87 disputes occurred. Of this number 70 involved workpeople engaged in mining and quarrying. Working days lost during 1931 totalled 245,991 for all disputes in Australia, as compared with 1,511,241 working days lost during 1930. The estimated loss of wages was £227,731 in 1931 as compared with £1,592,342 for the year 1930.

5. *Particulars of Principal Disputes in 1931.*—(i) *General.* The preceding tables show the number and effect of all disputes for the year 1931 classified according to Industrial Groups. The figures show large decreases compared with those of the previous year as regards number of working days and amount of wages lost. The number of disputes is the lowest recorded for any year during the period covered by the investigations. The tables show that of the total number of disputes (134) which occurred in 1931 no less than 79 were in connexion with the coal-mining industry, and of these 69 occurred in New South Wales. The total loss in wages through all disputes in Australia was £227,731, the lowest annual loss yet recorded. The loss through disputes in the coal-mining industry in New South Wales was £111,378 or 49 per cent. of the total loss in wages for Australia.

(ii) *Details regarding Principal Disputes.*—(a) *New South Wales.* A dispute at the Coalcliffs colliery, which commenced in June, 1930, was not settled until March, 1931. The dispute arose over filling rates for machine-cut coal, and the refusal of claims for the re-employment of men who had been given notice of dismissal. Despite negotiations between the parties, the dispute remained unsettled at the end of the year 1930. A compulsory conference under the Commonwealth Act was held in February, but was adjourned on the understanding that the parties would consider a proposal of the Judge to submit the matters in dispute for arbitration to the Commonwealth Conciliation Commissioner. The proposal was accepted, but at the request of the parties, the Commissioner sat as a private arbitrator. As a result of the arbitration, the parties agreed to a compromise on the matters in dispute, and work was resumed after a stoppage of nine months.

A stoppage of work occurred in August at the State Coal Mine, Lithgow, because of the proposal of the Railway Commissioners to reduce wages under the provisions of the Salaries Reduction Act, as they considered that production costs at the mine should be reduced. The dispute was taken up by the Premier, who succeeded in arranging a settlement on the basis that each miner would increase his daily output by one skip per day. In consideration of the increased output, the provision of the Salaries Reduction Act would not operate. The colliery was idle for about three weeks.

At the Zinc Corporation South Blocks Mine, Broken Hill, in July, a proposal for the reduction of contract rates to a party of miners caused a stoppage of work for ten weeks. The Company agreed to provide work elsewhere for the party concerned in the dispute, but refused to pay the previous rate.

In October, a serious dislocation of Interstate shipping arose out of a dispute concerning the dismissal of a relief fireman on S.S. Canberra. Vessels were held up in Sydney and Newcastle, and the trouble extended to Melbourne, Adelaide and Fremantle, where other vessels were laid up. The strike lasted for approximately three weeks—a settlement being effected at a compulsory conference under the Commonwealth Arbitration and Conciliation Act, presided over by the Chief Judge.

(b) *Victoria.* Two disputes involving employees in the meat industry occurred in this State during the year. The first arose about the end of April, owing to the refusal of slaughtermen at about 70 establishments to accept a reduction in wages as provided by a determination of the Wages Board. Early in May, the Assistant Minister for Labour proposed terms of settlement. These were not accepted by the employees, but, after further negotiations, the original terms were accepted, i.e., the rates under the determination to apply, but the quarterly reduction of 2s. owing to the fall in the cost of living figures would not operate from 1st May, and would be restored to those automatically reduced under the Commonwealth Arbitration Court Award.

The other dispute occurred in October, concerning a "go slow" policy as a protest against the existing rates of wages provided in an agreement. A rank and file committee took control of the dispute. At a conference, the meat exporters suggested terms of settlement, a compromise being effected, and the existing agreement being extended to the end of 1932.

(c) *Queensland.* A serious dispute occurred in November, involving railway employees at Townsville, owing to the dismissal of some shunters who refused to handle a truck of ore from one of the mines, the ore having been declared "black". Altogether 1,600 men ceased work as a protest against the dismissals. The Government passed the Railway Strike and Public Preservation Act, dismissing all strikers, and the dispute, after six days, was declared "off" by the men. Re-employment was left to the discretion of the Railways Commissioner.

A dispute involving employees in the principal meat works in the State occurred in July. After stop-work meetings held on the 8th July as a protest against a reduction in wages by the State Industrial Court affecting employees in the export section of the industry, work ceased at a number of establishments, and was not resumed for about a week. At an informal conference of employers and employees, held at the invitation of the Premier, a proposal for re-opening the works to treat stock on hand was made. It was agreed that the proposal should be considered at a mass meeting of the employees, who decided to resume work.

A dispute as to tonnage rates of machine-mined coal occurred at the State Coal Mine, Collinsville, in September—the dispute did not terminate for about three weeks—the men ultimately accepting the Mines Department's rates and conditions.

(d) *Western Australia.* A stoppage of work occurred among employees in the Fremantle Wool Stores in November, consequent on a reduction of wages by an order by the State Arbitration Court under the provisions of the Financial Emergency Act, in addition to the basic wage reduction. Stop-work meetings were held, the matter eventually being left to the Disputes Committee for negotiation with the Employers' Federation. Numerous conferences called by the President of the Arbitration Court were fruitless, and the Secretary and members of the union were prosecuted and fined. The men resumed under terms suggested by the President of the Arbitration Court as follows:—

"That, pending the Arbitration Court's decision, the employers pay the difference between the rates specified in the Industrial agreement as varied by the Court's orders under the Financial Emergency Act and the rates now payable under the said agreement as modified by the current basic wage declaration, provided—

- (a) the men return to work forthwith;
- (b) that the union immediately lodges appeals against the said orders, and undertakes to abide by the Court's decision thereon, without any further cessation of work;
- (c) the Court to proceed to hear the said appeals immediately."

On the 24th December, the President of the State Arbitration Court cancelled the orders previously made in favour of the wool firms.

A reduction of 8s. per week in the State basic wage which the Kurrawang Woodline Company proposed to introduce in July caused a stoppage of work involving wood-cutters supplying the Company. The matter was referred to the State Arbitration Court, resulting in the piece-workers losing their annual holiday pay per fortnight, but not suffering any reduction in pay for day work. The hours of work were increased from 44 to 48 per week.

In September, owing to the "seniority" question, employees of the same Company refused to work, alleging victimization of old employees in the previous dispute. The Company stated that men were dismissed as they finished cutting their block, as had been the practice. After meeting the Union, the Company decided to recognize right of service and, so far as possible, to re-engage the dismissed men.

(e) *Tasmania*. The only serious dispute occurred at the Seymour Colliery, where a question of regular payment of wages and arrears arose. After many conferences, most of the amount due was paid, but, owing to shortage of orders, the mine closed down permanently.

6. **Duration of Industrial Disputes, 1931.**—The following table gives particulars respecting the number of disputes, workpeople directly and indirectly involved, working days lost, and estimated loss in wages, consequent on the cessations of work recorded for Australia during the year 1931, classified under the adopted limits of duration :—

INDUSTRIAL DISPUTES.—DURATION, AUSTRALIA, 1931.(a)

Limits of Duration.	Number.	Workpeople Involved.			Working Days Lost.	Estimated Loss in Wages.
		Directly.	Indirectly.	Total.		
1 day and less .. .. .	45	12,776	1,234	14,010	13,810	£ 14,791
2 days and more than 1 day	16	3,940	102	4,042	8,054	7,363
3 days and more than 2 days	13	4,122	7	4,129	12,373	7,295
Over 3 days and less than 1 week (6 days) .. .. .	18	4,615	233	4,848	22,786	22,173
1 week and less than 2 weeks	19	4,552	683	5,235	40,782	37,469
2 weeks and less than 4 weeks	11	2,997	509	3,506	48,940	42,522
4 weeks and less than 8 weeks	8	907	233	1,140	38,323	34,840
8 weeks and over .. .. .	4	632	125	757	60,923	61,278
<b>Total .. .. .</b>	<b>134</b>	<b>34,541</b>	<b>3,126</b>	<b>37,667</b>	<b>245,991</b>	<b>227,731</b>

(a) See footnote on page 792

Similar figures for the years 1913 to 1930 will be found in previous issues of the Year Book and in the Labour Reports issued by this Bureau.

7. **Causes of Industrial Disputes, 1913 to 1931.**—The following table shows the number of disputes, workpeople involved, and the working days lost in disputes during the years 1913 and 1926 to 1931, classified according to principal cause :—

INDUSTRIAL DISPUTES.—CAUSES, AUSTRALIA.

Causes of Dispute.	1913.	1926.	1927.	1928.	1929.	1930.	1931.
NUMBER.							
1. Wages—							
(a) For increase .. .. .	42	23	24	8	8	..	4
(b) Against decrease .. .. .	4	5	4	3	6	9	17
(c) Other wage questions .. .. .	31	67	66	39	45	44	16
2. Hours of Labour—							
(a) For reduction .. .. .	3	13	14	2	6	4	2
(b) Other disputes re hours .. .. .	7	2	4	2	2	..	..
3. Trades Unionism—							
(a) Against employment of non-unionists .. .. .	8	5	12	6	3	..	1
(b) Other union questions .. .. .	5	22	24	11	12	20	4
4. Employment of particular Classes or Persons .. .. .	44	108	152	105	87	48	50
5. Working Conditions .. .. .	51	46	72	48	31	27	22
6. Sympathetic .. .. .	5	8	5	9	6	11	5
7. Other Causes .. .. .	8	61	64	54	53	20	13
<b>Total .. .. .</b>	<b>208</b>	<b>360</b>	<b>441</b>	<b>287</b>	<b>259</b>	<b>183</b>	<b>(d) 134</b>

INDUSTRIAL DISPUTES.—CAUSES, AUSTRALIA—*continued.*

Causes of Dispute.	1913.	1926.	1927.	1928.	1929.	1930.	1931.
<b>WORKPEOPLE INVOLVED.</b>							
1. Wages—							
(a) For increase ..	8 633	17,046	7,316	2,775	1,414	..	2,053
(b) Against decrease ..	563	1,275	300	1,317	10,532	12,824	7,108
(c) Other wage questions	7,160	18,883	20,297	17,057	8,742	12,686	3,999
2. Hours of Labour—							
(a) For reduction ..	460	9,730	7,813	61	21,646	4,334	192
(b) Other disputes re hours	1,819	290	288	1,005	2,067	..	..
3. Trades Unionism—							
(a) Against employment of non-unionists ..	5,370	125	4,432	193	103	..	9
(b) Other union questions	1,418	3,790	25,848	2,311	4,367	4,160	2,240
4. Employment of particular Classes or Persons ..	11,370	25,165	55,174	35,379	22,933	7,751	12,023
5. Working Conditions ..	10,785	12,889	29,766	14,169	4,672	4,276	6,659
6. Sympathetic ..	947	3,499	1,484	6,123	11,604	4,010	1,053
7. Other Causes ..	1,758	20,342	48,039	16,032	16,524	4,181	2,331
Total .. ..	50,283	113,034	200,757	96,422	104,604	54,222	37,667

## WORKING DAYS LOST.

1. Wages—							
(a) For increase ..	100,069	580,183	150,601	6,548	7,433	..	15,425
(b) Against decrease ..	9,438	2,573	2,578	3,824	2,332,157	1,227,808	111,258
(c) Other wage questions	78,183	82,898	83,831	80,755	47,261	113,102	43,746
2. Hours of Labour—							
(a) For reduction ..	2,774	280,152	305,782	725	1,887,196	63,583	152
(b) Other disputes re hours	15,111	290	4,487	2,667	3,183	..	..
3. Trades Unionism—							
(a) Against employment of non-unionists ..	91,002	1,623	82,156	2,137	424	..	99
(b) Other union questions	32,388	15,607	204,802	8,900	49,924	50,225	11,752
4. Employment of particular Classes or Persons ..	191,723	114,917	310,425	423,555	78,492	24,683	38,567
5. Working Conditions ..	73,562	123,390	303,788	98,852	8,545	8,551	17,106
6. Sympathetic ..	24,066	38,381	3,573	106,358	23,482	17,648	4,070
7. Other Causes ..	5,212	70,247	261,468	42,957	23,381	5,641	3,816
Total .. ..	623,528	1,310,261	1,713,581	777,278	4,461,478	1,511,241	245,991

(d) See footnote, page 792.

The main causes of industrial disputes are "Wage" questions, "Working Conditions," and "Employment of Particular Classes or Persons." In each of the years 1913 to 1925, with the exception of 1922, the number of dislocations concerning wages exceeded those caused by any other question, and varied between a minimum proportion of 26 per cent. in 1922 and a maximum of 45 per cent. in 1916. During 1931 the number of disputes concerning "Wages" represented 28 per cent. of the total number for the year. The majority of the dislocations of work classified under the heading, "Employment of Particular Classes or Persons," are stoppages for the purpose of protesting against the dismissal of certain employees, who, in the opinion of their fellow-workers, have been unfairly treated or victimized. This class of dispute occurs very frequently in the coal-mining industry. The number of disputes over "Trade Union" questions has represented a fairly uniform proportion of the total number of disputes during the years under review, while stoppages of work concerning "Hours of Labour" increased during 1926 and 1927, but decreased during 1928 to 1931. "Sympathetic" disputes have not been numerous during the past five years.

8. Results of Industrial Disputes.—The following table shows the number of disputes, workpeople involved, and the working days lost in disputes throughout Australia during the five years 1927 to 1931, classified according to results:—

## INDUSTRIAL DISPUTES CLASSIFIED ACCORDING TO RESULTS.—AUSTRALIA.

Year.	Number.				Workpeople Involved.				Working Days Lost.			
	In Favour of Workpeople.	In Favour of Employer.	Compromise.	Indefinite.	In Favour of Workpeople.	In Favour of Employer.	Compromise.	Indefinite.	In Favour of Workpeople.	In Favour of Employer.	Compromise.	Indefinite.
1927 ..	88	307	35	5	28,005	152,429	18,571	995	207,009	1,198,163	294,102	10,285
1928 ..	39	228	14	1	7,362	85,306	2,814	178	55,757	674,076	16,309	178
1929 ..	70	135	44	5	11,200	69,859	7,150	15,304	38,943	4,315,760	43,174	26,302
1930 ..	36	117	24	1	4,133	45,204	3,343	520	13,497	1,358,044	25,177	13,000
1931 a b	27	80	25	..	5,917	26,182	5,406	..	47,191	142,006	49,222	..

(a) See footnote, page 792.

(b) The following particulars of disputes which were incomplete at the 31st December, 1931, should be added to the above figures to effect a balance with those published in the preceding table:—2 disputes; 162 workpeople involved; and 7,572 working days lost.

The figures for the year 1929 in the above, and also in the following table, include the number of workpeople involved and the working days lost in 1929 in the dispute on the Northern Coalfield of New South Wales which commenced in March, 1929, and terminated in June, 1930.

9. Methods of Settlement.—The following tables show for Australia the number of disputes, workpeople involved, and working days lost in industrial disputes during the years 1913 and 1926 to 1931, classified according to the adopted schedule of methods of settlement:—

## INDUSTRIAL DISPUTES.—METHODS OF SETTLEMENT, AUSTRALIA.

Methods of Settlement.	1913.	1926.	1927.	1928.	1929.	1930.	(a) 1931.(b)
NUMBER.							
Negotiations—							
Direct between employers and employees or their representatives	119	166	229	138	130	134	38
By intervention or assistance of distinctive third party—not under Commonwealth or State Industrial Act	17	16	18	8	8	3	3
Under State Industrial Acts—							
By intervention, assistance, or compulsory conference	19	8	13	10	3	6	11
By reference to Board or Court	22	10	19	8	1	2	1
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance, or compulsory conference	4	13	19	6	6	..	4
By Filling Places of Workpeople on Strike or Locked out	13	8	5	10	7	9	2
By Closing-down Establishment permanently	1	..	10	3	3	1	2
By Other Methods	13	135	122	99	96	23	21
Total	208	356	435	282	254	178	(b)132

(a) See footnote on page 792.

(b) See footnote (b) to previous table.

INDUSTRIAL DISPUTES.—METHODS OF SETTLEMENT. AUSTRALIA—*continued.*

Methods of Settlement.	1913.	1926.	1927.	1928.	1929.	1930.	(a)
							1031.(b)
<b>WORKPEOPLE INVOLVED.</b>							
Negotiations—							
Direct between employers and employees or their representatives	23,357	44,995	94,070	37,708	32,393	40,804	22,292
By intervention or assistance of distinctive third party—not under Commonwealth or State Industrial Act	3,172	17,072	5,839	1,242	19,161	196	1,885
Under State Industrial Acts—							
By intervention, assistance, or compulsory conference	6,505	936	3,763	2,009	487	3,476	3,871
By reference to Board or Court	12,774	684	4,314	2,975	56	184	42
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance, or compulsory conference	659	4,332	33,517	1,497	511	..	1,083
By filling places of workpeople on strike or locked out	658	245	533	11,047	5,411	2,940	222
By closing-down establishment permanently	170	..	1,104	266	144	40	52
By other methods	2,988	44,325	56,860	38,916	45,350	5,560	8,058
Total	50,283	112,589	200,000	95,660	103,513	53,200	37,505

**WORKING DAYS LOST.**

Negotiations—							
Direct between employers and employees or their representatives	94,400	417,158	700,968	273,254	2,417,171	1,289,487	109,601
By intervention or assistance of distinctive third party—not under Commonwealth or State Industrial Act	26,335	549,427	100,148	36,937	1,279,258	2,893	2,625
Under State Industrial Acts—							
By intervention, assistance, or compulsory conference	187,871	11,281	80,815	38,878	5,261	56,648	25,257
By reference to Board or Court	221,769	8,744	60,236	29,533	56	1,272	252
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance, or compulsory conference	2,105	134,841	305,303	3,962	1,882	..	30,317
By filling places of workpeople on strike or locked out	14,139	2,865	9,706	266,369	610,686	34,612	27,042
By closing-down establishment permanently	20,400	..	30,289	750	9,861	80	5,355
By other methods	56,509	118,580	422,094	96,637	100,004	24,726	37,970
Total	623,528	1,242,896	1,709,559	746,320	4,424,179	1,409,718	238,419

(a) See footnote on page 792.

(b) See footnote (b) to previous table.

The majority of the disputes were settled by direct negotiations between employers and employees, the proportion so settled ranging between 47 per cent. in 1924 and 76 per cent. in 1921. Of the 132 disputes during 1931, 88 or 67 per cent. were settled by this method. The proportion of dislocations settled by compulsory conferences or the intervention and assistance of officials under State or Commonwealth Arbitration Acts has varied considerably during the period under review, ranging from 2 per cent. in 1923 to 15 per cent. in 1920. The proportion in 1931 was 12 per cent. In connexion with the comparatively large number of disputes which are classified as having been settled "By other methods," many stoppages of work occur each year, principally at collieries, but the cause of such stoppages is not officially known to the employers or their representatives. Such stoppages usually last for one day, and work is resumed without negotiations for a settlement of the trouble.

## § 2. Fluctuations in Employment.

1. **General.**—The particulars given in the following tables are based upon information furnished by the secretaries of trade unions. The membership of the unions regularly reporting exceeds 430,000. Unemployment returns are not collected from unions the members of which are in permanent employment, such as railway and tramway employees, and public servants, or from unions whose members are casually employed (wharf labourers, etc.). Very few of the unions pay unemployment benefit, but the majority of the larger organizations have permanent secretaries and organizers who are closely in touch with the members and with the state of trade within their particular industries. In many cases unemployment registers are kept, and provision is made in the rules for payment of reduced subscriptions by members out of work. In view of these facts, and of the large membership of the unions from which quarterly returns are received, percentage unemployment results based on the information supplied may be taken to show the general trend of unemployment. Seasonal fluctuations in unemployment have been provided for by collecting returns quarterly since the 1st January, 1913, the yearly figures quoted representing the average of the four quarters.

2. **Unemployment.**—(i) *States.* In addition to the qualifications referred to above, allowance must be made for the circumstance that the industries included in the returns from trade unions are not quite identical in the various States. The results may, however, be taken as representing fairly well labour conditions generally.

### UNEMPLOYMENT.—STATES, 1931.

State.	Unions Reporting.		Unemployed.	
	Number.	Members.	Number.	Percentage.
New South Wales .. .. .	113	186,789	57,472	30.8
Victoria .. .. .	81	122,726	31,074	25.8
Queensland .. .. .	46	52,416	8,453	16.1
South Australia .. .. .	58	32,108	10,432	32.5
Western Australia .. .. .	63	26,537	7,249	27.3
Tasmania .. .. .	36	9,428	2,586	27.4
<b>Australia .. .. .</b>	<b>397</b>	<b>430,004</b>	<b>117,866</b>	<b>27.4</b>

(ii) The following table gives the percentages in each State from the end of 1929 to 1931 with particulars at the end of 1912.

### PERCENTAGE OF MEMBERS OF TRADE UNIONS RETURNED AS UNEMPLOYED IN EACH STATE.

State.	1912, end of Year.	1929.				1930.				1931.							
		4th Qtr.	%	2nd Qtr.	%	3rd Qtr.	%	4th Qtr.	%	1st Qtr.	%	2nd Qtr.	%	3rd Qtr.	%	4th Qtr.	%
New South Wales .. .. .	5.0	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Victoria .. .. .	6.7	13.8	13.8	17.6	19.4	21.9	24.4	26.5	26.8	25.6	26.8	25.6	26.8	25.6	26.8	25.6	26.8
Queensland .. .. .	4.6	7.4	7.4	10.1	11.6	12.5	14.1	16.1	16.9	17.5	16.9	17.5	16.9	17.5	16.9	17.5	16.9
South Australia .. .. .	5.1	17.8	17.8	21.4	24.7	28.5	30.6	32.4	33.3	33.7	32.4	33.3	33.3	33.7	32.4	33.3	33.7
Western Australia .. .. .	5.8	11.8	11.8	18.7	18.4	24.6	26.1	27.1	27.9	28.1	27.1	27.9	27.9	28.1	27.1	27.9	28.1
Tasmania .. .. .	3.4	15.1	15.1	18.9	23.4	26.5	26.6	27.3	27.3	28.4	27.3	27.3	27.3	28.4	27.3	27.3	28.4
<b>Total .. .. .</b>	<b>5.6</b>	<b>13.1</b>	<b>13.1</b>	<b>18.5</b>	<b>20.5</b>	<b>23.4</b>	<b>25.8</b>	<b>27.6</b>	<b>28.3</b>	<b>28.0</b>	<b>27.6</b>	<b>28.3</b>	<b>28.3</b>	<b>28.0</b>	<b>28.3</b>	<b>28.0</b>	<b>28.0</b>



(iii) *Summary for Australia.* The appended table gives a summary for Australia for the last five years :—

UNEMPLOYMENT.—AUSTRALIA.

Particulars.	Unions.	Membership.	Unemployed.	
			Number.	Percentage.
1927 .. .. .	375	445,985	31,032	7.0
1928 .. .. .	375	423,422	45,669	10.8
1929 .. .. .	382	424,093	47,359	11.1
1930 .. .. .	395	438,874	84,767	19.3
1931 .. .. .	397	430,004	117,866	27.4
1929 1st Quarter .. .. .	375	420,756	39,159	9.3
2nd „ .. .. .	376	409,503	40,996	10.0
3rd „ .. .. .	388	433,388	52,480	12.1
4th „ .. .. .	390	432,727	56,801	13.1
1930 1st Quarter .. .. .	392	432,464	63,144	14.6
2nd „ .. .. .	394	435,239	80,595	18.5
3rd „ .. .. .	396	439,971	90,379	20.5
4th „ .. .. .	399	447,822	104,951	23.4
1931 1st Quarter .. .. .	397	440,234	113,614	25.8
2nd „ .. .. .	397	429,687	118,424	27.6
3rd „ .. .. .	396	426,603	120,694	28.3
4th „ .. .. .	396	423,493	118,732	28.0

NOTE.—Similar figures for each of the four quarters of the years since 1912 will be found in the Labour Reports. The quarterly figures show the number of persons who were out of work for three days or more during a specified week in each quarter, and the annual figures, the average of the four quarters; the returns do not include persons out of work through strikes or lock-outs.

The highest percentage of unemployed yet recorded (28.3) was reached in the third quarter of 1931.

(iv) *Industrial Groups.* The next table shows the percentages unemployed in industrial groups. Industries or occupations in which employment is stable, such as railways, and those which are subject to exceptional fluctuations, such as wharf labour, agricultural, pastoral, etc., are not included. Other occupations—domestic, hotel employees, etc., are included in the “Other and Miscellaneous” group, as their returns are not sufficiently representative.

UNEMPLOYMENT IN INDUSTRIAL GROUPS.—AUSTRALIA, 1931.

Industrial Group.	Number Reporting.		Unemployed.	
	Unions.	Members.	Number.	Percentage.
Manufacturing :—				
I. Wood, Furniture, etc. ..	17	19,461	6,477	33.3
II. Engineering, Metal Works, etc. ..	63	76,018	22,853	30.1
III. Food, Drink, Tobacco, etc. ..	51	36,143	7,165	19.8
IV. Clothing, Hats, Boots, etc. ..	23	35,645	9,224	25.9
V. Books, Printing, etc. ..	13	19,383	2,758	14.2
VI. Other Manufacturing ..	66	40,235	17,515	43.5
VII. Building .. .. .	47	53,126	17,588	33.1
VIII. Mining, Quarrying, etc. ..	21	27,477	9,087	33.1
X. Land Transport other than Railway and Tramway Services ..	12	17,843	4,302	24.1
IX., XI., XII., XIII., and XIV. Other and Miscellaneous ..	84	104,673	20,897	20.0
All Groups .. .. .	397	430,004	117,866	27.4

3. **Seasonal Employment in Australia.**—An investigation concerning the extent of seasonal employment in Australia was made during 1929. The State Statisticians were requested to furnish brief reports regarding the industries and callings in their respective States subject to seasonal fluctuations. From the reports received from these officials, supplemented by information from other sources, particulars were compiled and published in Official Year Book, No. 22, and in Labour Report, No. 19.

4. **Special Legislation for the Relief of Unemployment.**—The position in regard to unemployment in Australia became so serious during 1930, that the usual methods of providing funds for relief works and sustenance were found to be inadequate. The cessation of loans, and the general depression in industry and business, due mainly to the decline in the prices of primary products, brought about an economic crisis in all States. The number of persons thrown out of work increased rapidly, with little prospect of conditions improving during the immediate future. The Commonwealth and State Governments realized that special action was necessary to provide additional funds to relieve the distress caused by continued unemployment, as the available money was not sufficient to meet the abnormal conditions.

Special grants to the States were made by the Commonwealth Government, while special legislation relating to the relief of unemployment was enacted in all States with the exception of Western Australia. In New South Wales, Victoria and Queensland the Acts provided for special taxation for the purpose of creating funds for relief works and sustenance for the unemployed. In South Australia and Western Australia special taxation was not imposed, the moneys for relief of unemployed being voted by Parliament. In Tasmania special legislation was enacted authorizing the raising of certain sums of money for purposes of affording relief to unemployed persons.

Further references to the special legislation relating to unemployment, rates of tax and sustenance payments will be found in Labour Report, No. 22.

### § 3. Apprenticeship.

In Year Book No. 16, pp. 602-3, information was given with regard to legislation relating to the question of apprenticeship. Tables were included showing the periods of apprenticeship fixed in the awards of the various industrial tribunals of the States and Commonwealth, also the proportion of apprentices to journeymen and journeywomen. This information has been omitted from the present issue. Reference to legislation covering apprenticeship will be found in the Appendix to Official Year Book, No. 23.

## D.—ASSOCIATIONS.

### § 1. Labour Organizations.

1. **Registration.**—(i) *Under Trade Union Acts.* The benefits obtained by registering trade unions under the Trade Union Acts in force in the various States are not considered of much value; consequently the statistics of registered trade unions of employees do not accurately represent the position of unionism. Further, the returns for past years are so defective as to be practically valueless, inasmuch as no reliable indication is afforded of the numerical and financial position of the unions. Some of the registered unions fail to supply returns; this non-supply may lead to cancellation of the registration. Others have obtained the cancellation of their certificates of registration, the apparent reason being that they proposed to register under the Commonwealth Conciliation and Arbitration Act or a State Arbitration Act. In Queensland, some of the largest labour unions withdrew from registration during 1911, mainly on account of the necessity for closer restriction of their objects as set forth in their rules, consequent on legal decisions affecting trade unions. In Victoria and in South Australia very few of the existing unions are registered under the Trade Union Acts. It will be seen, therefore, that the available information under this heading is too meagre for statistical purposes.

(ii) *Under Industrial Arbitration Acts.* Information with regard to registrations of employers' associations and trade unions under the various State Industrial Arbitration Acts will be found in previous issues of the Year Book. The latest information available as to registrations is as follows:—New South Wales, 162 industrial unions of employers and 154 industrial unions of employees, the membership of the latter being 284,149;

Queensland, 10 industrial unions of employers with 10,606 members, and 77 industrial unions of employees with approximately 110,421 members; South Australia, 25 organizations of employees with 19,284 members; Western Australia, 35 organizations of employers with 968 members, and 120 organizations of employees with 33,555 members. There is no provision in the South Australian Industrial Acts for the registration of organizations of employers, and in Victoria and Tasmania, where Wages Board systems of wage fixation are in operation, organizations of employers and employees are not required to register. Registration under Commonwealth legislation began in 1906. In that and the four following years, there was but one union of employers: another was registered in 1911. The unions of employees registered were 20 in 1906, with 41,413 members. In December, 1931, there were on the register 28 organizations of employers with 20,000 persons, firms or corporations affiliated: and 133 organizations of employees with approximately 670,000 members.

2. **Particulars regarding Trade Unions.**—(i) *Types.* The trade unions in Australia are very diverse in character, and range from the small independent association to the large interstate organization, which, in its turn, may be merely a branch of a British or International union. Broadly speaking, there are four distinct classes of labour organizations, viz. :—(i) the local independent, (ii) the State, (iii) the interstate, and (iv) the Australasian or International, but a number of variations occur from each of these classes. The leading characteristics of each of these types were briefly outlined in Labour Report No. 2 (pp. 7 to 9) issued by this Bureau.

(ii) *Number and Membership.* As already stated, the figures for trade unions registered under the Acts do not represent the position of unionism in Australia. In 1912, the Labour and Industrial Branch of the Commonwealth Bureau of Census and Statistics was established, and with the cordial co-operation of the officials of the labour organizations, comprehensive figures relating to the development of organized labour are now available. The following table shows the position at the end of 1931 :—

TRADE UNIONS, BRANCHES, AND MEMBERS, 1931.

State or Territory.	Number of Separate Unions.	Number of Branches.	Number of Members.
New South Wales .. ..	202(c)	585	315,732(c)
Victoria .. ..	150	408	203,956
Queensland .. ..	107	318	123,050
South Australia .. ..	110	171	57,082
Western Australia .. ..	129	183	52,234
Tasmania .. ..	78	70	16,150
Northern Territory .. ..	4	..	802
<b>Total .. ..</b>	<b>780</b>	<b>1,735</b>	<b>769,006</b>
<b>Australia (a) .. ..</b>	<b>362(a)</b>	<b>2,153(b)</b>	<b>769,006</b>

(a) Allowing for interstate duplication. The figures represent the number of distinct organizations and interstate groups of organizations in Australia—not the total number of organizations, which are practically independent and self-governing. (b) See remarks below. (c) Includes 13 unions with a membership of 905 in the Federal Capital Territory.

In the preceding table, the number of separate unions in each State refers to the number of unions which are represented in each State, exclusive of branches therein, and each union is counted once only. Except in the last line, the number of branches indicates the number of branches of State head offices, which may, of course, themselves be branches of an interstate or larger organization. In taking the total number of separate unions in Australia (see last line but one), it is obvious that, in the case of inter-state and similar unions, there will be duplication, since each such union is counted once in each State in which it has any branches. In the figures given in the last line, allowance has been made for this duplication. State branches of interstate or federated unions, as

well as sub-branches within a State, are included under the heading "Branches" in the third column—last line. The scheme of organization of these interstate or federated unions varies greatly in character, and the number of separate Commonwealth unions does not, therefore, fairly represent the number of practically independent organizations in Australia. In some of these unions the State organizations are bound together under a system of unification and centralized control, while in others the State units are practically independent and self-governing, the federal bond being loose and existing only for one or two specified purposes. There are, therefore, 362 distinct organizations and interstate groups of organizations in Australia, having 2,153 State branches and sub-branches, and a total of 769,006 members.

(iii) *Classification in Industrial Groups.* The following table shows the number of unions and members thereof in Australia at the end of each of the last five years. The number of unions specified refers to the number of different unions represented in each State; and, while interstate or federated unions are counted once in each State in which they are represented, sub-branches within a State are not counted.

### TRADE UNIONS.—INDUSTRIAL GROUPS, AUSTRALIA.

Industrial Groups.	1927.	1928.	1929.	1930.	1931.
NUMBER OF UNIONS.					
Manufacturing :—					
I. Wood, Furniture, etc. . .	18 (4)	18 (4)	18 (4)	18 (4)	18 (4)
II. Engineering, Metal Works, etc. . .	61 (23)	60 (23)	61 (22)	63 (22)	63 (22)
III. Food, Drink, Tobacco, etc. . .	63 (32)	65 (33)	65 (33)	65 (32)	63 (34)
IV. Clothing, Hats, Boots., etc. . .	24 (11)	25 (12)	25 (12)	24 (12)	24 (12)
V. Books, Printing, etc. . .	13 (8)	14 (8)	14 (8)	15 (9)	15 (10)
VI. Other Manufacturing . . .	80 (41)	78 (40)	79 (42)	79 (41)	76 (38)
VII. Building . . .	49 (28)	51 (28)	50 (28)	51 (28)	51 (28)
VIII. Mining, Quarrying, etc. . .	15 (12)	17 (14)	18 (14)	18 (14)	16 (13)
IX. Railway and Tramway Services . .	51 (28)	51 (30)	52 (31)	52 (30)	51 (29)
X. Other Land Transport . . .	13 (8)	12 (5)	11 (5)	12 (5)	11 (4)
XI. Shipping, etc. . .	54 (24)	58 (29)	59 (28)	59 (26)	57 (24)
XII. Pastoral, Agricultural, etc. . .	8 (3)	8 (3)	8 (3)	8 (3)	9 (4)
XIII. Domestic, Hotels, etc. . .	23 (19)	24 (20)	24 (19)	20 (15)	20 (15)
XIV. Miscellaneous :—					
(i) Banking, Insurance and Clerical . . .	29 (19)	29 (19)	30 (20)	30 (20)	31 (19)
(ii) Public Service . . .	143 (53)	144 (54)	143 (50)	143 (45)	145 (46)
(iii) Retail and Wholesale . . .	9 (7)	9 (7)	9 (7)	9 (7)	8 (7)
(iv) Municipal, Sewerage and Labouring . . .	14 (13)	14 (13)	14 (13)	14 (13)	14 (13)
(v) Other Miscellaneous . . .	92 (36)	91 (37)	91 (35)	100 (36)	108 (40)
Total . . .	759 (369) <i>a</i>	768 (379) <i>a</i>	771 (374) <i>a</i>	780 (362) <i>a</i>	780 (362) <i>a</i>
NUMBER OF MEMBERS.					
Manufacturing :—					
I. Wood, Furniture, etc. . .	37,110	35,740	35,898	30,944	26,700
II. Engineering, Metal Works, etc. . .	82,720	87,417	85,425	79,081	74,316
III. Food, Drink, Tobacco, etc. . .	70,012	71,994	71,948	71,437	63,582
IV. Clothing, Hats, Boots., etc. . .	53,641	56,874	56,300	50,625	47,707
V. Books, Printing, etc. . .	19,214	19,771	19,817	19,822	18,703
VI. Other Manufacturing . . .	47,671	46,779	44,693	44,742	42,553
VII. Building . . .	57,234	60,416	61,191	59,629	52,041
VIII. Mining, Quarrying, etc. . .	49,179	43,044	43,098	42,405	36,037
IX. Railway and Tramway Services . .	121,300	116,061	113,281	106,968	92,202
X. Other Land Transport . . .	22,137	20,632	18,817	18,211	17,595
XI. Shipping, etc. . .	42,702	38,361	38,308	38,050	36,039
XII. Pastoral, Agricultural, etc. . .	60,394	55,547	50,266	43,639	28,668
XIII. Domestic, Hotels, etc. . .	28,313	30,488	29,767	25,504	23,611
XIV. Miscellaneous :—					
(i) Banking, Insurance and Clerical . . .	31,343	28,371	30,440	31,140	30,222
(ii) Public Service . . .	76,225	79,175	79,773	81,275	81,395
(iii) Retail and Wholesale . . .	30,685	31,034	31,887	28,859	26,630
(iv) Municipal, Sewerage and Labouring . . .	42,811	48,691	46,577	41,027	32,541
(v) Other Miscellaneous . . .	38,961	41,146	43,682	42,399	38,374
Total . . .	911,652	911,541	901,168	855,757	769,006

(a) Allowing for interstate duplication.

(iv) *Trade Unions—Numbers and Percentages of Male and Female Members.—Australia.* The Census of 1921 gives the percentage of male and female employees (i.e., persons in "receipt of wages or salary," and persons "unemployed"), 20 years of age and over, on the total male and female population, and by applying these percentages to the estimated total male and female population at the end of each year, an estimate of the number of adult employees of each sex in the year is obtained.

The following table shows separately for males and females (a) the number of members of trade unions, (b) the estimated number of employees of each sex 20 years of age and over in all professions, trades, and occupations, and (c) the percentage of the former (a) on the latter (b) at the end of each year, 1927 to 1931. The estimated number of employees includes all persons (over the age specified) in receipt of wages or salary, as well as those unemployed, and therefore embraces a large number of adults who are not eligible for membership of any trade union, such as certain persons employed in professional occupations, as well as others who, while eligible for membership so far as the nature of their trade or occupation is concerned, do not reside in a locality which is covered by any union devoted to their particular trade or occupation. Moreover the age at which persons are eligible for membership varies in different unions. The Census results are classified in quinquennial age groups, and age 20 years is taken as approximating to the age of admission to membership. A line has also been added showing the estimated numbers of "junior" workers under 20 years of age.

**TRADE UNIONS—NUMBER AND PERCENTAGES OF MALE AND FEMALE MEMBERS.—AUSTRALIA.**

Particulars.	1927.	1928.	1929.	1930.	1931.
<b>MALES.</b>					
Estimated Total No. of Employees 20 years of age and over .. .. .	1,267,636	1,288,200	1,302,400	1,313,000	1,321,000
No. of Members of Unions .. .. .	793,131	785,189	774,031	735,767	656,105
Percentage of Members on Estimated Total					
Number of Employees .. .. .	62.6	60.9	59.4	56.0	49.7
Junior Workers (under 20) .. .. .	234,994	239,050	241,000	243,400	244,850
<b>FEMALES.</b>					
Estimated Total No. of Employees 20 years of age and over .. .. .	299,205	304,000	308,200	311,600	314,600
No. of Members of Unions .. .. .	118,521	126,352	127,137	119,990	112,901
Percentage of Members on Estimated Total					
Number of Employees .. .. .	39.6	41.5	41.3	38.5	35.9
Junior Workers (under 20) .. .. .	132,015	134,200	136,000	137,500	138,870

(v) *Interstate or Federated Unions.* The following table gives particulars as to the number and membership of interstate or federated unions in 1931.—

**INTERSTATE OR FEDERATED UNIONS.—AUSTRALIA, 1931.**

Particulars.	Unions Operating in—					Total.
	2 States.	3 States.	4 States.	5 States.	6 States. (a)	
Number of Unions .. .. .	19	14	18	23	41	115
Number of Members .. .. .	23,992	59,110	93,736	178,712	290,457	646,007

(a) Certain unions in this group have, in addition to branches in each of the six States, branches in the Northern Territory and the Federal Capital Territory.

It appears, therefore, that 115 out of the 362 separate associations and groups of associations in Australia are organized on an interstate basis. The membership of these 115 unions reaches 646,007 or 84 per cent. of the membership (769,006) of all unions.

3. **Central Labour Organizations.**—In each of the capital cities and in a number of industrial centres elsewhere, delegate organizations consisting of representatives from a group of trade unions have been established. Their revenue is raised by means of a per capita tax on the members of each affiliated union. In most of the towns where such central organizations exist, the majority of the local unions are affiliated with the central organization, which is usually known as the Labour or the Trades Hall Council, or the Labour Federation. In Western Australia a unified system of organization extends over the industrial centres throughout the State. In this State there is a provincial branch of the Australian Labour Party, having a central council and executive, and metropolitan and branch district councils, to which the local bodies are affiliated. The central council, on which all district councils are represented, meets periodically. In the other five States, however, the organization is not so close, and, while provision usually exists in the rules of the central council at the capital city of each State for the organization of district councils or for the representation of the central council on the local councils in the smaller industrial centres of the State, the councils in each State are, as a matter of fact, independent bodies.

A new Central Labour Organization, called the Australasian Council of Trade Unions, came into being during 1927. The Council was created to function on behalf of the Trade Unions of the Commonwealth, and was founded at an All-Australian Trade Union Congress held in Melbourne in May, 1927. The Australasian Council is based on the Metropolitan Trades and Labour Councils in each State, such bodies having the right to appoint two representatives to act on the Executive of the Council. The Metropolitan Trades and Labour Councils are the branches of the Australasian Council. In addition to the representatives from the Metropolitan Councils, the Executive consists of four officers, viz., the President, two Vice-Presidents, and a Secretary, who are elected by and from the All-Australian Trade Union Congress.

The objective of the Council is the socialization of industry, i.e., production, distribution, and exchange. The methods to be adopted are:—(a) The closer organization of the workers by the transformation of the Australasian Trade Union Movement from the Craft to an Industrial basis by the establishment of one Union in each industry; (b) the consolidation of the Australasian Labour Movement with the object of unified control, administration, and action; (c) the centralized control of industrial disputes.

The table below shows the number of metropolitan and district or local labour councils, together with the number of unions and branches of unions affiliated thereto in each State at the end of the year 1931:—

**CENTRAL LABOUR ORGANIZATIONS.—NUMBER, AND UNIONS AFFILIATED, 1931.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	F.C.Ter.	Total.
Number of Councils	3	5	6	2	9	3	1	29
Number of Unions and Branch Unions affiliated	94	175	61	60	208	64	9	671

The figures given in the preceding table as to number of unions do not necessarily represent separate unions, since the branches of a large union may be affiliated to the local trades councils in the several towns in which they are represented.

Between the trade union and the central organization of unions may be classed certain State or district councils organized on trade lines, and composed of delegates from separate unions the interests of the members of which are closely connected by reason of the occupation of their members. Delegate councils of bakers, bread carters, and mill employees, or of unions connected directly or indirectly with the iron, steel, or brass trades, or with the building trades, may be so classed.

4. **Laws relating to Conditions of Labour.**—In Official Year Book No. 16, pp. 538 to 566, a conspectus was given of Labour Laws in force in Australia at the end of the year 1922, and of Acts and Regulations relating to Factories and Shops.

Information was contained in the same issue with regard to employment under Mining Acts, followed by a brief reference to Employers' Liability and Workmen's Compensation Acts and miscellaneous legislation relating to conditions of labour enacted by the States. A conspectus of the Tribunals for the Regulation of Wages and Conditions of Labour was also included.

## § 2. Employers' Associations.

1. **General.**—Recent investigations show that the spirit of association is no less manifest in the case of employers than in the case of workers. Associations for trade purposes merely are not included in the present chapter, which deals with those associations only whose members are united for their own protection, and for representation in cases before Arbitration Courts, Wages Boards and other wage-fixing tribunals. Associations of employers and employees are recognized under the Commonwealth Conciliation and Arbitration Act as well as under several State Acts, and organizations of these bodies may be registered.

The year 1922 was the first for which information was collected, and detailed particulars for that and subsequent years will be found in previous issues of the Official Year Book and in the Labour Reports.

2. **Employers' Associations in each State.**—The following table gives particulars of the number of employers' associations in each State at the end of the years 1927 to 1931 :—

### EMPLOYERS' ASSOCIATIONS.—STATES.

Year.	N.S.W.	Victoria.	Q'land.	S.A.	W.A.	Tas.	Total.
NUMBER OF ASSOCIATIONS.							
1927 .. ..	141	136	77	52	52	27	485
1928 .. ..	146	140	76	56	59	28	505
1929 .. ..	146	154	80	56	62	29	527
1930 .. ..	146	152	83	58	66	29	534
1931 .. ..	148	157	85	60	67	30	547

### NUMBER OF BRANCHES.

1927 .. ..	825	483	109	..	281	1	1,699
1928 .. ..	907	525	188	13	301	1	1,935
1929 .. ..	921	526	191	12	301	6	1,957
1930 .. ..	930	495	197	12	297	7	1,938
1931 .. ..	906	465	197	18	306	7	1,899

### MEMBERSHIP.

1927 .. ..	53,715	31,029	18,381	6,361	10,190	2,464	122,740
1928 .. ..	55,353	33,626	18,393	6,751	10,390	2,668	127,181
1929 .. ..	57,839	36,357	20,113	6,871	11,410	2,752	135,342
1930 .. ..	56,430	37,790	18,791	7,218	11,723	2,717	134,009
1931 .. ..	55,417	37,389	18,807	7,311	10,969	2,535	132,428

There has been a large increase in the number of branches since the year 1926, due to the inclusion of associations representing agricultural interests, while the increase in total membership is partly attributable to a more complete collection of statistics relating to these organizations.

3. **Employers' Associations in Industrial Groups.**—The figures in the following table refer to Australia at the end of the years 1930 and 1931.

**EMPLOYERS' ASSOCIATIONS.—INDUSTRIAL GROUPS, AUSTRALIA.**

Class.	Number of Associations.		Number of Branches.		Membership.	
	1930.	1931.	1930.	1931.	1930.	1931.
Manufacturing :—						
I. Wood, Furniture, etc. ..	19	20	3	3	1,607	1,311
II. Engineering, etc. ..	16	16	12	12	3,352	3,028
III. Food, Drink, etc. ..	113	117	91	91	20,585	20,070
IV. Clothing, Hats, etc. ..	20	21	2	2	2,147	1,916
V. Books, Printing, etc. ..	45	45	2	2	2,970	2,876
VI. Other Manufacturing ..	51	51	3	3	3,847	3,529
VII. Building ..	27	30	17	13	3,311	2,665
VIII. Mining, Quarrying, etc. ..	12	12	..	..	247	241
X. Other Land Transport ..	19	19	21	21	2,798	2,472
XI. Shipping, etc. ..	16	16	6	7	240	275
XII. Pastoral, Agricultural, etc. ..	45	47	1,750	1,714	74,400	76,328
XIII. Domestic, Hotels, etc. ..	20	17	..	..	1,756	1,541
XIV. Miscellaneous ..	131	136	31	31	17,400	16,176
Total .. ..	534	547	1,938	1,899	134,669	132,428

The female membership of these associations was 5,072 for 1930, and 5,153 for 1931.

The organization of employers is relatively strongest in the pastoral and agricultural industries and in the manufacture and distribution of articles of food and drink. In the former case there has been considerable growth in organization among small farmers, and in the latter, the number of small shops purveying foodstuffs of which the proprietors are members of grocers', butchers', and other similar associations accounts for the large membership.

4. **Federations of Employers' Associations.**—In addition to the associations in various industries, there are central associations in each State, to which many of these separate organizations are affiliated. Examples of this kind of association are provided in the Chamber of Manufactures, Chamber of Commerce, and Employers' Federation in each State. Further, these State associations are, in some cases, organized on a federal basis, e.g., there is an Associated Chamber of Manufactures, an Associated Chamber of Commerce, or a Central Council of Employers, to which State branches are affiliated.

The affiliation of these associations is, however, of a very loose nature when compared with that of the Federated Trade Unions. Whereas in the latter case the central body has complete control of its State branches, in the case of the Employers' Associations each State body enjoys complete independence, the central body acting in a more or less advisory capacity only.



The following table gives particulars, so far as can be ascertained, of interstate or federated associations having branches in two or more States from 1927 to 1931 :—

**INTERSTATE OR FEDERATED EMPLOYERS' ASSOCIATIONS.**

Particulars.	Associations Operating in—					Total.
	2 States.	3 States.	4 States.	5 States.	6 States.	
<b>NUMBER OF ASSOCIATIONS.</b>						
1927 .. .. .	4	1	4	9	14	32
1928 .. .. .	3	3	3	11	16	36
1929 .. .. .	3	4	4	10	16	37
1930 .. .. .	4	3	4	12	16	39
1931 .. .. .	5	4	4	13	19	45
<b>NUMBER OF MEMBERS.</b>						
1927 .. .. .	352	315	1,655	40,548	37,654	80,524
1928 .. .. .	205	1,126	208	59,175	41,511	102,225
1929 .. .. .	201	1,066	594	60,729	43,166	105,756
1930 .. .. .	1,169	339	975	61,327	43,303	107,113
1931 .. .. .	1,190	359	741	61,813	42,871	106,974

The above table shows that associations having 81 per cent. of the total membership (132,428) of employers' organizations are grouped together on an interstate basis.

## CHAPTER XXVII.

## MISCELLANEOUS.

## § 1. Patents, Trade Marks, and Designs.

1. Patents.—(i) *General.* The granting of patents is regulated by the Commonwealth Patents Act 1903–1930, which, in regard to principle and practice, has the same general foundation as the Imperial Statutes, modified to suit Australian conditions. The Act is administered by a Commissioner of Patents. Fees totalling £10 are sufficient to obtain letters patent for Australia, Papua and the Territory of New Guinea. A renewal fee of £5 is payable before the expiration of the seventh year of the patent on all patents granted on applications lodged prior to 2nd February, 1931. On patents granted on applications made on or after the 2nd February, 1931, renewal fees are payable as follows:—£1 before the expiration of the fifth year and an amount progressively increasing by ten shillings before the expiration of each subsequent year up to the fifteenth, when the fee becomes £6. If a renewal fee is not paid when it becomes due, an extension of time up to twelve months may be granted on grounds specified in the Act, and subject to the payment of prescribed fees.

(ii) *Summary.* The number of separate inventions in respect of which applications were filed during the years 1927 to 1931 is given in the following table, which also shows the number of letters patent sealed in respect of applications made in each year:—

## PATENTS, AUSTRALIA.—SUMMARY.

Particulars.	1927.	1928.	1929.	1930.	1931.
No. of applications .. .. .	5,683	6,530	6,806	6,524	5,576
No. of applications accompanied by provisional specifications .. .. .	3,627	3,993	4,021	4,062	3,798
Letters patent sealed during each year	2,638	2,615	2,881	3,330	3,041

(iii) *Revenue.* The revenue of the Commonwealth Patents Office during the years 1927 to 1931 is shown hereunder:—

## PATENTS, AUSTRALIA.—REVENUE.

Particulars.	1927.	1928.	1929.	1930.	1931.
	£	£	£	£	£
Fees collected under Patents Acts 1903–21 .. .. .	30,602	32,573	36,686	38,045	37,136
Receipts from publications	1,101	1,331	1,405	1,486	1,593
Total .. .. .	31,703	33,904	38,091	39,531	38,729

2. Trade Marks and Designs.—(i) *Trade Marks.* Under the Trade Marks Act 1905, the Commissioner of Patents is also Registrar of Trade Marks. This Act has been amended from time to time, the last amendment having been made in 1922. Special provisions for the registration of a “Commonwealth Trade Mark” are contained in the Act of 1905, and are applicable to all goods included in or specified by a resolution passed by both Houses of Parliament that the conditions as to remuneration of labour in connexion with the manufacture of such goods are fair and reasonable.

(ii) *Designs.* The Designs Act 1906, as amended by the Patents, Designs and Trade Marks Act 1910, and the Designs Act 1912, is now cited as the Designs Act 1906–1912. Under this Act a Commonwealth Designs Office has been established, and the Commissioner of Patents appointed “Registrar of Designs.”

(iii) *Summary.* The following table shows the applications for trade marks and designs received and registered during the years 1927 to 1931 :—

TRADE MARKS AND DESIGNS, AUSTRALIA.—SUMMARY.

Applications.	1927.	1928.	1929.	1930.	1931.
RECEIVED.					
Trade Marks .. ..	2,960	2,882	2,904	2,362	1,876
Designs .. ..	580	574	568	736	661
REGISTERED.					
Trade Marks .. ..	2,177	2,175	2,337	1,940	1,546
Designs .. ..	546	694	547	648	538

(iv) *Revenue.* The revenue of the Trade Marks and Designs Office during the years 1927 to 1931 is given hereunder :—

TRADE MARKS AND DESIGNS, AUSTRALIA.—REVENUE.

Particulars.	1927.			1928.			1929.			1930.			1931.		
	Trade Marks. £.	Designs. £.	Publ- ications. £.	Trade Marks. £.	Designs. £.	Publ- ications. £.	Trade Marks. £.	Designs. £.	Publ- ications. £.	Trade Marks. £.	Designs. £.	Publ- ications. £.	Trade Marks. £.	Designs. £.	Publ- ications. £.
Fees collected under Commonwealth Acts .. ..	9,709	722	198	9,420	795	264	12,702	718	259	15,056	903	199	12,241	789	120

No fees in respect of Trade Marks have been collected under State Acts since the year 1922.

§ 2. Copyright.

1. *Legislation.*—Copyright is regulated by the Commonwealth Copyright Act of 1912, details of which will be found in earlier issues of the Official Year Book (see No. 8, p. 1066), while, subject to modifications relating to procedure and remedies, the British Copyright Act of 1911 has been adopted and scheduled to the Australian law.

Reciprocal protection of unpublished works was extended in 1918 to citizens of Australia and of the United States under which copyright may be secured in the latter country by registration at the Library of Congress, Washington. The Commonwealth

Government promulgated a further Order in Council which came into operation on the 1st February, 1923, and extended the provisions of the Copyright Act to the foreign countries of the Copyright Union, subject to the observance of the conditions therein contained.

2. Applications and Registrations.—The following table shows under the various headings the number of applications for copyright received and registered, and the total revenue obtained for the years 1927 to 1931 :—

**COPYRIGHT, AUSTRALIA.—SUMMARY.**

Particulars.	1927.	1928.	1929.	1930.	1931.
Applications received—					
Literary .. .. . No.	1,256	1,241	1,142	1,334	1,258
Artistic .. .. . No.	176	160	141	176	143
International .. .. . No.	13	4	17	16	..
Applications registered—					
Literary .. .. . No.	1,180	1,176	1,101	1,267	1,213
Artistic .. .. . No.	171	152	127	165	122
International .. .. . No.	10	3	5	16	..
Revenue .. .. . £	376	366	356	406	398

### § 3. Local Option, and Reduction of Licences.

Local option concerning the sale of fermented and spirituous liquors is in force in all the States, the States being divided into areas generally coterminous with electoral districts, and a poll of the electors taken from time to time in each district regarding the continuance of the existing number of licensed premises, the reduction in number, or the closing of all such premises. Provision is made for giving effect to the results of the poll in each district in which the vote is in favour of a change.

In earlier issues of the Year Book (see No. 22, pp. 1005–1008), details, by States, were published of polls taken and of the operations of the Licences Reduction Boards.

### § 4. Lord Howe Island.

1. **Area, Location, etc.**—Lord Howe Island is situated between Norfolk Island and the Australian coast in latitude 31° 30' south, longitude 159° 5' east. It was discovered in 1788. The total area is 3,220 acres, the island being 7 miles in length and from  $\frac{1}{2}$  to  $1\frac{1}{4}$  miles in width. It is distant 436 miles from Sydney, and in communication therewith by monthly steam service. The flora is varied and the vegetation luxuriant, the forest growth consisting principally of palms and banyans. The highest point is Mount Gower, 2,840 feet. The climate is mild and the rainfall abundant, but on account of the rocky formation only about a tenth of the surface is suitable for cultivation.

2. **Settlement.**—The first settlement was by a small Maori party in 1853; afterwards a colony was settled from Sydney. Constitutionally, the island is a dependency of New South Wales, and is included in King, one of the electorates of Sydney. A Board of Control at Sydney manages the affairs of the island and supervises the palm seed industry referred to hereunder.

3. **Population.**—The population at the Census of 3rd April, 1921, was 65 males, 46 females—total 111.

4. **Production, Trade, etc.**—The principal product is the seed of the native or Kentia palm. The lands belong to the Crown. The occupants pay no rent, and are tenants on sufferance.

## § 5. Commonwealth Council for Scientific and Industrial Research.

1. **General.**—By the Science and Industry Research Act 1926, the previously existing Commonwealth Institute of Science and Industry was reorganized under the title of the Council for Scientific and Industrial Research. An account of the organization and work of the former Institute was given in earlier issues of the Official Year Book. (See No. 18, p. 1062.)

2. **Science and Industry Research Act 1926.**—This Act provides for a Council, consisting of—

- (a) Three members nominated by the Commonwealth Government.
- (b) The Chairman of each State Committee constituted under the Act.
- (c) Such other members as the Council, with the consent of the Minister, co-opts by reason of their scientific knowledge.

The three Commonwealth nominees form an Executive Committee which may exercise, between meetings of the Council, all the powers and functions of the Council, of which the principal are as follow :—(a) The initiation and carrying out of scientific researches in connexion with primary or secondary industries in the Commonwealth; (b) the training of research workers and the establishing of industrial research studentships and fellowships; (c) the making of grants in aid of pure scientific research; (d) the establishment of industrial research associations in any industries; (e) the testing and standardization of scientific apparatus and instruments; (f) the establishment of a Bureau of information; and (g) the function of acting as a means of liaison between the Commonwealth and other countries in matters of scientific research.

State Committees whose main function is to advise the Council as to matters that may affect their respective States, have been constituted in accordance with prescribed regulations. A sum of £250,000 was appropriated under the terms of the Act for the purpose of scientific and industrial investigations. Subsequently an additional sum of £250,000 was appropriated for a similar purpose.

3. **Science and Industry Endowment Act 1926.**—Under this Act, the Government has established a fund of £100,000, the income from which is to be used to provide assistance (a) to persons engaged in scientific research, and (b) in the training of students in scientific research. Provision is made for gifts or bequests to be made to the fund, which is controlled by a trust consisting of the three Commonwealth nominees on the Council. In accordance with the Act, arrangements have been made to send a number of qualified graduates abroad for training in special fields of work.

4. **Work of the Council.**—The full Council held its first meeting in June, 1926, since which time it has held meetings at about half-yearly intervals. It has adopted a policy of placing each of its major fields of related researches under the direction of an officer having a standing at least as high as, if not higher than, that of a University Professor.

The main branches of work of the Council are (i) plant problems; (ii) soil problems; (iii) entomological problems; (iv) animal nutrition; (v) animal diseases; (vi) forest products; and (vii) food preservation and transport. Successful results have been obtained in a number of directions, but more particularly in regard to bitter pit in apples, spotted wilt in tomatoes, water blister of pineapples, blue mould of tobacco, the feeding of sheep for increased wool production, black disease, infectious entero-toxæmia, pulpy kidney and caseous lymphadenitis of sheep, internal parasites, soil surveys, paper making from Australian timbers, timber seasoning and timber preservation. More detailed information concerning the work of the Council may be found in Year Book No. 22, pp 1009 and 1010, but considerations of space preclude its insertion herein.

### § 6. Australian Institute of Anatomy.

1. *Foundation of Institute.*—The Australian Institute of Anatomy, situated in Canberra, occupies a monumental building erected by the Federal Government under the Zoological Museum Agreement Act of 1924. Prior to the passing of this Act, the Federal Government had expressed regret that the Australian Nation possessed neither a collection of specimens of the unique and fast disappearing fauna of Australia, nor a Museum in which such specimens could be preserved for future generations. Comparative anatomy is the basis of medical science, and while the importance of a study of Australian animals in the solution of various medical problems had for years been recognized by other countries and steps taken by them to procure specimens for their museums, national effort in this direction was neglected in Australia. Sir Colin MacKenzie, the present Director of the Institute of Anatomy, however, very kindly presented to the Federal Government his entire private collection, and this magnificent gift was acquired and provision was made for its proper housing under special legislation by the Federal Government.

2. *Additions to Original Collection.*—In addition to the original collection, which has been greatly augmented, the following free gifts have been made to the Australian Nation, and are on view in the Institute :—

- (1) *Horne-Bowie Collection.*—Dealing with the life of Central Australian aborigines, and throwing valuable light on the psychology of this Stone Age people.
- (2) *Burrell Collection.*—This deals with the life history of the platypus, and is unique in the world. The platypus is the most primitive mammal known to science, and is the link between the bird, the reptile and the mammal.
- (3) *Milne Collection.*—This is an anthropological and ethnological collection dealing with the aborigines of New South Wales, and contains many valuable and now unobtainable native weapons and implements.
- (4) *Murray Black Collection* of anatomical material representative of the aborigines of Southern Victoria and the River Murray.
- (5) *Nankivell Collection*, illustrating the anatomy of the aborigines of the Murray Valley.
- (6) Many hundreds of specimens and books received from numerous interested scientists, the most outstanding being those from Mr. E. Hill, of Nagambie, Victoria; Mrs. Harry Burrell, New South Wales; and medical books for the Library from the estates of the late Drs. Molloy; David Grant; and Robert Stirling.

3. *Endowments for Orations and Lectures.*—In addition to the aforementioned donations of material, there have been several endowments for Orations and Lectures as follows :—

- (1) *The Halford Oration.*—Endowed with a gift of £1,000 by the family of the late Professor G. B. Halford, founder of the first medical school in the Southern Hemisphere. The interest on this amount is given to a prominent scientist to deliver an oration on a subject suggested by the life and work of the late G. B. Halford.
- (2) *The Anne MacKenzie Oration.*—Founded with a gift of £1,000 by Sir Colin MacKenzie, in memory of his mother. The orator receives the annual interest for delivering an oration on any phase of "Preventive Medicine".

- (3) *The Dr. G. E. Morrison Memorial Lecture on Ethnology*.—Founded by Chinese residents in Australia, in memory of a great Australian who rendered important services to China.
- (4) *The Kendall Lecture in Veterinary Science*.—Endowed by the sons of Dr. W. T. Kendall in his honour, he being the founder of the first Veterinary School in the Southern Hemisphere.

4. **Ultimate Scope of the Institute.**—The Institute of Anatomy may be regarded as the first unit of a National University of Australia, and has already become the most important centre in the Southern Hemisphere for the study of comparative anatomy and of its application to human health and disease. Research work in many branches of this subject is being carried out, and an extensive collection of material for the use of future generations is being catalogued. The microscopic specimens of Australian fauna number many thousands, and are unique in the world. They represent normal mammalian tissues unaffected by disease or domestication, and with these, human tissues such as those affected with cancer can be compared. The building is used to a large extent for educational purposes. All the University College lectures are given there, and all public lectures of an educational nature are delivered in the lecture theatre attached to the Institute. The general public is admitted to the two great Museums of Osteology and Applied Anatomy, and large numbers take advantage of this concession.

## § 7. The Commonwealth Solar Observatory.

1. **Reasons for Foundation.**—The Commonwealth Solar Observatory was established for the study of solar phenomena, for allied stellar and spectroscopic research, and for the investigation of associated terrestrial phenomena. Its situation is such that it will fill a gap in the chain of existing astrophysical observatories: with its completion there will be stations separated by 90 degrees of longitude round the globe. In addition to advancing the knowledge of the universe and the mode of its development, it is hoped that the eventual discovery of the true relation between solar and terrestrial phenomena may lead to results which will prove of direct value to the country.

2. **History of Inauguration.**—A short account of the steps leading up to the establishment of the Observatory will be found in Official Year Book No. 19, p. 979.

3. **Site of the Observatory.**—The site selected for the Observatory is on Mount Stromlo, a ridge of hills about 7 miles west of Canberra. The highest point is 2,560 feet above sea level, or about 700 feet above the general level of the Federal Capital City.

4. **Equipment.**—The bulk of the telescopic equipment is due to the generosity of supporters of the movement in England and Australia. The gifts include a 6-in. Grubb refracting telescope, presented by the late W. E. Wilson, F.R.S., and Sir Howard Grubb, F.R.S., trustees of the late Lord Farnham; a 9-in. Grubb refractor with a 6-in. Dallmeyer lens, both presented by the late Mr. James Oddie, of Ballarat; while Mr. J. H. Reynolds, of Birmingham, presented a large reflecting telescope with a mirror 30 inches in diameter. A sun telescope including an 18-in. cœlostast has been installed. The equipment also includes spectroscopes for the examination of spectra in the infra-red, violet and ultra-violet regions. Donations amounting to over £2,500 have been received, and form the nucleus of a Foundation and Endowment Fund.

5. **Observational Work.**—The observational work embraces the following:—(a) solar research, (b) stellar research, (c) spectroscopic researches, (d) atmospheric electricity, (e) ozone content of the atmosphere, (f) luminosity of the night sky, and (g) meteorological observations. A more detailed account of the observational work cannot, owing to limits of space, be published in this issue, but may be found in earlier issues (see No. 22, p. 1011).

### § 8. Standards Association of Australia.

This Association was established under the aegis of the Commonwealth and State Governments for the promotion of standardization and simplified practice.

In addition to the Council and Standing and Organization Committees, the following Sectional Committees have been appointed to formulate Australian standard specifications and codes:—A.—*Safety Codes Group*—(1) Boiler Regulations (including Gas Cylinders); (2) Concrete and Reinforced Concrete Structures; (3) Cranes and Hoists; (4) Electrical Wiring Rules; (5) Lift Installations; (6) Pump Tests; (7) Refrigeration; (8) Steel Frame Structures; (9) Welding. B.—*General Technical Standards Group*—(1) Bore Casing; (2) Building Materials; (3) Calcium Carbide; (4) Cement; (5) Coal—Purchase, Sampling and Analysis; (6) Colliery Equipment; (7) Containers for Inflammable Liquids; (8) Electrical; (9) Firebricks; (10) Locomotive; (11) Lubricants; (12) Machine Belting; (13) Machine Parts; (14) Non-ferrous Metals; (15) Paint and Varnish; (16) Pipes and Plumbing; (17) Railway Permanent Way Materials; (18) Roadmaking Materials; (19) Structural Steel; (20) Testing, Weighing and Gauging; (21) Timber; (22) Tramway Rails; (23) Typography. C.—*Co-ordinating Committees*—(1) Concrete Products; (2) Ferrous Metals; (3) Non-Ferrous Metals; (4) Methods of Physical Testing, Sampling and Chemical Analysis—Co-ordination of. D.—*Commercial Standards Division Committees*—(1) Building Materials Classification; (2) Three-ply Wood Panels for Use in Stock Door Manufacture; (3) Institutional Supplies and Co-ordinated Purchasing (Hospitals, Asylums and other Public Institutions); (4) General Conditions of Contract; (5) Bank Cheques and Drafts; (6) Commercial Paper Sizes; (7) Road Gully Gratings; (8) Shovels; (9) Sheet Metal Guttering, Ridging and Downpiping; (10) Laminated Steel Springs for Motor Cars.

A Power Survey Committee to deal with the collection of data and the framing of recommendations for assistance in the development and co-ordination of power schemes has also been appointed.

The objects of the Association include the following:—To prepare and promote the general adoption of standards in connexion with structures, materials, etc.; to co-ordinate the efforts of producers and users for the improvement of materials, processes, and methods; and to procure the recognition of the Association in any foreign country.

The sole executive authority of the Association is vested in the Council, which undertakes the whole of the organization of the movement, the raising of the necessary funds, the controlling of the expenditure, the arranging of the subjects to be dealt with by the various sectional and sub-committees, and the authority for the issue of all the reports and specifications.

The Association was established in July, 1929, by amalgamation of the Australian Commonwealth Engineering Standards Association and the Australian Commonwealth Association of Simplified Practice.



## § 9. Valuation of Australian Production.

1. **Value of Production.**—The want of complete uniformity in methods of compilation and presentation of Australian statistics renders it an extremely difficult task to make a satisfactory valuation of the various elements of production. At present there is little accurate statistical knowledge regarding such industries as forestry, fisheries, poultry, and bee-farming, and a valuation of the production therefrom must be regarded as a rough approximation. Due consideration must also be given to the qualifications briefly summarized below in regard to values in the more important classes of production.

The annual value of production as defined by the Conference of Statisticians in 1924 is the sum available each year for distribution among those concerned in industry, i.e., workers, proprietors (including landlords), and providers of capital. At the Conference referred to, and at subsequent conferences, it was resolved that a subtraction on identical lines from gross values on account of costs of production was necessary in order to avoid duplication, and to arrive at net values for all States on a comparable basis. Excluding depreciation, the value of manufacturing production has for some time been computed on the lines mentioned, but it has not been possible to extend the new valuation to include all primary industries excepting Agriculture, particulars concerning which are set out on page 628. The presentation of net values in regard to all branches of production is, however, receiving attention. In the meantime, the values given in the table hereunder, are, with the exception of manufacturing, gross values.

The values for agricultural production are the gross values in the metropolitan markets at port of export. No deductions have been made for freight, seed, fertilizers or material of any kind used in production. Further, the total is exaggerated by the inclusion therein of the value of hay and other forage which is used on the farm in the production of milk, meat, &c. Particulars of these deductions are shown in the table on page 628.

The values for pastoral production also are gross, but the exaggeration is not so great, and on the other hand, there are substantial omissions. In the case of rabbits (meat and skins) and a number of pastoral by-products, the value of exports only is included.

No costs are deducted from dairy production. One large item included, moreover, has, of necessity, been accorded a somewhat artificial value, viz., milk consumed on the farm.

The values for mining are unsatisfactory, as in some cases they represent the gross values of the metal content of ores, though the cost of treatment is substantial. There is, therefore, some duplication with metal refining and ore-reduction included in manufacturing production.

The values for manufacturing are, in accordance with the resolutions of the Conference of Statisticians, obtained by deducting from the value of the output the cost of all materials used, and of fuel, power, light, lubricants, water, &c. Most of the principal costs have, therefore, been allowed for, except depreciation. The value of manufacturing production is, consequently, much nearer a net value than the value of primary production.

For the reasons stated above, the values of different kinds of production are not strictly comparable with one another, and may be added together, only with considerable reserve, to make a rough index of change in the value of total material production.

Butter, bacon, and condensed milk factories, and sawmills for native timber, are included in the tables relating to manufacture shown in Chapter XXIV., but are here excluded and added to dairying and forest production respectively.

The table hereunder shows, subject to the above reservation, the approximate value of the production from all industries during the years specified:—

## ESTIMATED VALUE OF PRODUCTION.—AUSTRALIA.

Year.	Agriculture.	Pastoral.	Dairy, Poultry, and Bee-farming.	Forestry and Fisheries.	Mining.	Manufacturing.(a)	Total.
	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
1920-21 ..	112,801	90,641	52,613	11,136	21,675	101,778	390,644
1921-22 ..	81,890	75,054	44,417	10,519	20,029	112,517	344,426
1922-23 ..	84,183	97,127	43,542	11,124	20,281	123,188	379,445
1923-24 ..	81,166	110,216	42,112	11,866	22,184	132,732	400,276
1924-25 ..	107,163	127,301	45,190	12,357	24,592	137,977	454,580
1925-26 ..	89,267	113,556	48,278	12,784	24,529	143,256	431,670
1926-27 ..	98,295	111,716	46,980	12,790	23,939	153,634	447,354
1927-28 ..	84,328	124,554	50,261	12,181	23,015	158,562	452,901
1928-29 ..	89,440	116,733	50,717	11,617	19,539	159,759	447,805
1929-30 ..	77,109	84,563	49,398	11,371	17,912	149,184	389,537
1930-31 ..	70,500	69,499	43,067	8,313	15,356	112,966	319,701

(a) These amounts differ from those given in Chapter XXIV., Manufacturing Industry, which include certain products included under Dairy Farming and Forestry in this table.

2. **Productive Activity.**—In previous issues, an attempt has been made to measure the quantity of material production by means of production price index-numbers. These index-numbers have never been regarded as satisfactory over a long period, and there is a danger in continuing them further in respect to manufacturing production. (See Production Bulletin No. 25, page 128.)

In the absence of a satisfactory measure of the "quantity" of production, all that is offered here is a measure of "real" production, i.e., the value of production measured in retail purchasing power. Two tables are given. The first shows "real" production per head of population. For the following reasons this table must be used with caution. The production considered is material production only, and takes no account of services. As civilization advances, material production becomes less important relative to services, and a smaller proportion of the population is engaged in material production. For example, the present use of the motor car, the cinema, and wireless is comparatively recent, and these employ a much larger number of people in services than in material production, particularly when the material instruments are largely imported. It follows that material production per head of population will not measure accurately the progress of productive efficiency, but will tend to give too low a value. Unemployment, of course, will also depress it.

A better measure is afforded by "real" production per person engaged in material production. The second table attempts to give this. The result will afford a better measure of individual productive efficiency, but will not take into account the effect of unemployment, though the index may be somewhat depressed by short time and rationing.

The two tables tell a different story. Before unemployment became severe in 1930, "real" production per head, as shown in the last column of the first table, had remained substantially steady, with minor fluctuations ever since 1906. Whatever gain had been made in individual productive efficiency had been off-set by the gradual change-over from production of goods to production of services. With unemployment becoming intense in the last three years, the index fell from its normal figure of about 100, to 76 in 1930-31. This would imply a fall in average real income of about 24 per cent. from the normal level, taking unemployment into account. The corresponding index for 1931-32 will probably be about 79, an increase of about 4 per cent. in "real" production per head.

The index of "real" production per person engaged, as given in the last column of the second table, shows, on the other hand, an appreciable upward tendency. It rose steeply during the war, as might have been expected, fell somewhat after the war, and recovered again. For 1929-30 it fell to 105, owing to the lag in the fall of retail prices, increased to 107 for 1930-31, and will probably rise appreciably for 1931-32, as contrasted with about 79 for real production per head. This high figure for real production per person engaged, implies a high real wage for those in employment, and is consistent with information respecting real wages which in the second quarter of 1932 had maintained the high level reached in the years 1927-29.

The data for the second table are not complete. The numbers engaged in timber-getting are not accurately known, so that the value of production on this account, and the corresponding persons engaged, are both left out of account. Further, the information concerning women engaged in primary production is unsatisfactory, so that males alone are counted in primary industries. In manufacturing, the numbers are converted into equivalent male workers on the basis of relation of wages for male and female workers. The column headed "numbers engaged" is, therefore, rather an index than the absolute number of individuals occupied in material production, but, as an index, it should be accurate enough to give a satisfactory measure of production per person engaged.

#### PRODUCTION PER HEAD OF POPULATION.—AUSTRALIA.

Year.	Value of Material Production.			Retail Prices Index Number. (a) 1911 = 1,000.	Real production per head of population (measured in retail purchas- ing power). 1911 = 100.
	Total.	Per head of population.			
		Actual.	Index Number 1911 = 100.		
	£1,000.	£			
1901 .. ..	114,585	30.0	73	880	83
1906 .. ..	147,043	35.9	87	902	97
1907 .. ..	166,948	40.1	97	897	109
1908 .. ..	162,861	38.5	93	951	98
1909 .. ..	174,273	40.3	98	948	103
1910 .. ..	185,399	41.9	102	970	105
1911 .. ..	188,359	41.2	100	1,000	100
1912 .. ..	209,236	44.1	107	1,101	97
1913 .. ..	220,884	45.1	110	1,104	99
1914 .. ..	213,552	43.0	104	1,140	92
1915 .. ..	255,571	51.4	125	1,278	98
1916 .. ..	261,996	53.3	129	1,324	98
1917 .. ..	279,418	56.1	136	1,318	103
1918 .. ..	291,875	57.5	140	1,362	102
1919-20 ..	343,697	64.8	157	1,624	97
1920-21 ..	390,644	72.2	175	1,821	96
1921-22 ..	344,426	62.5	152	1,600	95
1922-23 ..	379,445	67.4	164	1,642	100
1923-24 ..	400,276	69.6	169	1,714	99
1924-25 ..	454,580	77.4	188	1,690	111
1925-26 ..	431,670	72.1	175	1,766	99
1926-27 ..	447,354	73.2	178	1,763	101
1927-28 ..	452,901	72.6	176	1,776	99
1928-29 ..	447,805	70.7	172	1,785	96
1929-30 ..	389,537	60.7	148	1,783	83
1930-31 ..	319,701	49.4	120	1,574	76

(a) Retail prices of Food, Groceries, and Housing (all Houses) for six capital cities.

## PRODUCTION PER PERSON ENGAGED.—AUSTRALIA.

Year.	Number engaged in Material Production.(a)	Value of Material Production per person engaged in production.(a)		Real production per person engaged (measured in retail purchasing power). 1911 = 100.
		Actual.	Index Number, 1911 = 100.	
	(1,000)	£		
1906 .. ..	659	223	87	96
1907 .. ..	678	244	95	106
1908 .. ..	677	239	93	98
1909 .. ..	684	252	98	104
1910 .. ..	704	262	102	105
1911 .. ..	728	257	100	100
1912 .. ..	744	279	109	99
1913 .. ..	756	290	113	102
1914 .. ..	733	289	113	99
1915 .. ..	704	361	141	110
1916 .. ..	685	381	148	112
1917 .. ..	683	408	159	120
1918 .. ..	685	424	165	121
1919-20 ..	743	460	179	110
1920-21 ..	760	510	199	109
1921-22 ..	775	441	172	107
1922-23 ..	793	475	185	113
1923-24 ..	810	491	191	111
1924-25 ..	826	547	213	126
1925-26 ..	831	515	201	114
1926-27 ..	841	527	205	116
1927-28 ..	838	536	209	118
1928-29 ..	830	536	209	117
1929-30 ..	803	482	187	105
1930-31 ..	728	431	168	107

(a) See explanatory remarks above tables.

## § 10. Film Censorship.

1. **Legislation.**—The censorship of imported films derives its authority from section 52 (g) of the Customs Act, which gives power to prohibit the importation of goods. Under this section, proclamations have been issued prohibiting the importation of films and relative advertising matter except under certain conditions and with the consent of the Minister. The conditions governing importation are contained in regulations issued under the Act and provide, *inter alia*, that no film shall be registered which in the opinion of the censor is (a) blasphemous, indecent or obscene; (b) likely to be injurious to morality, or to encourage or incite to crime; (c) likely to be offensive to the people of any friendly nation; (d) likely to be offensive to the people of the British Empire; or (e) depicts any matter the exhibition of which is undesirable in the public interest.

The regulations governing the exportation of Australian-made films are similar, with the addition that no film may be exported which in the opinion of the Censor is likely to prove detrimental or prejudicial to the Commonwealth of Australia.

The Censorship consists of a Censorship Board of three persons and an Appeal Censor, the headquarters being in Sydney. Importers also have the right of appeal to the Minister.

In addition to the censorship of moving pictures, the Censorship may refuse to admit into Australia any advertising matter proposed to be used in connexion with the exhibition of any film. Such control, does not, however, extend to locally-produced publicity.

2. **Imports of Films.**—Imported films dealt with by the Censorship for the year 1931 were as follows:—1,564 films of 2,933,365 feet passed without eliminations, 255 films of 1,290,089 feet passed after eliminations, and 102 films of 595,505 feet rejected in first instance, making a total of 1,921 films of 4,818,959 feet (one copy). The countries or origin were as follows:—United States of America, 1,499 films of 3,783,577 feet; United Kingdom, 321 films of 832,409 feet; and 101 films of 202,973 feet from other countries.

3. **Export of Films.**—The number of films exported for the year 1931 was 869 of 710,296 feet (one copy).

### § 11. Marketing of Australian Commodities.

Particulars in respect of the various Commonwealth Acts and Regulations, together with the operations of the Boards or Councils appointed to assist or control the marketing of Australian commodities, were published in earlier issues of the Year Book.

### § 12. The National Safety Council of Australia.

The National Safety Council of Australia was founded in Melbourne in 1927 for the purpose of developing, mainly by means of education, safety on the road, at work and in the home, and its activities have developed in other directions, wherever the need for reducing the toll of accidents has been shown.

In the States of New South Wales, Victoria, Queensland and South Australia it issues, by courtesy of the Chief Commissioners of Police, a thirty-two page booklet with every motor driver's licence, and conducts continuous propaganda through the press and other sources.

It also forms Junior Safety Councils in the schools for developing a safety conscience among children. The children themselves are officers of these Councils and patrol the roads in the neighbourhood of the schools and conduct the scholars across in safety.

Small films specially taken are available for children's and home safety instruction.

A "Freedom from Accidents" competition is also conducted among employee drivers, those completing a year free from any accident for which they are responsible being given a certificate to that effect.

A Factories Service of four posters per month, together with slips for pay envelopes, constitutes a regular service, and was supplied to over 40,000 workers in factories last year. Committees deal with specific problems regarding traffic, films, safety in industry, etc., the latest committees created being the Air Safety and Home Committees.

The Council is supported by public subscription and sales of service.

Numerous lectures are given throughout the year on the work of the Council, and on various aspects of safety, and lecturers are always available for any organization which makes application to the Secretary.

## CHAPTER XXVIII.

## STATISTICAL ORGANIZATION AND SOURCES OF INFORMATION.

## § 1. General.

**Development of Australian Statistics.**—(i) *General.* An outline of the history and development of statistics in Australia was published in Year Book No. 19 (see p. 988) and previous issues, particular reference being made to the Crown Colony Blue Books, Statistical Registers, Prominent State Statisticians, Statistical Conferences, the Foundation of the Federal Bureau, and Uniformity of Control. It is not proposed to repeat this information in this issue.

(ii) *Present Organization.* The organization in respect of the collection, tabulation, etc., of statistical data as between the State and Federal Statistical Bureaux, and State and Federal Government Departments, was described in Official Year Book No. 19, p. 990. Limits of space preclude its repetition in this issue.

## § 2. Statistical Publications of Australia.

1. **General.**—The official statistical publications of Australia may be divided bibliographically into two main divisions, viz. :—(1) Commonwealth publications dealing both individually and collectively with the several States of the Commonwealth, and (2) State publications dealing with individual States only. Besides these there are many other reports, etc., issued regularly, which though not wholly statistical, necessarily contain a considerable amount of statistical information.

2. **Commonwealth Publications.**—Commonwealth publications may be grouped under two heads, viz. :—(i) Publications issued by the Commonwealth Statistician, and (ii) Parliamentary and Departmental Reports and Papers.

(i) *Publications issued by the Commonwealth Statistician.* The following is a list of the principal statistical publications issued from the Commonwealth Bureau of Census and Statistics since its inauguration up to December, 1931 :—

*Australian Life Tables, 1901–1910. Australian Joint Life Tables, 1901–1910.*

*Census (1911) Bulletins.*

*Census (1911) Results.*—Vols. I., II., and III., with Appendix “Mathematical Theory of Population.”

*Census (1921) Results.*—Bulletins, Nos. 1 to 26. Parts I. to XVI., forming Vol. I., and Parts XVII. to XXIX., forming, with the Statistician's Report, Vol. II.

NOTE.—Part XXVII., Life Tables.

*Finance*—Bulletins, 1907 to 1916–17 annually; 1917–18 and 1918–19 (one vol.); 1919–20 and 1920–21 (one vol.); 1921–22 to 1930–31 annually.

*Labour and Industrial Statistics.*—Memoranda and Reports, various, to 1913.

*Labour Report,* annually, 1913 to 1931.

*Local Government in Australia*—July, 1919.

*Official Year Book of the Commonwealth of Australia*—Annually, 1907 to present issue (1932).

*Oversea Trade,* annually, 1906 to 1930–31.

*Pocket Compendium of Australian Statistics* (formerly *Statistical Digest*), 1913, 1914, 1916, and 1918 to 1932 annually.

*Population and Vital Statistics Bulletins*—Reports, various. Commonwealth Demography, 1911 to 1931 annually.

*Production*—Bulletins, annually, 1906 to 1930–31.

*Professional Papers*—Various. A full list will be found in Official Year Book No. 13, p. 3.

- Quarterly Summary of Australian Statistics*—first issue, No. 70, December, 1917, replacing *Monthly Summary of Australian Statistics* (Bulletins 1 to 69).  
*Social Insurance*—Report to the Hon. the Minister of Trade and Customs, 1910.  
*Social Statistics*—Bulletins, 1907 to 1915 annually, and 1918.  
*Superannuation for the Commonwealth Public Service*—Report to the Hon. the Minister for Home Affairs, 1910.  
*Transport and Communication*—Bulletins, 1906, 1908 to 1916 annually; 1919 to 1930 annually.  
*Wealth*—The Private Wealth of Australia and its Growth as ascertained by various methods, together with a Report on the War Census in 1915.

(ii) *Commonwealth Parliamentary and Departmental Reports and Papers.* Lists of the principal official reports and other documents containing statistical information issued from the inauguration of the Commonwealth were given in Year Books up to No. 15, but limits of space preclude the incorporation of this information in the present volume.

3. **State Publications**—The chief statistical publications of each State are set out hereunder. Limits of space preclude a further enumeration of the various Departmental Reports, statements of accounts, etc., issued by officials, boards, local government bodies, etc., in each State.

- (a) New South Wales—Statistical Register (annual); Official Year Book of New South Wales (annual); Statesman's Year Book (annual); Vital Statistics (monthly and annual); Statistical Bulletin (monthly to December, 1919, thereafter quarterly).  
 (b) Victoria—Statistical Register (annual to 1916, then discontinued); Victorian Year Book (annual); Statistical Abstracts (quarterly to 1917).  
 (c) Queensland—Statistical Register (annual); Official Year Book, 1901; A.B.C. of Queensland Statistics (annual); Vital Statistics (annual and monthly).  
 (d) South Australia—Statistical Register (annual); Official Year Book, 1912 and 1913; Statesman's Pocket Year Book (annual).  
 (e) Western Australia—Statistical Register (annual); Statistical Abstracts (quarterly, previously issued monthly to July, 1917); Pocket Year Book of Western Australia (annual); Circular (monthly), containing Principal Statistics.  
 (f) Tasmania—Statistical Register (annual); Statesman's Pocket Year Book (annual); Statistical Summaries (annual); Vital Statistics (quarterly).

### § 3. Selected List of One Hundred Representative Works Dealing with Australia.\*

It is not claimed that this list is completely representative, as it has been restricted chiefly to recent publications or to publications still in print.

Much important literature necessary to the study of many aspects of Australia is contained in official publications or in Parliamentary Papers which have not been included in this list.

#### GENERAL AND DESCRIPTIVE.

- BROWNE, G. S. *Australia: a General Account; History, Resources, Production, Social Conditions.* London, 1929.  
 HANCOCK, W. K. *Australia.* London, 1930.  
 HOPPE, E. O. *The Fifth Continent.* London, 1931.  
 JOSE, A. W., CARTER, H. J., and TUCKER, T. G., editors. *The Illustrated Australian Encyclopædia.* 3rd edition. 2 vols. Sydney, 1926-27.

\* This list has been compiled by the Librarian of the Commonwealth Parliament Library. A copy of each of the works mentioned is preserved in the Library and access thereto may be had by any Commonwealth official or other authorized person.

## DISCOVERY AND EARLY VOYAGES AND EXPLORATION.

- MARRIOTT, Mrs. C. B. *Early Explorers in Australia*. London, 1925.  
 SCOTT, E. *Australian Discovery*. 2 vols. London, 1929.  
 WOOD, G. A. *The Discovery of Australia*. London, 1922.

## HISTORY AND BIOGRAPHY.

- BEAN, C. E. W., *editor*. *Official History of Australia in the War of 1914-1918* (in progress), Sydney, 1921 to date.  
 DUNBABIN, T. *Sailing the World's Edge; Sea Stories from Old Sydney*. London, 1931.  
 JOHNS, F. *Who's Who in Australia, 1927-28*. Adelaide, 1927.  
 JOSE, A. W. *Australia, Human and Economic*. London, 1932.  
 JOSE, A. W. *A History of Australia from the Earliest Times to the Present Day*. 10th edition, Sydney, 1924.  
 MACKANESS, G. *The Life of Vice-Admiral William Bligh*. 2 vols. Sydney, 1931.  
 SCOTT, E. *Short History of Australia*. 5th edition. Oxford, 1928.  
 SUGDEN, Rev. E. H., and EGLESTON, Hon. F. W. *George Swinburne; a Biography*. Sydney, 1931.  
 SYDNEY MORNING HERALD *newspaper*. *A Century of Journalism: the Sydney Morning Herald and its Record of Australian Life, 1831-1931*. Sydney, 1931.  
 VILLIERS, A. J. *Vanished Fleets*. London, 1931.  
 WATSON, J. F., *editor*. *Historical Records of Australia* (in progress). Sydney, 1914-1925.

## CONSTITUTION AND ADMINISTRATION.

- CRAMP, K. R. *State and Federal Constitutions of Australia*. 2nd edition. Sydney, 1911.  
 EGLESTON, Hon. F. W. *State Socialism in Victoria*. London, 1922.  
 KERR, D. *The Law of the Australian Constitution*. Sydney, 1925.  
 MCGHATH, B. J., O'SULLIVAN, G. J., and DIGNAM, W. J. *The Laws of the Commonwealth of Australia, 1901-1931*. 3 vols. Sydney, 1932.  
 MITCHELL, Sir E. F. *What Every Australian Ought to Know*. 2nd edition. Melbourne, 1932.  
 MOORE, Sir W. H. *The Constitution of the Commonwealth of Australia*. 2nd edition. Melbourne, 1910.  
 QUICK, Sir J., and GARRAN, Sir R. R. *The Annotated Constitution of the Australian Commonwealth*. 2nd edition. Sydney, 1901.  
 QUICK, Sir J., and GROOM, Sir L. E. *The Judicial Power of the Commonwealth: with the Practice and Procedure of the High Court*. Melbourne, 1904.  
 QUICK, Sir J. *The Legislative Powers of the Commonwealth and the States of Australia*. Melbourne, 1919.  
 SWEETMAN, E. *Australian Constitutional Development*. Melbourne, 1925.

## POLITICS.

- BERNAYS, C. A. *Queensland: Our Seventh Political Decade, 1920-1930*. Sydney, 1931.  
 BROWN, J. M. *Peoples and Problems of the Pacific*. 2 vols. London, 1927.  
 CAMPBELL, P. C., MILLS, R. C., and PORTUS, Rev. G. V. *Studies in Australian Affairs*. Melbourne, 1928.  
 CANAWAY, A. P. *The Failure of Federalism in Australia*. London, 1930.  
 HUGHES, W. M. *The Splendid Adventure: a Review of Empire Relations within and without the Commonwealth of Britannic Nations*. London, 1929.  
 LATHAM, J. G. *Australia and the British Commonwealth*. London, 1929.  
 ROBERTS, S. H. *History of Australian Land Settlement (1788-1920)*. Melbourne, 1924.  
 TURNER, H. G. *First Decade of the Australian Commonwealth: a Chronicle of Contemporary Politics, 1901-1910*. Melbourne, 1911.  
 WILKINSON, H. L. *The World's Population Problems and a White Australia*. London, 1930.  
 WILLARD, M. *History of the White Australia Policy*. Melbourne, 1923.

## INDUSTRIES AND RESOURCES.

- BILLIS, R. V., and KENYON, A. S. *Pastures New: an Account of the Pastoral Occupation of Port Phillip*. Melbourne, 1930.  
 BILLIS, R. V., and KENYON, A. S. *The Domesday Book of Port Phillip: or Supplement to Pastures New*. Melbourne, 1932.  
 HARDING, R. *Cotton in Australia: the Possibilities and Limitations of Australia as a Cotton-growing Country*. London, 1924.  
 HAWKESWORTH, A. *Australasian Sheep and Wool*. 6th edition. Sydney, 1930.  
 HOLMES, J. M. *An Atlas of Population and Production for New South Wales*. Sydney, 1931.  
 HUTCHINS, Sir D. E. *Discussion of Australian Forestry*. Perth, 1916.  
 MAULDON, F. R. E. *The Economics of Australian Coal*. Melbourne, 1929.  
 PEARSE, E. H. *Sheep, Farm, and Station Management*. 3rd edition. Melbourne, 1932.  
 TAYLOR, T. G. *Australia in its Physiographic and Economic Aspects*. 5th edition. Oxford, 1928.

## INDUSTRIAL CONDITIONS.

- ANDERSON, G. *Fixation of Wages in Australia*. Melbourne, 1929.  
 COGHLAN, Sir T. H. *Labour and Industry in Australia: from the First Settlement in 1788 to the Establishment of the Commonwealth in 1901*. 4 vols. Oxford, 1918.  
 HIGGINS, H. B. *A New Province for Law and Order: being a re-view by its late president for fourteen years of the Australian Court of Conciliation and Arbitration*. Sydney, 1922.  
 SURCLIFFE, J. T. *History of Trade Unionism in Australia*. Melbourne, 1921.



## SELECTED LIST OF ONE HUNDRED REPRESENTATIVE WORKS, ETC. 829

### ECONOMIC CONDITIONS.

- AUSTRALIAN QUARTERLY.** Sydney, 1929 to date.  
**BRIGDEN, J. B.** *Credit: A Descriptive and Critical Account of What is, What is proposed, What has been Done and What Might be Done in Australia.* Australia, 1932.  
**BRIGDEN, J. B., and others.** *The Australian Tariff: an Economic Inquiry.* Melbourne, 1929.  
**COPLAND, D. B.** *Credit and Currency Control, with special reference to Australia.* 2nd edition. Melbourne, 1930.  
**ECONOMIC RECORD.** *The Journal of the Economic Society of Australia and New Zealand.* Melbourne, 1925 to date.  
**GREAT BRITAIN.** *Department of Overseas Trade.* Report on the Economic and Commercial Situation of Australia. London, to date.  
**MACKAY, A. L. G.** *The Australian Banking and Credit System.* London, 1931.  
**MILLS, S.** *Taxation in Australia.* London, 1925.  
**SHANN, E. O. G.** *An Economic History of Australia.* Cambridge, 1930.  
**SMITH, N. S.** *Economic Control: Australian Experiments in "Rationalisation" and "Safeguarding."* London, 1929.  
**SMITH, N. S.** *The Structure and Working of the Australian Tariff: with Special Reference to Empire Marketing.* London, 1929.  
**WILSON, R.** *Capital Imports and the Terms of Trade Examined in the Light of Sixty Years of Australian Borrowings.* Melbourne, 1931.  
**WOOD, G. L.** *Business and Borrowing in Australia.* London, 1930.

### SCIENCE.

- CAYLEY, N. W.** *Australian Finches in Bush and Aviary.* Sydney, 1932.  
**What Bird is That? A Guide to the Birds of Australia.** Sydney, 1931.  
**CHISHOLM, A. H.** *Nature Fantasy in Australia.* London, 1932.  
**DAVID, Sir T. W. B.** *Explanatory Notes to accompany a New Geological Map of the Commonwealth of Australia.* Sydney, 1932. [Four sections of the Map have appeared at the end of 1932.]  
**EWART, A. J.** *Flora of Victoria.* Melbourne, 1930.  
**GIBBLE, Rev. E. R. B.** *The Problem of the Australian Aboriginal.* Sydney, 1932.  
**LE SOUFF, A. S., and BURRELL, H.** *Wild Animals of Australasia.* London, 1926.  
**MAIDEN, J. H.** *Useful Native Plants of Australia, including Tasmania.* Sydney, 1889.  
**POPELUS, S. D.** *The Psychology of a Primitive People: a Study of the Australian Aborigine.* London, 1931.  
**SPENCER, Sir W. B.** *Scientific Correspondence with Sir J. G. Frazer and Others.* Oxford, 1932.  
**SPENCER, Sir W. B.** *Wanderings in Wild Australia.* 2 vols. London, 1928.  
**SPENCER, Sir W. B., and GILLES, F. J.** *The Arunta.* 2 vols. London, 1927.  
**TAYLOR, T. G.** *Geography of Australasia.* 4th edition, revised. Oxford, 1920.  
**YONGE, C. M.** *A Year on the Great Barrier Reef: the Story of Corals and of the Greatest of their Creations.* London, 1930.

### LITERATURE AND ART.

- ART IN AUSTRALIA.** A Quarterly Magazine. Sydney, 1916 to date.  
**BARNETT, P. N.** *Pictorial Bookplates: Their Origin and Use in Australia.* Sydney, 1931.  
**BREBRETON, J. LE G., and others.** *Henry Lawson: By His Mates.* Sydney, 1931.  
**GILMORE, M.** *Under the Wilgus: Poems.* Melbourne, 1932.  
**GREEN, H. M.** *An Outline of Australian Literature.* Sydney, 1930.  
**LINDSAY, N. A. W.** *Pen Drawings.* Sydney, 1931.  
**MACKANESS, G., compiler.** *Australian Short Stories.* London, 1928.  
**MURDOCH, W. L. F.** *Saturday Mornings.* Sydney, 1931.  
**MURDOCH, W. L. F., editor.** *A Book of Australasian Verse.* 2nd edition. London, 1924.  
**MURDOCH, W. L. F., editor.** *An Australian Story Book.* Sydney, 1928.  
**SERLE, P., compiler.** *Bibliography of Australasian Poetry and Verse: Australia and New Zealand.* Melbourne, 1925.  
**SERLE, P., and others, compilers.** *An Australasian Anthology (Australian and New Zealand poems).* London, 1927.  
**SIMPSON, H. DE G.** *Boomerang.* 2nd edition. London, 1932.  
**VERSE.** Vol. 1, No. 1, September, 1929 to date. Melbourne (bi-monthly).

### EDUCATION.

- BROWNE, G. S., editor.** *Education in Australia: a Comparative Study of the Educational Systems of the Six Australian States.* London, 1927.  
**HANSEN, M. P.** *Thoughts that Breathe.* Melbourne, 1932.  
**IDRIESS, I. L.** *Flynn of the Inland.* Sydney, 1932.  
**JOHNSTONE, Rev. S. M.** *Samuel Marsden: a Pioneer of Civilization in the South Seas.* Sydney, 1932.  
**MACKAY, A. L. G.** *Experiments in Educational Self-Government.* London, 1931.  
**MEYER, F., editor.** *Adamson of Wesley.* Melbourne, 1932.  
**SMITH, S. H.** *Brief History of Education in Australia, 1788-1848.* Sydney, 1917.  
**SWBETMAN, E., LONG, C. R., and SMITH, J.** *History of State Education in Victoria.* Melbourne, 1922.

(See also Annual Reports of various State departments of Education.)

## APPENDIX.

[Recent information and returns which have come to hand since the various chapters were sent to press are given hereunder.]

## CHAPTER III.—GENERAL GOVERNMENT.

## § 1. Scheme of Parliamentary Government.

5. Number and Salary of Members of the Legislatures, p. 63.—The number of members in the Upper House of the New South Wales Parliament in December, 1932, was 124.

## § 2. Parliaments and Elections.

5. The Parliament of New South Wales, p. 65.—Particulars of the Legislative Assembly elections held on the 11th June, 1932, are as follows:—Electors qualified to vote—males, 739,009, females 725,999, total 1,465,008; electors who voted—males 690,094, females 676,993, total 1,367,087; percentage of electors who voted in contested electorates—males 96.42, females 96.37, total 96.39.

7. The Parliament of Queensland, p. 67.—Particulars of the Legislative Assembly elections held on the 11th June, 1932, are as follows:—Electors enrolled—males 274,986, females 250,958, total 525,944; electors who voted—males 236,266, females 220,628, total 456,894; percentage of electors who voted in contested electorates—males 92.59, females 93.14, total 92.86.

## § 3. Administration and Legislation.

## 2. Governors-General and Ministers, p. 71.

(c) LYONS GOVERNMENT, FROM 6TH JANUARY, 1932.

DEPARTMENTS.	MINISTERS (13th October, 1932).
Prime Minister and Treasurer ..	Rt. Hon. JOSEPH ALOYSIUS LYONS, P.C.
Attorney-General, Minister for External Affairs and Minister for Industry	Rt. Hon. JOHN GREIG LATHAM, P.C., C.M.G., K.C.
Minister without Portfolio .. ..	Rt. Hon. STANLEY MELBOURNE BRUCE, C.H., P.C., M.C.
Minister for Defence .. ..	*Rt. Hon. SIR GEORGE FOSTER PEARCE, P.C., K.C.V.O.
Minister for Trade and Customs ..	†Hon. SIR HENRY SOMER GULETT, K.C.M.G.
Postmaster-General .. ..	Hon. ROBERT ARCHDALE PARKHILL
Vice-President of the Executive Council	*Hon. ALEXANDER JOHN MCLACHLAN.
Minister for Health and Minister for Repatriation	Hon. CHARLES WILLIAM CLANAN MARR, D.S.O., M.C., V.D.
Minister for the Interior .. ..	Hon. JOHN ARTHUR PERKINS.
Minister for Commerce .. ..	Hon. FREDERICK HAROLD STEWART.
Assistant Ministers .. ..	{ *Hon. WALTER MASSY GREENE. Hon. JOSIAH FRANCIS. Hon. JAMES ALLAN GUY.

\* Senator. † Resigned 14th January, 1933, succeeded by Lieutenant-Colonel Thomas Walter White, D.F.C., V.D., M.P., from the same date.

## CHAPTER VI.—TRADE.

## § 3. Balance of Payments, pp. 149-150.

1. **General.**—In the following tables, tentative estimates have been made of the main items entering into the Australian balance of international payments during the four years ending in June, 1932. While insufficient direct statistical data are available to provide a completely accurate presentation of the position, it is possible, by resorting to indirect methods of estimation, to narrow the range of uncertainty. Additional data are constantly becoming available, however, while the methods of estimation adopted are susceptible of gradual improvement. The conclusions reached at this stage of the investigation, therefore, must be regarded as first approximations rather than as final results pretending to a substantial degree of accuracy.

The calculations have been carried out in terms of English sterling throughout. For the more important items, the figures for 1931-32 will require little revision. In a few cases, items of minor significance have been estimated in 1931-32 on the basis of the previous year's figures, with an allowance for known tendencies. Figures thus subject to material revision have been marked with an asterisk.

2. **The Balance of International Payments.**—The form in which the items entering into the balance of payments have been set out approximates fairly closely to that used by the League of Nations in its annual volumes on *International Trade and Balances of Payments*. The individual credit and debit "current" items appear in the first statement, and are followed by a statement of the inward and outward movements of capital, so far as they can be traced. The totals of these statements are then set out in the summary tables which follow. If the information contained in the primary statements were both accurate and exhaustive, the balances on current account (including the monetary movement of gold) should be exactly offset by contra balances on capital account each year. In practice, differences inevitably appear, on account of errors of estimation, omissions and time-lags. The discrepancies attributable to time-lags will be greater, of course, the greater are the fluctuations in the total volume of transactions. During the four years at present considered these fluctuations have been unparalleled in their violence.

## CURRENT MOVEMENTS OF GOODS, SERVICES AND GOLD.

Inward or Credit Movements (Exports).	1928-29.	1929-30.	1930-31.	1931-32.
	£000 stg.	£000 stg.	£000 stg.	£000 stg.
<b>I. MERCHANDISE.</b>				
1. Merchandise, including silver bullion and coins other than gold, exported .. .. .	138,646	98,255	76,628	75,467
2. Ships' stores exported .. .. .	2,316	2,047	1,408	1,222
3. Value of gold produced in all forms .. .. .	1,871	1,873	2,156	3,605
4. Deduct household effects, prizes, &c., exported .. .. .	— 111	— 102	— 94	— 74
5. Deduct for over-valuation of wool exported .. .. .	— 1,718	— 1,195	— 613	..
	141,004	100,878	79,485	80,220
<b>II. INTEREST AND DIVIDENDS.</b>				
6. Interest on Commonwealth Government investments overseas .. .. .	90	181	161	174
7. Interest on sinking fund investments overseas .. .. .	52	45	53	58
8. Interest on net banking balances overseas .. .. .	1,352	896	463	470
9. Interest on New Zealand Government debt domiciled in Australia .. .. .	269	293	328	330*
10. Interest on New Zealand Local Bodies' debt domiciled in Australia .. .. .	388	436	436*	436*
11. Interest on "other" assets overseas .. .. .	286	701	905	1,074
12. Interest on local investments in Australian Government securities domiciled overseas, n.e.i. .. .. .	?	?	?	?
13. Interest and dividends on other long and short term investments overseas, n.e.i. .. .. .	?	?	?	?
	2,437	2,552	2,346	2,542

## Current Movements of Goods, Services and Gold—continued.

Inward or Credit Movements (Exports).	1928-29.	1929-30.	1930-31.	1931-32.
	£000 stg.	£000 stg.	£000 stg.	£000 stg.
<b>III. OTHER SERVICES.</b>				
14. Insurance earnings overseas by Australian companies—				
(a) Life .. .. .	2,741	2,954	2,605	2,000*
(b) Fire, marine, and general .. .. .	30	30	25	20
15. Earnings of Australian ships on account of all overseas freight traffic .. .. .	647	647	532	505
16. Expenditure of foreign ships in Australian ports .. .. .	5,603	5,840	4,076	3,470
17. Duties collected on ships' stores consumed in Australian waters .. .. .	83	78	59	48
18. Expenditure in Australia by overseas tourists and travellers .. .. .	1,228	1,139	811	663
19. Funds brought in by immigrants and returned emigrants .. .. .	1,072	705	360	207
20. Emigrants' remittances and money gifts from overseas, n.e.i. .. .. .	560	578	546	426
21. Diplomatic, consular, and similar expenditure in Australia .. .. .	60	60	55	50
22. War pensions received from overseas .. .. .	381	451	446	436
23. Government receipts in cash on account of reparations .. .. .	876	878	1,265	— 1
24. Government receipts from overseas, n.e.i. . . . .	12	12	12	12
	13,293	13,372	10,792	7,836
<b>IV. GOLD COIN AND BULLION.</b>				
25. Gold coin and bullion in all forms exported, in excess of production .. .. .	1,116	24,999	10,120	5,931

Outward or Debit Movements (Imports).	1928-29.	1929-30.	1930-31.	1931-32.
	£000 stg.	£000 stg.	£000 stg.	£000 stg.
<b>I. MERCHANDISE.</b>				
26. Merchandise, including silver bullion and coins other than gold, imported .. .. .	143,300	130,787	60,586	44,059
27. Value of outside packages of imports (unrecorded) .. .. .	2,690	1,315	..	..
28. Add for undervaluation of freight, insurance, and sundry charges .. .. .	2,966	5,543	3,195	3,217
29. Add for undervaluation of films .. .. .	605	1,071	446	155
30. Deduct household effects, prizes, &c., imported .. .. .	— 172	— 181	— 120	— 111
	149,389	138,535	64,107	47,320
<b>II. INTEREST AND DIVIDENDS.</b>				
31. Interest on Government debt overseas:—				
Commonwealth—				
(a) Long-term securities } .. .. .	7,757	8,530	8,534	5,084
(b) Short-term securities } .. .. .	..	..	..	..
(c) Bank overdrafts (net) .. .. .	— 38	171	189	5
States—				
(d) Long-term securities .. .. .	19,562	19,193	18,893	19,225
(e) Short-term securities .. .. .	..	148	594	1,023
(f) Bank overdrafts (net) .. .. .	80	608	551	79
32. Interest on Local Bodies' debt overseas .. .. .	1,300	1,450	1,500	1,500*
33. Interest and dividends on long-term private capital invested in Australia .. .. .	8,750	8,750	6,087	4,177
34. Interest on short-term balances .. .. .	?	?	?	?
35. Deduct contribution of British Government to interest on migration loans .. .. .	— 109	— 126	— 131	— 112
	37,302	38,724	36,217	30,919

Current Movement of Goods, Services and Gold—*continued.*

Outward or Debit Movements (Imports).	1928-29.	1929-30.	1930-31.	1931-32.
<b>III. OTHER SERVICES.</b>				
36. Insurance earnings in Australia by oversea companies—	£000 stg.	£000 stg.	£000 stg.	£000 stg.
(a) Life .. .. .	— 2	21	24	20*
(b) Fire, marine, and general .. .. .	975	944	471	400*
37. Expenditure overseas by Australian tourists and travellers, including fares .. .. .	3,619	3,344	1,545	1,149
38. Funds taken out by emigrants and returning immigrants, including fares .. .. .	1,190	1,516	1,370	747
39. Immigrants' remittances and money gifts sent overseas, n.e.i. .. .. .	801	847	702	327
40. Commonwealth contributions to assisted passages .. .. .	133	58	10	..
41. Diplomatic, consular, and similar expenditure overseas .. .. .	170	177	158	134
42. Expenditure overseas by Department of Defence .. .. .	1,386	453	132	81
43. War pensions paid overseas .. .. .	342	367	374	325
44. Contributions to upkeep of soldiers' graves .. .. .	95	95	95	..
45. Oversea mail subsidy .. .. .	130	130	130	110
46. Loan flotation and management expenses and stamp duties on transfers .. .. .	430	174	35	31
47. Government expenditure overseas, n.e.i. .. .. .	122	108	95	89
	9,391	8,234	5,141	3,413
<b>IV. GOLD COIN AND BULLION.</b>				
48. Gold coin and bullion imported .. .. .	348	294	374	654

## CAPITAL MOVEMENTS.

Inward or Credit Movements (Increase of Liabilities).	1928-29.	1929-30.	1930-31.	1931-32.
49. Government debt domiciled overseas :—	£000 stg.	£000 stg.	£000 stg.	£000 stg.
Commonwealth—				
(d) Long-term securities .. .. .	6,279	7,941	— 1,952	— 103
(e) Short-term securities .. .. .	..	175	8,645	1,400
(f) Bank overdrafts (net) .. .. .	— 1,665	10,618	— 7,817	2,590
States—				
(d) Long-term securities .. .. .	— 4,164	— 11,595	— 616	— 1,675
(e) Short-term securities .. .. .	..	4,825	19,430	2,850
(f) Bank overdrafts (net) .. .. .	9,580	13,056	— 15,309	— 3,743
50. Local Bodies' debt domiciled overseas .. .. .	..*	3,000	1,000	..
51. Excess of assets over liabilities in Australia of oversea life insurance companies .. .. .	..*	4	11	..*
52. Long-term private capital invested in Australia .. .. .	?	?	?	?
53. Trade debits held temporarily in Australia .. .. .	?	?	?	?
	10,030	28,024	3,392	— 3,861

Outward or Debit Movements (Increase of Assets).	1928-29.	1929-30.	1930-31.	1931-32.
54. Commonwealth Government investments overseas .. .. .	£000 stg.	£000 stg.	£000 stg.	£000 stg.
55. Sinking fund investments in securities domiciled overseas, or in bank accounts .. .. .	— 86	— 172	— 155	— 29
56. Excess of assets over liabilities overseas of Australian banks less excess of assets over liabilities in Australia of oversea banks .. .. .	— 7,768	— 38	247	— 84
57. Excess of assets over liabilities overseas of Australian life insurance companies .. .. .	— 3,927	— 26,479	— 2,357	18,505
58. New Zealand Government debt domiciled in Australia .. .. .	..*	952	— 7,537	..*
59. New Zealand and Local Bodies' debt domiciled in Australia .. .. .	..1	109	— 102	..*
60. "Other" assets overseas .. .. .	314	814	..*	..*
61. Local investments in Australian Government securities domiciled overseas, n.e.i. .. .. .	1,260	14,065	8,819	3,513
62. Other long and short term investments overseas, n.e.i. .. .. .	?	?	?	?
	— 10,208	— 10,744	— 1,085	21,905

## SUMMARY TABLES.

Current Movements of Goods, Services, and Gold.	1928-29.	1929-30.	1930-31.	1931-32.
	£000 stg.	£000 stg.	£000 stg.	£000 stg.
<b>Inward or Credit Movements (Exports)—</b>				
I. Merchandise .. .. .	141,004	100,878	79,485	80,220
II. Interest and Dividends .. .. .	2,437	2,552	2,346	2,542
III. Other Services .. .. .	13,293	13,372	10,792	7,836
IV. Gold Coin and Bullion .. .. .	1,116	24,999	10,120	5,931
<b>Total Credits .. .. .</b>	<b>157,850</b>	<b>141,801</b>	<b>102,743</b>	<b>96,529</b>
<b>Outward or Debit Movements (Imports)—</b>				
I. Merchandise .. .. .	149,389	138,535	64,107	47,320
II. Interest and Dividends .. .. .	37,302	38,724	36,217	30,919
III. Other Services .. .. .	9,391	8,234	5,141	3,413
IV. Gold Coin and Bullion .. .. .	348	294	374	654
<b>Total Debits .. .. .</b>	<b>196,430</b>	<b>185,787</b>	<b>105,839</b>	<b>82,306</b>
<b>Excess of Debits (-) or Credits (+) ..</b>	<b>- 38,580</b>	<b>- 43,986</b>	<b>- 3,096</b>	<b>+ 14,223</b>

Capital Movements.	1928-29.	1929-30.	1930-31.	1931-32.
<b>Inward or Credit Movements (Increase of Liabilities) ..</b>	<b>+ 10,030</b>	<b>+ 28,024</b>	<b>+ 3,392</b>	<b>- 3,861</b>
<b>Outward or Debit Movements (Increase of Assets) ..</b>	<b>- 10,208</b>	<b>- 10,744</b>	<b>- 1,085</b>	<b>+ 21,905</b>
<b>Excess of Credits (+) or Debits (-) ..</b>	<b>+ 20,238</b>	<b>+ 38,768</b>	<b>+ 4,477</b>	<b>- 25,766</b>
<b>Balance, accounted for by lags, errors, and omissions, especially in capital items .. .. .</b>	<b>+ 18,342</b>	<b>+ 5,218</b>	<b>- 1,381</b>	<b>+ 11,543</b>
	<b>+ 38,580</b>	<b>+ 43,986</b>	<b>+ 3,096</b>	<b>- 14,223</b>

The balances appearing at the foot of the summary tables call for more detailed investigation than is possible at this juncture. If the accumulation of short-term trading balances in Australia be taken into account, however, the unexplained balances in the last three years of the period become relatively small and roughly cancel out. In 1928-29 the balance not specifically accounted for amounts to approximately £18 millions. Some part of this discrepancy is possibly due to the actual receipt in 1928-29 of part of the oversea public borrowings of 1927-28, which amounted, for the States and the Commonwealth as a whole, to the huge sum of £54,254,627. Further discussion of the possibilities must await a fuller exploration of the balance of payments in earlier years. Attention should be called, however, to the fact that the estimates of the banks' oversea balances are based on average liabilities and assets for the June quarters of each year. The use of quarterly averages, the only figures at present available, involves possibilities of error, particularly when large transactions take place near the end of the financial year.

3. **The Balance of International Indebtedness.**—The annual movements of capital, inward and outward, have already been dealt with. A supplementary statement may now be given setting out the total capital sums outstanding at successive dates. For convenience they have been termed "liabilities" and "assets". Some of the items included, however, are not of the nature of fixed money obligations, and the totals should be accepted with caution. Further qualifications will be found in the notes on capital items.

## BALANCE OF INTERNATIONAL INDEBTEDNESS.

(Approximate.)

Liabilities.	At 30th June.				
	1928.	1929.	1930.	1931.	1932.
	£000 stg.	£000 stg.	£000 stg.	£000 stg.	£000 stg.
63. Government debt domiciled overseas:—					
Commonwealth—					
(a) Long-term securities ..	153,507	159,786	167,727	165,775	165,672
(b) Short-term securities ..	..	..	175	8,820	10,220
(c) Bank overdrafts (net) ..	150	Cr. 1,515	9,103	1,286	Cr. 1,304
States—					
(d) Long-term securities ..	416,661	412,497	400,902	400,286	398,611
(e) Short-term securities ..	..	..	4,825	24,255	27,105
(f) Bank overdrafts (net) ..	Cr. 3,957	5,623	18,679	3,370	Cr. 373
64. Local Bodies' debt domiciled overseas	26,000*	26,000	29,000	30,000	30,000*
65. Excess of assets over liabilities in Australia of oversea life insurance companies (£A) ..	42*	42	46	57	57*
66. Long-term private capital invested in Australia (£A) ..	175,000	175,000	175,000	175,000	175,000
67. Trade debits held temporarily in Australia ..	?	?	?	?	?
	767,403	777,433	805,457	808,849	804,988

Assets.	At 30th June.				
	1928.	1929.	1930.	1931.	1932.
	£000 stg.	£000 stg.	£000 stg.	£000 stg.	£000 stg.
68. Commonwealth Government investments overseas ..	3,320	3,234	3,062	2,907	2,878
69. Sinking fund investments in securities domiciled overseas, or in bank accounts ..	8,899	1,131	1,098	1,345	1,261
70. Excess of assets over liabilities overseas of Australian banks less excess of assets over liabilities in Australia of oversea banks (£ stg.?) ..	47,016	43,089	16,610	14,253	32,758
71. Excess of assets over liabilities overseas of Australian life insurance companies ..	6,293*	6,293	7,245	Dr. 292	Dr. 292*
72. New Zealand Government debt domiciled in Australia (£A) ..	4,169	4,168	4,277	4,175	4,175*
73. New Zealand Local Bodies' debt domiciled in Australia (£A) ..	7,072	7,386	8,200	8,200*	8,200*
74. " Other " assets overseas ..	5,721	6,981	21,046	29,865	33,378
75. Local investments in Australian Government securities domiciled overseas, n.e.i. ..	?	?	?	?	?
76. Other long and short term investments overseas, n.e.i. ..	?	?	?	?	?
	82,490	72,282	61,538	60,453	82,358
Net liabilities .. .. .	684,913	705,151	743,919	748,396	722,630

4. Notes on Goods, Services and Gold.—The estimates of the current movements of goods services and gold presented in the foregoing statements have in some cases been based on conjectural materials, while in others they represent the bald results of lengthy and intricate calculations. A full explanation of the sources of the data and the methods followed in their elaboration must be deferred. Meanwhile some indication of the degree of validity attaching to the less obvious of the estimates may be gained from the following notes :—

Item 1.—Includes the recorded (sterling) values of all exports, other than gold in all forms, and ships' stores, which are recorded separately.

*Item 3.*—Since Australia is a gold-producing country, the gold production of the year has been regarded as an export of merchandise. Exports in excess of actual production are entered under item 25. (In the event of exports falling short of production it would, of course, be necessary to enter the deficiency, under item 25, as a deduction from the total credit items.)

*Item 4.*—Since household effects, prizes, etc., are not paid for, they must be deducted from exports at their recorded values.

*Item 5.*—A comparison of the recorded export values of wool per pound with the prices recorded by the wool-selling brokers reveals discrepancies in the earlier years which cannot be satisfactorily accounted for. The adjustment has been made on the basis of the brokers' prices, plus an allowance for charges incurred between store and ship. The recorded export values in 1931-32 are believed to be correct, in consequence of revised methods of valuation.

*Item 6.*—From Commonwealth Budgets.

*Item 7.*—See item 55. Partly estimated.

*Item 8.*—Estimated at 3 per cent. in the first three years and 2 per cent. in 1931-32, on the average amounts outstanding at the beginning and end of the year.

*Items 9 and 10.*—Actual amounts payable by the New Zealand Government and Local Bodies.

*Item 11.*—Computed at the rates received, on earning assets.

*Item 14 (a).*—Actual excess of income over outgo overseas, as returned by the companies. There is some doubt whether this item represents a net credit to Australia. The amounts returned have been included pending further inquiries.

(b).—Estimated from New Zealand business of Australian companies.

*Item 15.*—Total freight charges on imports have been estimated under item 28. The share earned by Australian ships was allocated in accordance with the tonnage of oversea cargo discharged by Australian ships as compared with the tonnage discharged by foreign ships. The total freight charges on exports were separately estimated by applying actual and estimated freight rates to quantities exported. The total earnings on exports were then allocated according to the tonnage of oversea cargo shipped by Australian ships and foreign ships respectively.

*Item 16.*—Estimated at 20 per cent. of the total freight earnings of foreign shipping, from data in *Report of the Overseas Shipping Conference* (1929) and sundry sources. The item covers numerous expenses (other than stores, fuel and duties) in Australian ports, and crews' expenditures in Australia.

*Item 18.*—Estimated in detail from the numbers of "temporary visitors arriving" from various groups of countries in each year. The average length of stay and average expenditure per head assumed, differ considerably for the various classes of visitor.

*Item 19.*—Estimated at £30 per head for immigrants from British and North American countries, and £25 per head for all other immigrants, in the first three years; and at £25 and £15 respectively in 1931-32.

*Item 20.*—Estimated as in Roland Wilson, *Capital Imports and the Terms of Trade*, pp. 22-26.

*Item 21.*—Very rough estimate.

*Item 23.*—No reparations were received in 1931-32, on account of the Hoover Moratorium.

*Item 24.*—From Commonwealth Budgets.

*Item 26.*—Includes the recorded values of all imports, other than gold. The recorded values of merchandise imports are the sterling f.o.b. values plus an arbitrary addition of 10 per cent. as an allowance for freight and charges.

*Item 27.*—"Outside packages" were not separately recorded until the second half of 1929-30. Previously it is probable that they were excluded almost entirely from the recorded values of dutiable goods and in part from the recorded values of free goods. In 1930-31 they amounted to about 3 per cent. of the value of other merchandise imports. An adjustment of 3 per cent. of the value of dutiable imports has therefore been made.



*Item 28.*—Total freight charges on imports were estimated by applying actual freight rates to quantities imported, in the case of "bulk" imports; and by applying an estimated rate per ton to the remaining tonnage of goods discharged from overseas. The estimated rate per ton on "berth" imports was deduced from the actual average rate per ton carried on inward and outward cargoes in 1927 and 1928 by vessels carrying over one million tons of goods between Australia and Europe. (*Report of the Overseas Shipping Conference, 1929*). By calculating the average freight rate per ton on "berth" exports, from actual freight quotations, and estimating the comparative tonnage of inward and outward "berth" cargoes, it was possible to break down the weighted average rate per ton, as given in the *Report*, into its two component rates. The percentage of freight charges, so estimated, on the f.o.b. values of all merchandise imports in 1927-28 was 10.6; in 1928-29, 11.3; in 1929-30, 13.7; in 1930-31, 14.8; and in 1931-32, 17 per cent. The rise in the percentage has been due to the much more rapid fall in import prices than in freight rates. For insurance and numerous small charges not included in the recorded values a further adjustment of 1 per cent. of the f.o.b. values of merchandise imports was made. The excess of the total charges, so estimated, over the 10 per cent. already allowed, is the final adjustment required.

*Item 29.*—Cinematograph films are recorded at official valuations which bear little relation to the sums paid as rentals and purchase price. The total remittances overseas have been roughly estimated from data collected by the Royal Commission on the Moving Picture Industry, and from information obtained privately. The excess of these remittances over the recorded values of imports is the adjustment required.

*Item 31 (a) and (b).*—The amounts stated are those actually paid in sterling during the financial year, on Commonwealth liabilities only. In 1931-32 the amount paid in interest on Commonwealth Government long-term debt was reduced by £3,919,774, payment of which was postponed under the Hoover Moratorium on war debts and reparations. Allowance has also been made for the sterling premium on dollar payments during 1931-32. The interest obligation on long and short term securities can be shown separately only on the basis of interest payable at 30th June, in each year, viz. :—

		Long term £000 stg.	Short term £000 stg.
At 30th June, 1929	.. ..	8,018	..
At 30th June, 1930	.. ..	8,416	11
At 30th June, 1931	.. ..	8,320	303
At 30th June, 1932	.. ..	4,396*	376

\* Exclusive of £295,000 sterling premium on amounts payable in dollars in New York, at rate of exchange ruling on 30th June.

(c).—From Commonwealth Budgets.

(d) and (e).—The figures stated are the averages of the amounts payable at the beginning and the end of each financial year. Allowance has been made for the sterling premium on dollar payments during 1931-32, at the appropriate rates.

(f).—Interest on overdrafts has been calculated at 5 per cent.; and 3 per cent. has been allowed on net credit balances.

*Item 32.*—Partly estimated, but in the main a compilation.

*Item 33.*—This item is largely conjectural. Interest has been allowed at 5 per cent. in the first two years, at 4 per cent. in 1930-31, and at 3 per cent. in 1931-32, on a capital value in Australian currency of £175,000,000.

*Item 35.*—From Commonwealth Budgets.

*Item 36.*—Excess of income over outgo in Australia, as returned by the companies.

*Item 37.*—Estimated in detail from the numbers of "Australian residents departing temporarily" to various groups of countries in each year. The average length of stay and average expenditure per head assumed, including fares, differ considerably for the various classes and destinations.

*Item 38.*—Estimated at varying amounts per head, allowing for fares, for "Australian residents departing permanently" to various groups of countries.

*Item 39.*—See item 20.

*Item 40.*—From Commonwealth Budgets.

*Item 41.*—Includes upkeep of Australia House and Agents-General, and representation at conferences, &c.

*Item 42.*—Estimated by Department of Defence; does not include value of goods imported.

*Items 43 to 46.*—From Commonwealth Budgets.

*Item 47.*—Includes expenditure in territories outside Australia, contributions to oversea institutions and scientific bodies, &c.

5. **Notes on Capital Items.**—The capital movements stated for each year in the Balance of Payments are based on the corresponding items in the Balance of International Indebtedness. For the most part the individual liabilities and assets have been stated in English sterling, as nearly as can be ascertained. Movements in the capital items recorded in Australian or United States currency have been so small since the depreciation of the Australian and sterling exchanges that the effects of the exchange fluctuations can be safely ignored.

*Items 49 and 63.*—The information as to long-term and short-term securities is available in the *Finance Bulletin* and the Commonwealth Budget. Sub-items (a) and (d) include some dollar liabilities which have not been adjusted for the depreciation of sterling. Information on bank balances and overdrafts overseas has been specially supplied by the Commonwealth and State Treasuries.

*Items 50 and 64.*—Mainly a compilation.

*Items 51 and 65.*—From details supplied by the companies. The returns are not complete.

*Items 52 and 66.*—The amount of £175,000,000 has been chosen after consideration of a number of estimates, none of which is very firmly based. Little information on this item has so far become available.

*Items 53 and 67.*—There is some evidence to suggest that considerable amounts of trade money were held temporarily in Australia during the early stages of exchange depreciation. No estimates of the amounts involved have been made. The view is held in responsible quarters, however, that from £7,000,000 to £10,000,000 was so held, and that practically the whole of this amount has now been repatriated.

*Items 54 and 68.*—From Commonwealth Budgets. Includes amounts owing by the British Phosphate Commissioners, White Star Line, and "other administrations".

*Items 55 and 69.*—Date from *Statistical Register of Western Australia and Annual Reports of the National Debt Commission*.

*Items 56 and 70.*—Estimated by the method explained in Roland Wilson, "Australian Monetary Policy Reviewed", *Economic Record*, November, 1931. There have been some revisions in the estimates of "shareholders' funds" stated therein.

*Items 57 and 71.*—From details supplied by the companies. The returns are not complete.

*Items 58 and 72.*—Data from *New Zealand Official Year Books*.

*Items 59 and 73.*—Data from *New Zealand Official Year Books*.

*Items 60 and 74.*—Based on confidential information received.

*Items 61 and 75.*—There is much evidence to suggest that Australian securities domiciled overseas have been repurchased by Australian residents, particularly while Australian Government stocks were very low in price overseas. No estimate of the amounts involved, in excess of those already included, has been made.

*Items 62 and 76.*—During the more acute stages of the depression it was common knowledge that capital was being moved out of Australia in the interests of security, even while the exchange was heavily depreciated. No estimate of the amounts involved can be made, but they were probably offset in some degree by the reverse movements referred to under item 53.

## § 12. Export Prices, etc., p. 181.

Owing to the impossibility of obtaining sufficient particulars, it has been found impracticable to include complete results of an investigation into this subject in the present issue.

## CHAPTER VII.—TRANSPORT AND COMMUNICATION.

## E. MOTOR VEHICLES.

5. *Motor Vehicles Registered, p. 253.*—Motor vehicles registered at 30th June, 1932, were as follows :—

## MOTOR VEHICLES REGISTERED AT 30th JUNE, 1932.

State or Territory.	Motor Cars.	Commercial Vehicles.	Motor Cycles.	All Vehicles.	
				No.	Per 1,000 of Population.
New South Wales ..	143,970	40,050	22,741	206,761	82
Victoria ..	117,160	28,224	22,568	167,952	93
Queensland ..	(a) 78,992	(b) 1,934	8,034	88,960	91
South Australia ..	39,023	10,909	7,860	57,792	99
Western Australia (c) ..	28,315	12,339	6,738	47,392	112
Tasmania ..	11,327	2,222	3,661	17,210	78
Northern and Central Australia ..	233	307	39	579	116
Federal Capital Territory ..	949	222	93	1,264	158
Australia (c) ..	419,969	96,207	71,734	587,910	89

(a) Pneumatic tyred vehicles. (b) Solid tyred vehicles. (c) Incomplete.

## CHAPTER VIII.

## PUBLIC FINANCE.

(See pp. 290, 304, 341, 348.)

## THE FINANCIAL CRISIS.

1. **General.**—It is not within the functions of the Official Year Book to attempt a full record of the financial and economic crisis which began to develop in Australia towards the end of 1929, and space does not permit of a presentation of the whole of the statistical and financial data relevant to the subject. The principal documents relating to the crisis, however, up to June, 1931, have been conveniently put together, with some brief comment, by Professors E. G. Shann and D. B. Copland in the two compact volumes, entitled *The Crisis in Australian Finance*, and *The Battle of the Plans*. These may be supplemented by the official reports of the Premiers' Conferences, especially those dealing with the Conferences of 25th May to 11th June, 1931, (P.P. No. 236), 28th January to 5th February, 1932 (P.P. No. 12), and 14th to 21st April, 1932 (F.1969). Particular reference may be made to the Treasury Officers' Report on the Budgets of 1931-32 and 1932-33 in the latter paper; and to the Report of the Committee appointed to make a "Preliminary Survey of the Economic Problem" (C.3847). Discussions of the economic and financial issues will be found in the "Economic Survey of Australia" published in the *Annals of the American Academy of Political and Social Science* (Philadelphia) for November, 1931; in the Circulars of the Bank of New South Wales (Sydney); in Nos. 11 to 15 of the *Economic Record* (Melbourne), and in its Special Supplement (October, 1932) containing the "Papers on World Economic Influences" read before Section G of the A.N.Z.A.A.S. (Sydney Congress, August, 1932).

2. Elements of the Situation.—The elements of the situation before the depression began, were :—

- (1) A national income of about £100 per head in 1928–29.
- (2) Oversea interest obligations, fixed for the most part in sterling, of about £5 per head.
- (3) Imports of about £27 per head in 1926–27, falling to £23 per head in 1928–29.
- (4) Exports of commodities, which for some years had failed to pay for imports, amounting in 1928–29 to £21 per head
- (5) A standing net debit of interest obligations and balance of visible trade, which had been met by oversea long-term loans averaging about £5 per head for some years, helped by some investment of private capital from overseas.
- (6) Deficits in Government finance for the Commonwealth and all States, which for 1929–30 totalled about £1 15s. per head.

On this situation impinged :—

- (1) A world fall in commodity prices, with consequent general depression and increase in the burden of fixed money claims which were estimated for Australia at about £20 per head in 1928–29.
- (2) A fall in Australian export prices, which, in gold, have now (October, 1932) sunk to about 31 per cent. of the 1927–28 level, and to 53 per cent. even in the depreciated Australian £; while, at the same time, interest obligations remained fixed in sterling for the most part, and import prices fell very much less than export prices, probably only to 50 or 55 per cent. in gold.
- (3) A total cessation of oversea long-term loans, which had in recent years roughly balanced interest obligations overseas.
- (4) Government deficits, which had been about £1 15s. per head in 1929–30 rose to over £4 per head in 1930–31, and threatened to be £7 per head in 1931–32, with consequent further loss of business confidence and intensification of the depression.

3. Attempts to meet the Situation.—A brief diary of the attempts to meet this situation may be set out as follows :—

*July-August, 1930.*—Sir Otto Niemeyer, representing the Bank of England, visited Australia at the invitation of the Commonwealth Government, and made a statement on severely deflationary lines to a Conference of Premiers in Melbourne (see *The Crisis in Australian Finance*, p. 18.) The Premiers resolved to balance budgets in 1930–31.

*2nd January, 1931.*—The Commonwealth Court of Arbitration after a protracted hearing made a comprehensive survey of the economic position (see *The Crisis*, pp. 102–145), and awarded a 10 per cent. reduction in all railway wages which were the subject of the case, operative from the 1st February, 1931. This judgment was followed by others, making the same reduction in practically all wages and salaries which were determined by Federal award. This reduction of 10 per cent. was in addition to the "automatic" adjustment to falling prices, and made the total reduction over 20 per cent. on the wage rates of 1929. Wages under State jurisdiction were gradually brought into line, except in New South Wales where no adjustment was made in State awards for some time.

*January to February.*—Premiers' Conference, Canberra and Melbourne.—A committee of Treasury officers presented a report analysing the financial and economic position. The report preserved much of the deflationary tone of Sir Otto Niemeyer's statement, and commented adversely on the high exchange rate. Curtailment of Government expenditure was strongly urged, but no definite reductions were proposed. This report was signed by four of the State Under-Treasurers only.

Mr. Lang (Premier of New South Wales) proposed as an alternative the reduction of internal interest on Government bonds to 3 per cent., the cessation of oversea interest payments pending agreement for a similar reduction, and the substitution for the gold standard of "currency based on the wealth of Australia".

The Conference rejected Mr. Lang's motion and resolved to aim at budget equilibrium in three years, reducing salaries and wages on a cost of living basis, taxing interest on Government bonds at the source and putting on the banks the responsibility of reducing interest rates.

*January.—The Unpegging of the Exchange.*—Australian exchange with sterling had been held by the banks at 8½ per cent. discount since 9th October, 1930. On 5th January, 1931, on the initiative of the Bank of New South Wales, the rate was allowed to move up until it reached 30 per cent. on 29th January, 1931, and it was held at that figure notwithstanding some competition at higher rates, by "outside" dealers.

*2nd April.*—Letter from the Commonwealth Bank to the Chairman of the Loan Council, stating that it was unable to finance Governments beyond the outstanding £25,000,000 in London, and a limit of £25,000,000 in Australia. This limit in Australia was bound to be, and was, in fact, reached within three months.

*25th May to 11th June.—Premiers' Conference, Melbourne.*—The Conference had before it a report of a Committee of economists and Treasury officers, of which Professor D. B. Copland was Chairman. This report proposed a definite scheme of reduction of expenditure of all kinds, including wages, salaries, pensions, and interest. The reduction aimed at was from 20 to 25 per cent. below the 1928–29 level, based on the actual reduction in wage rates in Federal awards of something over 20 per cent. The aim of the proposals was to reduce total Government deficits in 1931–32 from a prospective £40,000,000, to some figure not much above £10,000,000. This report, which is printed in full at the end of this section, formed the basis of the "Premiers' Plan," adopted on the 10th June, 1931.

*19th June.—Gold Position.*—The minimum proportion of gold to be held against notes was reduced from 25 per cent. to 15 per cent., with provision for gradual restoration over a term not exceeding five years to 25 per cent. This amendment of the Commonwealth Bank Act was put through by general consent to permit further shipments of gold to meet short-term debt in London. The gold movements since June, 1929, have been roughly :—

30th June, 1929—	£ m.
Gold held by Note Issue Department .. .. .	22.7
Gold held by Banks .. .. .	22.8
Other (say) .. .. .	2.3
Add Production to 31st October, 1932 .. .. .	7.9
<hr/>	
Total .. .. .	55.7
<hr/>	
Net Exports of Gold 1st July, 1929 to 31st October, 1932 .. .. .	46.8
31st October, 1932—	
Gold held by Note Issue Department .. .. .	8.5
Gold held by Banks (about) .. .. .	0.4
<hr/>	
Total .. .. .	55.7
<hr/>	

The reserve ratio against Commonwealth notes at 30th June, 1929, was 53.4 per cent.; at 31st October, 1932, it was 21.4 per cent. The reserve consisted of £2,000,000 of sterling in addition to the £8,500,000 of gold.

*26th June.—Reduction of Bank Deposit and Advance Rates.*—The Commonwealth Bank and the trading banks reduced by 1 per cent. the rates on new fixed deposits or renewals.

*1st July.*—The Commonwealth Bank reduced rates for advances by 1 per cent. The other trading banks by successive small steps fell into line.

The Commonwealth and State Savings Banks reduced interest rates by 1 per cent., except in Victoria where successive reductions of one-half, one quarter, and again one-quarter of 1 per cent. were made by the State Savings Bank.

*July–August.—Conversion Loan.*—A conversion loan was launched to reduce the rate of interest on all internal Government debt by approximately 22½ per cent.

The results of the conversion plan will be best understood by consideration of the following figures :—

	£
Total Internal public debt at 31st July, 1931 .. ..	557,998,904
Conversion applications notified .. ..	510,331,153
Dissents notified .. ..	16,655,769
Conversion effected automatically (in absence of notification of either conversion or dissent) .. ..	31,011,982
	557,998,904

The amount held by dissentients was thus a little less than 3 per cent. of the total outstanding public debts.

The annual savings in interest to all the Governments for a full year in consequence of the conversions effected were calculated to be about £6,500,000, but some part of this relief was to be passed on to settlers and other debtors to the State Governments.

*10th to 14th August, and 1st to 12th September.—Premiers' Conference, Melbourne.* The several Governments reported their attempts to adjust their budgets to the "Premiers' Plan." After some allowance had been made for unforeseen contingencies, the new budgets appeared on the whole to be in fair conformity with the "Plan," though for some of the State Governments there was an appreciable gap. Measures were agreed upon for applying compulsion to the small amount of Debt which had not been converted, and provision was made for the redemption from the National Debt Sinking Fund of securities held by persons in necessitous circumstances.

*21st September.*—Great Britain ceased payment in gold, and sterling depreciated over 20 per cent. in terms thereof, thus making a corresponding reduction in the real burden of interest payments by Australian Governments, which are for the most part fixed in sterling. Australian exchange was kept for the time at the old discount of 30 per cent. with sterling, so that no direct relief to Australian budgets ensued.

*30th October.*—The Commonwealth Government made provision for the payment of a bounty of 4½d. per bushel on wheat produced in the 1931–32 season.

*27th November.*—Further reduction in bank deposit rates of one-half and one-quarter of one per cent. on short and long-term deposits respectively.

*3rd December.—Exchange.*—Commonwealth Bank Board resolved to take responsibility for the regulation of sterling exchange and to announce rates for the coming week every Friday. The rate was fixed at £125 for £100 sterling, in place of £130, which had been the official bank rate since 29th January. It may be noted that sterling in the preceding week had depreciated from about 20 per cent. discount on gold to about 30 per cent. For some weeks the banks had been rationing their purchases of exchange, with the result that the "open market" rate had fallen considerably below the "carded" rates.

*January, 1932.*—Letter from the Commonwealth Bank to the Chairman of the Loan Council calling attention to the growth of the floating debt, and suggesting that "national finance" might be refused.

*28th January to 5th February.—Premiers' Conference, Melbourne.*—A serious drift in State finances was revealed. After receiving assurances that further economies would be sought, the Commonwealth Bank agreed to provide further assistance for the small States. During the meetings, New South Wales announced its default on interest payments due in London, New York and Australia. The payments were met, after a short delay, by the Commonwealth Government.

*February.*—A beginning was made in the revision of the tariff and the removal of prohibitions on imports.

*8th March.*—Further reductions in bank deposit rates of one-half, one-quarter and one-quarter of one per cent. on 3, 6 and 12 months' deposits, respectively.

*12th March.*—The Financial Agreements (Commonwealth Liability) Act resolved all doubts as to the liability of the Commonwealth for debts taken over in pursuance of the Financial Agreement.

*March to May.*—The Financial Agreements Enforcement legislation was enacted, giving the Commonwealth drastic powers to attach State revenues and other moneys in the event of failure by a State to pay to the Commonwealth moneys due under the Financial Agreement. The High Court decided in favour of the Commonwealth on a writ for recovery of interest paid on behalf of New South Wales. The New South Wales Government then contested the validity of the Enforcement Acts, which were upheld by the High Court, leave to appeal being refused.

*13th April.*—The Committee of Experts appointed by the Commonwealth Government to make a "Preliminary Survey of the Economic Problem" issued its report, recommending the restoration of economic balance by a combination of reduced costs and a high exchange rate, the former to be secured in part by the general application by State wage-fixing authorities of the 10 per cent. "cut" in real wages. The chief measures of more immediate alleviation recommended were (i) systematic revision of the customs tariff, (ii) construction of public works when the reductions in costs of construction made it possible for such works to earn interest, (iii) advances on debentures to large-scale enterprises for which three-quarters of the needed capital had been privately subscribed, and (iv) the settlement of married recipients of sustenance as cottagers on established farms.

*14th to 21st April.*—*Premiers' Conference, Melbourne.*—It was decided to raise a loan of £2,400,000 for expenditure on unemployment relief works.

*May.*—The trade union unemployment percentage reached the peak of 30 per cent. Mr. Lang was dismissed by the Governor of New South Wales, and the Victorian Labour Government was defeated at the elections. A widespread agitation for a higher exchange rate commenced, and lasted for some months.

*11th June.*—The State Labour Party was defeated in the New South Wales elections, while in Queensland the Labour Party was victorious.

*16th and 17th June.*—The New South Wales Industrial Commission was reconstituted. The Commonwealth Court of Arbitration refused an application for restoration of the special 10 per cent. reduction in wages.

*21st June.*—The Commonwealth Bank Act was amended to allow part of the note reserve to be held in English sterling. Subsequently, £2,000,000 of gold was shipped and converted into sterling.

*May–June.*—Further reductions in bank deposit rates of one-quarter and one-half of one per cent. on 12 and 24 months' deposits, respectively.

*30th June.*—*Balance of Payments.*—The balance on current account, including the movement of monetary gold, was estimated to be in Australia's favour by approximately £15,000,000 sterling in 1931–32, as against a small debit balance in 1930–31. (See Appendix, Chapter VI.—Trade, p. 832.)

*28th June to 8th July.*—*Premiers' Conference, Canberra and Sydney.*—The Conference unanimously affirmed its adherence to the "Premiers' Plan" of 1931. The estimated deficits for 1931–32 were reported to the Conference; and, with the notable exceptions of New South Wales and Queensland, they disclosed a satisfactory conformity with the "planned" deficits. The Conference agreed to reduce the total deficits in 1932–33 to £9,000,000 (inclusive of £6.45 millions for sinking funds); and arranged for a three-year unemployment relief works plan involving the ultimate expenditure of £15,000,000. Of this amount, £7,000,000 was to be spent in 1932–33, in addition to the ordinary works programme of £6,000,000.

*1st July.*—The Commonwealth Bank reduced its rate for advances by a further one-half of one per cent., bringing the rate to 5 per cent. The average reduction by the trading banks, since 1st October, 1931, was stated to be 1 per cent. Further reductions were anticipated by prominent bankers.

*26th August.*—The New South Wales Industrial Commission reduced the basic wage for adult males from £4 2s. 6d. to £3 10s., and for adult females from £2 4s. 6d. to £1 18s.

*1st September.*—The Commonwealth Budget provided *inter alia* for a further reduction of pensions and salaries, decreased customs duties, the final removal of import prohibitions, exemptions from Sales Tax and primage, and suspension of the gold bounty.

*September to November.*—Wool prices showed some improvement; share prices advanced substantially; the value of imports and Commonwealth customs revenues increased steadily. Early in October all the 4 per cent. Commonwealth bonds reached par, after allowing for accrued interest.

*10th October.*—A New South Wales loan of £12,000,000 was converted from 5½ per cent. to 3½ per cent. in London, for five years—issue price £97½.

*24th to 29th October.*—*Premiers' Conference, Melbourne.*—It was decided to place on the Australian market a loan of £8,000,000 at 3¾ per cent., for Unemployment Relief and the funding of Treasury Bills. A reduction in the rate of interest on Treasury Bills from 4 per cent. to 3½ per cent. was announced.

*1st November.*—Further reductions in bank deposit rates of one-quarter of one per cent. for all terms, bringing the rates down to 2¼, 2½, 3 and 3¼ per cent. on 3, 6, 12 and 24 months' deposits respectively.

*10th November.*—In view of the improved revenue position, the Commonwealth Government gave notice of substantial reductions in land and income taxes, further exemptions from sales tax, and the provision of £2,000,000 for assistance to wheat-growers.

**4. The Results for Government Finance.**—The statement below gives a comparison of the deficits actually realized in 1930–31 and 1931–32, and the deficits anticipated in the Budgets of 1932–33.

Column 3 of the table shows an estimate of the financial position prior to the May–June 1931 Conference, when proposals for the restoration of budgetary equilibrium were formulated. The anticipated position after making the necessary adjustments consequent upon the adoption of the “Premiers' Plan” (and its subsequent revision) was as stated in column 4, while the deficits actually realized are given in column 5.

DEFICITS BEFORE AND AFTER THE “PLAN”, COMMONWEALTH AND STATES.  
(£'000.)

States, etc.	1930–31.	1931–32.		1932–33.	
	Deficit.	Estimated Deficit.		Estimated Deficit.	
	Realized for Year.	Prior to Melbourne Conference.	After Conference Adjustments and later Revisions.	Budget Estimate for Year.	
1.	2.	3.	4.	5.	6.
New South Wales (b) ..	7,850	11,510	5,910	14,228	4,350
Victoria ..	2,450	3,060	1,610	1,608	851
Queensland ..	840	1,630	760	2,075	1,491
South Australia ..	1,810	2,400	1,500	1,063	1,187
Western Australia ..	1,420	1,860	1,560	1,558	703
Tasmania ..	240	220	170	272	124
Six States ..	14,610	20,680	11,510	20,804	8,766
Commonwealth ..	10,760	20,400	1,150	(+) 1,314	(+) (d) 12
Grand Total ..	(c) 25,370	41,080	(e) 12,660	19,490	(d) 8,754

(a) Preliminary figures. (b) Exclusive of Metropolitan Board of Water Supply and Sewerage. (c) Excluding interest, &c., £3,834,149 paid by the Commonwealth on behalf of New South Wales and not recovered at 30th June, 1931. Of this amount £1,672,722 would normally have been brought to account as expenditure by New South Wales during 1930–31 and the remainder in 1931–32. (d) After bringing to account Commonwealth surplus of 1931–32, paid into Trust Fund. (e) Originally £14,650,000.



As compared with 1930-31, the results for 1931-32 show an increase in aggregate revenue of approximately £2,000,000. Since expenditure showed a reduction of slightly under £4,000,000, the total deficits for the year were reduced by about £6,000,000.

Taxation revenue increased by £5.3 millions, principally on account of the increase in the rate of Sales Tax from 2½ per cent. to 6 per cent.

Lower interest rates on loans to Local Bodies, etc., together with a reduction in railway revenue of £1,000,000, were largely responsible for offsetting the increased taxation revenue. Moreover, the Commonwealth's accounts for 1930-31 included a non-recurring item of income, amounting to £1.5 millions, derived from the liquidation of ex-enemy properties.

Notwithstanding very substantial increases in expenditure on account of exchange payments and unemployment relief, the aggregate expenditure decreased by over £4,000,000. This amount would have been increased to over £5,000,000 but for the fact that the New South Wales accounts for 1931-32 included £1,033,000, representing interest and exchange attributable to 1930-31. The reduction in internal interest payments as provided under the "Premiers' Plan", combined with the relief to the Commonwealth Budget of £5,548,809 (plus exchange) given by the suspension of payments to the British Government due under the *Funding Arrangements Act 1921*, contributed materially to the reduced expenditure.

Railway working expenses decreased by about £3.6 millions; and, while complete details for other business undertakings and the normal social services are not available, there is evidence that definite steps have been taken to effect the reductions contemplated under the "Premiers' Plan".

5. **Present Position of Government Finance.**—The following summaries have been compiled from information published in the monthly statements prepared by the Commonwealth and State Treasuries. While returns for 1931-32 do not contain as much detail as those for the current year, the information generally permits fairly reliable analyses to be made.

The aggregate deficits of all States amounted to £5.17 millions for the quarter ended 30th September, 1932. The Commonwealth surplus of £2.62 millions reduced the aggregate deficit to £2.55 millions, which represents a very marked improvement on the results for the corresponding quarter of the previous year, when the deficits aggregated £13.07 millions. Revenue increased by £6.4 millions, and expenditure decreased by £4.1 millions, giving a net improvement of £10.5 millions.

COMMONWEALTH AND STATES FINANCES.—SUMMARY.

Quarter ended 30th September.				Receipts.	Expenditure.	Deficit.
				£1,000.	£1,000.	£,1000.
1931	..	..	..	32,504	45,575	13,071
1932	..	..	..	38,944	41,498	2,554
Improvement	..	..	..	6,440	4,077	10,517

Taxation receipts have increased by £4.06 millions and the expenditure on administrative and social services has been reduced by £0.76 million.

In regard to Business Undertakings, the trading results, excluding provision for interest, etc., can be summarized as follows :—

BUSINESS UNDERTAKINGS—COMMONWEALTH AND STATES.—SUMMARY.

Quarter ended 30th September.				Receipts.	Expenditure.(a)	Excess Receipts.
				£1,000.	£1,000.	£1,000.
1931	..	..	..	13,789	10,395	3,394
1932	..	..	..	14,107	10,067	4,040
Improvement .. ..				318	328	646

(a) Excludes Interest, &c., charges.

6. The Adopted Plan.—The full text of the Report prepared by the representatives of the various Australian Governments in connexion with the national financial position is as follows :—

CONFERENCE REPORT.

The Governments of Australia have met in Conference to consider what measures are possible to restore solvency and avoid default. The national income was £650,000,000 in 1927-28. It fell to £564,000,000 in 1929-30, and a further fall to £450,000,000 in 1931-32 is estimated.

This has reacted on Government finance.

The total deficit of the seven Australian Governments will be £31,000,000 for the present financial year. The Governments are now going behind at the rate of £40,000,000 a year, in spite of reduction of expenditure amounting to £11,000,000 per annum since 1929-30. The deficits have been met hitherto by bank overdraft. The Commonwealth Bank has notified the Governments that the limit to that process has been reached. Early in July, Governments will have insufficient means to meet their obligations. Unless the drift be stopped, Public Service salaries and wages, pensions, and interest could not be paid in full. Public default would be followed by a partial breakdown in public utilities such as railways, and in private industry and trade. Revenue would come toppling down, and even half-payment might become impossible. With this prospect, everything that can be got from Government economy, from taxation, and from reduction of interest, must be called on to bring the debit balance within manageable limits that can safely and practicably be covered for a time by borrowing.

THE PLAN.

The Conference has, therefore, adopted a plan which combines all possible remedies in such a way that the burden falls as equally as possible on every one, and no considerable section of the people is left in a privileged position. This sharing of the burden is necessary to make the load more tolerable ; it is still more necessary, because only on this condition will it be possible to get the combined effort required.

The plan has been adopted by the Conference as a whole, each part of which is accepted on the understanding that all the other parts are equally and simultaneously put into operation. It embraces the following measures :—

- (a) A reduction of 20 per cent. in all adjustable Government expenditure, as compared with the year ending 30th June, 1930, including all emoluments, wages, salaries, and pensions paid by the Governments, whether fixed by statute or otherwise, such reduction to be equitably effected ;
- (b) Conversion of the internal debts of the Governments on the basis of a 22½ per cent. reduction of interest ;
- (c) The securing of additional revenue by taxation, both Commonwealth and State ;
- (d) A reduction of bank and Savings Bank rates of interest on deposits and advances ;
- (e) Relief in respect of private mortgages.

These proposals require the greatest effort in economy and taxation which the Conference considers it safe to attempt. The effect will be still to have a gap of from £13,000,000 to £15,000,000 to be covered for a time by borrowing.

#### REDUCTION OF EXPENDITURE.

The plan provides for Government economy on the basis of an immediate cut, averaging 20 per cent. for all Government wages and salaries below the level of 1929-30. To this will be added all saving that can be made from a strict scrutiny into the necessity of every item of Government expenditure.

The same general principle is extended to all pensions provided out of Government funds—old-age and invalid pensions, war pensions, superannuation pensions, and the maternity allowance. Over the whole field of this expenditure, the cut will amount to 16 per cent. The result will be, for each Government, savings as shown in the following table :—

#### FURTHER REDUCTIONS IN EXPENDITURE BEYOND THOSE PROVIDED FOR IN THE PRESENT ESTIMATES FOR 1931-32.—ADMINISTRATION AND PENSIONS.

					£
Commonwealth .. .. .	..	..	..	..	6,050,000
New South Wales .. .. .	..	..	..	..	3,300,000
Victoria .. .. .	..	..	..	..	880,000
Queensland .. .. .	..	..	..	..	620,000
South Australia .. .. .	..	..	..	..	400,000
Western Australia .. .. .	..	..	..	..	560,000
Tasmania .. .. .	..	..	..	..	110,000
					11,920,000

The further savings to be made in accordance with the plan are, therefore, £11.92 millions for all Governments. The total reduction of expenditure (excluding Commonwealth pensions) compared with 1929-30 will be £21.4 millions.

#### TAXATION.

Taxation equally must make a maximum contribution. Ordinary direct taxation has nearly reached the limit in some States. The Commonwealth will raise an additional £1.5 millions by income tax, and what capacity for direct taxation remains will be left for a last reserve as the option of the several State Governments. The only possible substantial contribution must, therefore, be by taxes on consumption so designed as to add as little as possible to the costs of industry. It has been agreed that the sales tax and primage should be increased to give £6.4 millions of additional revenue. By the agreed economies and taxation, the position estimated for 1931-32 will be improved by £20,000,000, exclusive of savings on interest and additional State taxation.

#### REDUCTION OF INTEREST.

The reduction in the rate of interest is of urgent importance, for two reasons :—

1. With the fall in prices since 1929, interest payments have become an intolerable load on all industry, and immediate relief is necessary for the restoration of industry and employment. Government budgets are subject to the same strain, because revenue falls with falling prices, and thus interest relatively becomes a heavier burden. A reduction of interest will substantially reduce the deficit which remains when economy and taxation have made their maximum contribution.

2. Income from interest, particularly from Government bonds and bank interest, has hitherto suffered little loss. A reduction of interest will ensure that it will contribute equitably to the common effort to restore solvency. Unless the contribution is made, it is not to be expected that the wage-earner and the pensioner will acquiesce in the very real hardships imposed on them by this plan.

The second of these objects could be obtained by taxation, but taxation would give no relief to industry and no stimulus to employment. The Conference has, therefore, resolved on an appeal to all bond-holders to accept a reduction of  $22\frac{1}{2}$  per cent. in the effective rate of interest. This is to be done by a conversion loan, and the new securities will be exempt from the present super-tax of  $7\frac{1}{2}$  per cent. and from any additional taxation imposed on income from interest, in order to spread as evenly as possible the sacrifices required to restore solvency.

Concurrently with the reduction of bond interest must go a reduction in private interest. This is mainly a matter for the banks, who are co-operating to that end. Reductions of interest are being arranged between the Commonwealth Bank, the trading banks, and the Savings Banks which will result in the rapid reduction in the interest on money required for trade and industry. This reduction of interest will be supplemented by legislation giving relief to mortgagors. This legislation forms part of the plan.

The lower rates of interest will greatly stimulate the general demand for credit, and the conference has the assurance of the Commonwealth Bank and the trading banks that, as a result of the operation of the plan, money will be readily available. With falling costs and ample supplies of credit, industry should then recover. This recovery will be stimulated by the maintenance of a free external exchange rate and the avoidance of any measures that will cause a sudden further fall in prices. A reduction of existing exchange rates will best be achieved on rising markets for Australian exports. If premature attempts are made to force the rates down earlier, they may bring about a further crisis by reducing export values once more.

#### SUMMARY.

The total effects of the plan on the budgets of 1931-32 may now be summarized. The total deficit as estimated for 1931-32 was £39,000,000. The extra economies agreed upon take £12,000,000 off this total. New Federal taxation embodied in the plan will contribute a net £7.5 millions, in addition to any increases which may be obtained by the States. The saving of interest by conversion will reduce the internal interest burden by £6.5 millions. As Governments will pass on this relief to their own borrowers—public bodies, public utilities, and private individuals—the net benefit to the budgets will be £5.5 millions. The combined effect will be a reduction of the deficit from £40,000,000 to £15,000,000. A further reduction of the deficit by £2,000,000 could be secured by levelling up the income tax in at least two States.

These very substantial reductions will go far to restore confidence both at home and abroad. This restoration of confidence, with the indirect effects of the fall in interest, may be expected to restore revenue, even to some extent in 1931-32, and substantially in the years following. A rise in world's price for our exports would accelerate the upward movement, and this rise may reasonably be expected within the next two years. With any improvement in industry, the expenditure on unemployment sustenance will decline, with further relief to budgets.

With this prospect, and confidence restored, there would be no difficulty in borrowing temporarily to meet the deficits as substantially reduced.

The deficit includes £10.6 millions additional charge on overseas interest and external payments on account of exchange. If the exchange rate falls, there will be a corresponding decline in the deficit. On the other hand, if the present exchange rate is maintained, its full effect in keeping up local prices and incomes will have a beneficial effect on Government revenues.

## A UNITED EFFORT.

Before the details of the plan were settled, and in order to make it effective, the Leaders of the Opposition in the Commonwealth Parliament were invited to attend the Conference. After full discussion of the whole plan, the following resolution was passed :—

“ The Conference, including the Leaders of the Opposition in the Federal Parliament, having most carefully considered the financial position of the Commonwealth and the States, and recognizing the national inability to meet existing Government charges, is unanimously of the opinion that to prevent national default in the immediate future, and a general failure to meet Government payments, all expenditure, including interest on Government securities and other interest, and expenditure upon governmental salaries and wages, pensions, and other social services must be substantially reduced.

These measures, drastic as they may appear, are the first essentials to the restoration of prosperity and the re-employment-of our workless people.

The necessary sacrifice is due to national inability to pay, and it must, therefore, be shared by all.

The Conference has accordingly provided a conversion plan under which bond-holders may make their contribution to the general sacrifice by themselves accepting the lower rate of interest which the existing position makes unavoidable.

The Conference therefore appeals to all sections of the people to recognize the position, and, in the interests of the nation to accept the sacrifices which are involved.

A National Appeal Executive, consisting of the Prime Minister, the Leader of the Opposition, and the Chairman of the Commonwealth Bank Board, is appointed by this Conference to direct the conversion campaign.”

## CONCLUSION.

1. The plan agreed upon is an indivisible whole and the carrying out of any one part is dependent upon the carrying out of all parts.

2. It involves sacrifices by every member of the community, and the Conference appeals to all sections of the people to recognize the position, and to accept these sacrifices as a national duty.

3. To the bond-holder the plan involves a reduction of interest by 22½ per cent., but it safeguards the capital of the investor.

4. To the Government employee the plan involves a reduction which with reductions already effected, represent an average of 20 per cent., but it makes his position, and future emoluments, much more secure.

5. To the war pensioner, the plan involves a reduction of 20 per cent. (in some cases less), but it removes the danger of any sudden stoppage, and provides security for future payments.

6. To the invalid and old-age pensioner the plan involves a reduction in most cases of 12½ per cent., but it removes the danger of any sudden stoppage, and provides security for future payments.

7. To all of these a large part of the reduction is counterbalanced by the fall in prices, and in the cost of living.

8. To the unemployed, the plan provides for a restoration of employment, and in the meantime makes more secure the continuation of sustenance relief.

9. With the sacrifice distributed over the whole community in this manner, with the lead of Governments followed by all citizens, with the revival of business confidence and activity, a sure foundation will have been laid for the restoration of general prosperity in Australia.

## EFFECT OF THE PLAN ON DEFICITS.

	1929-30 Actual.	1930-31 Estimate.	1931-32.	
			Original Estimate.	After making the Agreed Adjustments.
	£ millions.	£ millions.	£ millions.	£ millions.
Commonwealth ..	1.50	13.40	20.40	4.38
New South Wales ..	5.57	10.48	11.51	5.41
Victoria ..	1.17	2.60	3.06	1.31
Queensland ..	.72	.74	1.63	.76
South Australia ..	1.63	2.20	2.40	1.50
Western Australia ..	.52	1.52	1.86	1.20
Tasmania ..	.02	.21	.22	.09
Total States ..	9.63	17.75	20.68	10.27
Total ..	11.13	31.15	41.08	14.65

## FINAL RESOLUTION.

Just prior to concluding its business, the Conference unanimously passed the following resolution, on the motion of Mr. Hill (Premier of South Australia) :—

“ The representatives of each Government present at this Conference bind themselves to give effect promptly to the whole of the resolutions agreed to at this Conference.”

## B. COMMONWEALTH FINANCE, 1931-32.

Particulars.	See page—	Amount.	Per Head of Population.
Consolidated Revenue Fund—(a)		£	£ s. d.
Revenue .. .. .	279	71,532,298	10 19 3
Expenditure .. .. .	280	(b) 70,218,207	10 15 2
Loan Fund—			
Works Expenditure, 1931-32 .. .. .	299	..	..
Unemployment Relief .. .. .	..	153,873	} 0 10 7
Wheat Bounty .. .. .	..	3,296,464	
Aggregate expenditure to 30th June, 1932 .. .. .	..	88,474,241	
Public Debt, 30th June, 1932—			
Commonwealth—			
War .. .. .	334	286,059,736	43 13 8
Works .. .. .	..	112,824,994	17 4 6
Total .. .. .	..	398,884,730	60 18 2
States .. .. .	..	788,043,138	120 14 1
Grand Total .. .. .	..	1,187,827,868	181 7 6
Place of Maturity—			
Australia .. .. .	..	586,219,929	89 10 3
Overseas .. .. .	..	601,607,939	91 17 3
Total .. .. .	..	1,187,827,868	181 7 6

(a) Excludes balance of interest on States' Debts. (b) Excludes Surplus for year £1,314,092 transferred to Trust Fund—Invalid and Old-age Pensions Account.

## C. STATE FINANCE, 1931-32.

## STATE FINANCE, 1931-32 (a).

States.	Revenue. (Page 316.)		Expenditure. (Page 323.)		Net Loan Expenditure. (Page 326.)	
	Amount.	Per Head.	Amount.	Per Head.	Amount.	Per Head.
	£	£ s. d.	£	£ s. d.	£	£ s. d.
New South Wales ..	45,607,700	18 5 0	59,834,538	23 18 11	3,387,144	1 7 1
Victoria ..	24,555,272	13 14 2	26,163,594	14 12 2	2,042,043	1 2 10
Queensland ..	12,994,113	13 13 9	15,069,293	15 17 6	Cr. 7,417	Cr. 0 0 2
South Australia ..	10,481,977	18 0 2	11,545,336	19 16 9	286,828	0 9 10
Western Australia ..	8,035,316	19 1 8	9,593,212	22 16 10	1,380,226	3 5 9
Tasmania ..	2,385,495	10 18 8	2,657,109	12 3 7	26,254	0 2 5
All States ..	104,059,873	16 2 2	124,863,082	19 6 7	7,115,078	1 1 10

(a) Preliminary figures subject to revision.

## CHAPTER IX.

## PRIVATE FINANCE.

## B. BANKING, p. 338.

CHEQUE PAYING BANKS—AVERAGE LIABILITIES AND ASSETS IN AUSTRALIA,  
QUARTER ENDED 30th SEPTEMBER, 1932.

Average Liabilities. (Page 345.)		Average Assets. (Page 345.)	
	£		£
Notes in circulation ..	196,076	Coin and Bullion ..	2,876,477
Bills in circulation ..	3,223,211	Australian Notes and Cash with Commonwealth Bank .. ..	45,644,192
Balances due to other Banks	23,136,894	Government and Municipal securities .. ..	88,973,973
Deposits—		Landed and other property	9,078,417
Not bearing interest ..	88,610,830	Balances due from other Banks .. ..	5,313,327
Bearing interest ..	218,278,561	Notes and Bills of other Banks .. ..	1,296,224
		Advances and all other Assets .. ..	257,588,817
Total Liabilities(a) ..	333,445,572	Total Assets(a) ..	410,771,427

(a) Government "Set-off" Accounts, Interstate (Commonwealth Bank) deducted.

## § 2. Savings Banks, p. 351.

## SAVINGS BANK DEPOSITS (page 354).

State or Territory.	31st July, 1932.	31st August, 1932.	30th Septem- ber, 1932.	31st October, 1932.
	£	£	£	£
New South Wales .. ..	71,172,593	71,082,991	70,874,066	70,774,187
Victoria .. ..	65,701,132	65,863,410	66,041,183	66,245,258
Queensland .. ..	22,960,533	22,986,953	23,134,935	23,297,321
South Australia .. ..	21,562,846	21,662,768	21,784,978	21,847,977
Western Australia .. ..	10,088,214	9,995,141	9,964,874	9,960,300
Tasmania .. ..	5,620,953	5,705,767	5,715,660	5,702,739
Federal Capital Territory .. ..	257,704	250,375	244,064	238,462
Northern Territory .. ..	40,856	41,400	42,293	42,113
Total .. ..	197,404,831	197,588,805	197,802,053	198,108,357

## CHAPTER XVI.

## POPULATION.

## § 5. Distribution and Fluctuation of Population.

1. Present Number, p. 474.—The estimated population at the 30th September, 1932, was 6,561,673, distributed as follows:—

## AUSTRALIA.—ESTIMATED POPULATION, 30th SEPTEMBER, 1932.

States and Territories.	Males.	Females.	Persons.
New South Wales .. ..	1,285,227	1,249,141	2,534,368
Victoria .. ..	891,642	916,460	1,808,102
Queensland .. ..	517,662	457,619	975,281
South Australia .. ..	302,974	283,515	586,489
Western Australia .. ..	225,917	197,378	423,295
Tasmania .. ..	109,655	111,479	221,134
Northern Territory .. ..	2,773	1,752	4,525
Federal Capital Territory .. ..	4,499	3,980	8,479
Total .. ..	3,340,349	3,221,324	6,561,673

The corresponding figures for Australia at the 30th September, 1931, were 3,318,576 males and 3,194,162 females, or a total of 6,512,738. There was thus an increase during the year ended 30th September, 1932, of 48,935, made up of 21,773 males and 27,162 females.

The rate of increase for the year was 0.75 per cent.



## CHAPTER XVIII.

### MINERAL INDUSTRY.

#### § 1. The Mineral Wealth of Australia.

3 Value of Production, p. 560.—The following table gives the value of Australian mineral production for the year 1931 :—

MINERAL PRODUCTION.—VALUE, 1931.

Mineral.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Total.
	£	£	£	£	£	£	£	£
Gold ..	118,623	262,488	79,652	17,328	3,054,743	28,150	2,535	3,563,519
Silver and Lead ..	1,079,359	99	306,393	5	3,103	54,778	160	1,443,897
Copper ..	23,948	..	126,342	934	..	416,309	25	567,558
Iron ..	2,135	..	5,100	332,556	..	..	..	339,791
Tin ..	103,111	(a) 440	35,744	..	3,945	70,634	2,331	(a) 216,205
Zinc ..	512,795	..	..	..	..	..	..	512,795
Coal (Black) ..	4,607,343	(a) 362,284	699,926	..	336,178	98,004	..	(a) 6,103,735
Other ..	70,389	(a) 256,305	13,872	197,381	12,503	39,359	6,365	(a) 596,174
<b>Total ..</b>	<b>6,517,703</b>	<b>(a) 881,616</b>	<b>1,267,029</b>	<b>548,204</b>	<b>3,410,472</b>	<b>707,234</b>	<b>11,416</b>	<b>a13,343,674</b>

(a) Incomplete.

#### § 12. Oil Shale and Mineral Oil.

P. 587.—About 2,000 tons of shale were mined at Newnes during 1931, from which over 100,000 gallons of crude oil were produced, the average return from the retorts being 94 gallons per ton.

## CHAPTER XX.

### AGRICULTURAL PRODUCTION.

#### § 4. Wheat.

7. Voluntary Wheat Pools, p. 640.—(i) *General.* Voluntary wheat pools operated in the States of New South Wales, Victoria, South Australia, and Western Australia during the season 1931-32. The New South Wales pool had been inactive during 1928-29 and 1929-30. The system adopted in these States is somewhat similar, and is a co-operative one controlled by trustees, or committees appointed by the growers, the whole of the proceeds, less administrative expenses, being distributed amongst contributors of wheat to the pool. The trading names of these organizations in the various States are as follow :—

New South Wales.—The Wheat Growers' Pooling and Marketing Co. Ltd.

Victoria.—Victorian Wheat-growers' Corporation Ltd.

South Australia.—South Australian Co-operative Wheat Pools Ltd.

Western Australia.—The Co-operative Wheat Pool of Western Australia.

The marketing of wheat in Queensland was conducted on the compulsory basis by the State Wheat Board, consisting of five elected representatives and the Director of Marketing who represents the Queensland Government.

(ii) *Delivery of Wheat to Pools, Costs, etc.* The quantities of wheat received and the estimated average costs per bushel of rail freight and of administrative and other expenses are given hereunder. As the season's operations are not yet complete, the costs shown are subject to revision.

### WHEAT RECEIVED BY VOLUNTARY POOLS, 1931-32.

Particulars.	Unit.	New South Wales.	Victoria.	Queensland. (b)	South Australia.	Western Australia.
Wheat received .. ..	Bushel	871,581	16,550,000	3,440,670	10,522,125	15,220,211
Percentage on Total Marketable Wheat .. ..	%	1.6	39.4	89.3	24.0	42.0
Estimated average cost of rail freight to seaboard, per bushel .. ..	d.	5.71	4.7	4.00	4.0	4.388
Estimated average cost per bushel of Administration and other expenses .. ..	d.	(a) 3.508	..	3.79	3.50	2.619

(a) Season 1930-31.

(b) Compulsory Pool.

(iii) *Finance.* The requisite financial accommodation in New South Wales, Victoria and South Australia was furnished by the Commonwealth Bank. In Western Australia funds were made available by the Co-operative Wholesale Society Ltd., of Great Britain. Initial advances made available to growers on the delivery of their wheat at country stations are shown, together with subsequent payments, in the following table:—

### WHEAT POOLS ADVANCES(a) PER BUSHEL MADE TO OCTOBER, 1932.

Particulars.	New South Wales.	Victoria.	South Australia.	Western Australia.
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
1st Payment .. ..	1 9	1 10½	2 2½	2 0
2nd Payment .. ..	1 0	0 7½	0 3	0 3
3rd Payment .. ..	..	0 3	0 3	0 7½
4th Payment .. ..	..	0 2	..	0 2
Estimated Final Payment .. ..	0 3.30	(b)	(c) 0 1½	(c) 0 0½

(a) Less Rail Freight, these amounts.

(b) Not available.

(c) Not yet made but expected to approximate

In Queensland the Commonwealth Bank provides the financial assistance necessary to make advances on wheat delivered, the State Government guaranteeing the Wheat Board's accounts with the bank. All wheat not required for consumption on the farm is delivered to the Board, which is the sole marketing agency. The crop in 1931-32 amounted to 3,851,864 bushels, of which 3,440,670 bushels, or 89.3 per cent., was delivered into the pool. Advances to 30th September, 1932, have been made on milling wheat as follows, viz.:—No. 1 quality, 3s. 4d. per bushel, No. 2, 3s. 2d. and 3s. 3d. per bushel according to quality, and No. 3, 3s. and 3s. 1d. per bushel according to quality, while advances on feed wheat ranged from 2s. 7d. to 3s. 1d. per bushel according to quality. A further advance will be made when the season's operations have been finally dealt with.

## § 14. Sugar-Cane and Sugar-Beet:

5. Sugar Agreement—Embargo on Imports, etc., p. 659.—The Sugar Agreement Act 1932 (No. 74) was assented to on the 5th December, 1932.

## CHAPTER XXVI. LABOUR, WAGES, AND PRICES.

### A.—PRICES.

#### § 2. Retail Prices and House Rents, p. 767.

**Retail Price Index Numbers—Food, Groceries and Rent (all Houses) 1911 Base.**—The index numbers in the following table are computed for the Commonwealth Court of Conciliation and Arbitration on a different basis to those given in § 2. The rent constituent is based upon the weighted average of *all houses*. The index numbers are directly comparable with those published in Labour Report, No. 15, and in Quarterly Summaries of Australian Statistics previous to No. 99.

#### RETAIL PRICE INDEX NUMBERS—FOOD, GROCERIES AND RENT—ALL HOUSES.

*Weighted Average—Six Capitals in 1911 = 1,000.*

Town.	1927.				1928.				1929.				1930.				1931.			
	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.
<b>NEW SOUTH WALES.</b>																				
Sydney .. .. .	1,828	1,803	1,810	1,872	1,846	1,853	1,825	1,830	1,916	1,905	1,914	1,929	1,851	1,836	1,776	1,704	1,661	1,621	1,571	1,530
Newcastle .. .. .	1,713	1,683	1,701	1,763	1,726	1,722	1,716	1,712	1,777	1,758	1,761	1,769	1,713	1,692	1,641	1,572	1,550	1,513	1,451	1,385
Broken Hill .. .. .	1,638	1,661	1,704	1,720	1,711	1,685	1,666	1,667	1,753	1,761	1,768	1,793	1,719	1,710	1,634	1,581	1,537	1,511	1,435	1,379
Goulburn .. .. .	1,803	1,784	1,820	1,851	1,836	1,840	1,827	1,828	1,897	1,891	1,901	1,926	1,852	1,813	1,750	1,617	1,571	1,540	1,481	1,433
Bathurst .. .. .	1,577	1,552	1,553	1,575	1,555	1,569	1,562	1,549	1,647	1,618	1,620	1,642	1,593	1,584	1,543	1,492	1,495	1,450	1,402	1,343
Weighted Average— New South Wales .. .. .	1,811	1,787	1,804	1,856	1,830	1,835	1,810	1,814	1,898	1,887	1,895	1,910	1,834	1,819	1,759	1,687	1,646	1,607	1,555	1,512
<b>VICTORIA.</b>																				
Melbourne .. .. .	1,757	1,754	1,812	1,800	1,768	1,761	1,720	1,726	1,801	1,816	1,816	1,815	1,733	1,723	1,667	1,565	1,519	1,457	1,411	1,405
Ballarat .. .. .	1,532	1,525	1,565	1,554	1,553	1,549	1,548	1,540	1,604	1,610	1,636	1,655	1,579	1,576	1,542	1,455	1,420	1,371	1,339	1,327
Bendigo .. .. .	1,564	1,551	1,600	1,588	1,584	1,583	1,575	1,556	1,629	1,621	1,655	1,659	1,577	1,576	1,525	1,428	1,389	1,330	1,297	1,294
Geelong .. .. .	1,697	1,702	1,727	1,728	1,712	1,693	1,672	1,681	1,731	1,717	1,729	1,734	1,635	1,624	1,577	1,505	1,459	1,420	1,399	1,407
Warrnambool .. .. .	1,547	1,548	1,584	1,599	1,585	1,575	1,549	1,556	1,594	1,600	1,654	1,688	1,618	1,623	1,588	1,547	1,484	1,435	1,424	1,438
Weighted Average— Victoria .. .. .	1,737	1,733	1,789	1,778	1,749	1,742	1,713	1,709	1,782	1,795	1,798	1,799	1,717	1,707	1,653	1,554	1,507	1,448	1,404	1,398
<b>QUEENSLAND.</b>																				
Brisbane .. .. .	1,614	1,570	1,598	1,610	1,596	1,593	1,584	1,608	1,633	1,610	1,615	1,624	1,554	1,461	1,406	1,342	1,343	1,333	1,293	1,289
Toowoomba .. .. .	1,545	1,472	1,473	1,494	1,449	1,454	1,453	1,470	1,499	1,477	1,488	1,508	1,453	1,427	1,396	1,337	1,324	1,286	1,246	1,251
Rockhampton .. .. .	1,641	1,581	1,582	1,571	1,516	1,520	1,505	1,539	1,579	1,545	1,551	1,559	1,536	1,484	1,455	1,397	1,392	1,350	1,310	1,327
Charters Towers .. .. .	1,580	1,516	1,511	1,520	1,505	1,497	1,490	1,541	1,580	1,547	1,565	1,539	1,485	1,465	1,362	1,321	1,318	1,318	1,277	1,265
Warwick .. .. .	1,520	1,476	1,490	1,498	1,425	1,430	1,431	1,454	1,496	1,468	1,476	1,495	1,431	1,406	1,375	1,314	1,311	1,288	1,261	1,267
Weighted Average— Queensland .. .. .	1,608	1,560	1,581	1,592	1,570	1,569	1,561	1,586	1,613	1,589	1,595	1,608	1,539	1,459	1,407	1,345	1,345	1,330	1,289	1,288

## RETAIL PRICE INDEX NUMBERS—FOOD, GROCERIES AND RENT—ALL HOUSES—continued.

Weighted Average—Six Capitals in 1911 = 1,000.

Town.	1927.				1928.				1929.				1930.				1931.			
	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.
SOUTH AUSTRALIA.																				
Adelaide .. .. .	1,727	1,725	1,772	1,747	1,758	1,760	1,713	1,689	1,766	1,784	1,781	1,755	1,689	1,655	1,563	1,466	1,427	1,370	1,286	1,280
Kadina, &c. .. .	1,471	1,471	1,465	1,476	1,464	1,445	1,424	1,434	1,489	1,471	1,497	1,506	1,423	1,406	1,350	1,261	1,237	1,192	1,115	1,120
Port Pirie .. .	1,573	1,560	1,577	1,569	1,564	1,565	1,532	1,528	1,606	1,595	1,618	1,621	1,559	1,559	1,494	1,420	1,396	1,341	1,270	1,272
Mount Gambier ..	1,397	1,387	1,410	1,419	1,420	1,416	1,411	1,389	1,439	1,445	1,463	1,466	1,401	1,353	1,333	1,274	1,202	1,181	1,167	1,174
Peterborough .. .	1,651	1,649	1,656	1,679	1,682	1,672	1,655	1,673	1,741	1,724	1,758	1,749	1,668	1,660	1,608	1,501	1,438	1,393	1,322	1,334
Weighted Average— South Australia ..	1,706	1,703	1,745	1,724	1,733	1,734	1,689	1,668	1,743	1,759	1,759	1,736	1,669	1,637	1,549	1,453	1,414	1,359	1,277	1,272
WESTERN AUSTRALIA.																				
Perth, &c. .. .	1,604	1,612	1,595	1,608	1,607	1,689	1,706	1,705	1,724	1,742	1,716	1,678	1,660	1,651	1,581	1,470	1,484	1,461	1,379	1,339
Kalgoorlie, &c. ..	1,515	1,532	1,512	1,487	1,480	1,515	1,577	1,583	1,626	1,667	1,659	1,579	1,525	1,554	1,530	1,391	1,376	1,390	1,386	1,403
Northam .. .	1,595	1,621	1,618	1,627	1,571	1,610	1,637	1,639	1,664	1,697	1,672	1,633	1,599	1,609	1,557	1,446	1,401	1,369	1,328	1,319
Bunbury .. .	1,556	1,543	1,525	1,533	1,525	1,559	1,593	1,572	1,578	1,613	1,616	1,586	1,575	1,574	1,570	1,384	1,360	1,352	1,301	1,261
Geraldton .. .	1,586	1,577	1,565	1,573	1,565	1,570	1,571	1,596	1,627	1,650	1,661	1,629	1,621	1,630	1,615	1,488	1,484	1,481	1,458	1,424
Weighted Average— Western Australia ..	1,594	1,602	1,585	1,593	1,590	1,664	1,685	1,686	1,707	1,728	1,706	1,663	1,642	1,638	1,575	1,460	1,469	1,450	1,379	1,345
TASMANIA.																				
Hobart .. .	1,737	1,715	1,711	1,686	1,658	1,665	1,653	1,666	1,730	1,721	1,725	1,740	1,687	1,685	1,651	1,564	1,534	1,491	1,431	1,433
Launceston .. .	1,611	1,591	1,587	1,580	1,594	1,597	1,580	1,569	1,618	1,611	1,628	1,668	1,602	1,590	1,558	1,495	1,465	1,428	1,391	1,378
Burnie .. .	1,580	1,576	1,577	1,562	1,566	1,588	1,562	1,576	1,640	1,623	1,663	1,669	1,589	1,606	1,563	1,466	1,389	1,365	1,337	1,340
Devonport .. .	1,624	1,582	1,594	1,557	1,559	1,583	1,540	1,532	1,609	1,605	1,634	1,635	1,539	1,535	1,519	1,441	1,423	1,374	1,342	1,357
Queenstown .. .	1,384	1,357	1,395	1,401	1,389	1,406	1,416	1,418	1,494	1,487	1,492	1,520	1,464	1,469	1,458	1,405	1,374	1,327	1,300	1,315
Weighted Average— Tasmania .. .	1,678	1,656	1,655	1,635	1,622	1,630	1,615	1,620	1,681	1,673	1,683	1,704	1,644	1,640	1,608	1,529	1,498	1,457	1,407	1,406
Weighted Average— Thirty Towns .. .	1,737	1,722	1,751	1,766	1,745	1,750	1,727	1,728	1,797	1,797	1,800	1,803	1,731	1,711	1,651	1,566	1,531	1,487	1,435	1,414
Weighted Average— Six Capital Cities ..	1,758	1,743	1,774	1,789	1,768	1,774	1,748	1,749	1,820	1,821	1,823	1,825	1,752	1,730	1,668	1,582	1,546	1,501	1,447	1,425

*Retail Price Index—Numbers—Capital Cities—Annual Figures—1901 to 1931.*—The index-numbers given in the separate parts of the table cannot be compared with each other in order to show the relative cost of (say) housing, and food and groceries, since the weighted average cost for the six capital cities taken together in 1911 in each group or combination is made equal to 1,000.

*Weighted Average—Six Capitals in 1911 = 1,000.*

**FOOD AND GROCERIES ONLY.**

City.	1901.	1907.	1911.	1914.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.	1925.	1926.	1927.	1928.	1929.	1930.	1931.
Sydney .. .. .	917	936	989	1,156	1,520	1,540	1,549	1,783	2,148	1,898	1,703	1,820	1,732	1,785	1,867	1,846	1,826	1,948	1,759	1,567
Melbourne .. .. .	965	925	935	1,001	1,462	1,412	1,466	1,620	2,056	1,901	1,644	1,802	1,684	1,748	1,774	1,732	1,684	1,795	1,632	1,414
Brisbane .. .. .	965	947	1,018	1,078	1,426	1,406	1,495	1,762	2,052	1,812	1,608	1,693	1,690	1,734	1,788	1,680	1,671	1,701	1,508	1,392
Adelaide .. .. .	1,028	951	1,020	1,215	1,532	1,445	1,554	1,719	2,132	1,906	1,723	1,823	1,791	1,840	1,869	1,841	1,775	1,887	1,674	1,411
Perth .. .. .	1,184	1,197	1,346	1,302	1,542	1,505	1,486	1,772	2,050	1,995	1,776	1,828	1,891	1,938	1,866	1,796	1,882	1,938	1,719	1,494
Hobart .. .. .	1,011	1,010	1,058	1,212	1,523	1,544	1,635	1,748	2,162	2,025	1,794	1,863	1,849	1,810	1,868	1,788	1,727	1,833	1,702	1,459
Weighted Average— Six Capitals .. .. .	972	955	1,000	1,144	1,495	1,472	1,514	1,716	2,101	1,902	1,684	1,805	1,732	1,785	1,829	1,789	1,761	1,866	1,682	1,477

**HOUSING—ALL HOUSES.**

Sydney .. .. .	858	911	1,090	1,279	1,212	1,215	1,252	1,280	1,415	1,474	1,535	1,617	1,687	1,729	1,813	1,808	1,857	1,870	1,839	1,637
Melbourne .. .. .	733	804	970	1,126	1,089	1,124	1,180	1,283	1,405	1,502	1,597	1,672	1,729	1,742	1,839	1,850	1,835	1,836	1,729	1,497
Brisbane .. .. .	488	575	767	882	847	859	905	983	1,061	1,079	1,206	1,247	1,242	1,251	1,459	1,480	1,487	1,505	1,344	1,204
Adelaide .. .. .	629	812	1,112	1,040	930	959	1,022	1,108	1,216	1,289	1,360	1,450	1,551	1,565	1,553	1,601	1,665	1,607	1,477	1,240
Perth .. .. .	801	684	810	914	869	874	885	916	996	1,055	1,092	1,124	1,134	1,154	1,316	1,331	1,382	1,395	1,407	1,304
Hobart .. .. .	667	708	805	914	928	951	956	1,134	1,373	1,440	1,445	1,602	1,665	1,634	1,650	1,603	1,565	1,580	1,568	1,492
Weighted Average— Six Capitals .. .. .	751	816	1,000	1,135	1,080	1,098	1,143	1,215	1,333	1,404	1,480	1,551	1,609	1,632	1,725	1,734	1,758	1,760	1,685	1,483

**FOOD, GROCERIES AND HOUSING—ALL HOUSES—COMBINED.**

Sydney .. .. .	893	926	1,031	1,206	1,394	1,406	1,427	1,580	1,847	1,724	1,634	1,737	1,714	1,762	1,844	1,830	1,839	1,916	1,792	1,596
Melbourne .. .. .	870	875	950	1,105	1,309	1,294	1,349	1,481	1,788	1,737	1,625	1,749	1,703	1,745	1,801	1,781	1,746	1,812	1,672	1,448
Brisbane .. .. .	769	794	915	997	1,188	1,181	1,252	1,442	1,645	1,511	1,442	1,510	1,506	1,535	1,653	1,598	1,595	1,620	1,441	1,315
Adelaide .. .. .	864	894	1,058	1,143	1,285	1,245	1,335	1,468	1,756	1,653	1,574	1,670	1,693	1,727	1,739	1,742	1,730	1,772	1,593	1,341
Perth .. .. .	1,027	986	1,126	1,143	1,266	1,246	1,239	1,420	1,617	1,609	1,495	1,538	1,580	1,616	1,640	1,605	1,677	1,715	1,591	1,416
Hobart .. .. .	869	886	954	1,090	1,278	1,301	1,356	1,496	1,837	1,785	1,651	1,756	1,773	1,738	1,778	1,712	1,661	1,729	1,647	1,472
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## GENERAL INDEX.\*

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E. T. MCPHEE, Commonwealth Statistician.