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SECTION V.

VITAL STATISTICS.

NOTE.—The rates quoted throughout this Section for the years 1901 to 1911 have been calculated in accordance with the corrected populations as determined by the results of the Census of 1911.

§ 1. Births.

1. Male and Female Births, 1901 to 1911.—The total number of male and female births registered in the Commonwealth during the years 1901 to 1911 is as shewn in the two tables hereunder:—

TOTAL MALE BIRTHS, COMMONWEALTH, 1901 to 1911.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Territory.	C'wealth.
1901 ...	19,149	15,876	7,281	4,665	2,946	2,570	22	...	52,509
1902 ...	19,322	15,583	7,279	4,579	3,241	2,604	8	...	52,616
1903 ...	18,377	15,115	6,427	4,464	3,433	2,570	20	...	50,406
1904 ...	19,857	15,313	7,134	4,665	3,666	2,702	21	...	53,358
1905 ...	20,206	15,523	6,978	4,491	3,862	2,812	23	...	53,895
1906 ...	21,066	15,716	7,280	4,605	4,043	2,792	12	...	55,514
1907 ...	21,604	15,986	7,451	4,675	3,962	2,797	14	...	56,489
1908 ...	21,605	16,071	7,677	4,924	3,993	2,818	25	...	57,113
1909 ...	22,464	16,096	7,954	5,224	3,884	2,849	11	...	58,482
1910 ...	23,368	16,412	8,260	5,395	3,855	2,888	28	...	60,206
1911 ...	24,383	16,934	8,703	5,615	4,124	2,716	16	(a) 17	62,508

(a) Part of New South Wales prior to 1911.

TOTAL FEMALE BIRTHS, COMMONWEALTH, 1901 to 1911.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Territory.	C'wealth.
1901 ...	18,726	15,132	7,022	4,414	2,772	2,360	10	...	50,436
1902 ...	18,513	14,878	6,937	4,348	2,991	2,481	12	...	50,160
1903 ...	17,589	14,454	6,194	4,011	3,266	2,510	13	...	48,037
1904 ...	18,810	14,450	6,948	4,435	3,510	2,590	12	...	50,755
1905 ...	19,295	14,584	6,648	4,341	3,720	2,445	13	...	51,046
1906 ...	19,882	15,128	6,739	4,316	3,757	2,541	13	...	52,376
1907 ...	20,597	15,379	7,089	4,536	3,750	2,494	13	...	53,858
1908 ...	20,853	15,026	7,153	4,832	3,762	2,797	9	...	54,432
1909 ...	21,318	15,448	7,598	4,840	3,718	2,651	16	...	55,589
1910 ...	22,076	15,025	7,909	5,145	3,730	2,698	12	...	56,595
1911 ...	23,154	16,092	8,281	5,442	3,967	2,721	15	(a) 13	59,685

(a) Part of New South Wales prior to 1911.

2. Total Births, 1901 to 1911.—While the total number of births for the Commonwealth was higher in 1911 than in any of the preceding ten years, the following table of particulars discloses also the fact that the excess of births in 1911 over those in 1901 was very unequally distributed between the States:—

TOTAL BIRTHS, COMMONWEALTH, 1901 to 1911.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fd. Cp. Terr.	C'wealth.
1901 ...	37,875	31,008	14,303	9,079	5,718	4,930	32	...	102,945
1902 ...	37,835	30,461	14,216	8,927	6,232	5,085	20	...	102,776
1903 ...	35,966	29,569	12,621	8,475	6,699	5,080	33	...	98,443
1904 ...	38,667	29,763	14,082	9,100	7,176	5,292	33	...	104,113
1905 ...	39,501	30,107	13,626	8,832	7,582	5,257	36	...	104,941
1906 ...	40,948	30,844	14,019	8,921	7,800	5,333	25	...	107,890
1907 ...	42,201	31,365	14,540	9,211	7,712	5,291	27	...	110,347
1908 ...	42,458	31,097	14,830	9,756	7,755	5,615	34	...	111,545
1909 ...	43,782	31,544	15,552	10,064	7,602	5,500	27	...	114,071
1910 ...	45,444	31,437	16,169	10,540	7,585	5,586	40	...	116,801
1911 ...	47,537	33,026	16,984	11,057	8,091	5,437	31	(a) 30	122,193

(a) Part of New South Wales prior to 1911.

3. *Birth Rates, 1901 to 1911.*—(i.) *Crude Birth Rate.* The birth rate for the whole Commonwealth during 1911 was higher than in any of the preceding ten years, an uninterrupted increase having been experienced since 1907. New South Wales and South Australia are the only States in which an increase in the rate took place, as will be seen from the following table, which gives also the number of persons per square mile in each State. The very high masculinity of the population accounts for the low birth rate experienced in the Northern Territory :—

CRUDE BIRTH RATE (a), COMMONWEALTH, 1901 to 1911 (b).

Year.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	North. Terr.	Fed. Cap. Terr.	Cwltth.
1901 ...	27.78	25.77	28.52	25.41	30.39	28.58	6.72	...	27.16
1902 ...	27.23	25.23	27.85	25.08	30.44	29.03	4.37	...	26.71
1903 ...	25.44	24.53	24.53	23.84	30.50	28.16	7.58	...	25.29
1904 ...	26.85	24.74	26.99	25.49	30.67	28.92	7.82	...	26.41
1905 ...	26.85	24.96	25.76	24.54	30.74	28.50	8.72	...	26.23
1906 ...	27.21	25.41	26.15	24.57	30.66	28.94	6.29	...	26.57
1907 ...	27.34	25.59	26.79	25.05	30.18	28.63	7.06	...	26.76
1908 ...	26.99	25.07	26.79	25.81	30.08	29.95	9.30	...	26.59
1909 ...	27.40	25.01	27.29	25.91	28.87	28.91	7.63	...	26.69
1910 ...	27.83	24.51	27.33	26.50	27.99	29.25	11.75	...	26.73
1911 ...	28.75	24.84	27.65	26.89	28.21	28.57	9.34	(d) 16.85	27.21
Density (c) (No. per square mile) ...	5.41	15.51	0.93	1.10	0.30	7.38	0.006	2.13	1.54

(a) Number of births per 1,000 of the mean annual population. (b) Rates corrected in view of Census Returns, 1911. (c) On 31st December, 1911. (d) Part of New South Wales prior to 1911.

The population density of each State and of the Commonwealth has been given for the purpose of considering the influence, if any, of concentration of population on birth rate, in connection with the disparities of the rate in different parts of Australia.

(ii.) *Objections to Crude Birth Rate.* The figures just given represent the "crude birth rate," i.e., the number of births per thousand of mean annual population. The number of births per thousand of the female population of child-bearing ages, i.e., from 15 to 45, would furnish a more significant rate. As the calculation has, for previous periods, been made so as to cover in each case the Census year together with the year immediately preceding and the year immediately following, the same practice will be adopted for the period surrounding the Census of 1911, and figures for the years 1910-1912 will be given in the next issue. The following results have been obtained for the preceding three Census periods:—Total births per 1000 women (married and unmarried) of ages 15 to 45 :—Years 1880-82, 169.69; years 1890-92, 158.81; years 1900-02, 117.26. Nuptial

births per 1000 married women of ages 15 to 45:—Years 1880-82, 320.96; 1890-92 332.03; years 1900-02, 235.84.

4. **Birth Rates of Various Countries.**—A comparison with other countries shews that the Australian States occupy a very low position, which is, however, fortunately counterbalanced by a still lower position in regard to their death rates, as will be seen from the table hereinafter in the section dealing with "Deaths."

CRUDE BIRTH RATE (a) OF VARIOUS COUNTRIES (b).

Country.	Year.	Rate.	Country.	Year.	Rate.
Russia, European ...	1905	44.8	Western Australia ...	1911	28.2
Bulgaria ...	1909	40.6	Queensland ...	1911	27.7
Rumania ...	1910	39.8	Denmark ...	1910	27.5
Ceylon ...	1910	39.0	Commonwealth ...	1911	27.2
Jamaica ...	1910	38.6	South Australia ...	1911	26.9
Chile ...	1910	38.4	Scotland ...	1910	26.2
Servia ...	1909	36.5	Norway ...	1910	26.1
Hungary ...	1910	35.7	New Zealand ...	1911	26.0
Japan ...	1909	34.2	Switzerland ...	1909	25.5
Spain ...	1910	33.1	England and Wales ...	1910	25.1
Italy ...	1910	32.9	United Kingdom ...	1910	25.0
Austria ...	1910	32.5	Canada (Ontario) ...	1910	24.9
German Empire ...	1909	31.1	Victoria ...	1911	24.8
Prussia ...	1910	30.5	Sweden ...	1910	24.8
Finland ...	1910	30.2	Belgium ...	1909	23.7
New South Wales ...	1911	28.8	Ireland ...	1910	23.3
Tasmania ...	1911	28.6	France ...	1910	19.7
Netherlands ...	1910	28.6			

(a) Number of births per 1000 of the mean population. (b) Rates corrected in view of Census Returns, 1911.

5. **Masculinity at Birth.**—The masculinity of births, i.e., the number of males per 100 females, registered during the last eleven years in the several States of the Commonwealth has varied from 99.82 in Tasmania in 1911 to 115.01 in Tasmania in 1905. The following table, which gives the values for the States and Commonwealth for 1901 to 1911, shews the remarkable fact that for the Commonwealth there was a steady increase of masculinity from 1901 to 1906, with a sharp decrease in 1907, a further increase in 1908, 1909, 1910, and a rapid decrease in 1911:—

MASCULINITY (a) OF BIRTHS REGISTERED, COMMONWEALTH, 1901 to 1911.

Year.	N.S.W.	Vict.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Fed. Cap. Territory.	C'wealth.
1901 ...	102.26	104.92	103.69	104.33	106.28	108.90	220.00	...	104.11
1902 ...	104.37	104.74	104.93	105.31	108.36	104.96	66.67	...	104.90
1903 ...	104.48	104.57	103.76	111.29	105.11	102.39	153.85	...	104.93
1904 ...	105.57	105.97	102.68	105.19	104.44	104.32	175.00	...	105.13
1905 ...	104.72	106.44	104.96	103.46	103.82	115.01	176.92	...	105.58
1906 ...	105.96	103.89	108.03	106.70	107.61	109.88	92.31	...	105.99
1907 ...	104.89	103.95	105.11	103.06	105.65	112.15	107.69	...	104.89
1908 ...	103.61	106.95	107.33	101.90	106.14	100.75	277.78	...	104.93
1909 ...	105.38	104.19	104.69	107.93	104.46	107.47	68.75	...	105.20
1910 ...	105.85	109.23	104.44	104.86	103.35	107.04	233.33	...	106.38
1911 ...	105.31	105.23	105.10	103.18	103.96	99.82	106.67	(b) 130.77	104.73

(a) Number of males to each 100 females. (b) Part of New South Wales prior to 1911.

There is ordinarily a very small difference between the masculinity of nuptial and ex-nuptial births. Thus, according to Bodio, whose figures are quoted in the following

table, for the period about 1887-1891, the masculinity ranged from 108.3 to 103.6, and from 107.9 to 101.6 for total and ex-nuptial births respectively.

MASCULINITY OF BIRTHS IN VARIOUS COUNTRIES.

Country.	Masculinity of Births. (a)		Country.	Masculinity of Births. (a)	
	All Live Births.	Ex-nuptial Live Births.		All Live Births.	Ex-nuptial Live Births.
Spain ...	108.3	107.9	German Empire ...	105.2	104.7
Rumania ...	107.7	103.4	Finland ...	105.0	105.2
Portugal ...	107.5	106.4	Hungary ...	105.0	102.9
Austria ...	105.8	105.5	Sweden ...	105.0	104.3
Italy ...	105.8	104.4	Denmark ...	104.8	105.0
Norway ...	105.8	105.9	Servia ...	104.7	103.5
Ireland ...	105.5	104.8	France ...	104.6	102.9
Netherlands ...	105.5	104.7	Belgium ...	104.5	102.2
Scotland ...	105.5	105.9	Switzerland ...	104.5	101.6
Russia, European ...	105.4	104.5	England ...	103.6	104.4

(a) Number of males to each 100 females.

The masculinity of ex-nuptial births in the Commonwealth was as follows:—

MASCULINITY (a) OF EX-NUPTIAL BIRTHS REGISTERED, COMMONWEALTH, 1901 TO 1911.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	North Territ'y.	Federal Capital Territ'y.	C'with.
1901 ...	108.46	102.22	107.84	100.56	100.00	102.07	...	...	105.50
1902 ...	103.67	106.78	100.23	106.91	111.11	93.17	...	...	103.96
1903 ...	97.79	114.83	95.22	100.00	114.29	122.66	...	...	104.10
1904 ...	100.80	108.68	95.77	83.50	107.28	93.71	200.00	...	100.98
1905 ...	102.50	102.52	105.63	96.94	98.75	102.80	...	...	102.44
1906 ...	103.10	102.23	104.17	116.97	118.13	124.82	100.00	...	105.44
1907 ...	104.91	105.59	100.90	113.56	115.94	100.00	...	...	105.11
1908 ...	108.60	105.38	96.83	96.82	89.33	108.51	150.00	...	104.00
1909 ...	105.46	102.16	103.90	105.37	129.14	129.01	66.67	...	106.25
1910 ...	104.96	103.59	100.39	101.33	89.70	106.94	200.00	...	103.05
1911 ...	101.73	106.61	97.94	106.19	108.05	105.67	28.57	(b) ...	103.10

(a) Number of males to each 100 females. (b) Part of New South Wales prior to 1911.

It is curious to note that while, so far as the total births are concerned, there has always been an excess of male births over female births (excepting Tasmania in 1911), this has not been the case in regard to ex-nuptial births, where in South Australia in 1904 the masculinity was only 83.50. On the other hand it rose as high as 129.14 in Western Australia in 1909. Little weight, however, can be attached to these results on account of the small totals on which they are based.

6. Ex-nuptiality of Births.—The total ex-nuptial births fell from 1901 to 1903, then rose rapidly to 1908 and remained almost stationary till 1909, when the number again decreased. The total for 1910 was the lowest number recorded since 1906. See the table on the following page.

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.

TOTAL EX-NUPTIAL BIRTHS REGISTERED IN THE COMMONWEALTH, 1901 to 1911.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	F. C. Terr.	C'wealth.
1901 ...	2,712	1,729	848	361	222	293	...	...	6,165
1902 ...	2,497	1,677	859	389	247	311	...	...	5,980
1903 ...	2,413	1,695	857	354	315	285	...	...	5,919
1904 ...	2,755	1,707	971	364	313	308	3	...	6,421
1905 ...	2,912	1,689	950	381	318	290	1	...	6,545
1906 ...	2,882	1,721	1,076	356	373	308	2	...	6,718
1907 ...	2,920	1,764	1,117	373	298	306	...	...	6,783
1908 ...	2,887	1,793	1,118	435	337	294	5	...	6,867
1909 ...	2,821	1,870	1,097	421	346	300	5	...	6,860
1910 ...	2,853	1,759	1,034	455	313	298	9	...	6,721
1911 ...	2,921	1,969	1,057	466	362	290	9	(a)...	7,074

(a) Part of New South Wales prior to 1911.

(i.) *Rate of Ex-nuptiality, 1901 to 1911.* The rate of ex-nuptiality, *i.e.*, the percentage of ex-nuptial to total births, shews on the whole a slight increase from 1902 to 1905, with a decrease during the last six years, as the subjoined table shews :—

PERCENTAGE OF EX-NUPTIAL ON TOTAL BIRTHS, COMMONWEALTH, 1901 to 1911.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	F. C. Terr.	C'wealth.
	%	%	%	%	%	%	%		%
1901 ...	7.16	5.58	5.93	3.96	3.88	5.94	...	...	5.99
1902 ...	6.60	5.51	6.04	4.36	3.96	6.12	...	...	5.82
1903 ...	6.71	5.73	6.79	4.18	4.70	5.61	...	...	6.01
1904 ...	7.12	5.74	6.90	4.00	4.36	5.82	9.09	...	6.17
1905 ...	7.37	5.61	6.97	4.36	4.19	5.52	2.78	...	6.24
1906 ...	7.04	5.58	7.68	3.99	4.78	5.78	8.00	...	6.23
1907 ...	6.92	5.62	7.68	4.10	3.86	5.78	...	...	6.15
1908 ...	6.80	5.77	7.54	4.44	4.35	5.24	14.71	...	6.16
1909 ...	6.44	5.94	7.05	4.18	3.95	5.45	18.52	...	6.01
1910 ...	6.28	5.60	6.39	4.32	4.13	5.33	22.50	...	5.75
1911 ...	6.14	5.96	6.22	4.21	4.47	5.33	29.03	(a)...	5.79

(a) Part of New South Wales prior to 1911.

A comparison of greater significance would be 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, and will be given in the next issue of this book for the period 1910-12. The calculation has been made for the three last Census periods, and covers in each case the Census year, together with the year immediately preceding and the year immediately following. The number of ex-nuptial births per 1000 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.

(ii.) *Causes of Increase.* Since the rate of ex-nuptiality might appear to increase by the mere decrease in the general birth rate, the following table has been prepared :—

CRUDE EX-NUPTIAL, NUPRTIAL AND TOTAL BIRTH RATES (a), COMMONWEALTH, 1901 TO 1911 (b).

Birth.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.
Ex-nuptial	1.63	1.55	1.52	1.63	1.64	1.65	1.64	1.64	1.60	1.54	1.57
Nuptial ...	25.53	25.16	23.77	24.78	24.59	24.92	25.12	24.95	25.09	25.19	25.64
Total ...	27.16	26.71	25.29	26.41	26.23	26.57	26.76	26.59	26.69	26.73	27.21

(a) Number of births per 1000 of mean population. (b) Rates corrected in view of Census Returns, 1911.

(iii.) *Ex-nuptiality—Rates of Various Countries.* The rate for the Commonwealth is higher than that for England and Wales, slightly lower than that for Scotland, and considerably below the rates for many of the countries for which returns are available, as the table hereunder shews. The rates shewn below refer to three triennial periods, 1880-2, 1890-2, and 1900-2, and are given per thousand of the unmarried and widowed female population:—

**EX-NUPTIAL BIRTHS PER THOUSAND OF UNMARRIED AND WIDOWED FEMALE
POPULATION IN VARIOUS COUNTRIES.**

Country.	Rate.			Country.	Rate.		
	1880-2.	1890-2.	1900-2.		1880-2.	1890-2.	1900-2.
	%	%	%		%	%	%
Ireland ...	4.4	3.9	3.8	Belgium ...	20.0	20.6	17.8
Netherlands ...	9.7	9.0	6.8	France ...	17.6	17.7	19.1
England and Wales ...	14.1	10.5	8.5	Italy ...	25.4	...	19.4
New Zealand ...	13.4	9.0	8.9	Russia ...	25.8	25.1	23.7
Switzerland ...	10.8	10.0	9.8	Denmark ...	26.9	24.5	24.2
Commonwealth ...	14.5	15.9	13.3	Sweden ...	22.6	22.9	24.3
Scotland ...	21.4	17.1	13.4	German Empire ...	29.6	28.7	27.4
Spain ...	16.0	17.5	15.5	Austria ...	43.4	42.7	40.1
Norway ...	19.7	16.9	17.2				

It may be added that the general circumstances in Australia with regard to opportunity for marriage are probably relatively easy as compared with those in older established countries.

7. Multiple Births.—Among the total number of 122,193 births registered in the Commonwealth in 1911 there were 119,721 single births, 2430 twins, and 42 triplets. The number of cases of twins was 1222, fourteen children being still-born, and the number of cases of triplets 14. The total number of mothers was, therefore, 120,957, the proportion of mothers of twins being one in every 99, and of mothers of triplets one in every 8639 of total mothers. The proportion of multiple births is a fairly constant one. In 1907 they numbered 1043 out of a total of 109,306, or one in 105; in 1908, 1065, or one in 104; in 1909, 1142, or one in 99; in 1910, 1189, or one in 99, and in 1911, 1236, or one in 98. The number of cases of triplets is so small that a slight alteration in the total will completely change the proportion. Thus, there were 14 cases in 1907, or one in 7872 of total mothers, as compared with one in 18,415 in 1908; one in 8066 in 1909, one in 8893 in 1910, and one in 8639 in 1911.

8. Ages of Parents.—The relative ages of the parents of children registered in 1911 have been tabulated, twins and triplets being distinguished from single births, and are shewn for single ages and for every State in "Bulletin of Population and Vital Statistics, No. 29; Commonwealth Demography, 1911 and previous years." In the present work the exigencies of space allow only the insertion of corresponding tables shewing the relative ages of parents in groups of five years. It will be seen from the tables that the largest number of single births occurred where the ages of both father and mother were between 25 and 29, while the largest number of twin births occurred where the ages of both father and mother were between 30 and 34. The largest number of mothers was found at ages 25 to 29.

(a) AGES OF PARENTS IN CASES OF SINGLE BIRTHS, COMMONWEALTH, 1911.

Age.	Total Fathers.	Ages of Mothers.								Not Stated.
		Under 15.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 and Upwds.	
Ages of Fathers.										
Under 20	408	...	270	135	3	...	...	...	...	...
20 to 24	11,494	1	2,178	7,439	1,652	189	31	2	...	2
25 to 29	27,623	1	1,183	11,268	12,589	2,275	275	25	3	4
30 to 34	27,067	...	326	4,693	11,332	9,122	1,444	137	9	4
35 to 39	21,217	...	118	1,456	5,185	7,964	5,816	656	15	7
40 to 44	14,152	...	30	518	1,826	3,875	5,325	2,492	81	5
45 to 49	7,376	...	15	178	668	1,350	2,659	2,198	308	...
50 to 54	2,400	...	5	55	161	414	726	542	197	...
55 to 59	701	...	2	17	65	107	221	216	73	...
60 to 64	203	...	...	8	16	36	54	76	13	...
65 & upwards	107	...	...	5	11	21	31	32	7	...
Not stated	10	...	...	4	3	2	1	...	...	...
Mothers of nuptial children	112,758	2	4,127	25,776	33,511	25,355	16,583	6,676	706	22
Mothers of ex-nuptial children	3,963	23	1,839	2,761	1,260	567	359	110	22	22
Total mothers	119,721	25	5,966	28,537	34,771	25,922	16,942	6,786	728	44

(b) AGES OF PARENTS OF TWINS, COMMONWEALTH, 1911.

Age.	Total Fathers.	Ages of Mothers.							45 & up-wards.
		Under 20.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 & up-wards.	
Ages of Fathers.									
Under 20	2	...	2	...	...	...	...	...	...
20 to 24	83	13	56	12	2	...	...	...	...
25 to 29	247	4	84	114	37	8	...	...	...
30 to 34	272	...	27	106	115	23	1	...	...
35 to 39	263	...	7	54	98	92	12	...	...
40 to 44	170	...	1	11	43	77	38	1	...
45 to 49	89	...	2	4	24	34	23	2	...
50 to 54	25	...	...	1	3	12	6	3	...
55 to 59	13	...	...	1	1	6	5	...	...
60 to 64	1	...	...	...	...	1	...	...	...
65 and upwards	3	...	...	1	1	...	...	1	...
Mothers of nuptial twins	1,168	17	179	304	323	253	85	7	...
Mothers of ex-nuptial ..	54	9	23	10	7	4	...	1	...
Total mothers	1,222	26	202	314	330	257	85	8	...

(c) AGES OF PARENTS OF TRIPLETS, COMMONWEALTH, 1911.

Age.	Total Fathers.	Ages of Mothers.				
		20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.
Ages of Fathers.						
25 to 29	3	1	1	1	...	...
30 to 34	2	1	...	1	...	...
35 to 39	6	...	1	1	2	2
40 to 44	...	...	...	...	...	...
45 to 49	1	...	...	...	1	...
50 to 54	1	...	...	1	...	...
Mothers of nuptial triplets	13	2	2	4	3	2
Mothers of ex-nuptial triplets	1	1	...	...	...	...
Total mothers	14	3	2	4	3	2

9. **Birthplaces of Parents.**—The relative birthplaces of the parents of children whose births were registered during the year 1911 will be found tabulated in the Bulletin before-mentioned. A summary of the results of the tabulation is here given:—

BIRTHPLACES OF PARENTS OF CHILDREN, COMMONWEALTH, 1911.

Birthplaces.	Fathers			Mothers of Nuptial Children.			Mothers of Ex-nuptial Children.		
	Single Births.	Twins.	Trip-lets.	Single Births.	Twins.	Trip-lets.	Single Births.	Twins.	Trip-lets.
AUSTRALASIA—									
Commonwealth of									
Australia—									
N. South Wales	35,154	348	3	36,442	380	4	2,647	23	1
Victoria	31,014	337	3	31,667	337	4	1,931	12	...
Queensland	9,287	99	1	11,744	118	1	931	8	...
South Australia	12,090	110	2	12,256	116	1	538	4	...
Western Australia	1,290	15	1	1,730	21	1	110	...	...
Tasmania	5,023	50	...	5,186	55	...	354	3	...
North. Territory	7	...	...	10	...	...	7	1	...
New Zealand	1,247	10	...	1,186	14	1	67	1	...
EUROPE—									
England...	9,445	106	1	5,782	77	...	198	1	...
Wales	294	3	...	207	1	...	11	...	...
Scotland...	2,268	20	1	1,466	20	...	46	...	...
Ireland	2,108	30	...	1,363	11	...	46	...	...
Isle of Man	10	1	...	7	2	...	...	...	...
Other European Bri-									
tish Possessions...	38	...	...	11	...	...	1	...	...
Austria-Hungary	80	2	...	33	1	...	1	...	...
Belgium...	9	...	...	11	...	...	1	...	...
Denmark	200	...	...	66	...	...	3	...	...
France	59	...	...	23	...	...	3	...	...
Germany	1,052	5	...	541	2	...	6	...	...
Greece	41	...	...	14	...	...	...	...	...
Italy	282	4	...	171	1	...	6	...	...
Netherlands	22	...	...	6	...	...	...	...	...
Norway	100	2	...	29	...	...	1	...	...
Portugal...	6	...	...	3	...	...	...	...	...
Russia	147	4	...	74	3	...	...	...	...
Spain	16	...	...	11	...	...	...	...	...
Sweden	208	3	...	28	1	...	1	...	...
Switzerland	38	1	...	27	...	...	1	...	...
Other European									
Countries	39	...	...	10	...	...	...	...	...
ASIA—									
British India	177	4	...	95	1	...	2	...	...
Ceylon	23	...	...	7	...	...	...	...	...
Hong Kong	5	...	...	6	...	...	...	...	...
Straits Settlements	8	...	...	5	...	...	...	...	...
Afghanistan	6	...	...	...	...	...	...	...	...
Arabia	4	...	...	...	...	...	...	...	...
China	171	2	1	51	1	1	1	...	...
Japan	21	...	...	10	...	...	1	...	...
Java	4	...	...	...	...	...	...	...	...
Philippine Islands	7	...	...	2	...	...	...	...	...
Syria	87	...	...	72	...	...	...	...	...
Other Asiatic Coun-									
tries	13	1	...	2	...	...	1	...	...

BIRTHPLACES OF PARENTS OF CHILDREN—Continued.

Birthplace.	Fathers.			Mothers of Nuptial Children.			Mothers of Ex-nuptial Children.		
	Single Births.	Twins.	Trip-lets.	Single Births.	Twins.	Trip-lets.	Single Births.	Twins.	Trip-lets.
AFRICA—									
Cape of Good Hope	11	...	...	13	...	...	...	...	...
Mauritius	23	...	...	8	...	...	1	...	...
Natal	1	...	...	4	...	...	...	...	...
Orange Free State	1	...	...	...	...	...	...	...	...
Transvaal	1	...	...	2	...	...	...	...	...
S. Africa (undefined)	71	...	...	88	...	...	1	...	...
Other African British Possessions	3	...	...	1	...	...	...	...	...
Egypt	2	1	...	10	...	...	...	...	...
Other African Countries	8	...	...	3	...	...	...	...	...
AMERICA—									
Barbadoes	...	...	...	...	...	...	...	...	...
Canada	59	...	...	33	1	...	3	...	...
Jamaica	3	...	...	1	...	...	...	...	...
Newfoundland	2	...	...	...	...	...	...	...	...
Other American British Pos.	3	...	...	3	1	...	...	...	...
Argentine Republic	2	...	...	3	...	...	...	...	...
Brazil	2	...	...	1	...	...	...	...	...
Chile	1	...	...	...	...	...	...	...	...
Mexico	3	...	...	...	...	...	...	...	...
United States of America	178	4	...	85	2	...	3	...	...
Other American Countries	62	...	...	15	...	...	1	...	...
POLYNESIA—									
Fiji	27	...	...	21	...	...	1	...	...
Friendly Islands	2	...	...	...	...	...	...	...	...
Other Polynesian British Pos.	1	...	...	...	...	...	...	...	...
New Caledonia	4	...	...	7	...	...	3	...	...
New Hebrides	11	...	...	1	...	...	...	1	...
Samoa	4	...	...	1	...	...	...	...	...
Other Polynesian Islands	2	...	...	1	...	...	1	...	...
South Sea Islands (so described)	17	1	...	3	...	...	1	...	...
At Sea	127	5	...	81	2	...	7	...	...
Unspecified	27	...	...	19	...	...	26	...	...
Total	112,758	1,168	13	112,758	1,168	13	6,963	54	1

10. **Occupations of Fathers.**—A summary of the occupations of the fathers of all nuptial children, whose births were registered in 1911, will be found in the following table. The figures include all the States and Territories of the Commonwealth:—

OCCUPATIONS OF FATHERS OF ALL NUPTIAL CHILDREN, COMMONWEALTH, 1911.

Occupations.	Number of Fathers.	Occupations.	Number of Fathers.
CLASS I.—PROFESSIONAL.			
General Government	582	Wool and Tallow	101
Local Government	98	Hay, Corn, etc.	252
Defence	165	Other Vegetable Matter	200
Law and Order	1,182	Wood and Coal	300
Religion	352	Glass and Earthenware	31
Charities	6	Gold, Silver, and Precious Stones	17
Health	840	Ironmongery	235
Literature	170	Merchants, etc.	469
Science	94	Shopkeepers and Assistants	1,071
Engineering, Architecture, and		Dealers and Hawkers	391
Surveying	356	Agents and Brokers	503
Education	780	Clerks, Bookkeepers, etc.	2,747
Fine Arts	153	Commercial Travellers, Salesmen	1,224
Music	137	Others engaged in Commercial	
Amusements	377	Pursuits	887
		Speculators on Chance Events	48
		Storage	9
Total Professional	5,292	Total Commercial	15,345
CLASS II.—DOMESTIC.			
Hotelkeepers and Assistants	888	CLASS IV.—TRANSPORT AND COMMUNICATION.	
Others engaged in providing board and lodging	240	Railway Traffic	3,788
House Servants	193	Tramway Traffic	998
Coachmen and Grooms	260	Road Traffic	5,051
Hairdressers	596	Sea and River Traffic	1,633
Laundrymen	51	Postal Service	453
Others engaged domestic occupat'ns	190	Telegraph and Telephone Service	414
		Messengers, etc.	23
Total Domestic	2,418	Total Transport & Communication	12,360
CLASS III.—COMMERCIAL.			
Banking and Finance	400	CLASS V.—INDUSTRIAL.	
Insurance and Valuation	483	Books and Publications	824
Land and Household Property	139	Musical Instruments	55
Property Rights not otherwise clsd.	4	Prints and Pictures	79
Books, Publications, Advertising	177	Ornaments and Small Wares	105
Musical Instruments	17	Equipment for Sports and Games	4
Prints and Pictures	2	Designs, Medals, Type	30
Ornaments and Small Wares	11	Watches and Clocks	138
Designs, Medals, Types	1	Surgical Instruments	7
Arms and Ammunition	1	Arms and Ammunition	8
Watches, Clocks, Jewellery	6	Engines and Machinery	1,158
Surgical Instruments	1	Carriages and Vehicles	856
Machinery	54	Harness and Saddlery	494
Carriages and Vehicles	46	Ships and Boats	189
Harness and Saddlery	9	Furniture	522
Ships, Boats, Marine Stores	4	Building Materials	693
Building Materials	27	Chemicals	48
Furniture	73	Textile Fabrics	59
Chemicals	13	Dress	1,995
Paper and Stationery	58	Fibrous Materials	44
Textile Fabrics	634	Animal Food	399
Dress	223	Vegetable Food	1,526
Fibrous Materials	6	Groceries, Drinks, Narcotics, and	
Animal Food	2,318	Stimulants	436
Vegetable Food	670	Animal Matter	431
Groceries, Drinks, Narcotics, and		Workers in wood not elsewhere clsd.	119
Stimulants	1,191	Fodder	15
Living Animals	252	Paper	18
Leather	40	Stone, Clay, Glass	667

OCCUPATIONS OF FATHERS OF ALL NUPTIAL CHILDREN—Continued.

Occupations.	Number of Fathers.	Occupations.	Number of Fathers.
Jewellery and Precious Stones ...	218	CLASS VI.—AGRICULTURAL, PASTORAL, MINING, ETC.	
Metals, other than Gold & Silver ...	3,238	Agricultural ...	19,481
Gas, Electric Lighting ...	576	Pastoral ...	3,710
Building—		Dairying ...	1,472
Builders ...	441	Fisheries, Capture and Destruction of Wild Animals, or acquisition of Products yielded thereby	356
Stonemasons ...	282	Forestry ...	719
Bricklayers ...	507	Water Conservation and Supply	125
Carpenters ...	2,805	Mines and Quarries ...	7,366
Slaters ...	39	Total Primary Producers ...	33,229
Plasterers ...	277		
Painters ...	1,239	CLASS VII.—INDEFINITE.	
Plumbers ...	729	Independent Means ...	112
Signwriters ...	63	Occupation not stated ...	26
Others ...	21	Total Indefinite ...	138
Roads, Railways, Earthworks ...	294		
Disposal of the Dead ...	39	CLASS VIII.—DEPENDENTS.	
Disposal of Refuse ...	211	Dependent Relatives ...	8
Other Industrial Workers—		Total Dependents ...	8
Manufacturers ...	311	Total all Occupations ...	113,939
Engineers, Firemen ...	2,658		
Contractors ...	1,229		
Labourers ...	18,852		
Others ...	251		
Total Industrial ...	45,149		

11. Mothers' Age, Duration of Marriage, and Issue.—A tabulation has been made shewing, in age-groups, the duration of marriage and issue of mothers. The total number of nuptial confinements in 1911 was 113,939, viz., 112,758 single births, 1168 cases of twins, and 13 cases of triplets. From this number 335 mothers must be deducted, in whose case the necessary particulars either as to date of marriage or as to previous issue were not stated. The tables refer, therefore, to a total of 113,604 mothers. They exclude children by former marriages and still-born children, but include ex-nuptial children, previous issue by the same father. The tables cannot be given in *extenso*, but the following are their most salient features. The complete tabulations are shewn in "Commonwealth Bulletin of Population and Vital Statistics, No. 29; Commonwealth Demography, 1911, and previous years."

DURATION OF MARRIAGE AND ISSUE OF MOTHERS OF ALL AGES,
COMMONWEALTH, 1911.

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 ...	19,198	19,411	1.01	18-19 ...	1,343	10,118	7.54
1-2 ...	8,178	9,071	1.11	19-20 ...	1,295	10,327	7.97
2-3 ...	8,457	15,180	1.79	20-21 ...	1,127	9,396	8.34
3-4 ...	9,907	20,735	2.09	21-22 ...	900	7,848	8.72
4-5 ...	8,601	21,580	2.51	22-23 ...	702	6,398	9.11
5-6 ...	7,802	22,720	2.91	23-24 ...	536	5,042	9.41
6-7 ...	6,760	22,343	3.30	24-25 ...	387	3,829	9.89
7-8 ...	5,660	20,760	3.67	25-26 ...	235	2,482	10.56
8-9 ...	4,916	19,598	3.99	26-27 ...	184	1,957	10.64
9-10 ...	4,656	20,029	4.31	27-28 ...	96	1,009	10.51
10-11 ...	4,302	20,239	4.70	28-29 ...	56	647	11.55
11-12 ...	3,975	20,262	5.10	29-30 ...	29	331	11.41
12-13 ...	3,274	17,877	5.46	30-31 ...	14	180	12.85
13-14 ...	2,848	16,290	5.72	31-32 ...	5	47	9.40
14-15 ...	2,491	15,310	6.15	32-33 ...	1	10	10.00
15-16 ...	2,240	14,483	6.47				
16-17 ...	1,845	12,589	6.82				
17-18 ...	1,564	11,329	7.24	Total	113,604	379,427	3.34

AGES AND ISSUE OF MOTHERS, COMMONWEALTH, 1911.

Ages of Mothers.	Total Mothers.	Total Issue.	Average Number of Children.	Ages of Mothers.	Total Mothers.	Total Issue.	Average Number of Children.
Under 20 years	4,132	4,886	1.18	40-44 years ...	6,756	47,066	6.97
20-24 years ...	25,791	45,537	1.77	45 yrs. and over	710	6,051	8.52
25-29 " ...	33,752	89,211	2.64				
30-34 " ...	25,652	97,885	3.82				
35-39 " ...	16,811	88,791	5.28	All ages ...	113,604	379,427	3.34

PREVIOUS ISSUE OF MOTHERS OF VARIOUS AGES, COMMONWEALTH, 1911.

Previous Issue.	Mothers' Ages.							
	Under 20 Years.	20-24 Years.	25-29 Years.	30-34 Years.	35-39 Years.	40-44 Years.	45 Years and Over.	Total.
0	3,456	13,039	9,271	3,632	1,279	303	20	31,000
1	619	7,717	8,672	4,327	1,539	316	24	23,214
2	53	3,642	7,109	4,522	1,997	405	29	17,757
3	4	1,085	4,727	4,328	2,277	531	36	12,988
4	...	246	2,419	3,501	2,243	722	40	9,171
5	...	50	1,093	2,527	2,143	740	48	6,601
6	...	8	336	1,565	1,848	777	64	4,598
7	...	4	86	745	1,333	771	70	3,059
8	...	...	29	317	970	706	72	2,094
9	...	...	8	131	591	607	86	1,423
10	...	...	2	44	292	388	72	798
11	...	...	...	7	152	229	63	451
12	...	...	...	4	54	138	46	242
13	...	...	...	2	25	69	22	118
14	...	...	...	...	12	34	8	54
15	...	...	...	...	6	13	4	23
16	...	...	...	...	...	3	5	8
17	...	...	...	...	...	2	1	3
18	...	...	...	...	...	1	...	1
22	...	...	...	...	...	1	...	1
Total Mothers	4,132	25,791	33,752	25,652	16,811	6,756	710	113,604

The tables shew a fairly regular increase in the number of children up to the period where the marriage has lasted twenty years, and it appears that the average interval between successive confinements up to that period was rather less than two and a half years. One mother of the age-group 40 to 44 years, had her twenty-fourth child in the twenty-sixth year of her marriage. The average number of children of all marriages was 3.34, the corresponding figure for 1910 having been 3.41.

A similar table has been prepared shewing the previous issue of mothers of twins and triplets, from which it appears that 254 mothers had twins at their first confinement; 198 at their second; 195 at their third; 144 at their fourth; 116 at their fifth; 83 at their sixth; 67 at their seventh; 38 at their eighth; 39 at their ninth; 16 at their tenth; 9 at their eleventh; 4 at their twelfth; 3 at their thirteenth; 1 at her fourteenth; and one at her twenty-third.

Of the twelve cases of triplets 1 occurred at the first confinement; 4 at the second; 1 at the third; 2 at the fifth; 2 at the sixth; 2 at the seventh; and 1 at the ninth.

12. **Interval between Marriage and First Birth.**—The following table shews the interval between marriage and first birth. Twins and triplets are included, the eldest born only being enumerated.

INTERVAL BETWEEN MARRIAGE AND FIRST BIRTH, COMMONWEALTH, 1911.

Interval.	Number of First Children.	Interval.	Number of First Children.	Interval.	Number of First Children.
Under 1 month	562	1 year	7,400	13 years	24
1 month	608	2 years	2,101	14 "	16
2 months	817	3 "	908	15 "	10
3 "	1,125	4 "	471	16 "	5
4 "	1,299	5 "	301	17 "	8
5 "	1,651	6 "	170	18 "	3
6 "	2,089	7 "	123	19 "	5
7 "	1,602	8 "	83	20 "	2
8 "	1,529	9 "	85	21 "	3
9 "	3,361	10 "	62	22 "	1
10 "	2,623	11 "	32	23 "	1
11 "	1,893	12 "	25	24 "	1
				25 "	1
				Total	31,000

Of these 31,000 children 15,954 were males and 15,046 were females; the masculinity of first births was therefore 106.03 as compared with 104.73 for total births.

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 shews the ages of mothers of ex-nuptial births, of nuptial births occurring less than nine months after marriage, and of nuptial 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, reveals the fact that for all ages the ratio of the two was approximately as 9 is to 10. 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 are necessarily included among the births which occurred less than nine months after marriage, but there is no means of arriving at the proportion of those births.

**AGES OF MOTHERS AND INTERVAL BETWEEN MARRIAGE AND FIRST BIRTH, etc.
COMMONWEALTH, 1911.**

Age of Mother at Birth of Child.	Ex-nuptial Births.	Nuptial Births less than nine months after Marriage.	Total of two preceding columns.	Nuptial Births nine months after Marriage and later.	Total Nuptial First Births.	Nuptial First Births and Ex-nuptial Births.
Years.						
13 ...	3	...	3	...	...	3
14 ...	20	2	22	...	2	22
15 ...	68	21	89	1	22	90
16 ...	191	138	329	13	151	342
17 ...	326	375	701	76	451	777
18 ...	547	799	1,346	259	1,058	1,605
19 ...	716	1,222	1,938	550	1,772	2,488
20 ...	737	1,265	2,002	889	2,154	2,891
21 ...	628	1,376	2,004	1,186	2,562	3,190
22 ...	539	1,194	1,733	1,602	2,796	3,335
23 ...	476	1,057	1,533	1,834	2,891	3,367
24 ...	405	854	1,259	1,782	2,636	3,041
25 ...	319	673	992	1,749	2,422	2,741
26 ...	291	529	820	1,678	2,207	2,498
27 ...	257	406	663	1,481	1,887	2,144

AGES OF MOTHERS AND INTERVAL BETWEEN MARRIAGE AND FIRST
BIRTH—Continued,

Age of Mother at Birth of Child.	Ex-nuptial Births.	Nuptial Births less than nine months after Marriage.	Total of two preceding columns.	Nuptial Births nine months after Marriage and later.	Total Nuptial First Births.	Nuptial First Births and Ex-nuptial Births.
Years.						
28 ...	223	315	538	1,251	1,566	1,789
29 ...	180	233	413	956	1,189	1,369
30 ...	162	207	369	922	1,129	1,291
31 ...	123	122	245	672	794	917
32 ...	107	115	222	618	733	840
33 ...	96	91	187	445	536	632
34 ...	86	71	157	369	440	526
35 ...	89	56	145	307	363	452
36 ...	74	46	120	262	308	382
37 ...	59	32	91	211	243	302
38 ...	81	25	106	190	215	296
39 ...	60	14	74	136	150	210
40 ...	42	17	59	103	120	162
41 ...	27	11	38	69	80	107
42 ...	18	3	21	39	42	60
43 ...	14	6	20	28	34	48
44 ...	9	4	13	23	27	36
45 ...	11	2	13	11	13	24
46 ...	5	...	5	2	2	7
47 ...	5	1	6	2	3	8
48 ...	2	...	2	1	1	3
51 ...	...	...	...	1	1	1
Not stated	22	...	22	...	...	22
Total ...	7,018	11,282	18,300	19,718	31,000	38,018

Interval between Birth and Registration of Birth.—Information was obtained during 1911 as to the period elapsing between birth and registration. The maximum number registered was forty-one days after birth, while in the case of ex-nuptial births the greatest number of children was registered within two days after birth.

INTERVAL BETWEEN BIRTH AND REGISTRATION, COMMONWEALTH, 1911.

Interval.	Nuptial Births.	Ex- Nuptial Births.	Total Births.	Interval.	Nuptial Births.	Ex- Nuptial Births.	Total Births.
Under 1 day ...	217	75	292	16 days ...	1,242	136	1,378
1 day ...	541	255	796	17 " ...	1,304	142	1,446
2 days ...	485	367	852	18 " ...	1,330	150	1,480
3 " ...	489	280	769	19 " ...	1,517	147	1,664
4 " ...	416	132	548	20 " ...	1,579	136	1,715
5 " ...	441	134	575	21 " ...	1,565	122	1,687
6 " ...	417	106	523	22 " ...	1,691	100	1,791
7 " ...	482	94	576	23 " ...	1,573	98	1,671
8 " ...	499	89	588	24 " ...	1,673	106	1,779
9 " ...	554	75	629	25 " ...	1,765	110	1,875
10 " ...	718	85	803	26 " ...	1,946	105	2,051
11 " ...	812	101	913	27 " ...	1,926	127	2,053
12 " ...	1,018	101	1,119	28 " ...	2,173	110	2,283
13 " ...	1,270	142	1,412	29 " ...	2,297	118	2,415
14 " ...	1,227	148	1,375	30 " ...	2,251	138	2,389
15 " ...	1,210	141	1,351	31 " ...	2,392	131	2,523

INTERVAL BETWEEN BIRTH AND REGISTRATION, COMMONWEALTH,
1911—Continued.

Interval.	Nuptial Births.	Ex-Nuptial Births.	Total Births.	Interval.	Nuptial Births.	Ex-Nuptial Births.	Total Births.
32 days ...	2,361	142	2,503	55 days ...	1,974	72	2,046
33 " ...	2,467	135	2,602	56 " ...	1,875	54	1,929
34 " ...	2,505	149	2,654	57 " ...	1,932	67	1,999
35 " ...	2,700	121	2,821	58 " ...	2,046	80	2,126
36 " ...	2,890	134	3,024	59 " ...	2,052	75	2,127
37 " ...	3,045	115	3,160	60 " ...	1,413	54	1,467
38 " ...	3,364	108	3,472	61 to 69 days	1,828	81	1,909
39 " ...	3,539	134	3,673	70 " 79 "	720	42	762
40 " ...	4,168	118	4,286	80 " 89 "	401	20	421
41 " ...	4,588	144	4,732	90 " 99 "	232	16	248
42 " ...	3,847	125	3,972	100 " 109 "	177	9	186
43 " ...	2,915	71	2,986	110 " 119 "	124	3	127
44 " ...	2,417	73	2,490	120 " 129 "	84	10	94
45 " ...	2,318	53	2,371	130 " 139 "	65	6	71
46 " ...	2,174	73	2,247	140 " 149 "	56	2	58
47 " ...	2,126	63	2,189	150 " 159 "	50	3	53
48 " ...	1,999	58	2,057	160 " 169 "	48	1	49
49 " ...	1,941	48	1,989	170 " 179 "	43	6	49
50 " ...	1,836	61	1,897	180 " 365 "	228	16	244
51 " ...	1,863	51	1,914	Not stated	107	11	118
52 " ...	1,875	63	1,938				
53 " ...	1,848	50	1,898				
54 " ...	1,858	56	1,914				
				Total Births	115,119	7,074	122,193

§ 2. Marriages.

1. **Marriages, 1901 to 1911.**—The number of marriages registered in the Commonwealth in 1911 was 39,482, the highest number ever recorded. There has been a steady increase in the annual number of marriages in each State since 1903, and the crude marriage-rate increased similarly in all the States until 1907, with the exception of Western Australia. In 1908 all the States, with the exception of New South Wales and Tasmania, had a lower marriage rate than in 1907, but the rate recovered in 1909, 1910 and 1911, and was considerably higher in the latter year than in 1907 in all the States. The number of marriages in each State since 1901 is shown below. The rate for 1911 was the highest ever experienced in the Commonwealth.

TOTAL MARRIAGES, COMMONWEALTH, 1901 to 1911.

Year.	N.S.W.	Victoria.	Qld.	S. Aust.	W. Aust.	Tas.	North Terr.	Ed. Cp. Terr.	C'wealth.
1901 ...	10,538	8,406	3,341	2,304	1,821	1,338	5	...	27,753
1902 ...	10,486	8,477	3,243	2,376	2,024	1,313	7	...	27,926
1903 ...	9,759	7,605	2,933	2,260	2,064	1,344	12	...	25,977
1904 ...	10,422	8,210	3,078	2,526	2,088	1,350	8	...	27,682
1905 ...	10,970	8,774	3,173	2,594	2,123	1,365	5	...	29,004
1906 ...	11,551	8,930	3,588	2,679	2,261	1,399	2	...	30,410
1907 ...	12,187	9,575	4,105	3,070	2,114	1,410	9	...	32,470
1908 ...	12,641	9,335	4,009	3,112	2,012	1,432	10	...	32,551
1909 ...	13,025	9,431	4,543	3,275	1,997	1,494	10	...	33,775
1910 ...	14,307	10,239	4,768	3,661	2,107	1,493	17	...	36,592
1911 ...	15,278	11,088	5,167	4,036	2,421	1,477	10	a) 5	39,482

(a) Part of New South Wales prior to 1911.

2. **Marriage Rates, 1901 to 1911.**—The number of marriages registered per thousand of mean population is shewn in the following table for the same period :—

CRUDE MARRIAGE RATE (a), COMMONWEALTH, 1901 to 1911 (b).

Year.	N.S.W.	Victoria.	Qld.	S. Aust.	W. Aust.	Tas.	N. Terr.	Fed. Cap. Territory.	C'wealth.
1901 ...	7.73	6.99	6.66	6.45	9.68	7.76	1.05	...	7.32
1902 ...	7.55	7.02	6.35	6.68	9.89	7.50	1.53	...	7.26
1903 ...	6.90	6.31	5.70	6.36	9.40	7.45	2.76	...	6.67
1904 ...	7.24	6.83	5.90	7.08	8.92	7.38	1.90	...	7.02
1905 ...	7.46	7.28	6.00	7.21	8.61	7.40	1.21	...	7.25
1906 ...	7.68	7.36	6.69	7.38	8.89	7.59	0.50	...	7.49
1907 ...	7.89	7.81	7.56	8.35	8.27	7.63	2.35	...	7.87
1908 ...	8.03	7.53	7.24	8.23	7.80	7.64	2.74	...	7.76
1909 ...	8.15	7.48	7.97	8.43	7.59	7.85	2.83	...	7.90
1910 ...	8.76	7.98	8.06	9.21	7.77	7.82	5.00	...	8.37
1911 ...	9.24	8.34	8.41	9.81	8.44	7.76	3.01	(c) 2.81	8.79

(a) Number of marriages (not persons married) per 1000 of mean annual population. (b) Rate corrected in view of Census Returns 1911. (c) Part of New South Wales prior to 1911.

As in some international tabulations the marriage rates are calculated per 1000 of the unmarried population of 15 years and over, the corresponding rates have been worked out for the Commonwealth for the three last Census periods. The figures comprise in each case the Census year with the year immediately preceding and the year immediately following, and are as follows :—Years 1880-82, 48.98; years 1890-92, 45.74; years 1900-02, 42.14. These rates refer, of course, to persons married and not to marriages, as do the rates in the preceding table. Corresponding figures for the period 1910-1912 will be given in the next issue of this book.

3. **Marriage Rates in Various Countries.**—A comparison of the Australian marriage rate with that of European countries shews it to be considerably below the rates prevailing in the East of Europe, above those of Central and Western Europe, and much higher than those of the North of Europe :—

CRUDE MARRIAGE RATES.—VARIOUS COUNTRIES (a).

Country.	Year.	Crude Marriage Rate.	Country.	Year.	Crude Marriage Rate.
Canada (Ontario) ...	1910	10.35	Austria ...	1910	7.55
Servia ...	1909	9.35	England and Wales ...	1910	7.50
Rumania ...	1910	9.20	Switzerland ...	1909	7.45
Bulgaria ...	1909	9.15	Denmark ...	1910	7.30
Commonwealth ...	1911	8.79	Netherlands ...	1910	7.15
New Zealand ...	1911	8.67	Spain ...	1910	7.10
Hungary ...	1910	8.65	Scotland ...	1910	6.50
France ...	1910	7.90	Norway ...	1910	6.20
Russia ...	1905	7.80	Finland ...	1910	6.10
German Empire ...	1910	7.75	Sweden ...	1910	6.00
Italy ...	1910	7.75	Ireland ...	1910	5.05
Belgium ...	1909	7.65			

(a) Rates corrected in view of Census Returns, 1911.

4. **Age at Marriage.**—(a) The age at marriage of bridegrooms and brides will be found in the following table, the previous conjugal condition of the contracting parties being distinguished. It will be seen that no less than 1472 males were married during 1911 who were less than twenty-one years of age, of whom one was a widower. The corresponding number of females was 8028, of whom four were widows. At the other extreme there were thirty-seven men of sixty-five years and upwards, who described themselves as bachelors, and seven spinsters of corresponding ages.

AGES AND CONJUGAL CONDITION OF PERSONS MARRIED.
COMMONWEALTH.

Age at Marriage.	Bridegrooms.				Brides.			
	Bachelors	Widowers	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
14 years	...	...	...	...	7	...	...	7
15 "	...	...	...	...	59	...	...	59
16 "	7	...	...	7	344	...	...	344
17 "	31	...	...	31	892	...	...	892
18 "	143	...	...	143	1,766	...	...	1,766
19 "	431	1	...	432	2,338	1	...	2,339
20 "	859	...	...	859	2,618	3	...	2,621
21 "	2,235	1	...	2,236	4,162	11	1	4,174
22 "	2,510	1	1	2,512	3,576	15	3	3,594
23 "	3,100	10	...	3,110	3,491	15	2	3,508
24 "	3,322	10	2	3,334	3,128	16	10	3,154
25 "	3,209	16	5	3,230	2,786	33	6	2,825
26 "	3,032	29	1	3,062	2,239	35	9	2,283
27 "	2,781	24	3	2,808	1,844	51	13	1,908
28 "	2,432	34	6	2,472	1,548	56	11	1,615
29 "	2,021	45	7	2,073	1,226	64	15	1,305
30 "	1,706	66	6	1,778	1,008	69	16	1,093
31 "	1,418	45	6	1,469	720	65	15	800
32 "	1,235	55	8	1,298	644	69	16	749
33 "	989	55	8	1,052	452	49	21	522
34 "	758	75	5	838	434	54	13	501
35 "	683	61	4	748	413	88	17	518
36 "	621	71	13	705	276	63	14	353
37 "	524	69	4	597	205	65	14	284
38 "	505	68	13	586	231	77	9	317
39 "	382	79	11	472	185	87	10	282
40 "	317	88	11	416	126	79	2	207
41 "	236	57	5	298	90	52	9	151
42 "	233	79	3	315	95	68	6	169
43 "	172	91	2	265	73	52	5	130
44 "	132	63	5	200	53	60	10	123
45 "	176	74	7	257	56	64	9	129
46 "	124	90	12	226	38	44	5	87
47 "	121	71	2	194	39	44	2	85
48 "	101	79	12	192	31	53	13	97
49 "	83	45	2	130	24	43	...	67
50 "	63	64	3	130	23	31	5	59
51 "	41	54	5	100	11	21	...	32
52 "	42	58	2	102	10	32	...	42
53 "	42	58	1	101	10	18	1	29
54 "	23	57	3	83	6	14	...	20
55 "	22	55	1	78	6	19	...	25
56 "	18	40	...	58	7	16	1	24
57 "	17	35	1	53	10	14	1	25
58 "	10	29	...	39	7	16	...	23
59 "	12	19	...	31	5	10	...	15
60 "	12	37	1	50	2	17	...	19
61 "	8	28	...	36	...	8	...	8
62 "	5	22	...	27	2	8	...	10
63 "	5	25	2	32	...	12	...	12
64 "	8	20	...	28	2	4	...	6
65 "	5	21	...	26	1	16	...	17
66 "	6	19	...	25	1	5	...	6
67 "	5	17	...	22	1	9	...	10
68 "	5	17	...	22	...	5	1	6
69 "	4	15	...	19	...	4	...	4
70 "	1	14	...	15	...	8	...	8

**AGES AND CONJUGAL CONDITION OF PERSONS MARRIED, 1911—Continued.
COMMONWEALTH.**

Age at Marriage.	Bridegrooms.				Brides.			
	Bachelors	Widowers	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
71 years ...	1	5	...	6	1	6	...	7
72 " ...	1	5	...	6	...	1	...	1
73 " ...	3	6	...	9	...	...	...	...
74 " ...	1	3	...	4	1	1	...	2
75 " ...	2	8	...	10	...	1	...	1
76 " ...	1	3	...	4	...	...	...	...
77 " ...	...	4	...	4	...	...	...	...
78 " ...	...	2	...	2	1	2	...	3
79 " ...	...	4	...	4	...	...	...	...
80 " ...	...	3	...	3	...	...	...	...
81 " ...	1	...	...	1	...	...	...	...
83 " ...	1	1	...	2	...	...	...	...
85 " ...	...	1	...	1	...	...	...	...
Not stated ...	1	3	...	4	7	3	...	10
Total ...	36,995	2,304	183	39,482	37,351	1,846	285	39,482

(b) The relative ages of bridegrooms and brides are shewn for single years in " Bulletin of Population and Vital Statistics, No. 29"; a condensation into age-groups of five years is here given :—

RELATIVE AGES OF PERSONS MARRIED, COMMONWEALTH, 1911.

Ages.	Total Bride- grooms.	Ages of Brides.								
		Under 15.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 and Upwds.	Not Stated.
Ages of Bridegrooms.										
Under 20 ...	613	...	433	163	15	1	...	1	...	...
20 to 24 ...	12,051	4	3,059	7,268	1,482	178	49	6	3	2
25 to 29 ...	13,645	3	1,396	6,557	4,593	880	169	31	13	3
30 to 34 ...	6,435	...	349	2,098	2,349	1,216	331	72	19	1
35 to 39 ...	3,108	...	107	651	944	738	477	133	58	...
40 to 44 ...	1,494	...	30	195	335	360	332	162	79	1
45 to 49 ...	999	...	17	79	149	181	231	170	172	...
50 to 54 ...	516	...	9	19	44	73	90	112	169	...
55 to 59 ...	259	...	...	11	12	25	40	43	128	...
60 to 64 ...	173	...	...	5	7	4	22	34	101	...
65 and upwards	185	...	...	4	6	9	13	16	137	...
Not stated ...	4	...	...	1	...	...	...	...	...	3
Total Brides ...	39,482	7	5,400	17,051	9,936	3,665	1,754	780	879	10

5. **Previous Conjugal Condition.**—In a previous table the total number of bachelors and spinsters, widowed and divorced persons, who were married during the year 1911, was shewn. In the following table the relative conjugal condition of the contracting parties is given :—

RELATIVE CONJUGAL CONDITION OF PERSONS MARRIED, COMMONWEALTH, 1911.

Conjugal Condition.		Total Bridegrooms.	Brides.		
			Spinsters.	Widows.	Divorced.
Bridegrooms {	Bachelors ...	36,995	35,583	1,197	215
	Widowers ...	2,304	1,621	626	57
	Divorced ...	183	147	23	13
Total Brides ...		39,482	37,351	1,846	285

6. **Birthplaces of Persons Married.**—Information as to the birthplaces of persons who were married in 1911 was not obtained in the State of Western Australia; the following figures refer, therefore, only to New South Wales, Victoria, Queensland, South Australia, Tasmania and Northern Territory and Federal Capital Territory. As might be expected, there were more brides than bridegrooms who were natives of the Commonwealth. In "Bulletin No. 29, Commonwealth Demography," the relative birthplaces of bridegrooms and brides will be found tabulated.

BIRTHPLACES OF PERSONS MARRIED, 1911.
COMMONWEALTH (a).

Birthplaces.	Bridegrooms.	Brides.	Birthplaces.	Bridegrooms.	Brides.
AUSTRALASIA—			ASIA—cont.—		
New South Wales ...	11,968	13,267	Philippine Islands ...	3	...
Victoria ...	10,314	10,661	Syria ...	15	5
Queensland ...	3,474	4,221	Other Asiatic Countries	1	...
South Australia ...	3,980	4,050	AFRICA—		
Western Australia ...	33	39	Cape of Good Hope...	4	2
Tasmania ...	1,527	1,678	Mauritius ...	5	1
Northern Territory ...	2	6	S. Africa (Undefined)	33	17
New Zealand ...	450	303	Egypt ...	1	...
EUROPE—			Other African Coun-tries ...	...	2
England ...	2,940	1,630	AMERICA—		
Wales ...	83	45	Canada ...	44	6
Scotland ...	739	460	Jamaica ...	1	...
Ireland ...	494	363	Newfoundland ...	2	...
Isle of Man ...	5	1	Other American Bri-tish Possessions ...	3	...
Other European Bri-tish Possessions ...	11	8	Argentine Republic...	2	...
Austria-Hungary ...	23	5	Chile ...	1	...
Belgium ...	4	...	Mexico ...	...	2
Denmark ...	46	16	Peru ...	1	...
France ...	33	14	United States ...	58	16
Germany ...	266	82	Other American Coun-tries ...	40	13
Greece ...	15	2	POLYNESIA—		
Italy ...	38	13	Fiji ...	10	7
Netherlands ...	19	3	Other Polynesian Bri-tish Possessions ...	3	...
Norway ...	37	5	New Caledonia ...	7	3
Portugal ...	1	...	New Hebrides ...	2	2
Russia ...	45	17	Samoa ...	1	...
Spain ...	6	5	Other Polynesian Is-lands ...	1	2
Sweden ...	64	6	South Sea Islands (so described) ...	14	...
Switzerland ...	20	4	At sea ...	32	26
Other European Coun-tries ...	3	4	Not stated ...	9	11
ASIA—			Total ...	37,061	37,061
British India ...	54	26			
Ceylon ...	3	1			
Straits Settlements ...	2	...			
Afghanistan ...	3	...			
China ...	45	5			
Japan ...	12	3			
Java ...	4	3			

(a) Exclusive of Western Australia.

7. **Occupations and Ages of Bridegrooms.**—A tabulation has been made of the occupations and ages of all males married in the Commonwealth in the years 1907, 1908, 1909, 1910, and 1911. In "Bulletin No. 29" the 1911 tabulation is shewn for orders of occupations: here it is repeated for classes only, with a subdivision of the Industrial class and of the class of Primary Producers. The average ages of the persons falling under those twelve 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 their own means, and where a high average age may naturally be expected, the average age ranges from 28.18 in the Manufacturing class to 31.88 years in the Pastoral class. The averages, calculated on the basis of the 1907, 1908, 1909 and 1910 figures, have been added for the purposes of comparison. The figures for five years are, however, rather small to allow of definite conclusions being drawn. The results obtained are shewn in the following table:—

OCCUPATIONS AND AGES OF BRIDEGROOMS, COMMONWEALTH, 1911.

Ages at Marriage.	Professional	Domestic.	Mercantile.	Transport and Communication.	Industrial.			Primary Producers.				
					Manu- facturing.	Building and Construction.	Indefinite Industrial Workers.	Agricultural.	Pastoral.	Mines and Quarries.	Other Primary Producers.	Indefinite.
15 years
16 "
17 "
18 "
19 "
20 "
21 "
22 "
23 "
24 "
25 "
26 "
27 "
28 "
29 "
30 "
31 "
32 "
33 "
34 "
35 to 39 years
40 " 44 "
45 " 49 "
50 years and upwards
Not stated
Total	2,374	990	6,398	4,058	5,462	2,547	8,377	5,499	1,411	1,936	305	125
Average age—years (1911)	30.88	30.69	29.61	28.40	28.18	28.83	28.75	31.05	31.88	29.64	29.49	43.26
" " " (1910)	31.19	30.07	29.73	28.51	28.29	28.88	28.90	30.94	32.33	29.25	30.23	45.47
" " " (1909)	31.25	30.09	29.80	28.61	28.40	29.12	28.86	31.07	33.10	28.78	28.89	39.88
" " " (1908)	31.01	30.62	29.77	28.83	28.46	29.02	28.89	30.96	32.63	29.00	29.33	41.12
" " " (1907)	31.26	30.12	29.74	28.90	28.01	29.71	28.76	30.93	32.55	29.03	29.19	38.26

The average age at marriage of brides has slowly risen from 25.56 years in 1907 to 25.74 years in 1911. The figures for the five years are:—1907, 25.56 years; 1908, 25.67 years; 1909, 25.74 years; 1910, 25.77 years, and in 1911, 25.74, while for the five years combined the average age was 25.70 years.

8. Fertility of Marriages.—The quotient obtained by division of the nuptial births registered, say during the five years 1907 to 1911, by the number of marriages registered during the five years 1902 to 1906, *i.e.*, the period antecedent by five years to the period of the births, has been called the "fertility of marriages." This works out at 3.43, or in other words, the number of children to be expected from every marriage in the Commonwealth is under four. This method, while not professing any claim to accuracy, furnishes results which agree fairly well with those found by more elaborate and careful investigation.

9. Registration of Marriages.—In all the States of the Commonwealth 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. The percentage of marriages celebrated by ministers of religion has increased from 96.47 per cent. in 1902 to 96.67 per cent. in 1911. The figures for the individual States in 1911 were: New South Wales, 97.64 per cent.; Victoria, 97.36 per cent.; Queensland, 95.72 per cent.; South Australia, 96.41 per cent.; Western Australia, 89.72

per cent.; and Tasmania, 98.92 per cent. The registered ministers in 1911 belonged to thirty-nine different denominations, some of which, however, can hardly be regarded as having any valid existence. The extraordinary number of marriages credited to some denominations, the number of whose adherents, according to the Census returns, was very small indeed, is not inconsistent with the supposition that some of these denominations have been created for the purpose of obtaining the registration necessary to conduct marriages, or to be connected with a so-called "Matrimonial Agency." The figures for 1911 are shewn in the following table:—

MARRIAGES IN EACH DENOMINATION, COMMONWEALTH, 1911.

Denomination.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N Ter.	Fed. Cap. Ter.	Com- wealth.
Church of England ...	6,383	2,823	1,451	910	955	513	1	5	13,041
Roman Catholic Church ...	2,825	1,861	1,042	385	399	198	2	...	6,712
Presbyterian Church of Aust. ...	2,177	1,990	716	224	227	186	...	...	5,520
Free Presbyterian Church ...	...	...	...	4	...	...	...	...	4
Independent Presbyterian Ch. ...	...	198	...	...	...	...	...	...	198
Welsh Presbyterian Church ...	...	15	...	...	...	...	...	...	15
Methodist Church ...	2,162	1,749	945	1,339	381	233	1	...	6,810
Congregational Church ...	639	1,128	136	225	95	178	...	...	2,401
Baptist Church ...	256	462	220	272	40	122	...	...	1,372
German Baptist Church ...	...	...	4	...	...	...	...	...	4
Particular Baptist Church ...	5	...	...	...	...	...	...	...	5
Church of Christ ...	236	227	21	208	22	14	...	...	728
Christian Brethren ...	8	...	...	25	...	...	...	...	33
Lutheran Church ...	14	67	128	239	4	...	...	...	452
Evangelical Lutheran Church ...	11	...	25	...	2	...	...	...	38
German Lutheran Church ...	11	...	7	...	...	...	...	...	18
Greek Orthodox Church ...	5	3	...	...	1	...	...	...	9
Australian Church ...	...	25	...	...	...	...	...	...	25
Unitarian Church ...	11	9	...	1	...	...	...	...	21
Moravian Church ...	...	...	2	...	...	...	...	...	2
Apostolic Church ...	1	...	10	...	...	...	...	...	11
Catholic Apostolic Church ...	1	4	6	...	...	...	...	...	11
Christadelphians ...	...	...	2	...	...	...	...	...	2
Salvation Army ...	102	37	33	48	15	7	...	...	242
Seventh-Day Adventists ...	9	6	5	6	4	2	...	...	32
Latter-Day Saints ...	10	10	...	2	...	...	...	...	22
New Church ...	2	5	...	...	...	...	...	...	7
Free Church ...	2	...	...	...	1	...	...	...	3
Free Christian Church... ..	...	36	2	...	...	...	...	...	38
Evangelist ...	1	...	...	...	...	...	...	...	1
Christian Assembly ...	...	...	8	...	...	...	...	...	8
Society of Friends ...	1	1	...	...	...	...	...	...	2
City Mission ...	...	...	...	...	...	2	...	...	2
Ballarat Town Mission ...	...	95	...	...	...	...	...	...	95
Joyful News Mission ...	...	...	169	...	...	...	...	...	169
Christian Mission ...	...	...	...	...	...	6	...	...	6
Aboriginal Mission ...	5	...	...	...	...	...	...	...	5
West End Mission ...	...	...	8	...	...	...	...	...	8
Jewish ...	41	44	6	3	2	...	...	...	96
Registrar's Office ...	360	293	221	145	273	16	6	...	1,314
Total ...	15,278	11,088	5,167	4,036	2,421	1,477	10	5	39,482

10. Mark Signatures.—The marriage registers afford some clue, even if an imperfect one, to the illiteracy of the adult population, since a small and constantly diminishing percentage of bridegrooms and brides sign the registers with marks.

(i.) *Males and Females, 1901 to 1911.* For a number of years, with the exception of 1905, 1908 and 1910, mark signatures by males have been slightly more numerous

than those by females, the percentages for the Commonwealth during the past eleven years having been as follows :—

PERCENTAGE OF MARK SIGNATURES AT MARRIAGE, COMMONWEALTH, 1901 to 1911.

Year. ...	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908	1909.	1910.	1911.
Male...	1.35	1.21	1.17	0.95	0.91	0.92	0.81	0.71	0.65	0.56	0.56
Female	1.29	1.11	1.02	0.91	0.93	0.86	0.70	0.73	0.62	0.59	0.54

(ii.) *Mark Signatures in Commonwealth States, 1901 to 1911.* The following table shows that while the Tasmanian percentage has been the highest, and the Victorian the lowest, in each of the eleven years under review, there has been a marked decrease in every State excepting Western Australia :—

PERCENTAGE OF MARK SIGNATURES AT MARRIAGE, COMMONWEALTH, 1901 to 1911.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust	Tas.	North. Terr.	F.C. Terr.	C'wealth.
1901 ...	1.34	0.53	2.56	0.95	0.99	4.11	...	...	1.32
1902 ...	1.22	0.61	1.93	1.12	0.69	3.12	14.29	...	1.16
1903 ...	1.10	0.60	1.86	1.22	0.75	2.38	20.83	...	1.10
1904 ...	0.90	0.54	1.72	0.65	0.53	2.85	...	...	0.93
1905 ...	1.12	0.44	1.39	0.83	0.57	2.12	...	...	0.92
1906 ...	0.94	0.43	1.67	0.65	0.66	2.18	25.00	...	0.89
1907 ...	0.87	0.36	1.14	0.55	0.64	2.02	...	...	0.76
1908 ...	0.79	0.33	1.20	0.56	0.82	1.57	...	...	0.72
1909 ...	0.60	0.22	1.16	0.55	0.68	2.07	30.00	...	0.64
1910 ...	0.61	0.29	0.92	0.44	0.52	1.17	29.41	...	0.58
1911 ...	0.54	0.22	0.84	0.46	0.78	1.96	15.00	(a)...	0.55

(a) Part of New South Wales prior to 1911.

A complete disappearance of mark signatures is hardly to be expected, for the available information tends to shew that two-thirds of those who sign with marks are natives of their respective States, who apparently have not made use of the advantages offered to them by the State schools.

§ 3. Deaths.

1. **Male and Female Deaths, 1901 to 1911.**—The total number of deaths registered in the Commonwealth from 1901 to 1911 inclusive, gives an annual average of 26,335 males and 19,345 females, the details being as follows :—

MALE DEATHS, COMMONWEALTH, 1901 to 1911.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	F. C. Terr.	C'wealth.
1901 ...	9,327	9,035	3,838	2,206	1,653	1,001	83	...	27,143
1902 ...	9,535	9,152	3,924	2,316	1,832	1,044	73	...	27,876
1903 ...	9,428	8,626	3,951	2,171	1,829	1,136	71	...	27,212
1904 ...	8,733	7,992	3,259	2,019	1,823	1,061	52	...	24,939
1905 ...	8,709	8,273	3,499	2,003	1,728	1,061	38	...	25,311
1906 ...	8,715	8,342	3,212	2,053	1,878	1,118	56	...	25,374
1907 ...	9,444	7,977	3,482	1,998	1,866	1,083	89	...	25,939
1908 ...	9,298	8,816	3,500	2,029	1,800	1,112	77	...	26,632
1909 ...	9,184	8,070	3,419	2,080	1,671	1,030	60	...	25,514
1910 ...	9,339	8,128	3,594	2,163	1,760	1,098	72	...	26,154
1911 ...	9,973	8,355	4,060	2,179	1,923	1,037	59	(a) 5	27,591
Rate, (b) 1911	11.59	12.57	12.14	10.43	11.72	10.68	21.57	4.93	11.82

(a) Part of New South Wales prior to 1911.

(b) Number of deaths per 1000 of mean population.

FEMALE DEATHS, COMMONWEALTH, 1901 to 1911.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aus.	Tas.	North. Terr.	F. Cp. Terr.	C'wealth.
1901	6,694	6,869	2,169	1,768	866	813	8	...	19,187
1902	7,111	7,025	2,280	1,920	991	870	5	...	20,202
1903	7,069	6,969	2,395	1,702	959	980	7	...	20,081
1904	6,627	6,401	1,991	1,700	994	913	7	...	18,633
1905	6,269	6,403	2,004	1,758	981	783	5	...	18,203
1906	6,260	6,895	1,883	1,819	1,206	893	3	...	18,959
1907	6,967	6,562	2,116	1,738	1,065	915	3	...	19,366
1908	6,757	6,950	2,180	1,805	1,079	1,017	6	...	19,794
1909	6,626	6,366	2,111	1,702	1,033	812	8	...	18,658
1910	6,819	6,604	2,150	1,851	980	1,022	10	...	19,436
1911	7,173	6,861	2,484	1,859	1,000	890	6	(a) 5	20,278
Rate, (b) 1911	9.05	10.33	8.88	9.19	8.15	9.55	10.27	6.54	9.40

(a) Part of New South Wales prior to 1911. (b) Number of deaths per 1000 of mean population.

2. **Male and Female Death Rates, 1911.**—The crude male and female death rates for 1911 only are given, viz., in the last line of the preceding tables. Victoria has the highest rate both for males and for females, while South Australia has the lowest male and Western Australia the lowest female death rate. The rates for the two Territories are based on very small numbers, and comparisons with the States are misleading.

Owing to differences in the age constitution of the six States, the crude rates are not, however, strictly comparable, but for the purposes of calculating the "Index of Mortality" (see page 221) a distribution into five age-groups has, however, been made, and the death rates are shewn for males and females in each State in five-year age groups for the year 1911 on page 216.

3. **Death Rates of Various Countries.**—A comparison with foreign States is, for the same reason, apt to shew the Commonwealth in too favourable a light, but even if an allowance for the different age constitution were made, it would still be found occupying a very enviable position. The following table gives particulars of the death rates of various countries for the latest available years:—

DEATH RATES (a) OF VARIOUS COUNTRIES.

Country.	Year.	Crude Death Rate.	Country.	Year.	Crude Death Rate.
New Zealand	1911	9.39	German Empire	1909	17.2
Commonwealth	1911	10.7	France	1910	17.9
Denmark	1910	12.9	Italy	1910	19.6
England and Wales	1910	13.5	Austria	1910	21.2
Norway	1910	13.5	Japan	1909	22.0
Netherlands	1910	13.6	Jamaica	1910	23.1
United Kingdom	1910	14.0	Spain	1910	23.3
Canada (Ontario)	1910	14.0	Hungary	1910	23.6
Sweden	1910	14.0	Rumania	1910	25.2
Scotland	1910	15.3	Bulgaria	1909	26.6
Belgium	1909	15.8	Ceylon	1910	27.3
Switzerland	1909	16.1	Servia	1909	29.3
Finland	1910	16.6	Russia, European	1904	29.9
Ireland	1910	17.1	Chile	1910	32.5

(a) Number of deaths per 1000 of mean population.

4. **Total Deaths, 1901 to 1911.**—The total number of deaths in each of the Commonwealth States during the eleven years 1901 to 1911, is shewn below:—

TOTAL DEATHS, COMMONWEALTH, 1901 to 1911.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aus.	Tas.	North. Terr.	F. Cp. Terr.	C'wealth.
1901 ...	16,021	15,904	6,007	3,974	2,519	1,814	91	...	46,330
1902 ...	16,646	16,177	6,204	4,236	2,823	1,914	78	...	48,078
1903 ...	16,497	15,595	6,346	3,873	2,788	2,116	78	...	47,293
1904 ...	15,360	14,393	5,250	3,719	2,817	1,974	59	...	43,572
1905 ...	14,978	14,676	5,503	3,761	2,709	1,844	43	...	43,514
1906 ...	14,975	15,237	5,095	3,872	3,084	2,011	59	...	44,333
1907 ...	16,411	14,589	5,593	3,736	2,931	1,998	92	...	45,305
1908 ...	16,055	15,766	5,680	3,834	2,879	2,129	83	...	46,426
1909 ...	15,810	14,436	5,530	3,782	2,704	1,842	68	...	44,172
1910 ...	16,158	14,732	5,744	4,014	2,740	2,120	82	...	45,590
1911 ...	17,146	15,216	6,544	4,038	2,923	1,927	65	(a) 10	47,869

(a) Part of New South Wales prior to 1911.

5. **Crude Death Rates, 1901 to 1911.**—The death rate for 1911 shewed an increase on that for 1910 in three States, viz., New South Wales, Queensland, and Western Australia. The rates, with the exception of that for Tasmania, are, however, considerably lower than those experienced during the early years of the decade. The Commonwealth rate for 1911 was considerably lower than in any of the other years of the period under review excepting the years 1909 and 1910.

CRUDE DEATH RATES (a), COMMONWEALTH, 1901 to 1911 (b).

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	F. Cp. Terr.	C'wealth.
1901 ...	11.75	13.22	11.98	11.12	13.39	10.51	19.10	...	12.22
1902 ...	11.98	13.40	12.15	11.90	13.79	10.93	17.05	...	12.49
1903 ...	11.67	12.94	12.33	10.90	12.69	11.73	17.91	...	12.15
1904 ...	10.67	11.97	10.06	10.42	12.04	10.79	13.98	...	11.05
1905 ...	10.18	12.17	10.40	10.45	10.98	10.00	10.42	...	10.88
1906 ...	9.95	12.55	9.50	10.66	12.12	10.91	14.84	...	10.92
1907 ...	10.63	11.86	10.31	10.16	11.47	10.81	24.07	...	10.99
1908 ...	10.20	12.71	10.26	10.14	11.17	11.36	22.71	...	11.07
1909 ...	9.89	11.45	9.70	9.74	10.27	9.68	19.22	...	10.33
1910 ...	9.89	11.49	9.71	10.09	10.11	11.10	24.10	...	10.43
1911 ...	10.37	11.45	10.65	9.82	10.19	10.13	19.58	(c) 5.62	10.66

(a) Number of deaths per thousand of mean population for year. (b) Rates corrected in view of Census Returns. (c) Part of New South Wales prior to 1911.

6. **Male and Female Death Rates, 1901 to 1911.**—The rise in the Commonwealth rate from 1905 to 1907 was due to an increase in the female death rate, while the increase in 1908 was practically limited to the male death rate, as the subjoined table shews. The decrease from 1908 to 1909 was fairly equal for the male and female rates, and the increase in 1910 was due to a rise in the female rate.

MALE AND FEMALE DEATH RATES (a), COMMONWEALTH, 1901 to 1911 (b).

Year.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.
Male rate	13.66	13.83	13.37	12.12	12.14	12.01	12.11	12.24	11.51	11.54	11.82
F'male „	10.64	11.02	10.80	9.88	9.50	9.73	9.77	9.81	9.06	9.24	9.40
Crude total rate	12.22	12.49	12.15	11.05	10.88	10.92	10.99	11.07	10.33	10.43	10.66

(a) Number of deaths per thousand of mean population. (b) Rates corrected in view of Census Returns.

7. Infantile Death Rate.—(i.) *Deaths and Death Rates of Male and Female Infants, 1901 to 1911.* A marked improvement has taken place in the infantile death rate since 1901, in which year it stood at 103.61 per thousand births registered, while in 1911 it had fallen to 68.49 per thousand, a rate lower than that experienced in any previous year. In the following table, which shows both the total number of deaths of children under one year and the rate per thousand births since 1901, males and females are distinguished. The universal experience that during the first few years of life the excess of male births disappears as a consequence of the higher death rate of male infants is shewn by the fact that out of 613,096 male infants born from 1901 to 1911, 56,641 died during their first year of life, while of 582,969 female infants the number who died was only 44,967:—

**NUMBER OF INFANTILE DEATHS AND RATE OF INFANTILE MORTALITY,
COMMONWEALTH 1901 to 1911.**

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
1902	6,008	5,004	11,012	114.19	99.76	107.15
1903	6,004	4,959	10,963	119.11	103.23	111.36
1904	4,713	3,800	8,513	88.33	74.87	81.77
1905	4,884	3,696	8,580	90.62	72.41	81.76
1906	5,002	3,981	8,983	90.10	76.01	83.26
1907	4,993	3,952	8,945	88.39	73.38	81.06
1908	4,885	3,791	8,676	85.53	69.65	77.78
1909	4,604	3,559	8,163	78.73	64.02	71.56
1910	4,916	3,822	8,738	81.65	67.53	74.81
1911	4,745	3,624	8,369	75.91	60.72	68.49

(a) Number of deaths under 1 year per 1000 births registered.

(ii.) *Infantile Mortality, 1901 to 1911.* Divided among the States and Territories, the rate of infantile mortality during the last eleven years was as follows:—

RATE (a) OF INFANTILE MORTALITY, COMMONWEALTH, 1901 to 1911.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Federal Capital Territory.	Com'-wealth.
1901	103.74	102.94	101.94	100.12	128.89	89.05	62.50	...	103.61
1902	109.74	108.60	100.17	93.76	142.01	79.06	200.00	...	107.15
1903	110.35	106.40	119.88	96.76	141.22	110.83	181.82	...	111.36
1904	82.42	77.92	76.13	70.00	113.02	90.70	212.12	...	81.77
1905	80.55	83.30	75.52	72.80	104.19	80.65	111.11	...	81.76
1906	74.53	92.92	74.68	75.66	110.00	90.19	160.00	...	83.26
1907	88.46	72.60	77.65	66.23	97.51	82.97	185.19	...	81.06
1908	75.20	86.05	70.67	69.50	84.72	75.16	58.82	...	77.78
1909	73.87	71.36	71.50	60.91	78.01	64.91	111.11	...	71.56
1910	74.71	76.88	62.90	70.21	78.18	101.68	200.00	...	74.81
1911	69.46	68.70	65.36	60.60	76.01	73.39	96.77	(b) 33.34	68.49

(a) Number of deaths under 1 year per 1000 births registered.

(b) Part of New South Wales prior to 1911.

The movement has been a fairly regular one, shewing an increase in the rate during 1902 and 1903, and a fall since the latter year, so that the 1909 rate was lower than that for 1902 in every State. The regrettable increase in the Victorian rate for 1908 over that of 1907 was wholly due to the large mortality caused by the phenomenal heat of January, 1908. With the exception of Queensland, where the 1908 rate was exception-

ally low, the 1909 rate was the lowest ever experienced up to that date in any of the States. A further rise occurred in every State in 1910, with the exception of Queensland, which was counterbalanced by a considerable decrease during 1911 in every State but Queensland.

(iii.) *Infantile Mortality in Various Countries and Cities.* Compared with European countries the cities and States of the Commonwealth occupy a very enviable position, and it may be pointed out that experience has shewn that a high birth rate is often, though not invariably, accompanied by a high infantile death rate. The figures in the subjoined tables relate to the latest years for which returns are available:—

RATE (a) OF INFANTILE MORTALITY IN VARIOUS COUNTRIES.

Country.	Year.	Rate of Infantile Mortality. (a)	Crude Birth Rate. (b)	Country.	Year.	Rate of Infantile Mortality. (a)	Crude Birth Rate. (b)
New Zealand ...	1911	56	26.0	Belgium ...	1909	137	23.7
Commonwealth ...	1911	68	27.2	Italy ...	1909	155	32.4
Norway ...	1909	72	26.1	Servia ...	1908	158	36.8
Sweden ...	1909	72	25.6	Spain ...	1907	158	33.6
Ireland ...	1910	95	23.3	Japan ...	1909	166	34.2
Denmark ...	1909	98	28.2	Bulgaria ...	1908	170	40.4
England and Wales	1910	105	25.1	German Empire ...	1909	170	31.1
United Kingdom ...	1909	107	25.7	Ceylon ...	1910	176	39.0
Netherlands ...	1910	108	28.6	Jamaica ...	1910	188	38.6
Scotland ...	1909	108	27.3	Hungary ...	1910	194	35.7
Switzerland ...	1909	115	25.5	Rumania ...	1903	201	40.1
Finland ...	1910	118	30.2	Austria ...	1908	205	33.6
France ...	1909	120	19.6	Russia, European	1904	232	48.5
Canada (Ontario) ...	1910	123	24.9	Chile ...	1910	313	38.4

(a) Number of deaths under 1 year per 1000 births registered. (b) Number of births per 1000 of mean population.

RATE (a) OF INFANTILE MORTALITY IN VARIOUS CITIES.

City.	Year.	Rate of Infantile Mortality. (a)	Crude Birth Rate. (b)	City.	Year.	Rate of Infantile Mortality. (a)	Crude Birth Rate. (b)
Sydney ...	1911	72	28.4	Glasgow ...	1911	139	27.7
Stockholm ...	"	77	22.0	Dublin (Registration area) ...	"	156	28.2
Hobart ...	"	77	29.1	Hamburg ...	"	158	21.7
Melbourne ...	"	78	24.4	Budapest ...	"	161	25.3
Adelaide ...	"	78	27.4	Dresden ...	"	166	20.1
Perth (W.A.) ...	"	79	30.5	Vienna ...	"	166	20.0
Brisbane ...	"	81	29.2	Berlin ...	"	173	20.8
Amsterdam ...	"	91	22.7	Munich ...	"	176	22.4
Rotterdam ...	"	103	28.9	Rio de Janeiro ...	"	182	27.4
The Hague ...	"	107	24.6	Prague ...	"	186	16.9
Copenhagen ...	"	113	24.6	Breslau ...	"	207	26.9
Christiania ...	"	116	22.5	Trieste ...	"	215	29.6
Edinburgh ...	"	118	21.3	St. Petersburg ...	"	231	28.2
Paris ...	"	118	17.2	Moscow ...	"	321	35.2
Belfast ...	"	128	28.4				
London ...	"	129	24.8				

(a) Number of deaths under 1 year per 1000 births registered. (b) Number of births per 1000 of mean population.

(iv.) *The Effect of Infantile Mortality on Birth Rate.* It has been contended by certain investigators that the birth-rate question is intimately related to that of infantile mortality, and that in many cases a declining birth rate may be to a large extent accounted for by a decline in the infantile death rate, since, in the case in which an infant has survived, the period elapsing before the birth of the next child is likely to be longer than in the case in which the infant has died. It may indeed be readily admitted that in any community the birth rate may be affected in a definite way by variations of infantile mortality, but careful investigation of the question serves to shew that, whether considered from the theoretical aspect with a view to determining the *maximum* and the *probable* effects which a given change in the rate of infantile mortality would produce in the birth rate, or from the practical point of view by observing the fluctuations in the birth rates of various countries which have been collateral with changes in their rates of infantile mortality, there is little ground for the contention that the rate of infantile mortality is an important factor in determining the variations in the birth rate. One calculation which has been made on the basis of normal Australian conditions indicates that the *maximum* effect of increasing the rate of infantile mortality 100 per cent. would, in the absence of other disturbing causes, be to increase the birth rate by only $3\frac{1}{4}$ per cent., whilst the *probable* effect would be considerably less than this. In other words, the *maximum* effect of an increase in the rate of infantile mortality from 100 to 200 per 1000 births would be to increase the birth rate from say 30 to 31 per 1000 of population. It may be noted too, that although in some countries an increase in birth-rate accompanies an increase in the rate of infantile mortality, in others the birth rate would appear to be quite unaffected by such an increase, while in the case of England and Wales, Scotland, and Ireland, the tendency apparently exhibited is for an increase in the rate of infantile mortality to be associated with a decrease in the birth rate. The conclusion which these results appear to warrant is that although infantile mortality undoubtedly tends on the whole to increase the birth rate, the practical effect produced is so slight that the existence of such a relation may in any instance be quite masked by more important causes of variation.

8. **Deaths in Age-Groups, 1901 to 1911.**—A distribution into age-groups has been made of the 502,482 deaths which occurred in the Commonwealth from 1901 to 1911, and the results are tabulated for each State. It is, however, sufficient here to shew the results for the Commonwealth as a whole, which are as follows:—

DEATHS IN AGE-GROUPS, COMMONWEALTH, 1901 to 1911.

Ages.	Males.	Females.	Total.	Percentage of Total Males.	Percentage of Total Females.	Percentage of Total.
Under 1 year ...	56,642	44,966	101,608	19.55	21.13	20.22
1 year and under 5 ...	16,683	15,260	31,943	5.76	7.17	6.36
5 years and under 20 ...	16,741	14,899	31,640	5.78	7.00	6.30
20 years and under 40 ...	39,898	35,017	74,915	13.77	16.46	14.91
40 years and under 60 ...	57,604	33,643	91,247	19.89	15.81	18.16
60 years and under 65 ...	16,592	10,145	26,737	5.73	4.77	5.32
65 years and over ...	84,994	58,773	143,767	29.34	27.62	28.61
Age not stated ...	531	94	625	0.18	0.04	0.12
Total ...	289,685	212,797	502,482	100.00	100.00	100.00

9. Deaths at Single Ages and in Age-Groups, 1911.—The 47,869 deaths which were registered in the Commonwealth in the year 1911 will be found tabulated under single years, and in groups of five years for each State and Territory, in "Bulletin No. 29, Commonwealth Demography, 1911." It has been thought advisable to tabulate the deaths during the first two years of life in greater detail. The first month has, therefore, been shewn in weeks, and the twenty-three months up to the end of the second year in months. This tabulation shews a great number of children dying during the first week, the number gradually diminishing towards the end of the second year. The particulars relating to the Commonwealth are given in the following table:—

DEATHS AT SINGLE AGES AND IN AGE-GROUPS, 1911.
COMMONWEALTH.

Ages.	Males.	Females.	Total.	Ages.	Males.	Females.	Total.
Under 1 week ...	1,481	1,085	2,566	10 years ...	88	69	157
1 week and under 2 ...	310	216	526	11 " ...	64	64	128
2 weeks " " 3 ...	232	152	384	12 " ...	63	65	128
3 " " " 4 ...	195	124	319	13 " ...	70	54	124
				14 " ...	71	70	141
Total under one month ...	2,218	1,577	3,795	Total 10 years and under 15	356	322	678
1 month and under 2 ...	462	328	790	15 years ...	76	74	150
2 months " " 3 ...	344	284	628	16 " ...	112	91	203
3 " " " 4 ...	289	218	507	17 " ...	102	92	194
4 " " " 5 ...	242	225	467	18 " ...	122	114	236
5 " " " 6 ...	207	198	405	19 " ...	143	120	263
6 " " " 7 ...	205	166	371	Total 15 years and under 20	555	491	1,046
7 " " " 8 ...	189	155	344	20 years ...	146	130	276
8 " " " 9 ...	181	131	312	21 " ...	172	146	318
9 " " " 10 ...	140	120	260	22 " ...	190	162	342
10 " " " 11 ...	118	123	240	23 " ...	166	166	332
11 " " " 12 ...	150	100	250	24 " ...	186	163	349
Total under 1 year	4,745	3,624	8,369	Total 20 years and under 25	850	767	1,617
12 months and under 13 ...	234	221	455	25 years ...	188	161	349
13 " " " 14 ...	65	55	120	26 " ...	181	164	345
14 " " " 15 ...	66	68	134	27 " ...	151	153	304
15 " " " 16 ...	61	55	116	28 " ...	170	159	329
16 " " " 17 ...	50	35	85	29 " ...	175	170	345
17 " " " 18 ...	41	34	75	Total 25 years and under 30	865	807	1,672
18 " " " 19 ...	42	47	89	30 years ...	203	161	364
19 " " " 20 ...	32	24	56	31 " ...	169	152	321
20 " " " 21 ...	34	28	62	32 " ...	185	164	349
21 " " " 22 ...	36	21	57	33 " ...	184	140	324
22 " " " 23 ...	30	27	57	34 " ...	157	155	312
23 " " " 24 ...	31	19	50	Total 30 years and under 35	898	772	1,670
Total under 2 years	5,467	4,258	9,725	35 years ...	196	162	358
2 years ...	290	289	579	36 " ...	185	196	381
3 " ...	216	172	388	37 " ...	175	155	330
4 " ...	153	152	305	38 " ...	230	171	401
Total under 5 years	6,126	4,871	10,997	39 " ...	200	153	353
5 years ...	133	133	266	Total 35 years and under 40	386	337	1,823
6 " ...	126	89	215				
7 " ...	109	89	198				
8 " ...	74	80	154				
9 " ...	72	67	139				
Total 5 years and under 10	514	458	972				

DEATHS AT SINGLE AGES AND IN AGE-GROUPS, 1911—Continued.

Ages.	Males.	Females.	Total.	Ages.	Males.	Females.	Total.
40 years ...	276	190	466	75 years ...	453	350	803
41 " ...	192	128	320	76 " ...	430	366	796
42 " ...	284	205	489	77 " ...	400	319	719
43 " ...	258	140	398	78 " ...	462	337	799
44 " ...	247	136	383	79 " ...	406	258	664
Total 40 years and under 45	1,257	799	2,056	Total 75 years and under 80	2,151	1,630	3,781
45 years ...	302	159	461	80 years ...	420	300	720
46 " ...	250	167	417	81 " ...	309	215	524
47 " ...	286	174	460	82 " ...	310	240	550
48 " ...	334	191	525	83 " ...	257	195	452
49 " ...	296	202	498	84 " ...	272	192	464
Total 45 years and under 50	1,468	893	2,361	Total 80 years and under 85	1,568	1,142	2,710
50 years ...	366	206	592	85 years ...	219	180	399
51 " ...	299	158	457	86 " ...	158	129	287
52 " ...	362	193	555	87 " ...	152	106	258
53 " ...	306	163	469	88 " ...	109	103	212
54 " ...	320	199	519	89 " ...	78	82	160
Total 50 years and under 55	1,673	919	2,592	Total 85 years and under 90	716	600	1,316
55 years ...	343	194	537	90 years ...	75	78	153
56 " ...	334	187	521	91 " ...	58	57	115
57 " ...	294	152	446	92 " ...	54	48	102
58 " ...	313	159	472	93 " ...	24	28	52
59 " ...	289	179	468	94 " ...	26	22	48
Total 55 years and under 60	1,573	871	2,444	Total 90 years and under 95	237	233	470
60 years ...	421	209	630	95 years ...	15	11	26
61 " ...	247	159	406	96 " ...	12	13	25
62 " ...	324	198	522	97 " ...	9	11	20
63 " ...	323	199	522	98 " ...	2	9	11
64 " ...	310	197	507	99 " ...	2	3	5
Total 60 years and under 65	1,625	962	2,587	Total 95 yrs. and under 100	40	47	87
65 years ...	396	236	632	100 years ...	5	6	11
66 " ...	341	232	573	101 " ...	4	2	6
67 " ...	425	277	702	102 " ...	2	1	3
68 " ...	376	317	693	103 " ...	1	2	3
69 " ...	415	258	673	104 " ...	...	1	1
Total 65 years and under 70	1,953	1,320	3,273	105 " ...	1	1	2
70 years ...	515	325	840	108 " ...	1	...	1
71 " ...	373	244	617	Total 100 years and over...	14	13	27
72 " ...	375	278	653	Age not stated ...	55	10	65
73 " ...	418	309	727	Total all ages ...	27,591	20,278	47,869
74 " ...	430	358	788				
Total 70 years and under 75	2,111	1,514	3,625				

The following tables shew the death rate per 1000 living at each age. The rates for Northern and Federal Capital Territories are not given, as the figures on which they are based are so small as to lead to erroneous conclusions:—

DEATH RATES PER 1000 LIVING IN VARIOUS AGE GROUPS, 1911.

MALES.

Age Group.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.
0 to 4 years	23.44	22.63	22.11	19.04	27.37	20.99	22.77
5 " 9	1.98	2.20	2.54	2.18	2.68	2.49	2.21
10 " 14	1.72	1.61	1.72	1.01	2.18	1.51	1.61
15 " 19	2.26	2.32	3.12	2.34	2.32	1.78	2.39
20 " 24	3.33	3.39	5.31	2.32	4.84	3.97	3.67
25 " 29	3.88	3.72	5.65	3.99	5.32	4.86	4.25
30 " 34	4.92	4.88	6.00	4.67	6.59	4.34	5.19
35 " 39	5.78	6.04	7.46	6.81	7.64	6.14	6.38
40 " 44	8.49	7.59	10.35	7.72	11.16	6.38	8.66
45 " 49	10.63	9.29	13.91	9.50	14.64	8.25	10.86
50 " 54	14.12	15.76	19.09	12.04	17.93	14.16	15.37
55 " 59	22.89	20.02	23.19	18.02	22.51	14.04	21.29
60 " 64	29.97	34.04	30.30	30.11	34.38	28.38	31.50
65 " 69	46.25	49.65	55.82	47.08	44.39	44.54	48.54
70 " 74	75.03	74.36	67.26	57.61	74.30	54.72	71.29
75 " 79	120.80	111.78	105.69	103.03	103.85	114.16	113.10
80 " 84	184.38	184.14	184.55	152.33	185.04	128.57	179.26
85 " 89	263.84	268.77	227.27	242.86	272.73	367.65	266.32
90 and over	384.94	365.45	238.81	351.06	250.00	507.94	367.42

FEMALES.

0 to 4 years	19.27	17.89	19.42	16.40	20.04	19.35	18.69
5 " 9	1.67	2.19	2.43	1.63	2.63	2.23	2.01
10 " 14	1.25	1.74	1.64	1.13	1.69	2.21	1.51
15 " 19	1.97	2.19	2.55	2.23	1.92	2.84	2.18
20 " 24	3.02	3.71	3.86	3.68	3.67	3.99	3.48
25 " 29	3.93	4.04	4.64	5.01	4.69	4.64	4.22
30 " 34	4.53	5.14	4.56	4.91	4.61	5.06	4.78
35 " 39	5.55	6.02	6.74	5.80	5.55	6.48	5.91
40 " 44	6.05	6.82	7.44	5.46	6.08	3.66	6.34
45 " 49	7.90	8.26	8.18	8.75	7.32	7.34	8.11
50 " 54	11.13	11.23	11.34	8.40	12.29	7.91	10.83
55 " 59	15.20	14.65	16.51	11.67	14.48	11.71	14.67
60 " 64	21.91	21.75	22.83	20.80	22.80	20.27	21.79
65 " 69	40.96	34.26	33.47	32.88	31.78	37.67	36.48
70 " 74	56.42	59.91	57.47	49.13	56.44	54.15	57.03
75 " 79	102.88	103.66	82.30	83.01	82.50	84.75	98.06
80 " 84	160.02	149.97	148.03	142.01	132.45	142.47	151.11
85 " 89	185.77	223.78	222.67	224.44	156.86	284.62	213.83
90 and over	316.50	361.45	458.55	253.85	384.62	340.91	335.62

PERSONS.

0 to 4 years	21.38	20.31	20.79	17.74	23.74	20.19	20.77
5 " 9	1.83	2.19	2.48	1.91	2.66	2.36	2.11
10 " 14	1.49	1.67	1.68	1.07	1.93	1.89	1.58
15 " 19	2.12	2.26	2.84	2.29	2.13	2.31	2.29
20 " 24	3.20	3.55	4.64	3.02	4.35	3.98	3.58
25 " 29	3.90	3.88	5.21	4.49	5.07	4.74	4.24
30 " 34	4.73	5.02	5.41	4.79	5.79	4.69	4.99
35 " 39	5.67	6.03	7.14	6.31	6.81	6.30	6.16
40 " 44	7.35	7.21	9.13	6.60	9.33	5.10	7.58
45 " 49	9.41	8.79	11.65	9.13	12.15	7.82	9.62
50 " 54	12.83	13.60	16.16	10.33	15.98	11.28	13.38
55 " 59	19.52	17.38	20.62	15.11	19.61	13.69	18.34
60 " 64	26.32	27.87	27.34	25.59	29.78	24.45	27.02
65 " 69	43.84	41.71	46.43	40.07	50.90	41.05	42.83
70 " 74	66.65	66.85	63.49	53.38	66.87	54.43	64.56
75 " 79	112.77	107.79	96.63	92.42	95.29	98.90	106.09
80 " 84	173.34	168.68	167.56	147.28	165.43	135.57	166.22
85 " 89	223.54	246.55	225.05	232.01	222.22	327.07	239.55
90 and over	347.01	363.35	349.59	294.64	292.68	439.25	350.75

The tables shew a high death rate for children under five years of age, which rapidly diminishes until at ages 10 to 14, a rate of 1.58 per 1000 was experienced, which was the lowest at any age. The rate then gradually increases with increasing age until, at the ages 90 and over, more than one-third die every year.

10. **Deaths of Centenarians, 1911.**—Particulars as to the twenty-seven persons who died in 1911, aged 100 years and upwards, are given in the following table. It must, of course, be understood that while the Registrars-General of the various States take the greatest care to have statements as to abnormally high ages verified as far as possible, no absolute reliance can be placed on the accuracy of the ages shewn, owing to the well-known tendency of very old people to overstate their ages. The fact must not be lost sight of in connection with this question, that while parish registers in the United Kingdom often date very far back, compulsory registration of births dates practically only from 1874, the Act passed in 1836 having left many loop-holes open for those unwilling to register the births of their children.

DEATHS OF CENTENARIANS, 1911.—COMMONWEALTH.

MALES.

Age	Locality where Death occurred.	State.	Cause of Death.	Occupation.	Birth-place.	Length of Residence in Commonwealth.
Yrs.						
108	Deloraine ...	Tasmania ...	Senility ...	Labourer ...	England ...	95 years
105	Gulpong ...	N.S.W. ...	Aortic stenosis ...	Storekeeper ...	China ...	70 "
103	Collarenebri ...	" ...	Rodent ulcer ...	Selector ...	N. S. Wales ...	Native
102	New Norfolk ...	Tasmania ...	Senility ...	Labourer ...	England ...	73 years
102	Dookie ...	Victoria ...	" ...	Old age pen ...	Ireland ...	50 "
101	Whitfield ...	" ...	Gangrene ...	Not stated ...	Scotland ...	70 "
101	Corindhap ...	" ...	Senility ...	Old age pen ...	N. S. Wales ...	Native
101	Wellington ...	N.S.W. ...	" ...	Gardener ...	China ...	60 years
101	Camden Cottage Hospital ...	" ...	" ...	Farmer ...	England ...	56 "
100	Evandale ...	Tasmania ...	" ...	Labourer ...	" ...	75 "
100	Port Macquarie ...	N.S.W. ...	" ...	Farmer ...	" ...	67 "
100	Petersham ...	" ...	Heart disease ...	" ...	" ...	12 "
100	Ascot Vale ...	Victoria ...	Senility ...	Old age pen ...	" ...	75 "
100	Bacchus Marsh ...	" ...	" ...	Farmer ...	Germany ...	59 "

FEMALES.

105	Benevolent Asy., Cheltenham ...	Victoria ...	Senility ...	" ...	Scotland ...	60 years
104	Tenterfield ...	N.S.W. ...	" ...	" ...	" ...	58 "
103	Randwick ...	" ...	Diarrhoea ...	" ...	" ...	61 "
103	South Yarra ...	Victoria ...	Influenza ...	" ...	England ...	71 "
102	Avenel ...	" ...	Senility ...	" ...	Ireland ...	64 "
101	Maffra ...	" ...	" ...	" ...	" ...	74 "
101	Maryborough ...	Queensland ...	" ...	" ...	" ...	48 "
100	Burwood ...	N.S.W. ...	" ...	" ...	N.S.W. ...	Native
100	Ashfield ...	" ...	" ...	" ...	England ...	78 years
100	Waterloo ...	" ...	" ...	" ...	" ...	75 "
100	Coburg ...	Victoria ...	" ...	" ...	Ireland ...	53 "
100	Melbourne, South ...	" ...	" ...	" ...	Scotland ...	60 "
100	Clermont ...	Queensland ...	" ...	" ...	Ireland ...	57 "

11. **Length of Residence in the Commonwealth of Persons who Died in 1911.**—The length of residence in the Commonwealth of all persons whose deaths were registered in the year 1911 has been tabulated for all the States, and a summary of the results is shewn below :—

LENGTH OF RESIDENCE IN COMMONWEALTH OF PERSONS WHO DIED IN 1911.

Length of Residence.	Male Deaths.	Female Deaths.	Total Deaths.	Length of Residence.	Male Deaths.	Female Deaths.	Total Deaths.
Born in the C'wealth...	14,476	12,279	26,755	Resident 25 to 29 years	1,046	559	1,605
Resident under 1 year	293	101	394	" 30 to 34 "	991	464	1,455
" 1 year	94	33	127	" 35 to 39 "	652	359	1,011
" 2 years	107	38	145	" 40 to 44 "	829	466	1,295
" 3 "	74	30	104	" 45 to 49 "	1,107	734	1,841
" 4 "	47	22	69	" 50 to 54 "	1,616	1,271	2,887
" 5 "	42	21	63	" 55 to 59 "	1,720	1,527	3,247
" 6 "	35	15	50	" 60 to 64 "	775	717	1,492
" 7 "	32	15	47	" 65 yrs. & over	497	482	979
" 8 "	28	15	43	Length of residence not stated...	2,029	561	2,590
" 9 "	21	12	33				
" 10 to 14 years...	200	76	276				
" 15 to 19 "	241	102	343				
" 20 to 24 "	639	379	1,018	Total ...	27,591	20,278	47,869

12. Birthplaces of Persons who Died in 1911.—In the following table are shewn the birthplaces of persons whose deaths were registered in 1911 :—

BIRTHPLACES OF PERSONS WHO DIED IN 1911.

COMMONWEALTH.

Birthplaces.	Males.	Females.	Total.	Birthplaces.	Males.	Females.	Total.
AUSTRALASIA—				Java	9	1	10
Commonwealth of				Philippine Islands	13	...	13
Australia—				Syria	7	2	9
New South Wales ...	5,541	4,653	10,194	Other Asiatic	18	...	18
Victoria	4,480	3,789	8,269	Countries ...			
Queensland	1,508	1,298	2,806	AFRICA—			
South Australia ...	1,379	1,232	2,611	Cape of Good Hope	2	2	4
Western Australia...	640	479	1,119	Mauritius	10	5	15
Tasmania	925	825	1,750	S. Africa (undefined)	13	9	22
Northern Territory	3	3	6	Other African			
New Zealand	126	79	205	Brit. Possessions	4	2	6
EUROPE—				Egypt	2	1	3
England	5,486	3,469	8,955	AMERICA—			
Wales	153	72	225	Canada	73	15	88
Scotland	1,666	1,112	2,778	Jamaica	2	4	6
Ireland	2,837	2,528	5,365	Newfoundland ...	1	1	2
Isle of Man	11	4	15	Other American			
Other European				Brit. Possessions	2	1	3
Brit'h Possessions	29	22	51	Argentine Republic	1	...	1
Austria-Hungary ...	36	3	39	Brazil	1	1	2
Belgium	10	...	10	United States of			
Denmark	103	25	128	America	72	18	90
France	73	18	91	Other American			
Germany	597	274	871	Countries	33	11	44
Greece	19	2	21	POLYNESIA—			
Italy	81	9	90	Fiji	2	1	3
Netherlands	9	2	11	Friendly Islands ...	...	1	1
Norway	72	5	77	Papua	42	2	44
Portugal	11	1	12	Other Polynesian			
Russia	70	6	76	Brit. Possessions	3	...	3
Spain	10	2	12	New Caledonia ...	3	3	6
Sweden	98	12	110	New Hebrides ...	10	1	11
Switzerland	44	15	59	Other Polynesian			
Other European				Islands	2	2	4
Countries	3	1	4	South Sea Islands			
ASIA—				(so described) ...	29	4	33
British India	79	25	104	At Sea	44	39	83
Ceylon	4	...	4	Not stated...	648	179	827
Hong Kong	2	...	2	Total Deaths ...	27,591	20,278	47,869
Straits Settlements	10	3	13				
Other Asiatic British							
Possessions	7	...	7				
China	353	3	356				
Japan	70	2	72				

13. Occupations of Male Persons who Died in 1911.—Information as to the occupations of the 27,591 males who died in the Commonwealth in 1911, is contained in the following statement:—

OCCUPATIONS OF DECEASED MALES, 1911.

COMMONWEALTH.

Occupation.	No. of Deaths.	Occupation.	No. of Deaths.
CLASS I.—PROFESSIONAL.			
General Government	103	Groceries, drinks, narcotics, and stimulants	137
Local Government	25	Living animals... ..	30
Defence	66	Manures	1
Law and order	171	Leather, hides, etc.	3
Religion	88	Wool and tallow	10
Charity	2	Hay, corn, etc.	29
Health	172	Timber	20
Literature	39	Wood and coal... ..	25
Science	14	Glass and earthenware	5
Civil and mechanical engineering, architecture and surveying	97	Gold, silver, and precious stones	7
Education	108	Ironmongery	27
Fine arts	31	Merchants	73
Music	29	Shopkeepers and assistants	190
Amusements	83	Dealers and hawkers	102
		Agents and brokers	97
		Clerks, bookkeepers, etc.	488
		Commercial travellers and salesmen	149
		Others engaged in commercial pursuits	102
Total Professional	1,028	Speculators on chance events	7
		Storage	3
		Total Commercial	2,120
CLASS II.—DOMESTIC.		CLASS IV.—TRANSPORT AND COMMUNICATION.	
Hotelkeepers and assistants	258	Railway traffic	361
Others engaged in providing board and lodging... ..	59	Tramway traffic	53
House servants	148	Road traffic	494
Coachmen and grooms	93	Sea and river traffic	600
Hairdressers	70	Postal service	73
Laundrymen	11	Telegraph and telephone service	22
Others engaged in domestic occupations	118	Messengers, etc.	11
Total Domestic	757	Total Transport & Communication	1,764
CLASS III.—COMMERCIAL.		CLASS V.—INDUSTRIAL.	
Banking and finance	65	Books and publications	118
Insurance and valuation	56	Musical instruments	9
Land and household property	42	Prints, pictures, and art materials	11
Property rights	1	Ornaments and small wares	14
Books, publications and advertising	28	Medals	8
Musical instruments	2	Watches and clocks	31
Ornaments and small wares	4	Surgical instruments	1
Machines, tools, and implements	4	Arms and ammunition	4
Harness and saddlery	1	Engines, machines, tools, etc.	134
Ships and boats	2	Carriages and vehicles	126
Building materials	3	Harness, saddlery, and leatherware	86
Furniture	7	Ships, boats, and equipment	47
Chemicals	2	Furniture	100
Paper and stationery	7	Building material	82
Textile fabrics	100	Chemicals	2
Dress	12		
Animal food	212		
Vegetable food	67		

OCCUPATIONS OF DECEASED MALES, 1911—Continued.

Occupation.	No. of Deaths.	Occupation.	No. of Deaths
INDUSTRIAL—Continued.		CLASS VI.—AGRICULTURAL, PASTORAL, MINING PURSUITS, ETC.	
Textile fabrics	22	Agricultural	2,724
Dress	369	Pastoral	696
Fibrous materials	14	Dairying	67
Animal food	17	Fisheries, capture or destruction of wild animals, or acquisition of products yielded thereby ...	218
Vegetable food	170	Forestry	71
Groceries, drinks, narcotics, and stimulants	60	Water conservation and supply ...	15
Wool-scouring, soap, and candles	68	Mines and quarries	1,796
Workers in wood not elsewhere classed	14		
Fodder	1	Total Primary Producers	5,587
Paper	1		
Stone, clay, glass	53	CLASS VII.—INDEFINITE.	
Jewellery and precious stones ...	20	Independent means, etc.	1,163
Metals, other than gold and silver	344	Undefined or unknown	486
Gas, electric lighting	35		
Buildings—		Total Indefinite	1,649
Builders	89	CLASS VIII.—DEPENDENTS.	
Stonemasons... ..	97	Dependent relatives (including persons under 20 years of age with no specified occupation) ...	7,193
Bricklayers	86	Dependent upon the State or upon public or private support ...	264
Slaters	2		
Carpenters	446	Total Dependents	7,457
Plasterers	49		
Painters and glaziers	171		
Plumbers	76		
Signwriters	6		
Others	1		
Roads, railways, and earthworks...	54		
Disposal of the dead	12		
Disposal of refuse	32		
Other industrial workers—			
Manufacturers	28		
Engineers, firemen	330		
Contractors	133		
Labourers, undefined	3,789		
Others	17		
Total Industrial	7,379	Total Male Deaths	27,591

14. **Index of Mortality.**—The death rates, those for age-groups on pages 211 and 216 excepted, so far shewn are crude rates, *i.e.*, they simply shew the number of deaths per thousand of mean population, without taking the age constitution of that population into consideration. It is, however, a well-known fact that the death rate and age constitution of a people are intimately related, thus, other conditions being equal, the death rate of a country will be lower if it contain a large percentage of young people (not infants). In order to have a comparison of the mortality of various countries on a uniform basis, so far as age constitution is concerned, the International Statistical Institute in its 1895 session recommended the universal adoption of the population of Sweden in five age-groups, as ascertained at the Census of 1890, as the standard population by which this "Index of Mortality," as distinguished from the crude death rate, should be ascertained. The calculation for 1911 is shewn below for each of the States and Territories and for the Commonwealth, the distribution of the mean population of 1911 into age-groups being in accordance with the distribution as found at the Census of 1911:—

INDEX OF MORTALITY, 1911.—(STATES AND COMMONWEALTH.)

Age-Group.	Mean Population, 1911, distributed according to Results of Census of 1911.	Number of Deaths, 1911.	No. of Deaths per 1000 of Mean Population, 1911, in each Age-Group.	Age Distribution per 1000 of Standard Population.	Index of Mortality.
NEW SOUTH WALES.					
Under 1 year	45,008	3,303	73.39	25.5	1.87
1 year and under 20	649,294	1,914	2.95	398.0	1.17
20 years " 40	555,367	2,339	4.21	269.6	1.14
40 " " 60	300,022	3,363	11.21	192.3	2.16
60 " and upwards	103,566	6,227	60.13	114.6	6.89
Total	1,653,257	17,146	10.37	1,000.0	13.23
VICTORIA.					
Under 1 year	31,177	2,269	72.78	25.5	1.86
1 year and under 20	510,509	1,501	2.94	398.0	1.17
20 years " 40	421,230	1,890	4.49	269.6	1.21
40 " " 60	269,920	2,859	10.59	192.3	2.04
60 " and upwards	96,481	6,697	69.41	114.6	7.95
Total	1,329,317	15,216	11.45	1,000.0	14.23
QUEENSLAND.					
Under 1 year	16,378	1,111	67.83	25.5	1.73
1 year and under 20	251,158	892	3.55	398.0	1.41
20 years " 40	201,679	1,102	5.46	269.6	1.47
40 " " 60	109,593	1,452	13.25	192.3	2.55
60 " and upwards	35,544	1,988	55.93	114.6	6.41
Total	614,352	6,544	10.65	1,000.0	13.57
SOUTH AUSTRALIA.					
Under 1 year	10,557	670	63.47	25.5	1.62
1 year and under 20	160,304	400	2.50	398.0	0.99
20 years " 40	136,363	602	4.41	269.6	1.19
40 " " 60	75,217	731	9.72	192.3	1.87
60 " and upwards	28,777	1,635	56.82	114.6	6.51
Total	411,218	4,038	9.82	1,000.0	12.18
WESTERN AUSTRALIA.					
Under 1 year	7,578	615	81.16	25.5	2.07
1 year and under 20	105,052	401	3.82	398.0	1.52
20 years " 40	104,963	583	5.55	269.6	1.50
40 " " 60	57,762	728	12.60	192.3	2.42
60 " and upwards	11,542	596	52.04	114.6	5.96
Total	286,807	2,923	10.19	1,000.0	13.47
TASMANIA.					
Under 1 year	5,290	399	75.43	25.5	1.92
1 year and under 20	80,935	237	2.93	398.0	1.17
20 years " 40	58,267	281	4.82	269.6	1.30
40 " " 60	33,987	298	8.77	192.3	1.69
60 " and upwards	11,837	712	60.15	114.6	6.89
Total	190,316	1,927	10.13	1,000.0	12.97
NORTHERN TERRITORY.					
Under 1 year	30	3	100.00	25.5	2.55
1 year and under 20	610	2	3.28	398.0	1.31
20 years " 40	885	6	6.78	269.6	1.83
40 " " 60	1,492	33	22.12	192.3	4.25
60 " and upwards	302	21	69.54	114.6	7.97
Total	3,319	65	19.58	1,000.0	17.91
FEDERAL CAPITAL TERRITORY.					
Under 1 year	41	1	24.39	25.5	0.62
1 year and under 20	730	3	4.11	398.0	1.64
20 years " 40	547	1	1.83	269.6	0.49
40 " " 60	331	2	6.04	192.3	1.16
60 " and upwards	131	3	22.90	114.6	2.62
Total	1,780	10	5.62	1,000.0	6.53

INDEX OF MORTALITY, 1911.—(STATES AND COMMONWEALTH)—Continued.

Age-Group.	Mean Population, 1911, distributed according to Results of Census of 1911.	Number of Deaths, 1911.	No. of Deaths per 1000 of Mean Population, 1911, in each Age-Group.	Age Distribution per 1000 of Standard Population.	Index of Mortality
COMMONWEALTH.					
Under 1 year	116,107	8,371	72.10	25.5	1.84
1 year and under 20	1,758,510	5,350	3.04	398.0	1.21
20 years " 40	1,479,497	6,804	4.60	269.6	1.24
40 " 60	848,204	9,465	11.16	192.3	2.15
60 " and upwards	288,048	17,879	62.07	114.6	7.11
Total	4,490,366	47,869	10.66	1,000.0	13.55

NOTE.—The small number of persons whose ages were not ascertained at the 1911 Census have been proportionately distributed among the various age-groups, and the same plan has been followed in regard to the 65 persons who died in 1911, and whose ages were not stated in the certificates of death.

It will be seen that Victoria has the highest index and crude rates, while South Australia has the lowest index and lowest crude rate. The range of the indexes is slightly larger than that of the crude death rates, thus, while the latter in 1911 rose from 9.82 per thousand in South Australia to 11.45 per thousand in Victoria, a range of 1.63 per thousand, the indexes varied from 12.18 per thousand in South Australia to 14.23 per thousand in Victoria, a range of 2.05 per thousand.

For purposes of comparison with previous years the index of mortality is shewn in the following table for each of the ten years 1902-1911 :—

INDEX OF MORTALITY, 1902-1911 (STATES AND TERRITORIES).

Year.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Northern Territory.	Federal Capital Territory.	Commonwealth.
1902	15.32	15.90	15.68	15.50	17.55	14.25	...	...	15.70
1903	14.89	15.38	15.72	13.99	16.11	14.73	...	...	15.21
1904	13.90	14.46	12.89	13.45	15.49	14.13	...	...	14.11
1905	13.23	14.80	13.72	13.49	14.17	12.95	...	...	13.94
1906	12.91	15.26	12.44	13.78	15.84	14.10	...	...	13.94
1907	13.66	14.55	13.52	13.12	14.94	14.10	...	...	13.97
1908	13.13	15.58	13.37	12.89	14.81	14.46	...	...	14.10
1909	12.61	14.11	12.57	12.27	13.91	12.32	...	...	13.15
1910	12.48	14.15	12.60	12.50	13.48	13.62	...	...	13.17
1911	13.23	14.23	13.57	12.18	13.47	12.97	* 17.91	† 6.53	13.55

* Included in South Australia prior to 1911.

† Part of New South Wales prior to 1911.

A comparison of the above figures with the crude death rates given on a previous page shews that while the crude rate was highest in Victoria eight times in 10 years and twice in Western Australia, the index was highest in Victoria five times and in Western Australia five times in the same period. South Australia had the lowest index four times, and Queensland and Tasmania each three times. The high index in Victoria is due to the large proportion of persons over 60 years of age, and in Western Australia to the heavy mortality in the early period of life.

15. **Causes of Death.**—(i.) *Changes in Classification from 1903 to 1906.* The causes of death were classified in all the States of the Commonwealth to the end of 1903 according to the system originally devised by Dr. William Farr, and modified in 1886 by Dr. William Ogle. A conference of the State Statisticians, held at Hobart in January, 1902, decided to substitute for that system the classification adopted since 1901 by the Registrar-General of England. While New South Wales, Queensland, and Tasmania remodelled their vital statistics on that plan, Victoria, South Australia, and Western Australia continued to tabulate according to the Farr-Ogle system, and a comparison of the causes of death in the six States during the years 1903, 1904, 1905, and 1906 is, therefore, a matter of extreme difficulty. The differences in tabulation will be seen in the following statement :—

TABULATION OF CAUSES OF DEATH.

State.	1902.	1903.	1904.	1905.	1906.	State.	1902.	1903.	1904.	1905.	1906
N.S.W. ...	Old	Old	Old	New	International	S. Australia	Old	Old	Old	Old	Old
Victoria ...	Old	Old	Old	Old	Old	W. Australia	Old	Old	Old	Old	Old
Queensland	Old	New	New	New	New	Tasmania ...	Old	New	New	New	New

Old = Farr-Ogle classification. New = New classification by Registrar-General of England.
International—See next paragraph

(ii.) *The Classification of the International Institute of Statistics.* At a conference held in Melbourne in November and December, 1906, the Commonwealth Statistician recommended the adoption of the classification of the International Institute of Statistics, generally known as the Bertillon Index, and after some discussion that recommendation was accepted, a course which has met with wide approval in medical circles. This index, as also the one now used by the Registrar-General of England, is based on the original Farr-Ogle classification, but approximates more closely to the present English system than to the older one. The chief advantage possessed by the international classification is that it presents a very extensive field for comparison, the countries which have adopted it representing a population which is probably not less than 200,000,000. Commencing with 1910, the statistics of the United Kingdom have also been compiled in accordance with this system. Provision is made for a decennial revision of the classification, as it has been recognised that finality is impossible in the present state of medical science. The committee charged with the first revision met in Paris in July, 1909, and, in accordance with a resolution of the Australasian Medical Congress, held in Melbourne in October, 1908, a number of recommendations were made to it, dealing particularly with tropical diseases occurring in the northern parts of Australia. Most of these recommendations, together with many others, have been adopted. The number of categories is the same as in the 1900 nomenclature, but these have been subdivided into 189 causes instead of 179, the ten-additional causes being obtained by shewing deaths from violence in greater detail than formerly.

The detailed classification groups causes of death under 179 (increased to 189 by the revised classification) different headings, in fourteen categories, as follows:—

- | | |
|-----------------------------------------------------------------|-------------------------------------------------|
| i. General Diseases. | viii. Diseases of the Skin and Cellular Tissue. |
| ii. Diseases of the Nervous System and Organs of Special Sense. | ix. Diseases of the Organs of Locomotion. |
| iii. Diseases of the Circulatory System. | x. Malformations. |
| iv. Diseases of the Respiratory System. | xi. Infancy. |
| v. Diseases of the Digestive System. | xii. Old Age. |
| vi. Diseases of the Genito-urinary System and Adnexa. | xiii. Violence. |
| vii. Puerperal Condition. | xiv. Ill-defined Diseases. |

(iii.) *Compilation of Vital Statistics for 1907, 1908, 1909, 1910 and 1911 in Commonwealth Bureau.* The vital statistics of the Commonwealth for 1907, 1908, 1909, 1910 and 1911 have been tabulated according to this classification in the Commonwealth Bureau, and the system is being employed in the majority of the State offices in the preparation of their monthly and quarterly bulletins of vital statistics.

(iv.) *Classification of Causes of Death, 1907 to 1911, according to Abridged Bertillon Index.* An abridged classification, which enumerates thirty-five diseases and groups of diseases (increased to thirty-eight by the revised classification), is in use in many European and American States, while the Commonwealth Statistics for 1907, 1908, and 1909 have been compiled on the detailed classification of 179 headings and 1910 and 1911 for 189 headings. A table has been compiled shewing 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 1907, 1908, 1909, 1910 and 1911 will be found in full in "Bulletins Nos. 8, 14, 20, 25, and 29 of Population and Vital Statistics"; here it will suffice to give the abridged classification under thirty-eight headings for the year 1911:—

CAUSES OF DEATH—COMMONWEALTH, 1911.

(a) MALES.

Cause.	N.S.W.	Vic.	Q'land.	S.Aust.	W.Aus.	Tas.	Nor. Ter.	F. C. Ter.	C'wlth.
1 Typhoid Fever ...	103	55	61	16	60	13	1	...	309
2 Typhus ...	...	...	...	...	...	...	...	...	...
3 Malaria ...	1	...	9	...	3	...	3	...	16
4 Small-pox ...	...	...	...	...	...	...	...	...	...
5 Measles ...	28	39	17	8	13	5	...	...	110
6 Scarlet Fever ...	6	1	7	...	...	...	...	...	14
7 Whooping Cough ...	77	19	22	8	5	2	...	...	133
8 Diphtheria and Group ...	129	127	48	35	13	10	...	...	362
9 Influenza ...	84	70	38	5	20	11	...	...	228
10 Asiatic Cholera ...	...	...	...	...	...	...	...	...	...
11 Cholera Nostras ...	2	2	...	...	...	...	...	...	4
12 Other Epidemic Diseases	39	27	105	6	6	1	4	...	188
13 Tuberculosis of the Lungs	642	569	219	137	121	71	8	...	1,767
14 Tuberculosis of the Men- inges ...	42	45	14	18	8	7	...	...	134
15 Other forms of Tubercu- losis ...	51	55	16	14	9	9	...	...	154
16 Cancer and other Malig- nant Tumours ...	660	532	238	147	107	75	1	1	1,761
17 Simple Meningitis ...	128	114	48	38	26	20	...	...	374
18 Congestion, Hæmorrhage and Softening of Brain	393	374	151	105	63	35	...	1	1,122
19 Organic Diseases of the Heart ...	968	906	422	219	147	100	1	...	2,763
20 Acute Bronchitis ...	129	76	25	29	10	7	...	...	276
21 Chronic Bronchitis ...	216	218	64	51	14	14	...	...	577
22 Pneumonia ...	365	380	146	82	123	47	1	...	1,144
23 Other Diseases of the Res- piratory System (Tuber- culosis excepted) ...	369	463	164	57	73	44	1	...	1,171
24 Diseases of the Stomach (Cancer excepted) ...	63	56	31	9	8	7	...	...	174
25 Diarrhoea & Enteritis (chil- dren under 2 years only)	542	374	196	77	149	50	...	...	1,388
26 Appendicitis and Typhlitis	65	57	22	15	11	9	...	...	179
27 Hernia, Intestinal Ob- structions ...	85	76	30	16	19	8	...	...	234
28 Cirrhosis of the Liver ...	87	76	45	14	17	4	...	...	243
29 Nephritis and Bright's Disease ...	433	402	172	93	64	31	2	...	1,197
30 Non-cancerous Tumours and other Diseases of Female Genital Organs	...	...	...	...	...	...	...	...	...
31 Puerperal Septicæmia (Puerperal Fever, Puer- peral Peritonitis, Puer- peral Phlebitis) ...	...	...	...	...	...	...	...	...	...
32 Other Puerperal Accidents of Pregnancy and Con- finement ...	...	...	...	...	...	...	...	...	...
33 Congenital Debility and Malformations ...	696	499	208	142	134	87	1	1	1,768
34 Senile Debility ...	806	781	203	205	88	134	7	1	2,225
35 Violence ...	848	503	486	190	221	63	11	1	2,323
36 Suicide ...	152	118	80	32	53	10	1	...	446
37 Other Diseases ...	1,654	1,278	745	368	305	148	10	...	4,508
38 Unspecified or Ill-defined Diseases ...	110	63	28	43	33	15	7	...	299
Total—Males ...	9,973	8,355	4,060	2,179	1,923	1,037	59	5	27,591

CAUSES OF DEATH—COMMONWEALTH, 1911.

(b) FEMALES.

Cause.	N.S.W.	Vic.	Q'land.	S. A.	W.A.	Tas.	N. T.	F.C. Ter.	C'wlth.
1 Typhoid Fever ...	76	39	28	7	22	7	...	...	179
2 Typhus ...	...	...	...	...	...	...	...	...	...
3 Malaria ...	1	...	1	...	1	...	...	...	3
4 Small-pox ...	1	...	...	...	...	...	...	...	1
5 Measles ...	22	33	19	8	7	7	...	...	96
6 Scarlet Fever ...	4	2	4	...	...	...	...	...	10
7 Whooping Cough...	78	21	29	16	7	7	...	...	158
8 Diphtheria and Croup	116	112	44	29	23	10	...	...	334
9 Influenza ...	79	76	33	11	11	7	...	2	219
10 Asiatic Cholera ...	...	...	...	...	...	...	...	...	...
11 Cholera Nostras ...	1	1	...	...	...	...	...	...	2
12 Other Epidemic Diseases ...	22	21	47	6	9	2	...	...	107
13 Tuberculosis of the Lungs...	459	527	135	155	64	56	...	1	1,397
14 Tuberculosis of the Meninges	29	56	8	14	14	14	...	...	135
15 Other forms of Tuberculosis	41	59	18	16	9	6	...	...	149
16 Cancer and other Malignant Tumours ...	562	562	156	154	70	56	...	...	1,560
17 Simple Meningitis ...	98	76	33	30	12	13	...	...	262
18 Congestion, Hæmorrhage, & Softening of the Brain ...	368	402	101	104	30	50	...	1	1,056
19 Organic Diseases of the Heart	698	801	247	211	77	98	1	...	2,133
20 Acute Bronchitis ...	94	77	30	20	6	12	...	...	239
21 Chronic Bronchitis ...	161	166	62	54	16	10	...	...	469
22 Pneumonia ...	234	261	85	56	45	44	...	...	725
23 Other Diseases of the Res- piratory System (Tuber- culosis excepted) ...	271	255	62	54	29	30	...	...	701
24 Diseases of the Stomach (Cancer excepted) ...	73	64	28	11	13	7	...	...	196
25 Diarrhœa and Enteritis (children under 2 yrs only)	403	290	161	72	100	48	...	...	1,074
26 Appendicitis and Typhlitis...	53	46	15	15	7	5	...	...	141
27 Hernia, Intestinal Obstruc- tions...	81	66	23	11	17	7	...	...	205
28 Cirrhosis of the Liver ...	45	60	22	9	4	2	...	...	142
29 Nephritis & Bright's Disease	257	294	108	50	25	20	...	...	754
30 Non-cancerous Tumours and other Diseases of the Female Genital Organs	45	37	15	11	6	6	...	...	120
31 Puerperal Septicæmia (Puer- peral Fever, Puerperal Peritonitis, Puerperal Phlebitis) ...	90	53	30	21	9	5	1	...	209
32 Other Puerperal Accidents of Pregnancy & Confinement	157	97	68	43	21	20	...	...	406
33 Congenital Debility and Mal- formations ...	557	368	165	129	95	59	1	...	1,374
34 Senile Debility ...	549	626	102	214	40	93	...	...	1,624
35 Violence...	248	186	127	50	43	41	...	...	695
36 Suicide ...	40	35	14	2	5	2	...	...	98
37 Other Diseases ...	1,092	1,035	462	269	156	138	1	1	3,144
38 Unspecified or Ill-defined Diseases ...	68	57	2	17	7	8	2	...	161
Total—Females ...	7,173	6,861	2,484	1,859	1,000	890	6	5	20,278

CAUSES OF DEATH—COMMONWEALTH, 1911.

(c) TOTAL, MALES AND FEMALES.

Cause.	N.S.W.	Vic.	Qld.	S. A.	W.A.	Tas.	N. Ter.	Fed. Cap. Ter.	Commonwealth
1 Typhoid Fever ...	179	94	89	23	82	20	1	...	488
2 Typhus ...	...	...	...	...	...	...	...	...	...
3 Malaria ...	2	...	10	...	4	...	3	...	19
4 Small-pox ...	1	...	...	...	...	...	...	...	1
5 Measles ...	50	72	36	16	20	12	...	...	206
6 Scarlet Fever ...	10	3	11	...	...	...	...	...	24
7 Whooping Cough ...	155	40	51	24	12	9	...	...	291
8 Diphtheria and Croup ...	245	239	92	64	36	20	...	...	696
9 Influenza ...	163	146	71	16	31	18	...	2	447
10 Asiatic Cholera ...	...	...	...	...	...	...	...	...	...
11 Cholera Nostras ...	3	3	...	...	...	...	...	...	6
12 Other Epidemic Diseases ...	61	48	152	12	15	3	4	...	295
13 Tuberculosis of the Lungs ...	1,101	1,096	354	292	185	127	8	1	3,164
14 Tuberculosis of the Meninges ...	71	101	22	32	22	21	...	...	269
15 Other forms of Tuberculosis ...	92	114	34	30	18	15	...	...	303
16 Cancer and other Malignant Tumours ...	1,222	1,094	394	301	177	131	1	1	3,321
17 Simple Meningitis ...	226	190	81	68	38	33	...	...	636
18 Congestion, Hæmorrhage, & Softening of the Brain ...	761	776	252	209	93	95	...	2	2,178
19 Organic Diseases of Heart ...	1,666	1,707	669	430	224	198	2	...	4,896
20 Acute Bronchitis ...	223	153	55	49	16	19	...	...	515
21 Chronic Bronchitis ...	377	384	126	105	30	24	...	...	1,046
22 Pneumonia ...	599	641	231	138	168	91	1	...	1,869
23 Other Diseases of the Respiratory System (Phthisis excepted) ...	640	718	226	111	102	74	1	...	1,872
24 Diseases of the Stomach (Cancer excepted) ...	136	120	59	20	21	14	...	...	370
25 Diarrhœa and Enteritis (children under 2 yrs. only) ...	945	664	357	149	249	98	...	...	2,462
26 Appendicitis and Typhlitis ...	118	103	37	30	18	14	...	...	320
27 Hernia, Intestinal Obstructions ...	166	142	53	27	36	15	...	...	439
28 Cirrhosis of the Liver ...	132	136	67	23	21	6	...	...	385
29 Nephritis & Bright's Disease ...	690	696	280	143	89	51	2	...	1,951
30 Non-cancerous Tumours & other Diseases of the Female Genital Organs ...	45	37	15	11	6	6	...	...	120
31 Puerperal Septicæmia (Puerperal Fever, Puerperal Peritonitis, Puerperal Phlebitis) ...	90	53	30	21	9	5	1	...	209
32 Other Puerperal Accidents of Pregnancy and Confinement ...	157	97	68	43	21	20	...	...	406
33 Congenital Debility and Malformations ...	1,253	867	373	271	229	146	2	1	3,142
34 Senile Debility ...	1,355	1,407	305	419	128	227	7	1	3,849
35 Violence ...	1,096	689	613	240	264	104	11	1	3,018
36 Suicide ...	192	153	94	34	58	12	1	...	544
37 Other Diseases ...	2,746	2,313	1,207	627	461	286	11	1	7,652
38 Unspecified or Ill-defined Diseases ...	178	120	30	60	40	23	9	...	460
Total—Males and Females	17,146	15,216	6,544	4,038	2,923	1,927	65	10	47,869

(d) The classification for the years 1907, 1908, 1909, and 1910 is shown for the Commonwealth in the following table, and for purposes of comparison the figures for

the year 1911 have been repeated from the preceding table. Male and female deaths for 1905, 1906, and 1907 are shewn separately on page 237 of the second issue, those for 1908 on pages 211 and 212 of the third issue, for 1909 on pages 200 and 201 of the fourth issue, and for 1910 on pages 202 and 203 of the fifth issue of this Year Book; while the figures for 1911 are given on the two preceding pages.

The figures for 1907, 1908, and 1909, which were compiled under thirty-five headings, have here been distributed among the corresponding headings of the revised classification.

CAUSES OF DEATH—COMMONWEALTH, 1907 to 1911.

MALES AND FEMALES.

Cause.	1907.	1908.	1909.	1910.	1911.
1 Typhoid Fever	564	736	661	648	488
2 Typhus ... ..	...	...	...	...	...
3 Malaria	42	52	59	55	19
4 Small-pox ... ..	...	...	1	4	1
5 Measles	147	125	31	124	206
6 Scarlet Fever	37	63	74	58	24
7 Whooping Cough	1,070	249	257	476	291
8 Diphtheria and Croup	403	421	435	555	696
9 Influenza... ..	902	588	326	324	447
10 Asiatic Cholera ... ..	...	...	...	...	...
11 Cholera Nostras	5	4	1	1	6
12 Other Epidemic Diseases	276	268	221	184	295
13 Tuberculosis of the Lungs	3,206	3,409	3,169	3,059	3,164
14 Tuberculosis of the Meninges	237	205	220	215	269
15 Other forms of Tuberculosis	415	352	332	343	303
16 Cancer and other Malignant Tumours	2,940	2,921	3,112	3,205	3,321
17 Simple Meningitis... ..	648	676	616	567	636
18 Congestion, Hæmorrhage, and Softening of the Brain	1,901	1,867	1,665	1,704	2,178
19 Organic Diseases of the Heart	3,801	4,066	3,940	4,378	4,896
20 Acute Bronchitis	514	412	422	420	515
21 Chronic Bronchitis	844	818	897	859	1,046
22 Pneumonia	1,788	1,871	1,752	1,612	1,869
23 Other Diseases of the Respiratory System (Tuberculosis excepted)	1,689	1,569	1,565	1,544	1,872
24 Diseases of the Stomach (Cancer excepted)	334	308	272	297	370
25 Diarrhœa and Enteritis (Children under two years only)	2,733	3,236	2,803	3,145	2,462
26 Appendicitis and Typhlitis	305	293	344	315	320
27 Hernia, Intestinal Obstructions	411	389	396	398	439
28 Cirrhosis of the Liver	325	362	331	363	385
29 Nephritis and Bright's Disease	1,760	1,864	1,799	1,771	1,951
30 Non-cancerous Tumours and other Diseases of the Female Genital Organs	128	159	130	149	120
31 Puerperal Septicæmia (Puerperal Fever, Puerperal Peritonitis, Puerperal Phlebitis)	179	202	201	218	209
32 Other Puerperal Accidents of Pregnancy and Confinement	435	404	376	373	406
33 Congenital Debility and Malformations	3,038	2,973	2,905	3,221	3,142
34 Senile Debility	3,136	3,466	3,194	3,353	3,849
35 Violence	2,679	2,922	2,664	2,738	3,018
36 Suicide	461	497	495	516	544
37 Other Diseases	6,677	7,417	7,419	7,795	7,652
38 Unspecified or Ill-defined Diseases	1,275	1,262	1,087	598	460
Total	45,305	46,426	44,172	45,590	47,869

16. Certification of Deaths.—Information was obtained in 1911 as to the persons by whom the 47,869 deaths which occurred in the Commonwealth were certified. The result of the enquiry shews that approximately 88.2 per cent. (in 1910, 88.1 per cent.) were certified by medical practitioners, and 10.9 per cent. (in 1910, 11.1 per cent.) by coroners after inquests, or magisterial enquiries, while in 0.9 per cent. (in 1910, 0.8 per cent.) of the cases there was either no certificate given, or particulars were not forthcoming. The results are shewn in detail in Bulletin No. 29; a short summary will therefore suffice here :—

CERTIFICATION OF DEATHS, COMMONWEALTH, 1911.

Death Certified by—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	F.C. T.	C'wth.
Medical practitioner	15,005	13,318	5,897	3,642	2,518	1,804	20	9	42,213
Coroner	2,090	1,893	316	383	365	114	41	1	5,203
Not certified or not stated	51	5	331	13	40	9	4	...	453
Total Deaths ...	17,146	15,216	6,544	4,038	2,923	1,927	65	10	47,869

Of the cases certified by coroners, violent deaths numbered 2475, ill-defined causes 255, organic heart disease 437, senile decay 476, congenital debility 188, diarrhoea and enteritis 97, Bright's disease 77, congestion and hæmorrhage of brain 141, tuberculosis of lungs 87, pneumonia 123, infantile convulsions 58, broncho-pneumonia 59, diseases of arteries, aneurisms, etc. 43, and acute and chronic alcoholism 27; a total of 4543 out of 5203.

Of uncertified causes of death, violent deaths numbered 206, senile debility 49, ill-defined causes 22, infantile convulsions 27, congenital debility 31, diarrhoea and enteritis 9, tuberculosis of the lungs 7, organic heart disease 8, and pneumonia 9; a total of 368 out of 453.

17. Deaths from Special Causes.—The table on p. 227 furnishes comparisons for the last five years only, and comparisons will, therefore, be restricted to that period.

(i.) *Typhoid Fever.* Deaths from typhoid fever were more numerous in 1908 than in 1907, numbering 736, against 564 in 1907. In 1909 the number fell to 661, to 648 in 1910, while only 488 deaths in 1911 were due to typhoid fever, of which 179 occurred in New South Wales, 94 in Victoria, 89 in Queensland, 23 in South Australia, 82 in Western Australia, and 20 in Tasmania, and 1 in the Northern Territory.

(ii.) *Typhus.* The death of one woman was registered in 1906 in Victoria as being due to typhus, but this registration may have been due to an error in the death certificate, and the death may possibly have been one of typhoid (enteric) fever.

(iii.) *Malaria.* Deaths from malarial diseases are practically confined to the tropical districts of Northern Queensland and Western Australia, and to the Northern Territory, 10 out of 19 deaths registered in 1911 having occurred in Queensland, and 3 in the Northern Territory.

(iv.) *Small-pox.* No deaths from small-pox occurred during the two years 1907 and 1908, but in 1909 one death was registered in Western Australia. In 1910 one death was registered in New South Wales, and three in Victoria. In 1911, only one death occurred in New South Wales.

(v.) *Measles.* No serious epidemic of measles has occurred for several years; the deaths in 1908 were less numerous than in 1907, numbering 125, against 147. In 1909 the deaths numbered 31, while 124 were registered in 1910, and 206 in 1911.

(vi.) *Scarlet Fever*. 24 deaths were registered in 1911, 10 of which occurred in New South Wales, and 11 in Queensland.

(vii.) *Whooping Cough*. A rather severe epidemic of whooping cough visited New South Wales in the early part of 1907, causing 592 deaths out of a total of 1070 registered in the Commonwealth. The deaths in 1908 fell to 249, with a slight increase to 257 in 1909, and a much greater increase to 476 in 1910. During 1911, however, only 291 deaths were registered.

(viii.) *Diphtheria and Croup*. Deaths in 1907, 403; in 1908, 421; in 1909, 435, in 1910, 555, and in 1911, 696, of which 245 occurred in New South Wales, 239 in Victoria, 92 in Queensland, and 64 in South Australia.

(ix.) *Influenza*. This disease was rather more prevalent in 1907 than in the two previous years, the deaths numbering 902, against 428 and 539. The deaths in 1908 were 588, in 1909, 326; 324 in 1910, and in 1911 447, of which 163 occurred in New South Wales, 146 in Victoria, and 71 in Queensland.

(x.) *Asiatic Cholera*. No cases of Asiatic cholera have ever occurred in the Commonwealth.

(xi.) *Cholera Nostras*. Isolated cases only of choleric form diarrhoea occurred in each of the four years. Six deaths from this cause occurred during 1911.

(xii.) *Other Epidemic Diseases*. The number of deaths registered under this heading was 276 in 1907, 268 in 1908, 221 in 1909, 184 in 1910, and 295 in 1911. The list in 1911 includes the following diseases:—Dysentery 121, erysipelas 68, leprosy 8, of which 7 occurred in Queensland, other epidemic diseases, 98. Prior to 1910 beri beri was included in other epidemic diseases, but is now included in No. 37 of the revised classification. Of the 54 deaths from leprosy in the years 1907 to 1911, 40 occurred in Queensland. There were no deaths from plague in the Commonwealth during 1910 and 1911. In 1907, 48 deaths were registered; in 1908, 14 deaths; and in 1909, 13 deaths.

(xiii.) *Tuberculosis of the Lungs*. The deaths in 1911 numbered 3164, viz., 1767 males and 1396 females. The figures for 1907, 1908, 1909, and 1910 were 3206, 3409, 3169, and 3059 respectively. Of the deaths in 1911, 1101 occurred in New South Wales, 1097 in Victoria, 354 in Queensland, 292 in South Australia, 185 in Western Australia, 127 in Tasmania, 8 in Northern Territory, and 1 in the Federal Capital Territory. In accordance with the revised classification, deaths from tuberculosis of the larynx are now included with Tuberculosis of the lungs, instead of in class 15 as in years prior to 1910. In the table on page 227, deaths from Tuberculosis of the larynx have been included with tuberculosis of the lungs, so that the figures allow of correct comparison.

(xiiiia.) *Tuberculosis of the Respiratory System*. Of the various forms of tuberculosis prevalent in the Commonwealth, that which has probably attracted the most attention and has been the subject of the widest comment is phthisis, or tuberculosis of the lungs. The intimate relation, however, between tuberculosis of the lungs and that 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 various investigations concerning the age incidence and duration of this disease.

In the matter of the age incidence of death from tuberculosis of the respiratory system, diagrams were given in Year Books 2, 3, and 4, pp. 239, 217, and 206 respectively, shewing the frequency of deaths at successive ages in England and Wales during 1906 (Fig. 1), and in the Commonwealth during 1907 (Fig. 2). These were superseded by a fuller reference based on later results in Year Book No. 5, pp. 230, etc. The results given depended upon intercensal estimates of population, and these having now been adjusted to agree with the Census of 3rd April, 1911, some slight amendments of the figures in previous issues were made in Year Book No. 5.

The figures dealt with furnish the following death-rates from tuberculosis of the respiratory system for the years specified :—

Particulars.	Males.	Females.	Total.
ENGLAND AND WALES, 1906—			
Population	16,689,707	17,857,309	34,547,016*
Deaths from tuberculosis of the respiratory system	22,645	17,101	39,746
Death-rate per 100,000 of population ...	135.68	95.76	115.05
COMMONWEALTH OF AUSTRALIA, 1907—			
Population	2,141,727	1,982,002	4,123,729
Deaths from tuberculosis of the respiratory system	1,891	1,477	3,368
Death-rate per 100,000 of population ...	88.29	74.52	81.67

* Not corrected to Census.

(xiv.) *Tuberculosis of the Meninges.* The number of deaths registered in 1907 was 237; in 1908, 205; in 1909, 220; in 1910, 215; and in 1911, 269.

(xv.) *Other Forms of Tuberculosis.* Deaths numbered in 1907, 415; in 1908, 352; in 1909, 332; in 1910, 343; and in 1911, 303. The deaths in 1911 include the following forms of tuberculosis:—Abdominal tuberculosis, 133; Pott's disease, 47; white swellings, 10; tuberculosis of other organs, 47; and disseminated tuberculosis, 66. Tuberculosis of the larynx (see paragraph xiii.)

(xv.a) *All Forms of Tuberculosis.* A complete tabulation of all the different tubercular diseases from which deaths occurred in 1911, will be found in Bulletin No. 29 of Population and Vital Statistics. Here it will suffice to show a few of the features of the tabulation mentioned. The total number of deaths due to tubercular diseases was 3736, viz., 2055 males and 1681 females. The following table shews the ages of these 3736 persons :—

AGES OF PERSONS WHO DIED FROM TUBERCULAR DISEASES, 1911.

COMMONWEALTH.

Ages.	Male.	Female	Total.	Ages.	Male.	Female	Total.
Under 5 years ...	124	114	238	55 years and under 60	140	49	189
5 years and under 10	30	31	61	60 " " 65	89	43	132
10 " " 15	44	42	86	65 " " 70	64	37	101
15 " " 20	70	148	218	70 " " 75	42	19	61
20 " " 25	168	260	428	75 " " 80	15	6	21
25 " " 30	219	255	474	80 " " 85	7	6	13
30 " " 35	220	206	426	Age not stated ...	3	...	3
35 " " 40	187	176	363				
40 " " 45	246	140	386				
45 " " 50	223	100	323	Total Deaths ...	2,055	1,681	3,736
50 " " 55	164	49	213				

A tabulation has been made of the occupations of males dying from tubercular diseases during 1911. A summary is here given :—

OCCUPATION OF MALES WHO DIED FROM TUBERCULAR DISEASES, 1911.

COMMONWEALTH.

Occupation.	No. of Deaths	Occupation.	No. of Deaths
Professional class	112	Agricultural class	142
Domestic class	87	Pastoral class	35
Mercantile class	280	Working in mines and quarries ...	212
Engaged in transport and communication	160	Other primary producers	11
Manufacturing class	238	Independent means	31
Engaged in building and construction	94	Dependents	259
Indefinite industrial workers ...	363	Occupation not stated	31
		Total male deaths	2,055

The length of residence in the Commonwealth of persons who died from tubercular diseases has been tabulated for the year 1911 for all the Commonwealth States, with the following results :—

LENGTH OF RESIDENCE IN COMMONWEALTH

OF PERSONS WHO DIED FROM TUBERCULAR DISEASES, 1911.

Length of Residence in Commonwealth.	Male.	Fem.	Total.	Length of Residence in Commonwealth.	Mals.	Fem.	Total.
Born in Commonwealth ...	1,331	1,399	2,730	Resident 10 yrs. & under 15	25	13	38
Resident under 1 year ...	39	17	56	" 15 " " 20	30	10	40
" 1 year	19	7	26	" 20 " over ...	436	169	605
" 2 years	20	5	25	Length of resid'ce not stated	117	40	157
" 3 " 	6	3	9				
" 4 " 	9	4	13				
" 5 " & under 10	23	14	37	Total Deaths	2,055	1,681	3,736

There would not appear, therefore, to be much ground for the statement sometimes heard that many persons arrive in Australia in the last stages of consumption.

In order to shew the prevalence of tuberculosis in the several States, the death rates from tubercular diseases are shewn in the following table, together with the percentage which deaths from tuberculosis bear on the total number of deaths registered :—

DEATH RATES (a) FROM TUBERCULOSIS AND PERCENTAGE ON TOTAL DEATHS.

COMMONWEALTH, 1911.

State.	Death Rates (a) from Tuberculosis.			Percentage on Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	0.85	0.67	0.76	7.37	7.37	7.37
Victoria ...	1.01	0.97	0.99	8.01	9.36	8.62
Queensland ...	0.74	0.58	0.67	6.13	6.48	6.26
South Australia ...	0.81	0.91	0.86	7.75	9.95	8.77
Western Australia	0.84	0.71	0.78	7.18	8.70	7.70
Tasmania ...	0.90	0.82	0.86	8.39	8.54	8.46
North. Territory	2.93	...	2.41	13.56	...	12.31
Fd. Cap. Territory	...	1.31	0.56	...	20.00	10.00
Commonwealth	0.88	0.78	0.83	7.45	8.29	7.80

(a) Number of deaths from tuberculosis per 1000 of mean population.

It may be of interest to state that while deaths from all tubercular diseases in the Commonwealth were 0.83 per thousand in 1911, they were 1.02 per thousand in Ontario in 1910; 1.43 per thousand in England and Wales in 1910; 1.51 per thousand in Prussia in 1910; 2.88 per thousand in Austria in 1910; and 3.48 per thousand in Hungary in 1910. The Commonwealth occupies, therefore, a very enviable position in regard to tubercular diseases, when compared with European countries.

(xvi.) *Cancer and other Malignant Tumours.* Deaths from cancer shew a tendency to increase, the figures for 1907 being 2940 deaths; for 1908, 2921 deaths; for 1909, 3112 deaths; and 1910, 3205 deaths; and in 1911, 3321 deaths. Of the deaths registered in 1911, 1761 were those of males, viz., 660 in New South Wales, 532 in Victoria, 238 in Queensland, 147 in South Australia, 107 in Western Australia, and 75 in Tasmania; while 1560 were those of females; viz., 562 in New South Wales, 562 in Victoria, 156 in Queensland, 154 in South Australia, 70 in Western Australia, and 56 in Tasmania. Bulletin No. 29 contains a complete tabulation of the various types of cancer and of the seat of the disease, of which the following is a summary:—

DEATHS FROM CANCER, COMMONWEALTH, 1911.

Seat of Disease.	Male.	Female	Total.
Cancer, etc., of the buccal cavity	250	20	270
„ „ the stomach and liver	760	472	1,232
„ „ the peritoneum, the intestines, and the rectum	188	192	380
„ „ the female genital organs ... ..	...	323	323
„ „ the breast ... ..	...	225	225
„ „ the skin	74	39	113
„ „ other organs	489	289	778
Total Deaths	1,761	1,560	3,321

Of these deaths 1009 were described as cancer, 1413 as carcinoma, 144 as epithelioma, 401 as “malignant disease,” 53 as “malignant tumour,” 5 as neoplasm, 51 as “rodent ulcer,” 221 as sarcoma, and 24 as scirrhus.

The ages of the 3321 persons who died from cancer in 1911, are shewn in the following table, from which it will be seen that while the ages below 35 are not by any means 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.

AGES OF PERSONS WHO DIED FROM CANCER, 1911.

COMMONWEALTH.

Ages.	Males.	Female	Total.	Ages.	Males.	Female	Total.
Under 15 years ...	21	8	29	65 years and under 70	306	194	500
15 years and under 20	10	6	16	70 „ „ 75	203	160	363
20 „ „ 25	10	7	17	75 „ „ 80	150	136	286
25 „ „ 30	12	17	29	80 „ „ 85	83	67	150
30 „ „ 35	25	35	60	85 years and over ...	44	39	83
35 „ „ 40	29	59	88	Age not stated ...	1	...	1
40 „ „ 45	81	100	181				
45 „ „ 50	132	173	305				
50 „ „ 55	208	203	411	Total Deaths ...	1,761	1,560	3,321
55 „ „ 60	203	179	382				
60 „ „ 65	243	177	420				

A tabulation has been made of the occupations of the males who died from cancer, of which the following is a summary:—

OCCUPATION OF MALES WHO DIED FROM CANCER, 1911.

COMMONWEALTH.

Occupation.	No. of Deaths.	Occupation.	No. of Deaths.
Professional class	92	Pastoral class	73
Domestic class	62	Working in mines and quarries...	137
Mercantile class	179	Other primary producers	16
Engaged in transport and communication	121	Independent means	92
Manufacturing class	153	Dependents	49
Engaged in building and construction	109	Occupation not stated	32
Indefinite industrial workers	360		
Agricultural class	286	Total Male Deaths	1,761

As the following tables shew, the death rates from cancer are below those for tubercular diseases in all the States (with the exception, however, of the female death rates in New South Wales), but while the latter have a general tendency to decrease, the former have, on the contrary, shewn an increase in nearly every recent year.

DEATH RATES (a) FROM CANCER AND PERCENTAGE ON TOTAL DEATHS, 1911.

COMMONWEALTH.

State.	Death Rates (a) from Cancer.			Percentage on Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	0.77	0.71	0.74	6.62	7.83	7.13
Victoria	0.80	0.85	0.82	6.37	8.19	7.19
Queensland	0.71	0.56	0.64	5.86	6.28	6.02
South Australia	0.70	0.76	0.73	6.75	8.28	7.45
Western Australia	0.65	0.57	0.62	5.57	7.00	6.05
Tasmania	0.77	0.60	0.69	7.23	6.29	6.80
Northern Territory	0.37	...	0.30	1.70	...	1.54
Fed. Capital Territory	0.99	...	0.56	20.00	...	10.00
Commonwealth	0.75	0.72	0.74	6.38	7.69	6.93

a Number of deaths from Cancer per 1000 of mean population.

The following table shows the death rate of the Commonwealth in comparison with other countries:—

CANCER—DEATH RATE IN VARIOUS COUNTRIES.

Country.	Year.	Rate.	Country.	Year.	Rate.
Western Australia	1911	0.62	Belgium	1909	0.54
Queensland	1911	0.64	Ireland	1910	0.68
Tasmania	1911	0.69	Austria	1910	0.73
South Australia	1911	0.73	Prussia	1910	0.77
New South Wales	1911	0.74	New Zealand	1910	0.84
Commonwealth	1911	0.74	Netherlands	1910	0.93
Victoria	1911	0.82	Scotland	1909	1.00
Hungary	1910	0.45	Switzerland	1909	1.07
Spain	1910	0.45	England and Wales	1910	1.97
Italy	1909	0.53			

The fifth issue of this Year Book contains, on pages 230, etc., a paper dealing, *inter alia*, with the incidence of cancer in the Commonwealth. The paper is not reprinted in the present issue.

(xvii.) *Simple Meningitis*. The table shews 648 deaths in 1907, 676 deaths in 1908, 616 deaths in 1909, 567 in 1910, and 636 in 1911.

(xviii.) *Congestion, Hæmorrhage, and Softening of the Brain*. The deaths registered under this heading in 1907 were 1901, viz., 1038 males and 863 females; in 1908, 1867, viz., 991 males and 876 females; in 1909, 1665, viz., 869 males and 796 females; in 1910, 1704, viz., 864 males and 840 females; and in 1911, 2178, viz., 1122 males and 1056 females. The 1911 figures are made up of congestion and hæmorrhage of the brain—1048 males, 987 females, total 2035; and softening of the brain—74 males, 69 females, total 143.

(xix.) *Organic Diseases of the Heart*. The number of deaths registered in 1911 was 4896, viz., 2763 males and 2133 females. Of these deaths, New South Wales was responsible for 968 males and 698 females; Victoria for 906 males and 801 females; Queensland for 422 males and 247 females; South Australia for 219 males and 211 females; Western Australia for 147 males and 77 females; Tasmania for 100 males and 98 females; and Northern Territory 1 male and 1 female. To the figures for 1911 correspond the following death rates and percentages to total deaths:—

DEATH RATES (a) FROM ORGANIC HEART DISEASE AND PERCENTAGE ON TOTAL DEATHS, COMMONWEALTH, 1911.

State.	Death Rates (a) from Organic Heart Disease.			Percentage on Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	1.13	0.88	1.01	9.71	9.73	9.72
Victoria ...	1.36	1.20	1.28	10.84	11.67	11.22
Queensland ...	1.26	0.88	1.09	10.39	9.94	10.22
South Australia ...	1.05	1.04	1.04	10.05	11.35	10.65
Western Australia	0.90	0.63	0.78	7.64	7.70	7.66
Tasmania ...	1.03	1.05	1.04	9.64	11.01	10.27
Northern Territory	0.37	1.71	0.60	1.70	16.67	3.08
Federal Capital Territory ...	..	...	...	...	...	...
Commonwealth ...	1.18	0.99	1.09	10.01	10.52	10.23

a Number of deaths from Organic Heart Disease per 1000 of mean population.

(xx.) *Acute Bronchitis*. The classification of causes of deaths requires deaths of persons under five years of age, which are merely ascribed to "bronchitis," to be classified under "acute bronchitis," and similarly certified deaths of older persons under "chronic bronchitis." This rule has been followed throughout in compiling the tables for 1907, 1908, 1909, 1910, and 1911, with the result that acute bronchitis is credited with 514 deaths in 1907, 412 deaths in 1908, 422 deaths in 1909, and 420 in 1910, and 515 in 1911, viz., 276 males and 239 females.

(xxi.) *Chronic Bronchitis*. The adjustment mentioned in the preceding paragraph gives a total of 844 deaths in 1907, 818 deaths in 1908, 897 deaths in 1909, 859 in 1910, and 1046 in 1911, viz., 577 males and 469 females.

(xxii.) *Pneumonia*. The 1911 figures were 1144 males and 725 females, a total of 1869 deaths.

(xxiii.) *Other Diseases of the Respiratory System*. This head was established in 1910, the figures previously being included in "Other Diseases" (paragraph xxxvii.). Deaths in 1907 numbered 1689; in 1908, 1569; in 1909, 1565, in 1910, 1544, and in 1911, 1872. The total for 1911 is made up as follows, viz.:—Diseases of the nasal fossæ, 11 deaths; diseases of the larynx, 61 deaths; diseases of the thyroid body, 19 deaths; broncho-pneumonia, 958 deaths, pleurisy, 187 deaths; pulmonary congestion and apoplexy, 173 deaths; gangrene of the lung, 44 deaths; asthma, 162 deaths; pulmonary emphysema, 11 deaths; fibroid phthisis, miners' complaint, 163 deaths; other diseases of the respiratory system (tuberculosis excepted), 83 deaths.

(xxiv.) *Diseases of the Stomach (Cancer excepted)*. In 1911 this heading includes: Ulcer of the stomach, 58 males, 62 females; and other diseases of the stomach (cancer excepted), 116 males, 134 females; a total of 370 deaths. The corresponding figures for 1907, 1908, 1909, and 1910, were 334, 308, 272, and 297 respectively.

(xxv.) *Diarrhœa and Enteritis (Children under two years only)*. In 1907, deaths numbered 2733, viz., 1513 boys and 1220 girls; in 1908, 3236, viz., 1814 boys and 1422 girls; in 1909, 2803, viz., 1544 boys and 1259 girls; in 1910, 3145, viz., 1713 boys and 1432 girls; and in 1911, 2462, viz., 1388 boys and 1074 girls. The 1911 deaths were distributed amongst the six States as follows:—New South Wales, 542 males, 403 females, total 945; Victoria, 374 males, 290 females, total 664; Queensland, 196 males, 161 females, total 357; South Australia, 77 males, 72 females, total 149; Western Australia, 149 males, 100 females, total 249; and Tasmania, 50 males, 48 females, total 98.

The following are the death rates and percentages on total deaths due to infantile diarrhœa and enteritis in the States and Territories for the year 1911:—

DEATH RATES (a) FROM INFANTILE DIARRHŒA AND ENTERITIS, AND PERCENTAGE ON TOTAL DEATHS, COMMONWEALTH, 1911.

State.	Death Rate (a) from Infantile Diarrhœa and Enteritis.			Percentage on Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	0.63	0.51	0.57	5.43	5.62	5.51
Victoria ...	0.56	0.44	0.50	4.48	4.23	4.36
Queensland ...	0.59	0.58	0.58	4.83	6.48	5.46
South Australia ...	0.37	0.36	0.36	3.53	3.87	3.69
Western Australia	0.91	0.81	0.87	7.75	10.00	8.52
Tasmania ...	0.51	0.53	0.51	4.82	5.39	5.09
Northern Territory	...	...	...	...	...	...
Fed. Cap. Territory	...	...	...	...	...	...
Commonwealth	0.59	0.50	0.55	5.03	5.30	5.14

a Number of deaths from these diseases per 1000 of mean population.

As a large number of these deaths is directly due to improper feeding, it would be interesting to know the percentage of infants who were bottle-fed, but, unfortunately, no provision exists for the registration of this information. The number of deaths was larger than usual in 1908, particularly in Victoria, and to a lesser degree in South Australia and in Tasmania, owing to the phenomenal heat experienced in the early part of that year. The death rates for the three States named were 0.83, 0.61, and 0.71 per 1000 respectively in 1908, compared with 0.55, 0.45 and 0.48 in 1907, and with 0.50, 0.36 and 0.51 in 1911.

(xxvi.) *Appendicitis and Typhlitis*. Prior to 1910 deaths from these causes were included in Other Diseases, paragraph xxxvii. Deaths numbered 305 in 1907, 293 in 1908, 344 in 1909, 315 in 1910, and in 1911, 320, viz., 179 males and 141 females.

(xxvii.) *Hernia, Intestinal Obstructions*. The number of deaths has not varied much from year to year, the number registered in 1907 being 411; in 1908, 389; in 1909, 396; in 1910, 398, and in 1911, 439, viz., 234 males and 205 females.

(xxviii.) *Cirrhosis of the Liver*. The deaths in 1907 numbered 325; in 1908, 362; in 1909, 331; in 1910, 368, and in 1911, 385, viz., 243 males and 142 females.

(xxix.) *Nephritis and Bright's Disease*. The number of deaths attributable to these diseases from year to year is a very large one. In 1907 there were registered the deaths of 1065 males and 695 females; in 1908, those of 1140 males and 724 females; in 1909, those of 1076 males and 723 females; in 1910, 1771, 1077 males and 694 females, and in 1911, 1951, 1197 males and 754 females. Of the deaths registered in 1911, those of 92 males and 59 females were ascribed to acute nephritis, and those of 1105 males and 695 females to Bright's disease. New South Wales was responsible for 690 deaths; Victoria for 696; Queensland for 250; South Australia for 143; Western Australia for 89; Tasmania for 51, and Northern Territory for 2; making a total of 1951.

(xxx.) *Non-cancerous Tumours and other Diseases of the Female Genital Organs*. Deaths in 1907 numbered 128; in 1908, 159; in 1909, 130; in 1910, 149; and in 1911, 120. Included in the 129 deaths registered in 1911 were the following:—Non-puerperal uterine hæmorrhage, 6; non-cancerous uterine tumours, 32; other diseases of the uterus, 19; cysts and other ovarian tumours, 36; other diseases of the female genital organs, 27.

(xxxi.) *Puerperal Septicæmia (Puerperal Fever, Puerperal Peritonitis, Puerperal Phlebitis)*. Deaths in 1907 were 179; in 1908, 202; in 1909, 201; in 1910, 218; and in 1911, 209.

(xxxii.) *Other Puerperal Accidents of Pregnancy and Confinement*. The deaths in 1907 numbered 435; in 1908, 404; in 1909, 376; in 1910, 373; and in 1911, 406. Included in the 406 deaths registered in 1911 were the following:—Accidents of pregnancy, 117; puerperal hæmorrhage, 71; other accidents of childbirth, 40; puerperal albuminuria and convulsions, 116; puerperal phlegmasia alba dolens, embolus, sudden death, 34; death following childbirth, 28.

(xxxii.a) *All Puerperal Diseases*. The 615 deaths registered in 1911 under the two preceding headings will be found tabulated in "Bulletin No. 29; Commonwealth Demography" under various aspects. It will suffice to repeat here the following facts:—

Of the 615 mothers who died in childbirth during the year 1911, 550 were married and 65 were single. As the total number of nuptial confinements was 113,939, and of ex-nuptial confinements 7018, it follows that one in 207 of married mothers, and one in 108 of single mothers, died of puerperal disease, the general proportion being one in 197, as against one in 196 in 1910, one in 195 in 1909, one in 181 in 1908, and one in 178 in 1907.

The ages of the mothers who died varied from 17 to 49 years, and are shewn in the following table:—

AGES OF MOTHERS WHO DIED IN CHILDBIRTH, COMMONWEALTH, 1911.

Age at Death.	Married Women.	Single Women.	Total.	Age at Death.	Married Women.	Single Women.	Total.
17 years ...	4	5	9	34 years ...	27	...	27
18 " ...	4	7	11	35 " ...	28	2	30
19 " ...	7	7	14	36 " ...	29	1	30
20 " ...	18	3	21	37 " ...	24	...	24
21 " ...	16	5	21	38 " ...	26	...	26
22 " ...	16	4	20	39 " ...	16	...	16
23 " ...	24	3	27	40 " ...	15	...	15
24 " ...	18	4	22	41 " ...	11	...	11
25 " ...	21	6	27	42 " ...	15	...	15
26 " ...	27	3	30	43 " ...	8	1	9
27 " ...	28	4	32	44 " ...	2	...	2
28 " ...	29	5	34	45 " ...	4	...	4
29 " ...	22	...	22	46 " ...	1	...	1
30 " ...	30	1	31	49 " ...	1	...	1
31 " ...	24	3	27				
32 " ...	32	1	33				
33 " ...	23	...	23	Total deaths	550	65	615

Of the 550 married women shewn in the above table, 23 died in Tasmania; in regard to these no information is available as to previous issue and as to duration of marriage. Of the remaining 527 women, 167 died at their first confinement, 72 at their second, 61 at their third, 66 at their fourth, 50 at their fifth, 36 at their sixth, 23 at their seventh, 18 at their eighth, 15 at their ninth, 9 at their tenth, 7 at their eleventh, 1 at her twelfth, and 2 at their fourteenth. The total number of children of the 527 mothers was 1690.

Thirty-five of the mothers who died had been married less than one year, 63 between one and two years, 49 between two and three years, the duration of marriage ranging up to 27 years. This tabulation will be found in detail, and distinguishing the ages at marriage, in "Bulletin No. 29; Commonwealth Demography," as will a further tabulation shewing the duration of marriage and previous issue in combination. These tables shew, for instance, that one mother, who had been married at the age of 18 years, died at the age of 43, in the 25th year of her marriage, at her fourteenth confinement.

(xxxiii.) *Congenital Debility and Malformations.* The figures for 1911 include children under one year of age, of whom 2751 were under three months. The 1911 figures include:—Malformations, 227 males, 177 females, total 404; and congenital debility, icterus, and sclerema of children under one year of age, 1541 males and 1197 females, total 2738; or a grand total of 3142. Of these deaths, 1253 were registered in New South Wales, viz., 696 males and 557 females; 867 in Victoria, viz., 499 males and 368 females; 373 in Queensland, viz., 203 males and 165 females; 271 in South Australia, viz., 142 males and 129 females; 209 in Western Australia, viz., 134 males and 95 females; 146 in Tasmania, viz., 87 males and 59 females; 1 male and 1 female in the Northern Territory, and 1 male in the Federal Capital Territory.

(xxxiv.) *Senile Debility.* The deaths ascribed to "old age" form a large group, and are slightly in excess of those due to infantile debility. In 1907 they numbered 3136, viz., 1721 males and 1415 females; in 1908, 3466, viz., 2027 males and 1439 females; in 1909, 3194, viz., 1829 males and 1365 females; in 1910, 3353, viz., 1905 males and 1448 females; and in 1911, 3849, viz., 2225 males and 1624 females. Of the deaths registered in 1911 1355 occurred in New South Wales, viz., 806 males and 549 females; 1407 in Victoria, viz., 781 males and 626 females; 305 in Queensland, viz., 203 males and 102 females; 419 in South Australia, viz., 205 males and 214 females; 128 in Western Australia, viz., 88 males and 40 females; 227 in Tasmania, viz., 134 males and 93 females; and 7 males in the Northern Territory and 1 male in the Federal Capital Territory.

Of the males whose death was described as due to senility, 1 was aged between 50 and 54; 9 were between 55 and 59; 55 between 60 and 64; 155 between 65 and 69; 380. between 70 and 74; 565 between 75 and 79; 559 between 80 and 84; 330 between 85 and 89; 140 between 90 and 94; 20 between 95 and 99; while 10 were 100 years old and upwards; and of one the age was not stated.

Of the females, 2 were between 55 and 59; 25 between 60 and 64; 105 between 65 and 69; 238 between 70 and 74; 395 between 75 and 79; 410 between 80 and 84; 281 between 85 and 89; 129 between 90 and 94; 33 between 95 and 99; while 11 were 100 years old and upwards.

(xxxv.) *Violence.* A very large number of deaths is every year due to external violence, and, as might be expected from the fact that their occupations expose them much more to accidents, males largely predominate. The figures quoted are exclusive of suicides, which have been treated as a separate group. Deaths ascribed to violence numbered in 1907, 2679, viz.: 2038 males and 641 females; in 1908, 2922, viz., 2187 males and 735 females; in 1909, 2664, viz., 2050 males and 614 females; in 1910, 2738, viz., 2128 males and 610 females; and in 1911, 3018, viz., 2323 males and 695 females. Of the deaths registered in 1911, those of 848 males and 248 females occurred in New South Wales; those of 506 males and 186 females in Victoria; those of 486 males and 127 females in Queensland; those of 190 males and 50 females in South Australia; those of 221 males and 43 females in Western Australia; those of 63 males and 41 females in Tasmania; and those of 11 males and 1 male in the Northern Territory and Federal Capital Territory respectively.

The following table shews the various kinds of accidental deaths which occurred in 1911, distinguishing males and females:—

DEATHS FROM VIOLENCE, COMMONWEALTH, 1911.

Cause of Death.	Males.	Females.	Total.
Poisoning by food	19	13	32
Venomous bites and stings	14	7	21
Other acute poisonings	44	21	65
Conflagration	9	7	16
Burns (conflagration excepted)	111	203	314
Absorption of deleterious gases	19	16	35
Accidental drowning	605	106	711
Traumatism by firearms	85	6	91
Traumatism by cutting or piercing instruments	5	...	5
Traumatism by fall	294	53	347
Traumatism in mines or quarries	119	...	119
Traumatism by machines	13	...	13
Traumatism by other crushing (vehicles, rail-ways, etc.)	377	42	419
Injuries by animals	57	8	65
Starvation, thirst, fatigue	107	56	163
Excessive cold	5	...	5
Effects of heat	50	28	78
Lightning	11	...	11
Electricity (lightning excepted)	5	...	5
Homicide by firearms	7	9	16
Homicide by cutting or piercing instruments...	6	5	11
Homicide by other means	29	16	45
Fractures (cause not specified)	122	50	172
Other external violence	210	49	259
Total Deaths	2,323	695	3,018

In every kind of violent death there was, therefore, an excess of males, with the exception of burning accidents, in which female deaths largely predominated, and homicide by firearms.

The excessive heat of January, 1908, was responsible for an increase in the number of deaths caused by insolation, i.e., sunstroke and heat apoplexy, from 64 in 1907 to 246 in 1908, distributed as follows:—New South Wales, 46; Victoria, 130; Queensland, 14; South Australia, 39; Western Australia, 15; Tasmania, 2. In 1911, as the preceding table shews, the deaths fell to 78.

(xxxvi.) *Suicide*. Although their number in 1908, 1909, 1910, and 1911 was greater than it was in 1907, it may be said that suicides have shewn a tendency to decrease during recent years, the number in 1905 having been 520, viz., 431 males and 89 females; while in 1906 it was 499, viz., 403 males and 96 females; in 1907, 461, viz., 385 males and 76 females; in 1908, 497, viz., 413 males and 84 females; in 1909, 495, viz., 398 males and 97 females; in 1910, 516, viz., 432 males and 84 females; and in 1911, 544, viz., 446 males and 98 females. Of the last named, those of 152 males and 40 females happened in New South Wales; those of 118 males and 35 females in Victoria; those of 80 males and 14 females in Queensland; those of 32 males and 2 females in South Australia; those of 53 males and 5 females in Western Australia; and those of 10 males and 2 females in Tasmania, and of 1 male in Northern Territory.

The modes adopted by persons who committed suicide in the years 1907 to 1911 were as follows:—

NUMBER OF MALE AND FEMALE SUICIDES, COMMONWEALTH, 1907 to 1911.

	Males.					Females.					Total.				
	1907.	1908.	1909.	1910.	1911.	1907.	1908.	1909.	1910.	1911.	1907.	1908.	1909.	1910.	1911.
Pop'n in millions	2.14	2.18	2.22	2.27	2.33	1.98	2.02	2.06	2.10	2.16	4.12	4.19	4.27	4.37	4.49
Mode of Death.															
Poisoning ...	57	88	70	79	93	32	35	54	34	52	89	123	124	113	145
Asphyxia ...	2	1	2	...	2	...	...	...	...	1	2	1	2	...	3
Hanging or Strangulation ...	71	68	67	72	69	12	15	9	10	10	83	83	76	82	79
Drowning ...	37	31	24	42	43	19	14	19	19	13	56	45	43	61	56
Firearms ...	129	146	138	134	133	3	7	6	6	9	132	153	144	140	142
Cutting instruments	61	54	74	79	65	5	6	5	13	9	66	60	79	92	74
Precipitation from a height ...	6	4	7	3	2	1	2	...	...	2	7	6	7	3	4
Crushing ...	3	6	5	8	6	2	2	1	...	...	5	8	6	8	6
Other modes ...	19	15	11	15	33	2	3	3	3	2	21	18	14	17	35
Total	385	413	398	432	446	76	84	97	84	98	461	497	495	516	544

The death rates from suicides and the percentage on total deaths borne by suicides are shewn in the following table:—

DEATH RATES (a) FROM SUICIDE AND PERCENTAGE ON TOTAL DEATHS, 1911. COMMONWEALTH.

State.	Death Rates (a) from Suicide.			Percentage on Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	0.18	0.05	0.12	1.52	0.56	1.12
Victoria	0.18	0.05	0.12	1.41	0.51	1.01
Queensland	0.24	0.05	0.15	1.97	0.56	1.44
South Australia	0.15	0.01	0.08	1.47	0.11	0.84
Western Australia	0.32	0.04	0.20	2.76	0.50	1.98
Tasmania	0.10	0.02	0.06	0.96	0.23	0.62
Northern Territory	0.37	...	0.30	1.70	...	1.54
Federal Capital Territory	...	...	...	...	...	...
Commonwealth	0.19	0.05	0.12	1.62	0.48	1.14

a Number of deaths from suicide per 1000 of mean population.

From the following table, which shews the ages of the persons who committed suicide in 1911, it will be seen that both extreme youth and extreme old age are represented:—

AGES OF PERSONS WHO COMMITTED SUICIDE, COMMONWEALTH, 1911.

Ages.	M.	F.	Total.	Ages.	M.	F.	Total.
10 years and under 15	1	...	1	60 years and under 65	29	1	30
15 " " 20	7	6	13	65 " " 70	16	2	18
20 " " 25	30	9	39	70 " " 75	7	2	9
25 " " 30	30	42	53	75 " " 80	8	1	9
30 " " 35	46	19	65	80 " " 85	5	...	5
35 " " 40	53	14	67	85 " " 90	1	...	1
40 " " 45	55	11	66	Age not stated	...	1	1
45 " " 50	56	11	67				
50 " " 55	52	5	57				
55 " " 60	38	5	43	Total Deaths	446	98	544

The following table shews the occupations of the 446 males who committed suicide:—

OCCUPATIONS OF MALE PERSONS WHO COMMITTED SUICIDE, 1911.

COMMONWEALTH.

Occupations.	Deaths.	Occupations.	Deaths.
Professional class ...	34	Pastoral class ...	30
Domestic class ...	16	Working in mines and quarries ...	25
Mercantile class ...	63	Other primary producers ...	3
Engaged in transport and communication ...	34	Independent means ...	9
Manufacturing class ...	46	Dependents ...	4
Engaged in building and construction ...	23	Occupation not stated ...	14
Indefinite industrial workers ...	103		
Agricultural class ...	42	Total Deaths ...	446

The assertion has been made that suicide has become more frequent during recent years, but an examination of the figures from the year 1871 onwards hardly bears this out. The absolute figures have certainly increased, but proportionately to the population the figures for 1906-10 are practically the same as those for 1886-90. No particulars are available for Western Australia prior to 1886, and from 1886 to 1895 the sexes are not distinguished. All figures for the first five periods are, therefore, exclusive of Western Australia:—

SUICIDES, COMMONWEALTH, 1871-75 to 1906-10.

Period.	Number of Suicides.			Suicides per One Million.			Suicides of Females to 100 Suicides of Males. Based on	
	Males.	Females.	Total.	Males.	Females.	Total.	Absolute Figures.	Rates.
1871-75	715	150	865	150.94	37.56	99.07	20.98	24.88
1876-80	878	145	1,023	159.69	31.06	100.62	16.51	19.45
1881-85	999	183	1,182	152.58	32.90	97.61	18.32	21.56
1886-90	1,394	292	a1,686	179.20	43.97	c116.92	20.95	24.54
1891-95	1,574	337	b1,911	181.34	44.09	d117.07	21.41	24.31
1896-1900	1,838	410	2,248	191.11	47.88	123.65	22.31	25.05
1901-05	2,054	380	2,434	201.78	40.88	124.98	18.50	20.26
1906-10	2,031	437	2,468	186.11	43.22	117.39	21.51	23.22

a. 1705 inclusive of Western Australian figures. b. 1984 inclusive of Western Australian figures. c. 116.49 inclusive of Western Australian figures. d. 119.11 inclusive of Western Australian figures.

The course of suicide in Australia presents certain features which call for special comment, viz. :—(i.) the constancy of the measure of the suicidal tendency; (ii.) its constancy in respect of the relative numbers of each sex; and (iii.) its periodicity according to seasons or months.

In the fifth issue of this Year Book (pp. 240, etc.), the result of a series of investigations into periodicity of suicide was published. The paper is not reprinted in this issue, with the exception of the following paragraph dealing with the seasonal fluctuation of suicide.

There is a well marked seasonal fluctuation of suicide. This fluctuation is perhaps best shewn by computing for a period of years how many persons commit suicide per month, correcting the crude results so as to equalise the months in respect of their duration and total population. The results are :—

MONTHLY FREQUENCY OF SUICIDE, AUSTRALIA.

Month.	Numbers per 100,000,000 of Population.				Numbers per 10,000 Suicides.			
	N.S.W. & Queensl'd 1890-1899.	All States of Australia, 1900-1910.*			N.S.W. & Queensl'd, 1890-1899.	All States of Australia, 1900-1910.		
	Persons.	Males.	Females.	Persons.	Persons.	Males.	Females.	Persons.
January ...	1,163	1,797	357	1,108	859	935	842	920
February ...	1,053	1,636	421	1,057	777	853	994	878
March ...	1,019	1,661	366	1,041	752	866	864	865
April ...	956	1,540	413	1,002	706	803	975	832
May ...	1,072	1,520	352	962	792	792	831	799
June ...	1,002	1,398	265	857	740	729	625	712
July ...	954	1,476	321	922	704	769	758	766
August ...	1,221	1,548	380	990	902	807	897	822
September ...	1,080	1,502	318	936	798	783	751	778
October ...	1,284	1,698	393	1,074	948	885	928	892
November ...	1,227	1,622	307	992	906	845	725	824
December ...	1,512	1,790	343	1,098	1,116	933	810	912
	13,543	19,188	4,236	12,039	10,000	10,000	10,000	10,000

* For result for 1890 to 1910 see table hereinafter.

There is a distinct seasonal fluctuation; it is, however, apparently not identical from decade to decade, and from the last three columns it is evident that the curve is by no means identical for the sexes. For the purpose of comparison the result for a long series of observations in various European countries, and the corresponding results for Australia for 1890 to 1910, are given. These shew in a general way that the seasonal relationship of the maximum frequency is identical in Australia with that of the Northern Hemisphere, the absolute difference between approximately 6 months.

The Australian figures for the last 21 years are based on two States for the first ten years and on all for the last eleven years. The following table shews the number of suicides occurring in each equalised month in 10,000 suicides :—

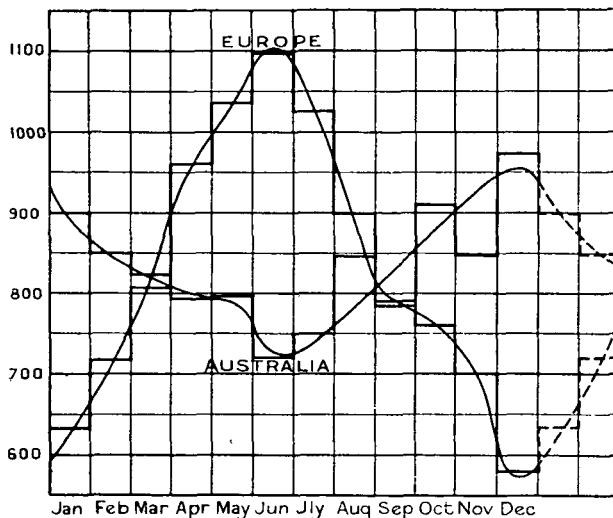
**NUMBER OF SUICIDES OCCURRING IN EACH EQUALISED MONTH IN
10,000 SUICIDES.**

Month.	France. (a)	Prussia.	Saxony.	Wurttemberg.		Baden.	Switzerland.	Italy.	Denmark.	Simple Mean.	Australia. (b)	
	1827 to 1876	1885 to 1900	1875 to 1889	1846 to 1879	1889 to 1893	1881 to 1900	1884 to 1893	1864 to 1876	1896 to 1905		Month.	1890 to 1910
January ...	690	625	629	547	658	676	637	610	618	632	July ...	749
February...	719	688	696	805	742	664	744	771	629	718	August ...	846
March ...	851	803	817	848	800	864	749	827	713	806	Sept. ...	784
April ...	955	982	987	896	983	903	973	995	964	960	Oct. ...	910
May ...	1,018	1,018	1,040	998	1,009	972	1,025	1,121	1,135	1,037	Nov. ...	848
June ...	1,092	1,053	1,088	1,134	950	1,059	1,078	1,216	1,207	1,097	Dec. ...	973
July ...	1,053	997	1,010	1,063	983	991	1,039	1,023	1,072	1,026	Jan. ...	900
August ...	871	907	927	961	892	896	871	868	893	898	Feb. ...	849
September	757	836	813	769	833	805	832	714	740	789	March...	832
October ...	744	787	758	742	775	803	810	641	762	758	April ...	793
November	643	692	664	717	867	730	659	610	688	697	May ...	796
December	607	612	571	520	508	637	583	604	579	580	June ...	720
	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000		10,000

a Computed approximately from results given in Prof. v. Mayr's work Statistik und Gesellschaftslehre, Vol. III., p. 262.

b New South Wales and Queensland only for 1890 to 1899, and all States of Australia from 1900 to 1910 inclusive.

ANNUAL FLUCTUATIONS IN THE FREQUENCY OF SUICIDE.



EXPLANATION OF GRAPHS.—The horizontal divisions denote not calendar but equalised months and the vertical divisions denote 50 suicides per month out of an assumed total of 10,000 per annum (833½ per month). The rectangular lines denote the group results for the equalised months on the basis assumed. The upper curve denotes the probable instantaneous values for the whole of Europe, the lower the probable instantaneous values for the whole of Australia. The results are so corrected as to correspond to a population constant throughout the year.

In the diagram the rectangular lines shew the rates for the various months for Australia and Europe generally, and the curves give the most probable form of the fluctuation.

If the monthly mean temperatures of the capital cities of Australia be weighted in proportion to the populations, the resultant mean is as follows :—

Month	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Temp. Fahr....	71.1	70.7	68.4	63.5	57.7	53.6	51.8	54.1	57.7	61.8	65.6	69.0

These results may be regarded as approximately representing the temperature conditions influencing the rate of suicides owing to the fact that the populations of the cities have a preponderating influence. The frequency of suicide can be expressed by a formula depending on this average temperature.*

The remarkable correlation between temperature and suicide frequency is best seen by combining the results for pairs of months. In this way we obtain the two upper lines in the following table† :—

—	Dec. Jan.	Feb. Mar.	April. May.	June. July.	Aug. Sept.	Oct. Nov.
Temperature, Fahr. ...	70.0	69.5	60.6	52.7	55.9	63.7
Suicides per 10,000 ...	1,832	1,743	1,631	1,478	1,600	1,716
Calculated	1,805	1,796	1,645	1,511	1,565	1,698

* See Journal Royal Society N.S.W., volume xiv., p. 109. The frequency (q) of suicide per million per diem in Australia can be put in the form

$$q = 0.33 + 0.003 t$$

where t is the temperature above 62° Fahr.

† This correlation is very approximately expressed by $615 + 17t$ (where t is the temperature Fahrenheit), a formula which gives results in the last line.

It may be pointed out that Australia differs very remarkably from Europe in this respect, viz., that the range of temperature throughout the year is decidedly smaller in Australia. Thus a mean for the various countries of Europe gives the range between the averaged hottest and coldest months of the year about 33° Fahr., while for Australia the range is only about 19°, *i.e.*, but little more than half. We thus have :—

Ranges	In Temperature.	In Frequency.
In Europe	33° Fahr.	517
In Australia	19° ..	253

That is to say, the variation in the suicide frequency on the whole corresponds very closely to the range in temperature, being strongly marked where the temperature differences are strongly marked. It is evident from this that large temperature fluctuations tend to bring about large changes in the frequency of suicide.

(xxxvii.) *Other Diseases.* The number of causes included under this heading is a very large one, amounting to no less than 79 of the items shewn in the detailed classification, and deaths were recorded under every one of these with the exception of the following

six:—Glanders and farcy, rabies, intestinal parasites, non-puerperal diseases of the breast (cancer excepted), and amputation. The total number of deaths under "other diseases" in 1907 was 6677, viz., 3933 males and 2744 females; in 1908, 7417, viz., 4351 males and 3066 females; in 1909, 7419, viz., 4344 males and 3075 females; in 1910, 7794, viz., 4590 males and 3204 females; and in 1911, 7652, viz., males, 4508; females, 3144. Following the revised edition of the classification the following changes have been made in this heading during 1910: beri-beri is now included under this heading instead of under xii., "Other Epidemic Diseases." Other diseases of the respiratory system (1872 deaths) are now shewn under a new head (xxiii.), and appendicitis and typhlitis (320 deaths) under head xxvi. Some of the diseases included here account for very considerable numbers of deaths. Thus there were 686 deaths ascribed to diarrhoea and enteritis of children over two years of age and of adults, 398 to convulsions of children under five years of age; 413 to diabetes; 355 to paralysis without indicated cause; and 466 to diseases of the arteries, atheroma, and aneurism. Particulars of the deaths included in 1911 are shewn in the following table:—

CAUSES OF DEATH INCLUDED UNDER "OTHER DISEASES," COMMONWEALTH, 1911.

Causes.	M.	F.	T'tal.	Causes.	M.	F.	T'tal.
Purulent Infection and Septicæmia	79	76	155	Diseases of the Veins (Varices, Varicose Ulcers, Hæmorrhoids)	6	13	19
Anthrax	10	4	14	Diseases of the Lymphatic System	3	6	9
Tetanus	88	31	119	Hæmorrhages, Other Diseases of Circulatory System	21	10	31
Mycoses	6	...	6	Diseases of the Mouth and its Associated Organs	9	10	19
Pellagra	1	...	1	Diseases of the Pharynx	21	20	41
Beri beri	66	...	66	Diseases of the Oesophagus	10	3	13
Rickets	5	3	8	Diarrhoea and Enteritis of Children over two years of age and Adults	333	353	686
Syphilis	97	64	161	Ankylostomiasis	4	3	7
Gonococcus Infection	1	1	2	Other Diseases of the Intestine	38	23	61
Other Tumours (Tumours of the female genital organs excepted)	28	12	40	Acute Yellow Atrophy of the Liver	3	13	16
Acute Articular Rheumatism	84	91	175	Hydatid Tumours of the Liver	30	25	55
Chronic Rheumatism and Gout	34	40	74	Biliary Calculi	14	52	66
Scurvy	5	4	9	Other Diseases of the Liver	85	93	178
Diabetes	175	238	413	Diseases of the Spleen	3	1	4
Exophthalmic Goitre	2	58	60	Simple Peritonitis (non-puerperal)	72	83	155
Addison's Disease	10	13	23	Other Diseases of the Digestive System	16	12	28
Leucæmia	45	38	83	Chyluria	1	...	1
Anæmia, Chlorosis	107	126	233	Other Diseases of the Kidneys and their Adnexa	75	23	98
Other General Diseases	48	43	91	Calculi of Urinary Passages	43	13	56
Acute and Chronic Alcoholism	109	35	144	Diseases of the Bladder	111	18	129
Chronic Lead Poisoning	6	1	7	Other Diseases of the Urethra, Urinary Abscess, etc.	19	2	21
Other Chronic Poisonings due to occupations	4	...	4	Diseases of the Prostate	181	...	181
Other Chronic Poisonings	6	3	9	Non-venereal Diseases of the Male Genital Organs	3	...	3
Encephalitis	33	29	62	Gangrene	70	55	125
Progressive Locomotor Ataxia	58	11	69	Furuncle	8	4	12
Other Diseases of the Spinal Cord	154	73	227	Acute Abscess	22	11	33
Paralysis without indicated cause	202	153	355	Other Diseases of the Skin and Adnexa	27	26	53
General Paralysis	150	24	174	Non-tuberculous Diseases of the Bones	30	13	43
Other Forms of Mental Alienation	29	28	57	Other Diseases of the Joints (Tuberculosis & Rheumatism excepted)	5	5	10
Epilepsy	107	63	170	Other Diseases of the Organs of Locomotion	1	...	1
Convulsions (non-puerperal)	8	24	32	Other Diseases peculiar to Infancy	290	207	497
Convulsions of Children under five years of age	238	160	398	Want of Care (Infants)	7	7	14
Chorea	1	3	4	Total Deaths	4,508	3,144	7,652
Neuralgia and Neuritis	13	12	25				
Other Diseases of the Nervous System	133	105	238				
Diseases of the Eye	2	1	3				
Diseases of the Ear	6	3	9				
Pericarditis	54	22	76				
Acute Endocarditis	134	114	248				
Angina Pectoris	82	39	121				
Diseases of the Arteries, Atheroma, Aneurism	347	119	466				
Embolism and Thrombosis	180	176	356				

(xxxviii.) *Unspecified or Ill-defined Diseases.* The number of cases which has to be included here is a considerable one from year to year, having numbered 1275 in 1907, 1262 in 1908, 1087 in 1909, 598, viz., 376 males and 222 females, in 1910, and 460, viz., 299 males and 161 females in 1911. The detailed classification distinguishes these ill-defined diseases under three headings:—Dropsy, including such definitions as anasarca, ascites, general œdema, etc.; sudden death, including syncope; and unspecified or ill-defined causes, of which the following are specimens:—Asthenia, coma, dentition, exhaustion, heart failure, etc. In 1911 the number of cases of death which would have to be classed under the first of these categories was 33; those belonging to the second, 48; and those belonging to the third, 379. It is, of course, true that there must always occur some cases where the disease is not well characterised, or where sufficient information is not procurable to allow of a clear definition being given in the certificate of death, but in the majority of cases included under this heading a more complete diagnosis and consequently a more satisfactory certificate would no doubt have been possible.

In the fifth issue of this Year Book, pp. 234, etc., some observations were published, dealing with the incidence of scarlet fever, measles, whooping cough, diphtheria and croup, typhoid, diarrhoea, enteritis, and dysentery. It has not been judged expedient to reprint the paper in the present issue.

18. **Causes of Death in Classes.**—The figures presented in the preceding paragraphs relate to certain definite causes of death. It is almost generally acknowledged that figures of this kind are of greater value in medical statistics than is a classification under general headings. The classification under fourteen general headings adopted by the compiler of The International Nomenclature is, however, shewn in the following table, together with the death rates and percentages on total deaths pertaining to those classes:

DEATHS, DEATH RATES (a), AND PERCENTAGES ON TOTAL DEATHS IN CLASSES, 1911.—COMMONWEALTH.

Class.	Total Deaths.			Death Rate. (a)			Percentage on Total Deaths.		
	M.	F.	Total.	M.	F.	Total	M.	F.	Total.
1. General diseases ...	6,196	5,231	11,427	2.65	2.43	2.54	22.46	25.80	23.89
2. Diseases of the Nervous System & of the Organs of Special Sense...	2,630	2,007	4,637	1.13	0.93	1.03	9.53	9.90	9.69
3. Diseases of the Circulatory System	3,590	2,632	6,222	1.54	1.22	1.39	13.01	12.98	13.00
4. Diseases of the Respiratory System	3,168	2,134	5,302	1.36	0.99	1.18	11.49	10.52	11.07
5. Diseases of the Digestive Organs...	2,856	2,449	5,305	1.22	1.14	1.18	10.35	12.09	11.08
6. Diseases of the Genito-Urinary System and Adnexa ...	1,630	930	2,560	0.70	0.43	0.57	5.91	4.58	5.35
7. Puerperal Condition ...	...	615	615	...	0.29	0.15	...	3.03	1.28
8. Diseases of the Skin and of the Cellular Tissue ...	127	96	223	0.04	0.04	0.05	0.46	0.47	0.47
9. Diseases of the Organs of Locomotion ...	36	18	54	0.02	0.01	0.01	0.13	0.09	0.11
10. Malformations ...	227	177	404	0.10	0.08	0.09	0.82	0.87	0.84
11. Infancy ...	1,838	1,411	3,249	0.79	0.65	0.72	6.66	6.96	6.78
12. Old Age ...	2,225	1,624	3,849	0.95	0.75	0.86	8.06	8.01	8.04
13. Violence ...	2,769	793	3,562	1.19	0.37	0.79	10.04	3.91	7.44
14. Ill-defined Diseases ...	299	161	460	0.13	0.07	0.10	1.08	0.79	0.96
Total ...	27,591	20,278	47,869	11.82	9.40	10.66	100.00	100.00	100.00

a Number of deaths per 1000 of mean population.

19. **Deaths of Children under 1 Year.**—"Bulletin No. 29; Commonwealth Demography" contains tables shewing the age at death of children dying during the first year of life from twenty causes. In the Bulletin mentioned the particulars are published for the States, Territories and Commonwealth, but the totals for the Commonwealth only are here shewn.

The figures for death from lack of care and other diseases peculiar to early infancy include children under four months of age only.

DEATHS OF CHILDREN UNDER 1 YEAR, COMMONWEALTH, 1911.

(a) MALES.

Age at Death.			Whooping Cough.	Pulmonary Tuberculosis.	Tubercular Meningitis.	Abdominal Tuberculosis.	Pott's Disease.	Tuberculosis of other Organs.	Syphilis.	Meningitis.	Convulsions.	Acute Bronchitis.
Under 1 week	...	...	...	...	...	...	...	...	5	7	64	7
1 week and under 2	...	...	2	...	...	...	...	...	3	3	32	9
2 weeks	3	...	2	...	...	...	...	...	6	4	15	12
3 "	4	...	4	...	...	...	...	...	7	4	5	16
1 month	2	...	14	...	1	...	...	1	11	10	16	49
2 months	3	...	15	2	4	...	...	...	11	8	10	16
3 "	4	...	5	...	...	2	...	...	4	9	9	16
4 "	5	...	8	1	2	2	...	1	2	7	6	7
5 "	6	...	9	...	...	...	...	...	3	10	8	6
6 "	7	...	9	...	3	2	...	...	3	14	9	2
7 "	8	...	6	...	2	1	...	...	4	12	9	2
8 "	9	...	5	1	1	1	...	...	2	13	3	3
9 "	10	...	4	1	2	...	...	...	...	14	8	2
10 "	11	...	6	...	2	2	1	...	1	6	4	7
11 "	12	...	4	...	4	3	...	...	...	12	5	1
Total under 1 year			93	5	21	13	1	2	62	133	203	155

Age at Death.			Broncho-pneumonia.	Pneumonia.	Diarrhea and Enteritis.	Hernia and Intestinal Obstruction.	Malformations.	Congenital Debility.	Other Diseases peculiar to Early Infancy.	Lack of Care.	Other External Violence.
Under 1 week	...	...	...	3	4	7	90	925	244	2	14
1 week and under 2	...	...	5	8	24	2	23	139	22	...	...
2 weeks	3	...	11	6	27	1	14	86	11	...	1
3 "	4	...	11	7	38	...	10	63	8	2	1
1 month	2	...	35	17	108	2	22	120	2	2	5
2 months	3	...	14	9	135	3	15	72	1	1	4
3 "	4	...	19	13	127	5	9	35	2	...	5
4 "	5	...	14	6	137	4	4	24	...	...	1
5 "	6	...	14	5	99	5	3	24	...	...	1
6 "	7	...	10	5	116	4	3	12	...	...	2
7 "	8	...	14	4	92	7	4	14	...	...	1
8 "	9	...	19	15	88	3	1	9	...	...	...
9 "	10	...	11	7	61	5	3	6	...	...	...
10 "	11	...	7	9	53	1	2	4	...	...	...
11 "	12	...	9	8	71	1	4	8	...	...	...
Total under 1 year			193	122	1,180	50	207	1,541	390	7	35

DEATHS OF CHILDREN UNDER 1 YEAR, COMMONWEALTH, 1911.

(b) FEMALES.

Age at Death.				Whooping Cough.	Pulmonary Tuberculosis.	Acute Miliary Tuberculosis.	Tubercular Meningitis.	Abdominal Tuberculosis.	Disseminated Tuberculosis.	Syphilis.	Meningitis.	Convulsions.	Acute Bronchitis.
Under 1 week	...	...	...	...	...	...	...	...	...	3	7	31	1
1 week and under 2	...	...	...	1	...	...	...	...	...	1	4	23	8
2 weeks	...	3	...	6	2	...	...	...	...	4	...	4	11
3 "	...	4	...	9	...	...	...	...	...	2	1	5	7
1 month	...	2	...	15	...	...	...	...	...	9	3	7	36
2 months	...	3	...	14	...	...	1	...	...	3	5	7	19
3 "	...	4	...	5	...	...	...	3	...	3	7	3	13
4 "	...	5	...	10	1	...	2	2	...	2	6	6	7
5 "	...	6	...	4	1	...	3	...	...	2	10	4	7
6 "	...	7	...	4	1	...	1	3	...	2	11	8	7
7 "	...	8	...	8	...	...	1	...	...	4	8	2	3
8 "	...	9	...	10	...	...	...	...	...	...	9	2	4
9 "	...	10	...	7	...	...	4	...	...	...	7	2	4
10 "	...	11	...	3	...	...	5	1	...	1	8	2	2
11 "	...	12	...	3	...	1	...	...	...	1	4	3	2
Total under 1 year				99	5	1	17	10	...	42	90	109	131

Age at Death.				Broncho-Pneumonia.	Pneumonia.	Diarrhoea and Enteritis.	Hernia and Intestinal Obstruction.	Malformations.	Congenital Debility.	Other Diseases peculiar to Early Infancy.	Lack of Care.	Other External Violence.
Under 1 week	...	...	...	3	4	2	5	82	700	169	5	6
1 week and under 2	...	...	...	3	2	10	3	15	102	15	...	1
2 weeks	...	3	...	8	3	13	...	3	66	9	...	1
3 "	...	4	...	3	7	10	3	8	48	6	...	...
1 month	...	2	...	30	8	83	5	8	80	3	...	2
2 months	...	3	...	25	7	103	1	8	52	4	...	3
3 "	...	4	...	12	13	101	1	5	35	1	1	...
4 "	...	5	...	15	3	116	3	6	21	...	...	1
5 "	...	6	...	11	12	85	7	6	32	...	...	...
6 "	...	7	...	12	11	72	3	3	15	...	...	...
7 "	...	8	...	2	6	80	3	1	18	...	...	1
8 "	...	9	...	9	8	68	1	2	8	...	...	...
9 "	...	10	...	10	11	50	1	4	5	...	...	...
10 "	...	11	...	10	8	53	...	4	7	...	...	1
11 "	...	12	...	4	7	50	2	3	8	...	...	...
Total under 1 year				157	110	896	38	158	1,197	207	6	16

DEATHS OF CHILDREN UNDER 1 YEAR, COMMONWEALTH, 1911.

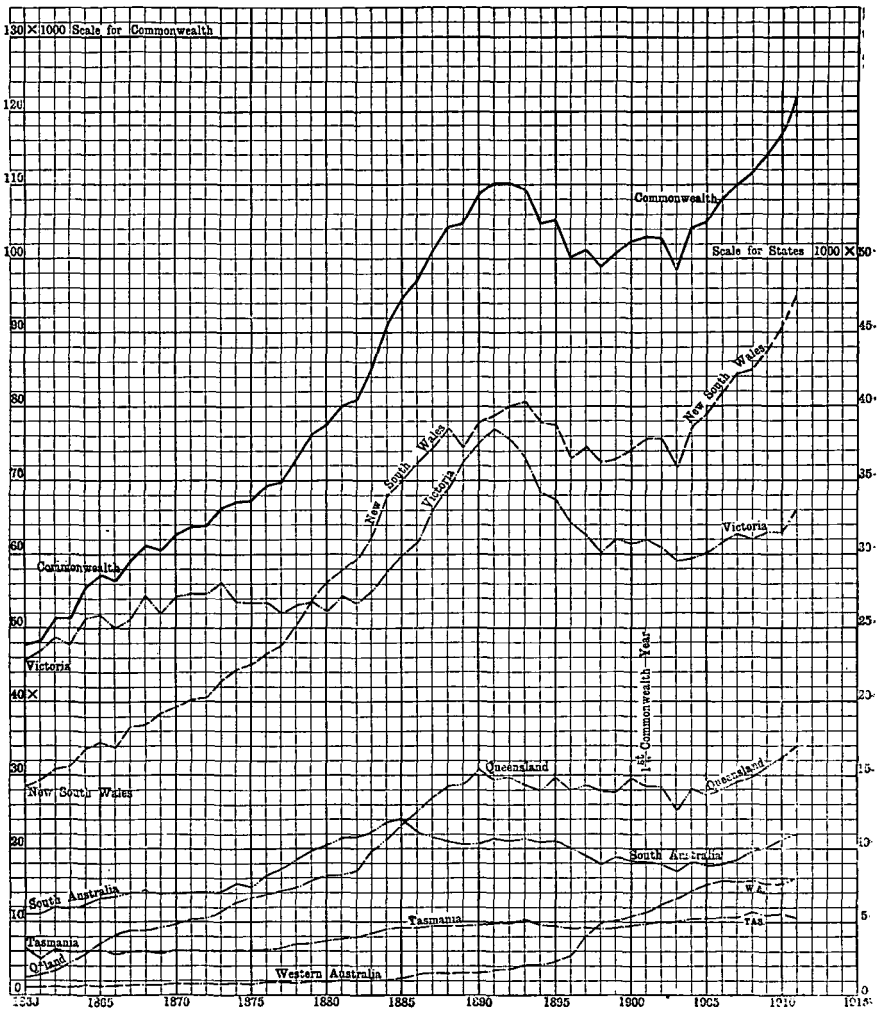
(c) MALES AND FEMALES.

Age at Death.	Whooping Cough.	Pulmonary Tuberculosis.	Acute Miliary Tuberculosis.	Tubercular Meningitis.	Abdominal Tuberculosis.	Pott's Disease.	Tuberculosis of other Organs.	Syphilis.	Meningitis.	Convulsions.	Acute Bronchitis.
Under 1 week ...	...	...	...	...	...	...	...	8	14	95	8
1 week and under 2 ...	3	...	...	...	...	...	...	4	7	55	17
2 weeks " 3 ...	8	2	...	...	...	...	...	10	4	19	23
3 " " 4 ...	13	...	...	...	...	...	1	9	5	10	23
1 month " 2 ...	29	...	...	1	...	...	...	20	13	23	85
2 months " 3 ...	29	2	...	5	1	...	...	19	13	17	35
3 " " 4 ...	10	...	...	...	5	...	...	7	16	12	29
4 " " 5 ...	18	2	...	4	4	...	1	4	13	12	14
5 " " 6 ...	13	1	...	3	...	...	...	5	20	12	13
6 " " 7 ...	13	1	...	4	5	...	...	5	25	17	9
7 " " 8 ...	14	...	...	3	1	...	...	8	20	11	5
8 " " 9 ...	15	1	...	1	1	...	...	2	22	5	7
9 " " 10 ...	11	1	...	6	...	...	...	...	21	10	6
10 " " 11 ...	9	...	...	7	3	...	...	2	14	6	9
11 " " 12 ...	7	...	1	4	3	1	...	1	16	8	3
Total under 1 year	192	10	1	38	23	1	2	104	223	312	286

Age at Death.	Broncho-Pneumonia.	Pneumonia.	Diarrhea and Enteritis.	Hernia and Intestinal Obstruction.	Malformations.	Congenital Debility.	Other Diseases peculiar to Early Infancy.	Lack of Care.	Other External Violence.
Under 1 week ...	3	7	6	12	172	1,625	413	7	20
1 week and under 2 ...	8	10	34	5	38	241	37	...	1
2 weeks " 3 ...	19	9	40	1	17	152	20	...	2
3 " " 4 ...	14	14	48	3	18	111	14	2	1
1 month " 2 ...	65	25	191	7	30	200	5	2	7
2 months " 3 ...	39	16	238	4	23	124	5	1	7
3 " " 4 ...	31	26	228	6	14	70	3	1	5
4 " " 5 ...	29	9	253	7	10	45	...	...	2
5 " " 6 ...	25	17	184	12	9	56	...	...	1
6 " " 7 ...	22	16	188	7	6	27	...	...	2
7 " " 8 ...	16	10	172	10	5	32	...	...	2
8 " " 9 ...	28	23	156	4	3	17	...	...	...
9 " " 10 ...	21	18	111	6	7	11	...	...	...
10 " " 11 ...	17	17	106	1	6	11	...	...	1
11 " " 12 ...	13	15	121	3	7	16	...	...	...
Total under 1 year	350	232	2,076	88	365	2,738	497	13	51

It will be seen that the maximum number of deaths from syphilis, convulsions, pneumonia, hernia and intestinal obstruction, malformations, congenital debility, icterus and sclerema, other diseases peculiar to early infancy, lack of care, and other external violence occurred during the first month of life, while acute bronchitis

GRAPHS SHEWING TOTAL ANNUAL BIRTHS IN THE COMMONWEALTH AND STATES OF AUSTRALIA, 1860-1911.



(See Table page 188.)

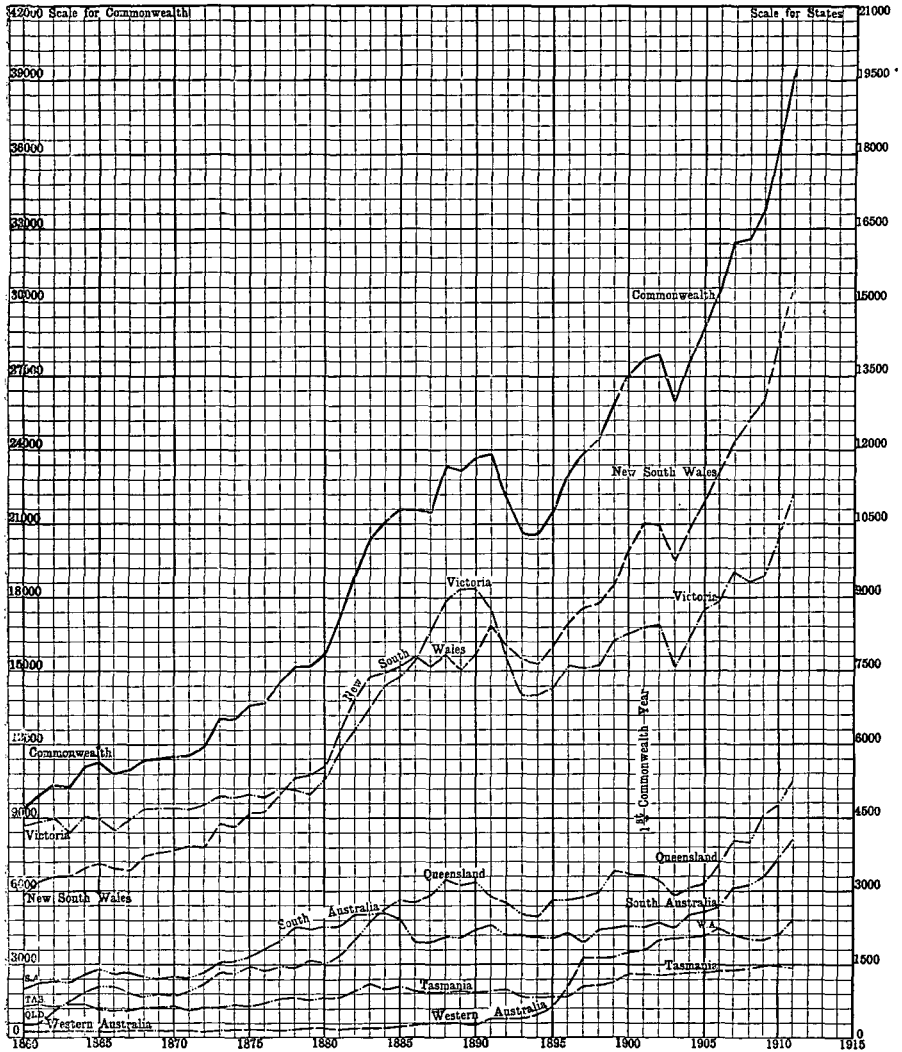
EXPLANATION OF GRAPHS.—The base of each small square represents an interval of one year for both Commonwealth and States, and the vertical height represents 2000 persons for the Commonwealth, and 1000 for the States.

The scale on the left relates to the Commonwealth, and that on the right to the States.

The distances upwards from the common zero lines of the States and Commonwealth, marked 0, denote the total annual number of births in the States and Commonwealth, the scale of the latter being reduced one-half.

The names of the States to which the graphs refer are written thereon, and the characters of the lines used are as follows:—Commonwealth, —————; New South Wales ————; Victoria, - - - - -; Queensland, ————; South Australia, ————; Western Australia, ————; Tasmania, ————.

GRAPHS SHEWING TOTAL ANNUAL MARRIAGES IN THE COMMONWEALTH AND STATES OF AUSTRALIA, 1860-1911.



(See Table page 201.)

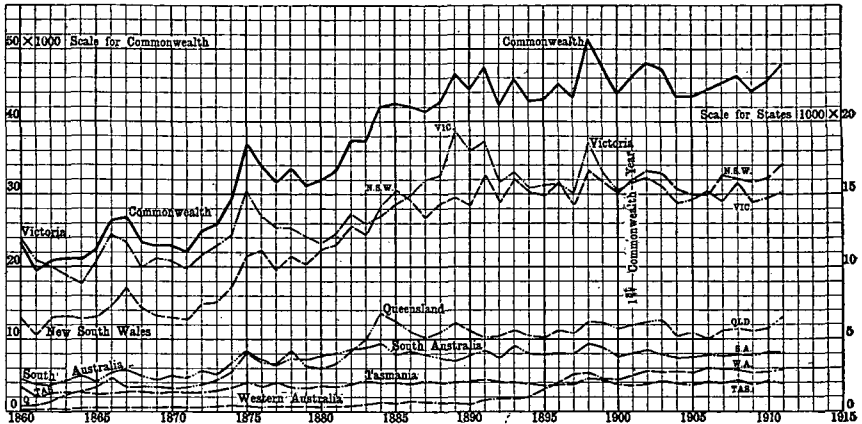
EXPLANATION OF GRAPHS.—The base of each small square represents an interval of one year for both Commonwealth and States, and the vertical height represents 600 marriages for the Commonwealth and 300 for the States.

The scale on the left relates to the Commonwealth, and that on the right relates to the States.

The distances upwards from the zero line, marked 0, denote the total annual number of marriages in the States and Commonwealth, the scale of the latter being reduced one-half.

The names of the States to which the graphs refer are written thereon, and the lines used are similar to those for births on page 249.

GRAPHS SHEWING TOTAL ANNUAL DEATHS IN THE COMMONWEALTH AND STATES OF AUSTRALIA, 1860-1911.



(See Table page 210.)

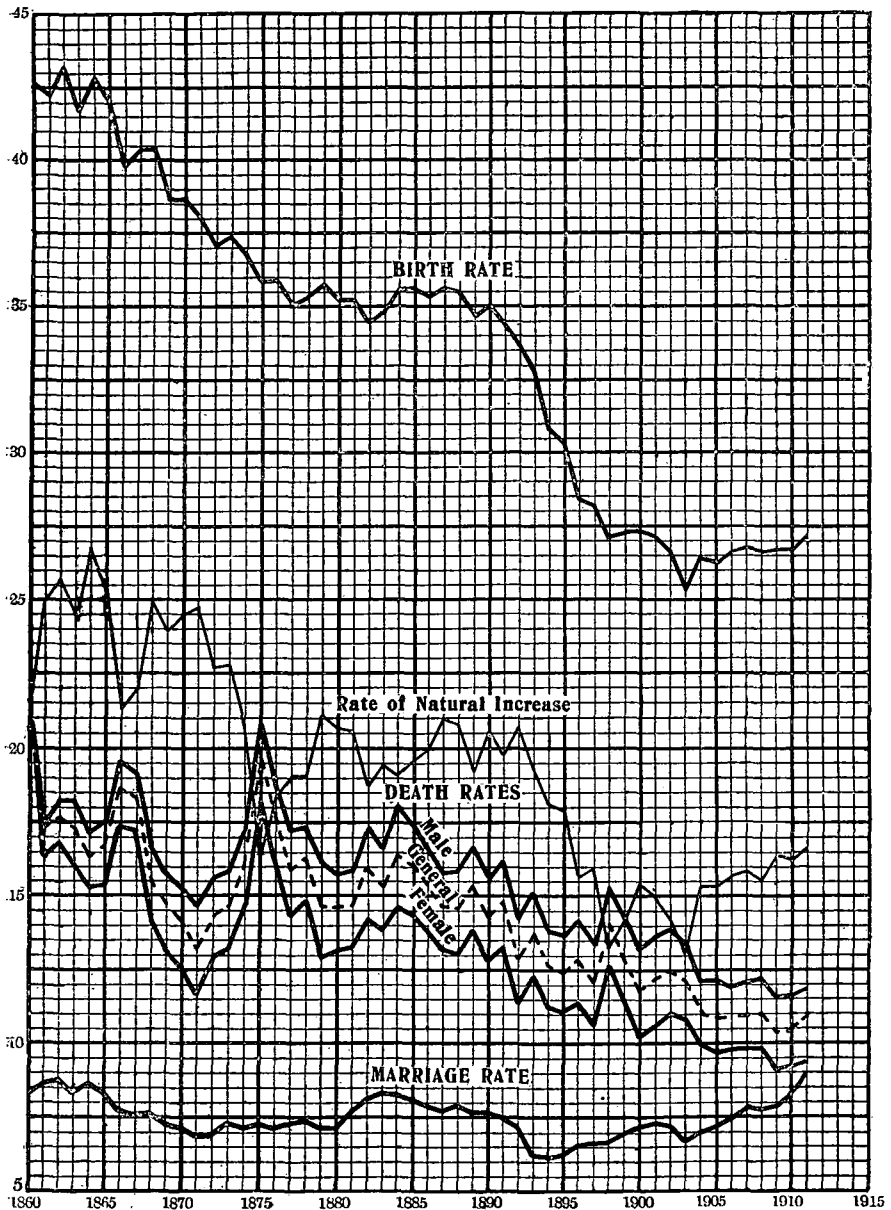
EXPLANATION OF GRAPHS.—The base of each small square represents an interval of one year for both Commonwealth and States, and the vertical height represents 2000 persons for the Commonwealth and 1000 for the States.

The scale on the left relates to the Commonwealth, and that on the right relates to the States.

The distances upwards from the common zero line for States and Commonwealth, marked 0, denote the total annual number of deaths in the States and Commonwealth, the scale of the latter being reduced one-half.

The names of the States to which the curves refer are written thereon, and the lines used are similar to those for births on page 249.

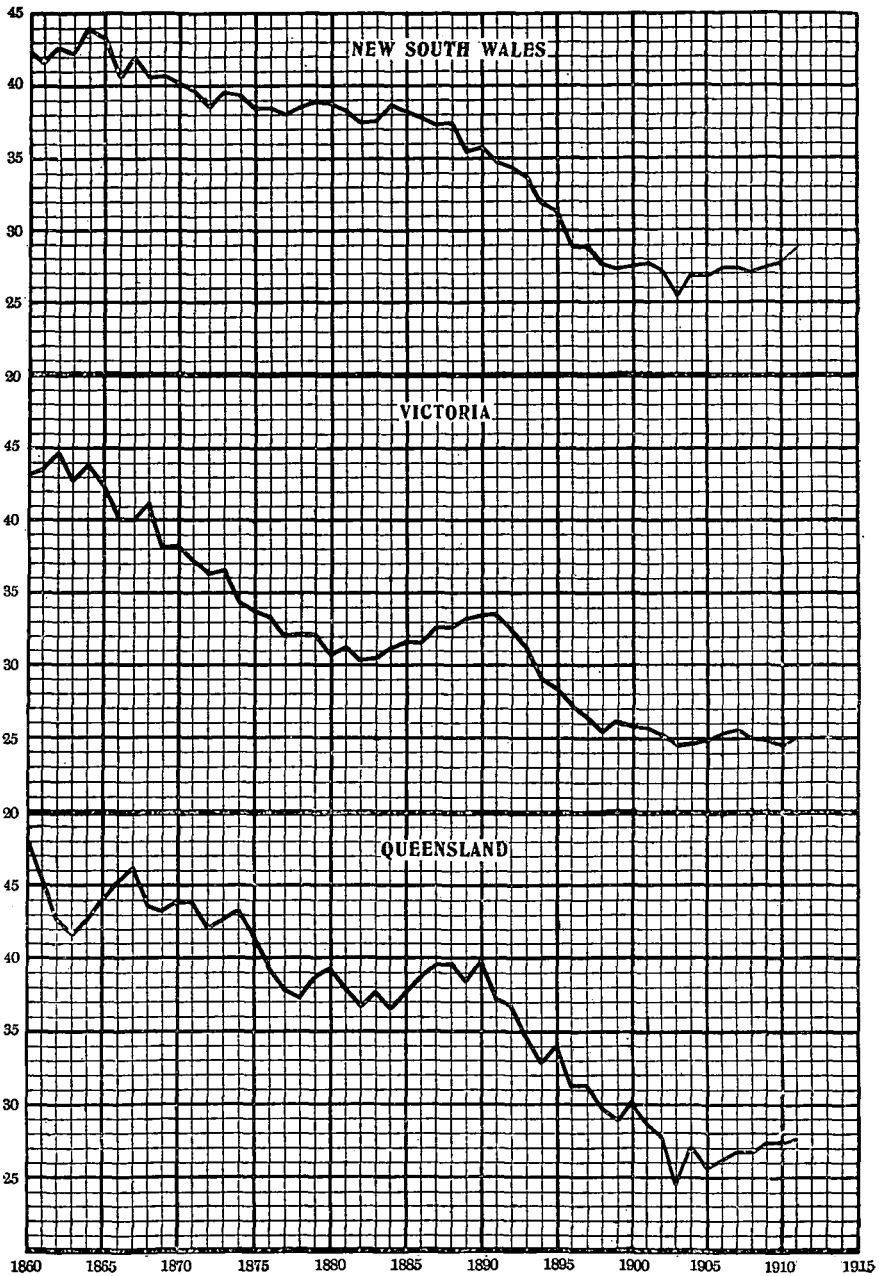
GRAPHS SHEWING GENERAL BIRTH, NATURAL INCREASE, DEATH (MALE, GENERAL AND FEMALE), AND MARRIAGE RATES IN THE COMMONWEALTH OF AUSTRALIA, 1860-1911.



(See pages 188, 202, 210 and 264.)

EXPLANATION OF GRAPHS.—The base of each small square represents one year's interval, and the vertical height, according to the character of the curve, one half per thousand of the population—the basic line being five per thousand of the population.

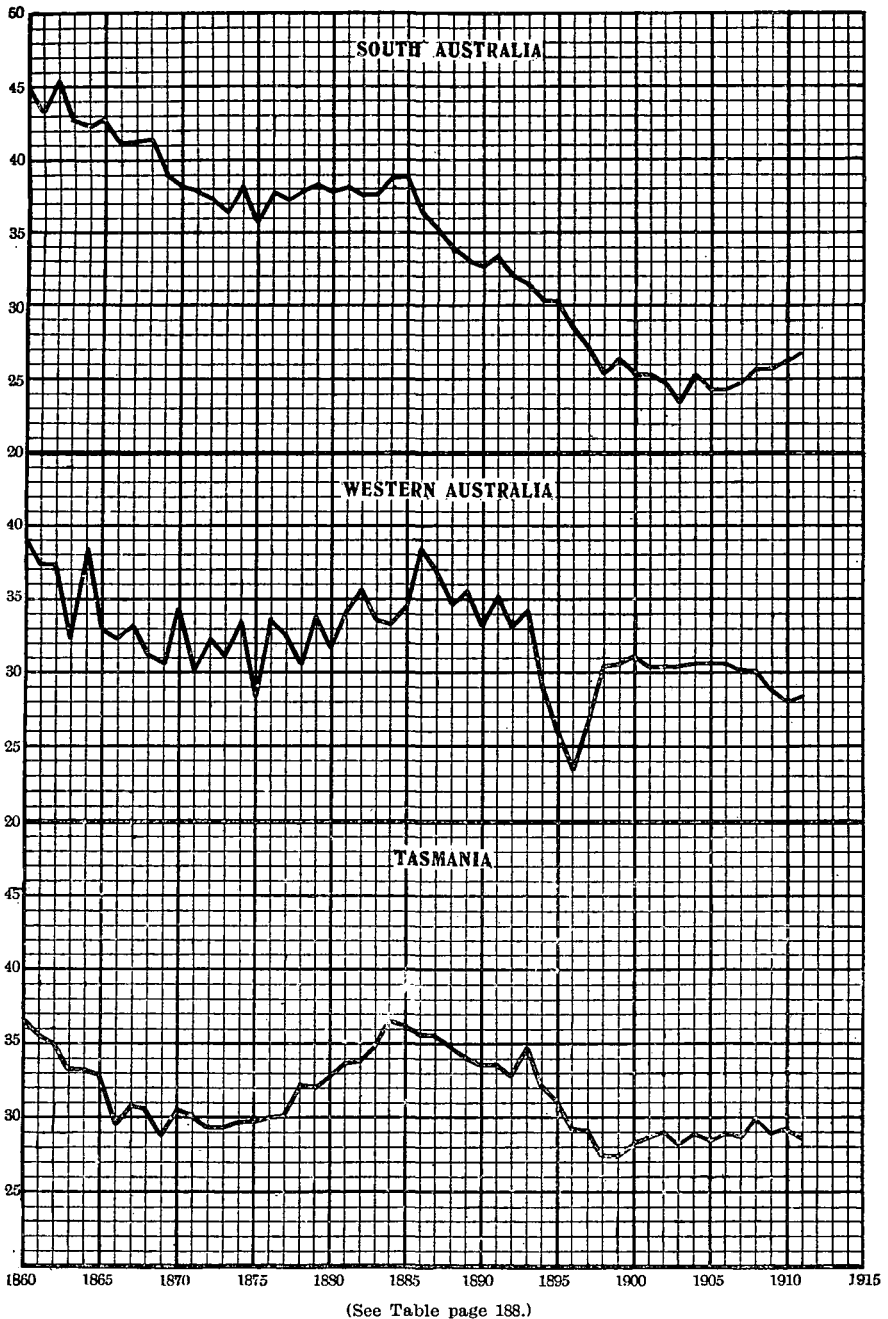
GRAPHS SHEWING BIRTH RATES IN THE STATES OF NEW SOUTH WALES,
VICTORIA, AND QUEENSLAND, 1860-1911.



(See Table page 188.)

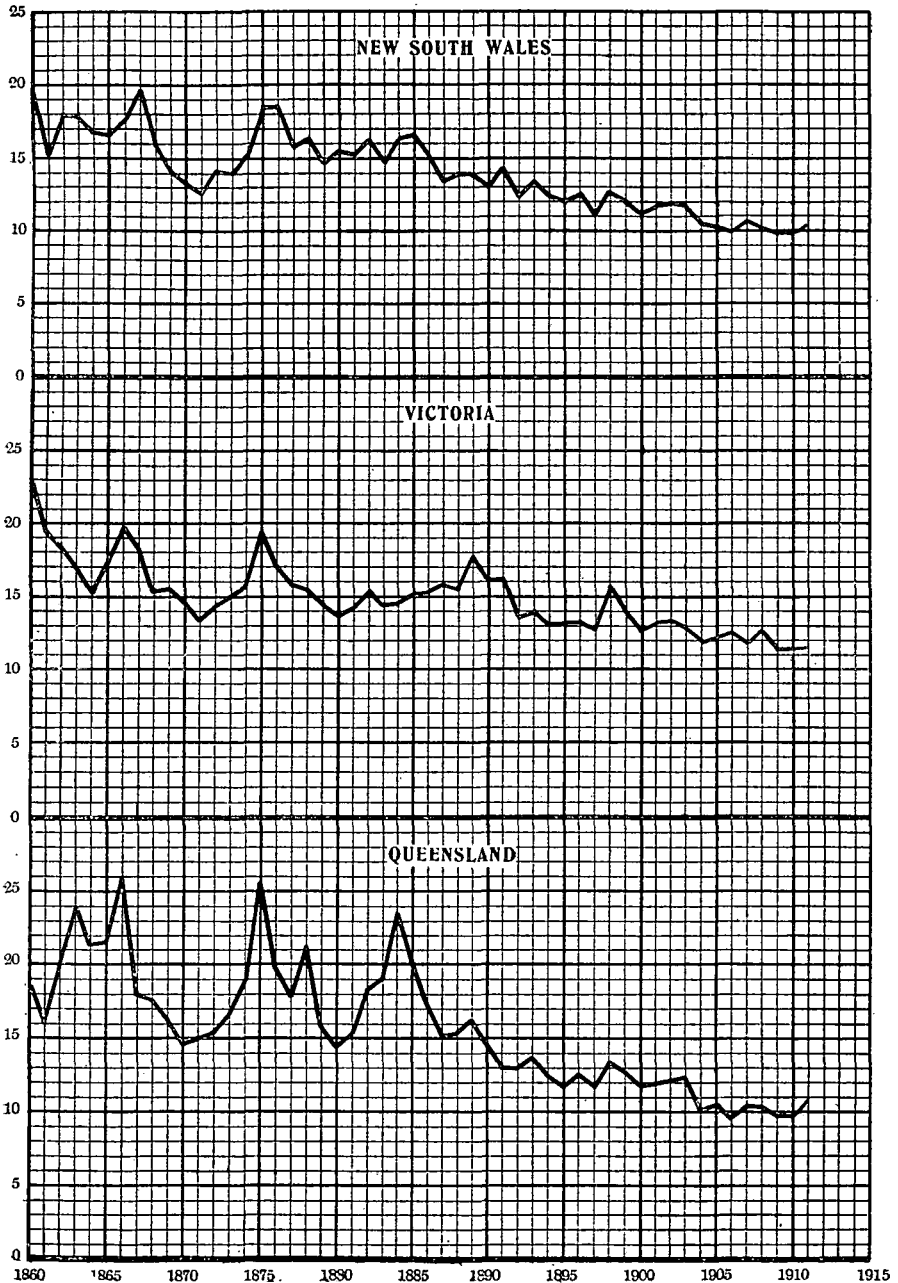
EXPLANATION OF GRAPHS.—The base of each small square represents one year's interval, and the vertical height one birth per thousand of the population—the basic line for each State being twenty per thousand of the population.

GRAPHS SHEWING BIRTH RATES IN THE STATES OF SOUTH AUSTRALIA,
WESTERN AUSTRALIA, AND TASMANIA, 1860-1911.



EXPLANATION OF GRAPHS.—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.

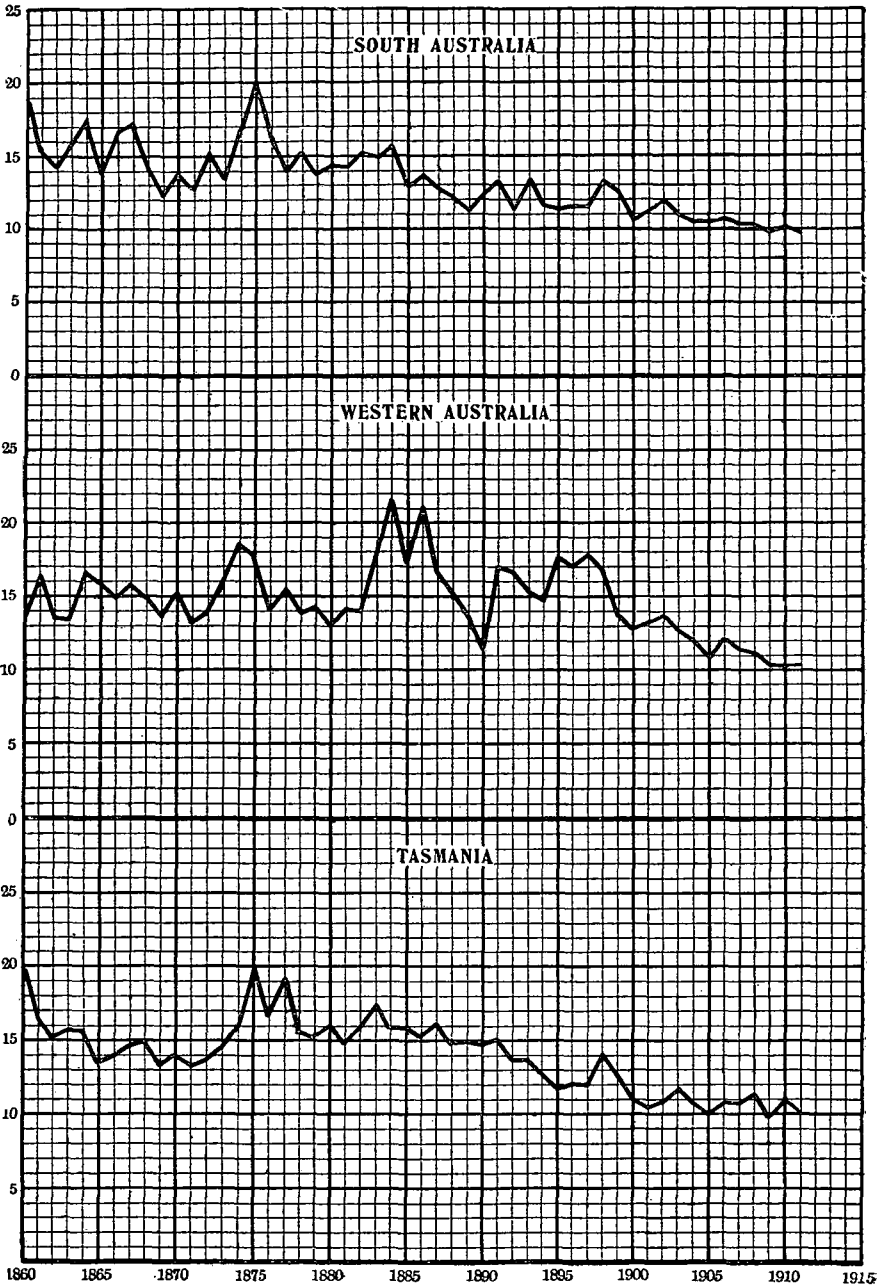
GRAPHS SHEWING DEATH RATES IN THE STATES OF NEW SOUTH WALES,
VICTORIA, AND QUEENSLAND, 1860-1911.



(See Table page 210.)

EXPLANATION OF GRAPHS.—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 shewn by a thickened line.

GRAPHS SHEWING DEATH RATES IN THE STATES OF SOUTH AUSTRALIA,
WESTERN AUSTRALIA, AND TASMANIA, 1860-1911.



(See Table page 210.)

EXPLANATION OF GRAPHS.—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 shewn by a thickened line.

and broncho-pneumonia were most fatal during the second month. Diarrhœa and enteritis carried off more children in the fifth month than in any other, the numbers gradually decreasing toward the end of the year. Whooping cough reached its maximum during the second and third month of life.

20. **Age at Death of Married Males and Females, and Issue.**—"Bulletin No. 29 Commonwealth Demography" contains a number of tables, for the Commonwealth, shewing the age at marriage, age at death, duration of life after marriage, birthplaces, and occupations, in combination with the issue, of married persons who died in 1911. A short summary of the tables mentioned is given hereunder. Deaths of married males in 1911 numbered 12,213, and of married females, 11,423. The ages at death of the males ranged from 19 to 103 years, and those of the females, from 17 to 102 years. The total number of children in the families of the 12,213 males was 66,252, the maximum in one family being 29; and of the 11,423 females, 61,089, with a maximum of 22. The average number of children is shewn for various age-groups in the following table:—

AGE AT DEATH OF MARRIED MALES AND FEMALES, AND AVERAGE ISSUE.

COMMONWEALTH, 1911.

Age at Death.	Average Family of Males.	Average Family of Females.	Age at Death.	Average Family of Males.	Average Family of Females.
Under 20 years ...	0.33	0.94	70 to 74 years ...	6.41	6.38
20 to 24 years ...	0.77	1.27	75 " 79 " ...	6.75	6.72
25 " 29 " ...	1.25	1.82	80 " 84 " ...	6.68	6.22
30 " 34 " ...	2.05	2.74	85 " 89 " ...	6.67	5.97
35 " 39 " ...	2.80	3.64	90 " 94 " ...	6.03	5.69
40 " 44 " ...	3.47	4.09	95 " 99 " ...	7.30	5.05
45 " 49 " ...	4.09	4.54	100 years and upwards	9.33	5.17
50 " 54 " ...	4.75	5.35	Age not stated ...	4.33	4.60
55 " 59 " ...	5.44	5.86			
60 " 64 " ...	5.95	5.99			
65 " 69 " ...	6.23	6.50	All ages ...	5.42	5.35

The figures shewn in the preceding table include the issue both living and dead; the proportion between the two, taking deceased males and females together, was about as 1000 to 323, or, roughly speaking, as three to one. The totals are shewn in the following table:—

ISSUE OF MARRIED MALES AND FEMALES.

COMMONWEALTH, 1911.

Issue of Married Males.	Males.	Females.	Total.	Issue of Married Females.	Males.	Females.	Total.
Living ...	26,107	25,072	51,179	Living ...	22,799	22,238	45,037
Dead ...	7,877	7,196	15,073	Dead ...	8,561	7,491	16,052
Total ...	33,984	32,268	66,252	Total ...	31,360	29,729	61,089

These figures shew a masculinity in the births of 105.40, which agrees fairly well with the experience of the birth statistics, the masculinity of the births in the Commonwealth from 1902 to 1911 having ranged from 104.73 to 106.38.

As a matter of curiosity it may be mentioned that the family of twenty-nine belonged to a father who died at the age of 81, and that it had originally comprised sixteen sons and thirteen daughters, of whom eleven sons and seven daughters survived their father.

21. Age at Marriage of Males and Females, and Issue.—While the table giving the average families of married males and females naturally shews 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, shews a corresponding decrease in the averages as the age at marriage advances :—

AGE AT MARRIAGE OF MALES AND FEMALES, AND AVERAGE ISSUE.

COMMONWEALTH, 1911.

Age at Marriage.	Average Family of Males.	Average Family of Females.	Age at Marriage.	Average Family of Males.	Average Family of Females.
Under 20 years ...	6.97	7.11	55 to 59 years ...	1.66	...
20 to 24 years ...	6.34	5.77	60 „ 64 „ ...	2.00	...
25 „ 29 „ ...	5.70	4.27	65 years and upwards	1.00	...
30 „ 34 „ ...	4.92	3.04	Age not stated ...	5.40	5.23
35 „ 39 „ ...	4.05	1.68			
40 „ 44 „ ...	3.43	0.72			
45 „ 49 „ ...	2.59	0.26			
50 „ 54 „ ...	2.45	...	All ages ...	5.42	5.35

It will be seen that of women who were married at ages from 40 to 44 years, seven in every ten gave birth to a child, while in the case of women who were married at ages from 45 to 49 years, the proportion fell to about one in every four.

22. Duration of Life after Marriage of Males and Females.—The duration of life after marriage has been tabulated for males and females both in combination with the age at marriage, and with the total and average issue. The tables shewing the result do not, however, lend themselves to condensation, and are, therefore, omitted here. They will be found in “Bulletin No. 29 of Commonwealth Demography,” pages 158 to 163.

23. Birthplaces of Married Males and Females, and Issue.—The following table shews the birthplaces of married males and females whose deaths were registered in 1911, together with their average issue. No generalisations can, of course, be made in those cases where the number of deaths is small, and where the average family had to be worked out on small figures. But where the figures are comparatively large, as in the case of natives of the Commonwealth, differences occur between the averages of the individual States which appear inexplicable on any other ground than that of inefficient registration in some of the States. It will be noted that the differences occur both in the male and female averages. Although the figures apply to the Commonwealth as a whole, it must be borne in mind that the vast majority of deaths of natives of any one State are registered in that particular State. For the whole Commonwealth the average family of deceased males was 4.71, and of deceased females, 4.57.

**BIRTHPLACES OF MARRIED MALES AND FEMALES, AND AVERAGE ISSUE.
COMMONWEALTH, 1911.**

Birthplaces.	Married Males.		Married Females.		Birthplaces.	Married Males.		Married Females.	
	Deaths.	Average Family.	Deaths.	Average Family.		Deaths.	Average Family.	Deaths.	Average Family.
New South Wales ...	1,654	5.15	1,861	5.11	Japan ...	5	0.80	1	0.00
Victoria ...	1,313	4.09	1,448	3.88	Philippine Islands ...	1	2.00	...	...
Queensland ...	203	3.52	275	3.53	Straits Settlements ...	1	0.00	...	...
South Australia ...	487	4.63	569	4.41	Syria ...	6	5.17	2	2.00
Western Australia ...	53	5.32	55	5.45	Other Asiatic Countries ...	2	1.50	...	...
Tasmania ...	360	5.64	358	5.43	Cape of Good Hope ...	2	7.50	2	5.00
Northern Territory ...	4	0.25	...	...	Mauritius ...	6	3.70	4	2.00
New Zealand ...	64	3.89	56	3.84	South Africa (so descd.) ...	5	2.00	7	6.29
England ...	3,972	5.87	3,087	5.86	Other African British Possessions ...	3	3.33	2	5.00
Wales ...	107	5.56	65	5.80	Canada ...	39	5.43	13	6.69
Scotland ...	1,133	5.89	1,002	6.09	Jamaica ...	1	1.00	3	3.67
Ireland ...	1,766	6.11	2,118	5.83	Newfoundland ...	1	8.00	1	12.00
Isle of Man ...	8	6.75	3	8.00	Other American British Possessions ...	1	12.00	...	...
Other European British Possessions ...	15	6.40	21	5.43	Argentina ...	1	3.00	...	...
Austria-Hungary ...	21	3.48	3	9.67	Brazil ...	1	2.00	1	8.00
Belgium ...	5	4.60	...	...	United States ...	40	3.78	17	4.94
Denmark ...	59	5.35	24	5.96	Other American Countries ...	15	4.80	9	4.11
France ...	43	3.51	14	4.79	Fiji ...	1	0.00	1	0.00
Germany ...	436	5.90	254	6.61	Friendly Islands ...	...	...	1	0.00
Greece ...	9	5.78	2	6.50	Other Polynesian British Possessions ...	2	5.50	1	8.00
Italy ...	38	4.89	8	3.88	New Caledonia ...	1	8.00	2	3.50
Netherlands ...	6	4.83	2	4.00	New Hebrides ...	...	...	1	6.00
Norway ...	35	4.23	4	4.50	Other Polynesian Islands ...	...	...	1	4.00
Portugal ...	8	5.13	1	10.00	S. Sea Islands (so descd.) ...	1	1.00	2	2.50
Russia ...	34	4.32	5	5.00	At Sea ...	32	4.81	35	6.03
Spain ...	3	5.33	1	5.00	Not stated ...	40	3.85	37	3.73
Sweden ...	51	3.80	11	3.91					
Switzerland ...	27	6.11	13	5.00					
Other Europ. Countries ...	1	6.00	1	2.00					
British India ...	29	4.14	17	6.41					
Ceylon ...	2	2.00	...	...			
China ...	60	2.37	2	4.50					
					Total ...	12,213	5.42	11,423	5.35

24.—Occupations of Married Males, and Issue.—A final tabulation shows the average issue in combination with the occupation of deceased males. When these figures are available for a number of years they will afford some clue to the much debated question as to the decrease in the birth rate among various classes of the population.

**OCCUPATIONS OF MARRIED MALES, AND AVERAGE ISSUE.
COMMONWEALTH, 1911.**

Occupations.	Deaths of Married Males.	Average Family.
Professional class ...	681	4.55
Domestic class ...	452	3.92
Mercantile class...	1,407	4.70
Engaged in transport and communication ...	1,001	4.56
Manufacturing class ...	1,325	5.18
Engaged in building and construction ...	757	5.88
Indefinite industrial workers ...	1,899	5.32
Agricultural class ...	2,035	6.74
Pastoral class ...	476	6.21
Working in mines and quarries ...	1,014	5.38
Other primary producers ...	85	5.35
Independent means ...	796	5.75
Dependents ...	44	4.30
Occupation not stated ...	241	6.01
Total ...	12,213	5.42

In the fifth issue of this Year Book (pp. 227 to 229), a series of observations was published dealing with the Commonwealth Rates of Infantile Mortality. These observations are not reprinted in the present issue.

§ 4. Graphical Representation of Vital Statistics.

1. **General.**—The progressive fluctuations of the numbers representing the total births and marriages are important indexes of the economic conditions and social ideals of a community. For this reason graphs have been prepared (see pages 249 and 250), shewing these fluctuations from 1860 to 1911, both for the States and the Commonwealth. The facts are very significant from the national point of view and call for serious consideration. To properly appreciate the situation it should be remembered that, normally, the increase of births and also of marriages will be similar to the increase of population. Although the marriage curve shews a falling off in marriages after 1891 (see page 250), it shews a recovery in 1894, and, with the exception of a small fall for 1903, it has continually advanced. The same characteristic is not seen in the curve of births, which discloses a recovering tendency only in 1904.

The table printed below shews the number of births, marriages and deaths which would have been experienced had the rate for 1890 continued, and reveals the significance of the facts disclosed by the curves. It may be remarked that the death rate has greatly improved, and among other countries Australia stands in a very favourable position in this respect. At the same time the decline in the marriage rate, overtaken once more in 1907, and the still more serious decline in the birth rate, in a country but sparsely populated, have an obvious and most important bearing on the national future, and on questions concerning the extent to which it is desirable to promote immigration.

ACTUAL BIRTHS, DEATHS, AND MARRIAGES,

EXPERIENCED IN THE COMMONWEALTH DURING THE YEARS 1890 TO 1911,
COMPARED WITH THE NUMBER THAT WOULD HAVE OCCURRED IF THE
RATES OF 1890 HAD REMAINED IN OPERATION.

Year.	BIRTHS.		DEATHS.		MARRIAGES.	
	Actual.	Number of Births that would have been experienced if the 1890 birth rate had been in operation.	Actual.	Number of Deaths that would have been experienced if the 1890 death rate had been in operation.	Actual.	Number of Marriages that would have been experienced if the 1890 marriage rate had been in operation.
1890	108,683		44,449		23,725	
1891	110,187	111,802	47,430	45,737	23,862	24,419
1892	110,158	114,502	42,268	46,842	22,049	25,009
1893	109,322	116,617	45,801	47,707	20,631	25,470
1894	104,660	118,734	42,958	48,573	20,625	25,933
1895	105,084	121,002	43,080	49,501	21,564	26,428
1896	100,134	123,212	45,202	50,405	23,068	26,911
1897	101,137	125,419	43,447	51,308	23,939	27,393
1898	98,845	127,371	51,406	52,106	24,472	27,819
1899	100,638	129,088	47,629	52,809	25,958	28,194
1900	102,221	130,848	44,060	53,529	27,101	28,579
1901	102,945	132,599	46,330	54,245	27,753	28,961
1902	102,776	134,603	48,078	55,065	27,926	29,399
1903	98,443	136,189	47,293	55,714	25,977	29,745
1904	104,113	137,917	43,572	56,420	27,632	30,122
1905	104,941	139,959	43,514	57,256	29,004	30,569
1906	107,890	142,030	44,333	58,103	30,410	31,021
1907	110,347	144,248	45,305	59,011	32,470	31,505
1908	111,545	146,720	46,426	60,022	32,551	32,045
1909	114,071	149,526	44,172	61,170	33,775	32,658
1910	116,801	152,869	45,590	62,537	36,592	33,388
1911	122,193	157,072	47,869	64,257	39,482	34,306

2. Graphs of Annual Births, Commonwealth and States (page 249).—A striking feature of the graphs of births is the practically continuous increase in the number of births exhibited in the graph for the Commonwealth from 1860 to 1891, and the marked variations of subsequent years. As the curve clearly shews, a turning point in the number of births occurred in 1891, whilst, as regards the separate States, New South Wales and Tasmania date their decline in number from 1893, Victoria from 1891, and Queensland from 1890. In South Australia the corresponding decline took place as early as 1885, while in Western Australia the increase in number of births has been practically continuous throughout.

It is of special interest to note the decline in births associated with the commercial crisis of 1891-3, and also the decline occurring in 1903, an accompaniment of the severe drought of that period.

In the case of New South Wales the graph crosses that of Victoria in 1879, *i.e.*, the births for that year were sensibly identical in the two States. A fairly continuous increase was experienced in the former State from 1860 to 1893, the only marked fluctuation being a sudden decline in 1889 and an equally rapid recovery in 1890. From 1893 to 1898 a somewhat rapid decline again took place, succeeded by a rise, the continuity of which was broken only by a sharp decline in 1903 and recovery in 1904.

In the case of Victoria the graph shews the increase between 1860 and 1880 to have been comparatively slight, the curve being a gradual rise, with fluctuations more or less marked to 1873, with a subsequent decline. From 1880 to 1891 the increase in the number of births is seen to be very rapid and practically continuous, while from 1891 to 1898 an equally sharp and continuous decline was experienced. A further rise and fall took place between 1898 and 1903, succeeded by a continuous rise from the last-mentioned year to 1907, and a slight fall in 1908, followed by a recovery in 1909.

Starting in 1860 with a lower number of births than any State except Western Australia, the Queensland graph shews that the births increased somewhat rapidly until 1867. The equality in the number of births in Queensland and Tasmania in 1864 is shewn by the Queensland curve crossing the Tasmanian curve at the line for that year. From 1867 to 1882 a continuous though somewhat less rapid increase was experienced, followed by a very rapid rise to 1890, in which year Queensland's maximum number of births was recorded. The South Australian graph is crossed by that of Queensland at the year 1885. From 1890 onwards the number of births has fluctuated somewhat, but has, on the whole, retained a practically stationary position at a height rather less than that of 1890. The most serious variation was a sudden fall in 1903, the drought year, and rapid recovery in 1904, with a further fall in 1905 and a continuous rise since 1906.

The South Australian graph, a slow but practically continuous rise from 1860 to 1885, exhibits the steady increase in the total number of births. This rise is followed by a slow but fluctuating decline to 1903, and a slight recovery to 1911.

The Tasmanian curve may be regarded as made up of five portions, of which the first, from 1860 to 1877, represents a period of very slight variation, with, on the whole, an increase; the second, from 1877 to 1884, a period of continuous and moderately rapid increase; the third, from 1884 to 1893, a period of rapid increase; the fourth, from 1893 to 1898, a period of continuous but slow decrease; and the fifth, from 1898 onwards, a period of steady recovery.

The Western Australian curve indicates that an increase, which was practically continuous but very slow, took place from 1860 to 1884, and that a somewhat quicker rate of increase, experienced from 1884 to 1896, was succeeded by a still more rapid and very satisfactory rate of increase from 1896 onwards.

It will be seen that the years in which the highest points were reached by the several curves are as follows :—

State ...	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.
Year ...	1911	1891	1911	1885	1911	1908	1911

3. **Graphs of Annual Marriages, Commonwealth and States** (page 250).—The Commonwealth marriage graph from 1860 to 1885 reveals a moderate but somewhat fluctuating increase in the annual number of marriages between 1860 and 1871, a more rapid increase between 1871 and 1879, a still more rapid increase between 1879 and 1885. From 1885 to 1891 the numbers continued to increase, but with marked fluctuations in rate. The financial crisis associated with the period subsequent to the latter year was accompanied by a strongly-marked decline in the number of marriages, which reached its lowest point in 1894. From that year onwards a fairly rapid recovery was effected, the record for 1891 being exceeded by that of 1897. This progress was maintained until 1902, when the severe drought of that and the succeeding year were collateral with a rapid fall in the number of marriages. An equally rapid recovery, however, has since taken place, and the number of marriages in the Commonwealth during 1911 was greater than in any preceding year.

4. **Graphs of Annual Deaths, Commonwealth and States** (page 251).—The curves shewing the progression of the annual number of deaths indicate clearly that the periods for which exceptionally large numbers of deaths occurred were:—(a) 1866-7, (b) 1875-6, (c) 1884-5, (d) 1889-1891, (e) 1893, (f) 1898, and (g) 1902-3. It is remarkable that in each of the periods specified the phenomenon of a relatively high number of deaths was experienced in the majority of the States. Thus, as regards 1866-7, all the States except Western Australia and Tasmania were so affected; in 1875-6 all except Western Australia; in 1884-5 all were affected; in 1889 all except Western Australia and South Australia; in 1891 all except Queensland; whilst in 1893 and 1898, and 1902-3 all were affected. The fact that the periods of high death rates have been practically identical in the several States furnishes an indication that the excessive mortality has been due to a considerable extent to some common cause operating throughout the Commonwealth.

It may be noted as curious that periods of heavy mortality have occurred at intervals of approximately of nine years, viz.:—1866-7, 1875-6, 1884-5, 1893, and 1902-3. There are, however, two marked increases between the third and fourth dates, and one between the fourth and fifth. Thus there is no real indication of the periodicity of the death rate.

Periods in which the number of deaths was exceptionally low are far less clearly defined than those in which the number was high, and the agreement amongst the States is also less complete. The principal periods of low mortality may be said to be 1861, 1869-71, 1879, 1892, 1897, 1900, 1904-5, 1909.

5. **Graphs of Annual Birth, Death, and Marriage Rates and of Rate of Natural Increase—Commonwealth** (page 252).—(i.) *General*. These graphs represent the number of births, deaths, and marriages, and the excess of births over deaths (natural increase) per 1000 of the population of the Commonwealth, for each of the years 1860 to 1911.

(ii.) *Births*. In the case of births, the graph indicates a well marked decline in rate during the period, and represents a fall from 42.56 per 1000 of population in 1860 to 27.21 per 1000 in 1911. This enormous reduction has been subject to small fluctuations during the period under review, but may, on the whole, be said to have been in evidence throughout. There are, however, two periods of arrested decline noticeable, one from 1877 to 1890, and the other from 1898 to the present time. The course of the graph thus indicates a rapid fall from 42.56 in 1860 to 34.99 in 1877, succeeded by a fluctuating but, on the whole, fairly stationary period to 34.98 in 1890, then a fall even more rapid to 27.15 in 1898, and a further comparatively stationary period to 27.21 in 1911. The lowest point reached, viz., 25.29, was attained in 1903, the year in which the Commonwealth suffered severely from the worst drought it has ever experienced.

Since then a small but well defined advance in the birth rate has been in evidence. A declining birth rate is usually due to complex causes, amongst which the variations in the age constitution of the population, and the adoption of preventative measures, are generally considered the most potent.

(iii.) *Deaths.* The three graphs relating to deaths furnish particulars concerning the rates experienced during the period amongst males and females separately, and in the population as a whole, the latter occupying naturally a position between the other two. Throughout the period the rate for males has largely exceeded that for females, but the fluctuations in the two rates have synchronised remarkably, indicating that the conditions which have been responsible for the marked variations which have occurred from time to time have affected males and females alike. On the whole, the graphs furnish clear evidence of a satisfactory decline in the death rate of the Commonwealth, a fall having taken place from 20.86 in 1860 to 10.66 in 1911. The graphical representation of the death rates brings into prominence five years in which the rates were exceptionally high when compared with those of adjacent years. These years are 1860, 1866, 1875, 1884, and 1898. The principal cause of the excessive rate of 1860 was the prevalence in that year of measles, scarlatina, and diphtheria, while the high rate of 1866, 1875, and 1898 were also largely due to epidemics of measles. Prior to 1892, when a rate of 12.91 was experienced, the lowest general death rate for the Commonwealth was that of 1871, viz., 13.24. The highest male death rate for the period was 20.97 in 1860, and the lowest 11.51 in 1909. For females the highest was 20.71 in 1860, and the lowest 9.06 in 1909. The difference between the male and female rate has, since 1869, been fairly constant, and has ranged between 1.97 and 3.44, with a mean value of about 2.7.

(iv.) *Marriages.* In the case of the graph representing marriage rates, the fluctuations are less abrupt than in the case of the birth rate and death rate graphs, and the rate for 1911, the final year of the period, viz., 8.79, does not differ very considerably from that of 1860, which was 8.42. The lowest marriage rate for the period was that of 1894, viz., 6.08, marking the culmination of the commercial and financial depression indicated by the declining rates from 1888 onwards. From 1894 to the present time a satisfactory increase has been in evidence, disturbed only by the sharp decline which, in 1903, accompanied the severe drought experienced in the Commonwealth in that year.

(v.) *Natural Increase.* This graph, which represents the excess of births over deaths per 1000 of population, exhibits marked fluctuations arising from the combined fluctuations in birth and death rates. Thus, corresponding to the high death rates of 1860, 1866, 1875, and 1898, there are exceptionally low rates of natural increase, accentuated in the last-mentioned year by a comparatively low birth rate. A combination of low birth rate and comparatively high death rate was also responsible for a very low rate of natural increase in 1903. The highest rate of natural increase for the period was 26.58 in 1864, and the lowest 13.03 in 1898.

6. Graphs of Annual Birth Rates—States (pages 253 and 254).—These graphs furnish for the several States information similar to that supplied in the graph on page 252 for the Commonwealth as a whole. It will be seen that in every case the total effect has been an extensive decline in rate, subject to very marked fluctuations. In all the States the period from 1875 to 1895 was one of arrested decline, if not of actual advance, in the birth rate. With the exception of the very low rate accompanying the drought in 1903, the variations in any of the States since 1901 have not been very marked, and in some cases a slight tendency to increase is in evidence.

The highest birth rates during the period were as follows:—New South Wales (1864), 44.00; Victoria (1862), 44.71; Queensland (1860), 47.93; South Australia (1862),

45.44 ; Western Australia (1860), 38.96 ; and Tasmania (1884), 36.68. The following were the lowest rates for the period.—New South Wales (1903), 25.44 ; Victoria (1910), 24.51 ; Queensland (1903), 24.53 ; South Australia (1903), 23.84 ; Western Australia (1896), 23.44 ; Tasmania (1899), 27.43.

7. **Graphs of Annual Death Rates—States** (pages 255 and 256).—These graphs furnish for the several States similar information to that given for the Commonwealth as a whole in the diagram on page 252, and indicate in each case a satisfactory decline in death rate. It may be noted that an exceptionally high death rate was experienced in all the States in 1875, and that a similar uniformity, though on a smaller scale, is observable for the year 1898, the principal cause in each case having been an epidemic of measles. The highest death rates experienced during the period were as follows :—New South Wales (1867), 19.79 ; Victoria (1860), 22.77 ; Queensland (1866), 25.96 ; South Australia (1875), 19.97 ; Western Australia (1884), 21.54 ; and Tasmania (1875), 19.99. The following were the lowest death rates for the period :—New South Wales (1909 and 1910), 9.89 ; Victoria (1909 and 1911), 11.45 ; Queensland (1906), 9.50 ; South Australia (1909), 9.74 ; Western Australia (1910), 10.11 ; and Tasmania (1909), 9.68.