

**SECTION V.**  
**VITAL STATISTICS.**

**NOTE.**—The rates quoted throughout this Section for the years 1903 to 1913 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, 1903 to 1913.**—The total number of male and female births registered in the Commonwealth during the years 1903 to 1913 is as shewn in the two tables hereunder :—

**TOTAL MALE BIRTHS, COMMONWEALTH, 1903 to 1913.**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Federal Territory.	C'wealth.
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
1912 ...	26,524	18,226	9,576	6,168	4,469	3,016	23	20	68,022
1913 ...	26,624	18,434	10,041	6,505	4,710	3,071	27	22	69,434

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

**TOTAL FEMALE BIRTHS, COMMONWEALTH, 1903 to 1913.**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Federal Territory.	C'wealth.
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
1912 ...	25,337	17,570	9,162	5,911	4,220	2,837	10	19	65,066
1913 ...	25,562	17,536	9,690	6,122	4,508	2,815	25	22	66,230

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

**2. Total Births, 1903 to 1913.**—While the total number of births for the Commonwealth was higher in 1913 than in any of the preceding ten years, the following table of particulars discloses also the fact that the excess of births in 1913 over those in 1903 was very unequally distributed between the States :—

## TOTAL BIRTHS, COMMONWEALTH, 1903 to 1913.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North Terr.	Fed'l Terr.	C'wealth.
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
1912 ...	51,861	35,796	18,738	12,079	8,689	5,853	33	39	133,088
1913 ...	52,186	35,970	19,731	12,627	9,218	5,886	52	44	135,714

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

3. **Birth Rates, 1903 to 1913.**—(i.) *Crude Birth Rate.* The law relating to Maternity Allowances which came into force on 10th October, 1912, had the effect of materially diminishing the period between the dates of birth and the dates of registration, so that probably 6000 births were registered during the last three months of the year which, under ordinary circumstances, would not have been registered before the beginning of 1913. The increase shewn by the 1912 birth rate over the rate for 1911 is, therefore, to some extent fictitious, and the true birth rate for the whole Commonwealth in 1912 was more probably about 27.42 per thousand than 28.65 as shewn in the subjoined table. If due allowance be made for this fact it may be stated that the birth rate for the Commonwealth was not only higher in 1913 than in any of the preceding ten years, but that the increase which began with the year 1909, has been maintained ever since. The very high masculinity of the population accounts for the low birth rate experienced in the Northern Territory:—

## CRUDE BIRTH RATE (a), COMMONWEALTH, 1903 to 1913 (b).

Year.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	North Terr.	Federal.	C'wealth.
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 ...	28.60	25.01	27.65	26.89	28.21	28.57	9.34	(c) 16.85	27.21
1912 ...	29.86	26.39	29.67	28.65	28.83	30.53	9.82	19.15	28.65
1913 ...	28.86	25.82	30.24	29.12	29.36	30.03	14.21	17.97	28.25
Density (b) (No. per square mile) ...	5.92	16.07	0.98	1.16	0.33	7.69	0.007	2.18	1.61

(a) Number of births per 1,000 of the mean annual population. (b) On 31st December, 1913. (c) 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, furnishes a more significant rate. This calculation has been made for the four last Census periods, and covers in each case the Census year together with the year immediately preceding and the year immediately following. The following results have

been obtained for the four 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; years 1910-12, 117.22. Nuptial births per 1000 married women of ages 15 to 45:—Years 1880-82, 320.96; years 1890-92, 332.03; years 1900-02, 235.84; years 1910-12, 236.06.

4. **Birth Rates of Various Countries.**—A comparison with other countries shows 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.

Country.	Year.	Rate.	Country.	Year.	Rate.
Russia, European ...	1909	44.0	Prussia ...	1912	28.9
Rumania ...	1912	43.4	German Empire ...	1912	28.3
Bulgaria ...	1909	40.7	Commonwealth ...	1913	28.3
Jamaica ...	1912	38.8	Netherlands... ..	1912	28.1
Chile ...	1912	38.7	Denmark ...	1912	26.7
Servia ...	1912	38.0	New Zealand ...	1913	26.1
Hungary ...	1912	36.3	Scotland ...	1912	25.9
Japan ...	1910	33.9	Victoria ...	1913	25.8
Spain ...	1912	33.6	Norway ...	1912	25.4
Ceylon ...	1912	33.3	Switzerland ...	1911	24.1
Italy ...	1912	32.4	United Kingdom ...	1912	23.9
Austria ...	1912	31.3	England and Wales ...	1912	23.8
Queensland ...	1913	30.2	Sweden ...	1912	23.7
Tasmania ...	1913	30.0	Ireland ...	1912	23.0
Western Australia ...	1913	29.4	Belgium ...	1911	22.9
South Australia ...	1913	29.1	Canada (Ontario) ...	1912	22.4
Finland ...	1912	29.1	France ...	1912	19.0
New South Wales ...	1913	28.9			

(a) Number of births per 1000 of the mean population.

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, apart from the Northern Territory and the Federal Territory, the figures for which are useless for comparative purposes on account of the smallness of the returns on which they are based, 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 1903 to 1913, shews the remarkable fact that for the Commonwealth there was a steady increase of masculinity from 1902 to 1906, with a sharp decrease in 1907, a further increase in 1908, 1909, 1910, a rapid decrease in 1911 and 1912, with a slight increase in 1913:—

#### <sup>c</sup> MASCULINITY (a) OF BIRTHS REGISTERED, COMMONWEALTH, 1903 to 1913.

Year.	N.S.W.	Vict.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Territory.	C'wealth.
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
1912 ...	104.68	103.73	104.52	104.35	105.90	106.31	230.00	105.26	104.54
1913 ...	104.15	105.12	103.62	106.26	104.48	109.09	108.00	100.00	104.76

(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 108.6, 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,  
1903 TO 1913.**

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Territ'y.	Federal Territ'y.	C'wth.
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	100.89	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
1912 ...	109.83	95.98	97.30	120.85	124.40	82.69	200.00	...	104.05
1913 ...	101.52	105.79	106.89	110.36	110.36	145.97	133.33	100.00	106.21

(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 145.97 in Tasmania in 1913. Little weight, however, can be attached to those results on account of the small totals on which they are based, and for the same reason the figures for the Northern Territory are not taken into consideration.

**6. Ex-nuptiality of Births.**—The total ex-nuptial births rose rapidly from 1903 to 1908 and remained almost stationary till 1909, when the number again decreased, so that total for 1910 was the lowest number recorded since 1906. During the last three years the number shews a considerable increase. (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, 1903 to 1913.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	North Terr.	Fed'l Terr.	C'wealth.
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	378	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
1912 ...	2,904	2,046	1,170	572	377	285	3	1	7,358
1913 ...	2,793	2,169	1,228	528	406	305	7	2	7,438

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

(i.) *Rate of Ex-nuptiality, 1903 to 1913.* The rate of ex-nuptiality, i.e., the percentage of ex-nuptial to total births, shews on the whole a slight increase from 1903 to 1905, with a decrease during the last eight years, as the subjoined table shews:—

## PERCENTAGE OF EX-NUPTIAL ON TOTAL BIRTHS, COMMONWEALTH, 1903 to 1913.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	North Terr.	Fed'l Terr.	C'wealth.
	%	%	%	%	%	%	%	%	%
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
1912 ...	5.60	5.72	6.24	4.74	4.34	4.87	9.09	2.56	5.53
1913 ...	5.35	6.03	6.22	4.18	4.40	5.18	13.46	4.55	5.48

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

A comparison of greater significance is obtained by calculating the number of ex-nuptial births per thousand of the single and widowed female population between the ages of 15 and 45. The calculation has been made for the last four 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; years 1910-12, 12.53.

(ii.) *Comparison of Rates.* 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, NUPTIAL AND TOTAL BIRTH RATES (a), COMMONWEALTH, 1903 TO 1913.

Births.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
Ex-nuptial	1.52	1.63	1.64	1.65	1.64	1.64	1.60	1.54	1.57	1.58	1.55
Nuptial ...	23.77	24.78	24.59	24.92	25.12	24.95	25.09	25.19	25.64	27.07	26.70
Total ...	25.29	26.41	26.23	26.57	26.76	26.59	26.69	26.73	27.21	28.65	28.25

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

(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 135,714 births registered in the Commonwealth in 1913 there were 132,974 single births, 2716 twins, and 24 triplets. The number of cases of twins was 1361, six children being still-born, and the number of cases of triplets 8. The total number of mothers was, therefore, 134,343, the proportion of mothers of twins being one in every 99, and of mothers of triplets one in every 16,793 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, in 1911, 1236, or one in 98, in 1912, 1350, or one in 98; and in 1913, 1369, or one in 99. 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, one in 8639 in 1911, one in 8233 in 1912, and one in 16,793 in 1913.

8. **Ages of Parents.**—The relative ages of the parents of children registered in 1913 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. 31; Commonwealth Demography, 1913 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 both single and twin births occurred where the ages of both father and mother were between 25 and 29. The largest number of mothers was found at ages 25 to 29.

## (a) AGES OF PARENTS IN CASES OF SINGLE BIRTHS, COMMONWEALTH, 1913.

Age.	Total Fathers.	Ages of Mothers.								
		Under 15.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 and Upwds.	Not Stated.
Ages of Fathers.										
Under 20 ...	475	...	309	150	13	3	...	...	...	...
20 to 24 ...	13,808	3	2,612	8,922	1,998	231	34	7	1	...
25 to 29 ...	33,199	...	1,385	13,185	15,414	2,776	395	31	2	11
30 to 34 ...	30,924	...	390	5,212	12,900	10,500	1,739	174	1	8
35 to 39 ...	22,061	...	94	1,491	5,344	8,449	6,057	617	22	7
40 to 44 ...	14,272	...	34	464	1,813	4,069	5,267	2,561	61	3
45 to 49 ...	7,290	1	20	185	645	1,375	2,641	2,137	284	2
50 to 54 ...	2,600	...	8	52	214	436	811	906	173	...
55 to 59 ...	712	...	...	22	65	110	237	220	58	...
60 to 64 ...	185	...	...	5	16	43	54	54	13	...
65 & upwards ...	88	...	...	7	16	24	19	13	10	...
Not stated ...	18	...	1	3	1	5	1	3	1	4
Mothers of nuptial children ...	125,652	4	4,853	29,698	38,439	28,021	17,255	6,721	626	35
Mothers of ex-nuptial children	7,322	15	1,937	2,830	1,292	693	377	132	18	28
Total mothers	132,974	19	6,790	32,528	39,731	28,714	17,632	6,853	644	63

## (b) AGES OF PARENTS OF TWINS, COMMONWEALTH, 1913.

Age.	Total Fathers.	Ages of Mothers.							
		Under 20.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 & upwards.	
Ages of Fathers.									
Under 20 ...	5	1	2	2	...	...	...	...	...
20 to 24 ...	81	7	62	14	1	...	...	...	...
25 to 29 ...	265	3	77	154	30	1	...	...	...
30 to 34 ...	332	3	22	130	143	33	1	...	...
35 to 39 ...	370	1	11	47	110	92	9	...	...
40 to 44 ...	208	...	1	28	53	37	39	...	...
45 to 49 ...	93	...	1	2	13	46	30	1	...
50 to 54 ...	35	...	1	2	7	15	9	1	...
55 to 59 ...	7	...	...	...	...	3	3	1	...
60 to 64 ...	2	...	...	...	2	...	...	...	...
65 and upwards ...	2	...	...	...	1	...	1	...	...
Mothers of nuptial twins	1,303	15	177	379	360	277	92	3	...
Mothers of ex-nuptial ..	58	8	26	10	8	4	2	...	...
Total mothers	1,361	23	203	389	368	281	94	3	...

## (c) AGES OF PARENTS OF TRIPLETS, COMMONWEALTH, 1913.

Age.	Total Fathers.	Ages of Mothers.					
		Under 20.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.
Ages of Fathers.							
20 to 24 ...	1	...	...	...	1	...	...
25 to 29 ...	2	...	...	...	2	...	...
30 to 34 ...	2	...	...	...	...	2	...
35 to 39 ...	1	...	...	...	...	1	...
40 to 44 ...	1	...	...	...	...	1	...
45 to 49 ...	1	...	...	...	...	...	1
Mothers of nuptial triplets ...	8	...	...	...	3	4	1
Mothers of ex-nuptial triplets	...	...	...	...	...	...	...
Total mothers	8	...	...	...	3	4	1

9. Birthplaces of Parents.—The relative birthplaces of the parents of children whose births were registered during the year 1913 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, 1913.

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	37,894	378	1	41,295	431	1	2,517	14	...
Victoria ...	33,522	368	1	32,706	361	2	2,060	20	...
Queensland ...	11,109	103	1	13,692	114	2	1,021	10	...
South Australia	13,022	146	1	13,290	149	2	547	4	...
Western Australia	1,535	12	...	2,044	21	...	132	...	...
Tasmania	5,638	48	1	5,873	44	...	405	3	...
North. Territory	13	...	...	23	1	...	6	...	...
New Zealand ...	1,398	20	...	1,259	18	...	69	...	...
EUROPE—									
England... ..	12,473	115	...	8,814	102	...	314	3	...
Wales ... ..	320	3	1	243	2	...	7	...	...
Scotland... ..	2,936	39	...	2,227	26	...	94	1	...
Ireland ... ..	2,028	27	1	1,283	19	1	58	2	...
Isle of Man	20	...	...	13	...	...	...	...	...
Other European Bri- tish Possessions...	43	...	...	16	...	...	2	...	...
Austria-Hungary ...	129	...	...	73	...	...	1	...	...
Belgium... ..	10	1	...	4	...	...	...	...	...
Denmark ... ..	208	4	...	71	2	...	1	...	...
France ... ..	50	13	...	30	...	...	3	...	...
Germany ... ..	994	...	1	460	4	...	14	...	...
Greece ... ..	56	2	...	30	...	...	...	...	...
Italy ... ..	322	...	...	214	1	...	2	...	...
Netherlands	53	...	...	22	...	...	1	...	...
Norway ... ..	100	...	...	33	...	...	1	...	...
Portugal... ..	5	...	...	...	...	...	...	...	...
Russia ... ..	252	2	...	163	2	...	2	...	...
Spain ... ..	21	2	...	12	...	...	...	...	...
Sweden ... ..	179	1	...	28	...	...	1	...	...
Switzerland	45	...	...	18	...	...	2	...	...
Other European Countries	37	...	...	21	...	...	...	...	...
ASIA—									
British India ...	174	1	...	89	1	...	5	...	...
Ceylon ... ..	27	1	...	6	...	...	...	...	...
Hong Kong	...	...	...	2	...	...	...	...	...
Straits Settlements	11	...	...	3	...	...	1	...	...
Other Asiatic British Possessions	2	...	...	1	...	...	...	...	...
Afghanistan	3	...	...	...	...	...	...	...	...
Arabia ... ..	3	...	...	2	...	...	...	...	...
China ... ..	160	3	...	53	...	...	5	...	...
Japan ... ..	14	...	...	11	...	...	3	...	...
Java ... ..	...	...	...	3	...	...	...	...	...
Philippine Islands	7	1	...	1	...	...	...	...	...
Syria ... ..	93	2	...	84	2	...	1	...	...
Other Asiatic Coun- tries	5	...	...	3	...	...	...	...	...

## 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	7	...	...	14	...	...	2	...	...
Mauritius ...	18	1	...	4	...	...	...	...	...
Natal ...	8	...	...	3	...	...	...	...	...
Orange River ...	...	...	...	1	...	...	...	...	...
Transvaal ...	2	...	...	3	...	...	...	...	...
S. Africa (undefined)	85	2	...	84	1	...	2	...	...
Other African British Possessions ...	...	...	...	1	...	...	...	...	...
Egypt ...	7	...	...	7	...	...	...	...	...
Other African Countries ...	4	...	...	6	...	...	...	...	...
AMERICA—									
Barbados ...	1	...	...	...	...	...	...	...	...
Canada ...	92	...	...	32	...	...	1	...	...
Jamaica ...	4	...	...	1	...	...	...	...	...
Newfoundland ...	1	...	...	1	...	...	...	...	...
Other American British Pos. ...	6	...	...	2	...	...	...	...	...
Argentine Republic	1	...	...	4	...	...	...	...	...
Brazil ...	2	...	...	...	...	...	...	...	...
Chile ...	1	...	...	1	...	...	...	...	...
Mexico ...	...	...	...	1	...	...	...	...	...
United States of America ...	229	5	...	89	...	...	10	...	...
Other American Countries ...	30	...	...	13	...	...	...	...	...
POLYNESIA—									
Fiji ...	27	...	...	33	...	...	1	...	...
Friendly Islands ...	4	1	...	...	...	...	...	...	...
Papua ...	1	...	...	1	...	...	...	...	...
Other Polynesian British Pos. ...	1	...	...	1	...	...	...	...	...
New Caledonia ...	20	...	...	13	...	...	2	...	...
New Hebrides ...	10	...	...	2	...	...	...	...	...
Samoa ...	1	...	...	...	...	...	...	...	...
Other Polynesian Islands ...	3	...	...	1	...	...	...	...	...
South Sea Islands (so described) ...	13	...	...	2	...	...	1	...	...
At Sea ...	129	2	...	80	1	...	6	1	...
Unspecified ...	34	...	...	37	1	...	22	...	...
Total ...	125,652	1,303	8	125,652	1,303	8	7,322	58	...

10. Occupations of Fathers.—A summary of the occupations of the fathers of all nuptial children, whose births were registered in 1913, 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, 1913.

Occupations.	Number of Fathers.	Occupations.	Number of Fathers.
<b>CLASS I.—PROFESSIONAL.</b>		Wool and Tallow ... ..	100
General Government ... ..	690	Hay, Corn, etc. ... ..	243
Local Government ... ..	161	Other Vegetable Matter, n.e.i. ... ..	159
Defence ... ..	262	Wood and Coal ... ..	260
Law and Order ... ..	1,217	Stone, Clay, and Glass ... ..	18
Religion ... ..	408	Gold, Silver, and Precious Stones ... ..	8
Charities ... ..	5	Ironmongery ... ..	239
Health ... ..	912	Merchants, Importers ... ..	591
Literature ... ..	169	Shopkeepers and Assistants ... ..	1,245
Science ... ..	96	Dealers and Hawkers ... ..	379
Civil Engineering, Architecture, and Surveying ... ..	377	Agents and Brokers ... ..	591
Education ... ..	826	Clerks, Bookkeepers, etc. ... ..	3,406
Fine Arts ... ..	135	Commercial Travellers, Salesmen ... ..	1,562
Music ... ..	166	Others engaged in Commercial Pursuits ... ..	1,089
Amusements ... ..	560	Speculators on Chance Events ... ..	41
		Storage ... ..	9
Total Professional ... ..	5,984	Total Commercial ... ..	17,189
<b>CLASS II.—DOMESTIC.</b>		<b>CLASS IV.—TRANSPORT AND COMMUNICATION.</b>	
Hotelkeepers and Assistants ... ..	902	Railway Traffic ... ..	4,487
Others engaged in providing board and lodging ... ..	311	Tramway Traffic ... ..	1,243
House Servants ... ..	198	Road Traffic ... ..	5,918
Coachmen and Grooms... ..	289	Sea and River Traffic ... ..	1,763
Hairdressers ... ..	660	Postal Service ... ..	523
Laundrymen ... ..	50	Telegraph and Telephone Service Messengers, etc. ... ..	609
Others engaged in domestic occupations ... ..	281		38
Total Domestic ... ..	2,691	Total Transport & Communication ... ..	14,581
<b>CLASS III.—COMMERCIAL.</b>		<b>CLASS V.—INDUSTRIAL.</b>	
Banking and Finance ... ..	432	Books and Publications ... ..	963
Insurance and Valuation ... ..	551	Musical Instruments ... ..	70
Landed and House Property ... ..	166	Prints, Pictures and Art Materials ... ..	84
Property Rights not elsewhere clsd. ... ..	1	Ornaments and Small Wares ... ..	96
Books, Publications, Advertising ... ..	167	Equipment for Sports and Games ... ..	6
Musical Instruments ... ..	17	Medals, Type, and Dies ... ..	31
Prints, Pictures and Art Materials ... ..	5	Watches, Clocks, and Scientific Instruments ... ..	131
Ornaments and Small Wares ... ..	3	Surgical Instruments ... ..	4
Sports and Games ... ..	2	Arms and Ammunition ... ..	17
Watches, Clocks, Jewellery ... ..	2	Engines, Machines, Tools, and Implements ... ..	1,418
Surgical Instruments ... ..	1	Carriages and Vehicles ... ..	1,030
Arms and Ammunition ... ..	1	Harness, Saddlery & Leatherware ... ..	456
Machinery ... ..	66	Ships, Boats, etc. ... ..	122
Carriages and Vehicles ... ..	38	Furniture ... ..	730
Harness, Saddlery & Leatherware ... ..	5	Building Materials ... ..	800
Ships, Boats, Marine Stores ... ..	5	Chemicals and By-Products ... ..	36
Building Materials ... ..	15	Textile Fabrics ... ..	68
Furniture ... ..	54	Dress ... ..	2,124
Chemicals and By-products ... ..	8	Fibrous Materials ... ..	66
Paper and Stationery ... ..	47	Animal Food... ..	358
Textile Fabrics ... ..	652	Vegetable Food ... ..	1,757
Dress ... ..	147	Groceries, Drinks, Narcotics, and Stimulants ... ..	517
Fibrous Materials ... ..	12	Animal Matter, not elsewhere clsd. ... ..	380
Animal Food ... ..	2,594	Workers in wood, not elsewhere clsd. ... ..	112
Vegetable Food ... ..	654	Vegetable Produce for Fodder ... ..	5
Groceries, Drinks, Narcotics, and Stimulants... ..	1,413		
Living Animals ... ..	152		
Leather, Raw Materials ... ..	39		

## OCCUPATIONS OF FATHERS OF ALL NUPTIAL CHILDREN—Continued.

Occupations.	Number of Fathers.	Occupations.	Number of Fathers.		
Paper ... ..	23	CLASS VI.—AGRICULTURAL, PASTORAL, MINING, ETC.	20,036		
Stone, Clay, Glass, etc. ...	748			Agricultural ... ..	3,764
Jewellery and Precious Stones ...	269			Pastoral ... ..	1,022
Metals, other than Gold & Silver	3,602			Dairy Farming ... ..	393
Gas, Electric Lighting, etc. ...	796			Bees, Fisheries, and Wild Animals	972
Building—				Forestry ... ..	144
Builders ... ..	568			Water Conservation and Supply	7,094
Stonemasons ... ..	301			Mines and Quarries ... ..	93,425
Bricklayers ... ..	768			Total Primary Producers ...	
Carpenters ... ..	3,598			CLASS VII.—INDEFINITE.	
Slaters ... ..	46			Independent Means, having no	
Plasterers ... ..	384			specific occupation ... ..	99
Painters ... ..	1,457			Occupation not stated ... ..	43
Plumbers ... ..	891			Total Indefinite ... ..	142
Signwriters ... ..	66			CLASS VIII.—DEPENDENTS.	
Others ... ..	14			Dependent Relatives ... ..	4
Roads, Railways, Earthworks ...	244			Total Dependents ... ..	4
Disposal of the Dead ... ..	45			Total all Occupations ... ..	126,963
Disposal of Refuse ... ..	204				
Other Industrial Workers—					
Manufacturers, etc. ... ..	362				
Engineers, Firemen... ..	3,376				
Contractors ... ..	1,395				
Labourers, undefined ... ..	22,091				
Others ... ..	318				
Total Industrial ... ..	52,947				

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 1913 was 126,963, viz., 125,652 single births, 1303 cases of twins, and 8 cases of triplets. From this number 235 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 126,678 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. 31; Commonwealth Demography, 1913, and previous years."

## DURATION OF MARRIAGE AND ISSUE OF MOTHERS OF ALL AGES.

## COMMONWEALTH, 1913.

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 ...	21,888	22,174	1.01	18-19 ...	1,356	10,282	7.58
1-2 ...	10,316	11,632	1.13	19-20 ...	1,123	8,763	7.80
2-3 ...	10,834	19,354	1.79	20-21 ...	945	7,856	8.31
3-4 ...	11,178	23,634	2.11	21-22 ...	799	6,872	8.60
4-5 ...	9,174	23,206	2.53	22-23 ...	654	5,973	9.13
5-6 ...	8,483	24,713	2.91	23-24 ...	512	4,814	9.40
6-7 ...	7,701	25,433	3.30	24-25 ...	345	3,315	9.61
7-8 ...	6,708	24,626	3.67	25-26 ...	232	2,365	10.19
8-9 ...	5,742	23,047	4.21	26-27 ...	141	1,480	10.50
9-10 ...	4,821	21,066	4.37	27-28 ...	73	832	11.40
10-11 ...	4,213	19,834	4.71	28-29 ...	47	543	11.55
11-12 ...	3,884	19,714	5.08	29-30 ...	24	282	11.75
12-13 ...	3,530	19,187	5.44	30-31 ...	9	103	11.44
13-14 ...	3,284	18,888	5.75	31-32 ...	10	125	12.50
14-15 ...	2,733	16,681	6.10	32-33 ...	2	25	12.50
15-16 ...	2,238	14,519	6.49	33-34 ...	2	35	17.50
16-17 ...	1,993	13,426	6.74				
17-18 ...	1,684	12,143	7.21	Total	126,678	406,942	3.21

## AGES AND ISSUE OF MOTHERS, COMMONWEALTH, 1913.

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	4,851	5,874	1.21	40-44 years ...	6,802	46,144	6.78
20-24 years ...	29,805	51,934	1.74	45 yrs. and over	630	5,147	8.17
25-29 " ...	38,749	101,220	2.61				
30-34 " ...	28,334	106,284	3.75				
35-39 " ...	17,507	90,339	5.16	All ages ...	126,678	406,942	3.21

## PREVIOUS ISSUE OF MOTHERS OF VARIOUS AGES, COMMONWEALTH, 1913.

Previous Issue.	Mothers' Ages.							Total.
	Under 20 Years.	20-24 Years.	25-29 Years.	30-34 Years.	35-39 Years.	40-44 Years.	45 Years and Over.	
0	3,932	15,351	11,133	4,203	1,443	326	27	36,415
1	833	8,991	9,882	4,914	1,611	371	22	26,624
2	83	3,851	7,904	5,192	2,153	462	26	19,671
3	3	1,268	5,415	4,565	2,429	605	29	14,314
4	...	277	2,730	3,812	2,408	702	41	9,970
5	...	56	1,103	2,716	2,190	749	52	6,866
6	...	10	417	1,611	1,879	779	69	4,765
7	...	1	118	772	1,461	771	57	3,180
8	...	...	36	352	924	612	75	1,999
9	...	...	6	127	542	522	64	1,261
10	...	...	2	46	263	412	54	777
11	...	...	3	15	121	256	42	437
12	...	...	...	5	58	136	32	231
13	...	...	...	4	17	59	23	103
14	...	...	...	...	7	24	11	42
15	...	...	...	...	...	9	3	12
16	...	...	...	...	1	5	1	7
17	...	...	...	...	...	1	...	1
18	...	...	...	...	...	1	...	1
19	...	...	...	...	...	...	1	1
21	...	...	...	...	...	...	1	1
Total Mothers	4,851	29,805	38,749	28,334	17,507	6,802	630	126,678

The tables show 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 more than two years and eight months. The average number of children of all marriages was 3.21, the corresponding figure for 1912 having been 3.29, for 1911, 3.34, and for 1910, 3.41.

A similar table has been prepared showing the previous issue of mothers of twins and triplets, from which it appears that 283 mothers had twins at their first confinement; 212 at their second; 197 at their third; 185 at their fourth; 132 at their fifth; 91 at their sixth; 67 at their seventh; 52 at their eighth; 30 at their ninth; 24 at their tenth; 11 at their eleventh; 6 at their twelfth; 3 at their thirteenth; 2 at their fourteenth; 1 at her sixteenth; and one at her twenty-first.

Of the eight cases of triplets 1 occurred at the second confinement; 1 at the fourth; 1 at the fifth; 1 at the sixth; 1 at the seventh; 2 at the ninth; and 1 at the seventeenth.

12. **Interval between Marriage and First Birth.**—The following table shows 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, 1913.**

Interval.	Number of First Children.	Interval.	Number of First Children.	Interval.	Number of First Children.
Under 1 month	524	1 year	9,142	13 years	21
1 month	628	2 years	2,772	14 "	14
2 months	955	3 "	1,041	15 "	10
3 "	1,201	4 "	578	16 "	10
4 "	1,453	5 "	296	17 "	6
5 "	1,848	6 "	218	18 "	3
6 "	2,304	7 "	152	19 "	3
7 "	1,926	8 "	106	20 "	6
8 "	1,686	9 "	71	21 "	3
9 "	3,921	10 "	43	22 "	4
10 "	3,225	11 "	49	23 "	1
11 "	2,155	12 "	39	25 "	1
				Total	36,415

Of these 36,415 children 18,671 were males and 17,744 were females; the masculinity of first births was therefore 105.22 as compared with 104.76 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 shows 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 as 5 is to 6. 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, 1913.**

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 ...	12	3	15	1	4	16
15 ...	60	19	79	2	21	81
16 ...	197	132	329	16	148	345
17 ...	402	457	859	75	532	934
18 ...	600	913	1,513	294	1,207	1,807
19 ...	686	1,353	2,039	667	2,020	2,706
20 ...	691	1,378	2,069	945	2,23	3,014
21 ...	655	1,583	2,238	1,512	3,095	3,750
22 ...	563	1,331	1,894	2,013	3,344	3,907
23 ...	539	1,178	1,717	2,218	3,396	3,935
24 ...	408	902	1,310	2,291	3,193	3,601
25 ...	369	702	1,071	2,152	2,854	3,223
26 ...	266	629	895	2,038	2,667	2,933
27 ...	237	426	663	1,756	2,182	2,419
28 ...	236	361	597	1,559	1,920	2,156

**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.						
29 ...	194	267	461	1,243	1,510	1,704
30 ...	180	209	389	1,053	1,262	1,442
31 ...	133	142	275	820	962	1,095
32 ...	153	125	278	700	825	978
33 ...	123	104	227	554	658	781
34 ...	112	63	175	433	496	608
35 ...	84	72	156	364	436	520
36 ...	88	58	146	300	358	446
37 ...	73	35	108	234	269	342
38 ...	85	18	103	198	216	301
39 ...	51	22	73	142	164	215
40 ...	51	12	63	114	126	177
41 ...	22	9	31	64	73	95
42 ...	34	12	46	34	46	80
43 ...	18	7	25	48	55	73
44 ...	9	1	10	25	26	35
45 ...	8	1	9	11	12	20
46 ...	1	1	2	7	8	9
47 ...	5	...	5	3	3	8
48 ...	2	...	2	1	1	3
49 ...	1	...	1	2	2	3
50 ...	...	...	...	1	1	1
51 ...	1	...	1	...	...	1
Not stated	28	...	28	...	...	28
Total ...	7,380	12,525	19,905	23,890	36,415	43,795

13. **Interval between Birth and Registration of Birth.**—Information was obtained during 1913 as to the period elapsing between birth and registration. It has already been mentioned at the beginning of this section that one of the effects of the law relating to maternity allowances has been to accelerate the registration of births, as the certificate of registration must be produced when a claim under the Act is lodged. In 1912, during the last quarter of which year the Act was in force, about 6 per cent. of all births were registered within seven days; in 1913 this percentage had risen to 34.

**INTERVAL BETWEEN BIRTH AND REGISTRATION, COMMONWEALTH, 1913.**

Interval.	Nuptial Births.	Ex-Nuptial Births.	Total Births.	Interval.	Nuptial Births.	Ex-Nuptial Births.	Total Births.
Under 1 day ...	1,246	111	1,357	16 days ...	3,293	190	3,483
1 day ...	4,502	486	4,988	17 " ...	3,049	207	3,256
2 days ...	6,035	600	6,635	18 " ...	2,852	177	3,029
3 " ...	6,706	489	7,195	19 " ...	2,549	149	2,698
4 " ...	6,858	392	7,250	20 " ...	2,541	148	2,689
5 " ...	6,417	289	6,706	21 " ...	2,334	146	2,480
6 " ...	6,191	273	6,464	22 " ...	2,109	121	2,230
7 " ...	5,747	230	5,977	23 " ...	1,863	115	1,978
8 " ...	5,446	195	5,641	24 " ...	1,735	102	1,837
9 " ...	4,826	201	5,027	25 " ...	1,632	98	1,730
10 " ...	4,643	234	4,877	26 " ...	1,429	82	1,511
11 " ...	4,777	272	5,049	27 " ...	1,457	70	1,527
12 " ...	4,743	257	5,000	28 " ...	1,379	52	1,431
13 " ...	4,575	239	4,814	29 " ...	1,208	62	1,270
14 " ...	4,049	258	4,307	30 " ...	1,243	56	1,299
15 " ...	3,637	202	3,839	31 " ...	1,100	60	1,160

INTERVAL BETWEEN BIRTH AND REGISTRATION, COMMONWEALTH,  
1913—Continued.

Interval.	Nuptial Births.	Ex-Nuptial Births.	Total Births.	Interval.	Nuptial Births.	Ex-Nuptial Births.	Total Births.
32 days ...	993	35	1,028	55 days ...	273	16	289
33 " ...	967	42	1,009	56 " ...	273	12	285
34 " ...	944	42	986	57 " ...	262	20	282
35 " ...	895	23	918	58 " ...	255	23	278
36 " ...	826	40	866	59 " ...	283	24	307
37 " ...	790	38	828	60 " ...	187	21	208
38 " ...	809	40	849	61 to 69 days	372	24	396
39 " ...	760	42	802	70 " 79 "	162	25	187
40 " ...	818	39	857	80 " 89 "	90	16	106
41 " ...	738	38	776	90 " 99 "	49	10	59
42 " ...	609	42	651	100 " 109 "	75	7	82
43 " ...	528	25	553	110 " 119 "	39	3	42
44 " ...	484	25	509	120 " 129 "	34	2	36
45 " ...	420	25	445	130 " 139 "	29	3	32
46 " ...	403	17	420	140 " 149 "	13	10	23
47 " ...	328	17	345	150 " 159 "	24	4	28
48 " ...	376	13	389	160 " 169 "	15	1	16
49 " ...	368	19	387	170 " 179 "	18	1	19
50 " ...	310	18	328	180 " 365 "	101	18	119
51 " ...	316	13	329	Not stated	6	...	6
52 " ...	302	12	314				
53 " ...	304	19	323				
54 " ...	257	11	268	Total Births	128,276	7,438	135,714

## § 2. Marriages.

1. **Marriages, 1903 to 1913.**—The number of marriages registered in the Commonwealth in 1913 was 41,594, the highest number ever recorded with the exception of that for the year 1912. 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 and the three following years, and was considerably higher in 1912 than in 1907 in all the States. In 1913 the actual number of marriages was greater in Queensland, South Australia, Western Australia, and Tasmania than it had been in 1912, but the marriage rate shows a decrease in every State with the exception of Tasmania. The number of marriages in each State since 1903 is shown below. The rate for 1912 was the highest ever experienced in the Commonwealth.

## TOTAL MARRIAGES, COMMONWEALTH, 1903 to 1913.

Year.	N.S.W.	Victoria.	Qld.	S. Aust.	W. Aust.	Tas.	North Terr.	Federal Terr.	C'wealth.
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
1912 ...	16,666	11,738	5,627	4,056	2,524	1,506	24	6	42,147
1913 ...	16,307	11,324	5,655	4,094	2,572	1,620	16	6	41,594

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

2. **Marriage Rates, 1903 to 1913.**—The number of marriages registered per thousand of mean population is shown in the following table for the same period:—

## CRUDE MARRIAGE RATE (a), COMMONWEALTH, 1903 to 1913.

Year.	N.S.W.	Victoria.	Qld.	S. Aust.	W. Aust.	Tas.	Nthn. Terr.	Federal Territory.	C'wealth.
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 ...	9.19	8.40	8.41	9.81	8.44	7.76	3.01	(b) 2.81	8.79
1912 ...	9.60	8.65	8.91	9.62	8.37	7.86	7.14	2.95	9.07
1913 ...	9.02	8.13	8.67	9.44	8.19	8.27	4.37	2.45	8.66

(a) Number of marriages (not persons married) per 1000 of mean annual population. (b) 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 four 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; years 1910-12, 50.10. These rates refer, of course, to persons married and not to marriages, as do the rates in the preceding table.

3. **Marriage Rates in Various Countries.**—A comparison of the Australian marriage rate with that of European countries shews that during the last few years it has only been surpassed by the rate for Ontario, and equalled by the rate of some of the countries of the East of Europe, and that it has been higher than the rate of the countries of Central and Western Europe, and especially than the rate of countries of the North of Europe:—

## CRUDE MARRIAGE RATES.—VARIOUS COUNTRIES.

Country.	Year.	Crude Marriage Rate.	Country.	Year.	Crude Marriage Rate.
Canada (Ontario) ...	1912	11.1	England and Wales ...	1912	7.8
South Australia ...	1913	9.4	Italy ...	1912	7.6
Bulgaria ...	1909	9.2	Netherlands ...	1912	7.5
New South Wales ...	1913	9.0	Austria ...	1912	7.4
Japan ...	1910	8.8	Switzerland ...	1911	7.4
Commonwealth ...	1913	8.7	United Kingdom ...	1912	7.4
Queensland ...	1913	8.7	Denmark ...	1912	7.3
Hungary ...	1912	8.6	Spain ...	1912	7.3
Rumania ...	1912	8.6	Scotland ...	1912	6.9
New Zealand ...	1913	8.5	Norway ...	1912	6.2
Tasmania ...	1913	8.3	Chile ...	1912	6.0
Western Australia ...	1913	8.2	Finland ...	1912	5.9
Victoria ...	1913	8.1	Sweden ...	1912	5.9
Belgium ...	1911	8.0	Ceylon ...	1912	5.3
Prussia ...	1912	8.0	Ireland ...	1912	5.3
France ...	1912	7.9	Servia ...	1912	4.4
German Empire ...	1912	7.9	Jamaica ...	1912	3.8
Russia, European ...	1909	7.9			

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 1597 males were married during 1913 who were less than twenty-one years of age. The corresponding number of females was 8271, of whom four were widows, and one was divorced. At the other extreme there were thirty-three 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, 1913.  
COMMONWEALTH.**

Age at Marriage.	Bridegrooms.				Brides.			
	Bachelors	Widowers	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
14 years	...	...	...	...	7	...	...	7
15 "	2	...	...	2	62	...	...	62
16 "	1	...	...	1	334	...	...	334
17 "	37	...	...	37	955	...	...	955
18 "	154	...	...	154	1,845	1	...	1,846
19 "	485	...	...	485	2,396	...	...	2,396
20 "	918	...	...	918	2,667	3	1	2,671
21 "	2,396	3	...	2,399	4,464	14	3	4,481
22 "	2,770	1	...	2,771	3,893	16	...	3,909
23 "	3,390	8	...	3,398	3,577	23	9	3,609
24 "	3,475	15	1	3,491	3,162	27	8	3,197
25 "	3,576	14	3	3,593	2,879	32	8	2,919
26 "	3,232	28	3	3,263	2,486	54	11	2,551
27 "	2,986	31	5	3,022	1,903	38	12	1,953
28 "	2,653	31	3	2,687	1,702	57	16	1,775
29 "	2,079	52	5	2,136	1,320	57	15	1,392
30 "	1,767	56	8	1,831	1,064	81	22	1,167
31 "	1,342	45	5	1,392	743	58	13	814
32 "	1,239	69	14	1,322	709	69	19	797
33 "	1,017	61	24	1,102	549	75	24	648
34 "	826	72	9	907	434	79	21	534
35 "	742	74	12	828	386	71	14	471
36 "	615	88	8	711	323	70	16	409
37 "	457	74	7	538	239	58	13	310
38 "	472	82	16	570	209	88	9	306
39 "	364	69	8	461	181	84	11	276
40 "	317	68	10	395	132	87	13	232
41 "	213	70	6	289	100	44	13	157
42 "	209	87	8	304	109	70	8	187
43 "	190	63	9	262	73	64	...	137
44 "	143	68	6	217	73	51	3	127
45 "	140	73	7	220	66	64	10	140
46 "	129	65	7	201	45	53	7	105
47 "	94	63	9	166	40	42	2	84
48 "	98	68	7	173	38	49	4	91
49 "	83	63	5	151	20	41	6	67
50 "	76	78	8	162	13	48	3	64
51 "	36	49	4	89	9	26	...	35
52 "	48	66	2	116	17	41	4	62
53 "	42	38	4	84	8	18	...	26
54 "	24	49	2	75	3	18	1	22
55 "	22	44	3	69	4	21	...	25
56 "	18	47	2	67	8	17	1	26
57 "	12	44	...	56	5	23	...	28
58 "	14	45	...	59	9	14	...	23
59 "	15	28	...	43	1	14	...	15
60 "	6	30	3	39	2	19	...	21
61 "	9	24	1	34	3	12	...	15
62 "	6	17	...	23	4	11	...	15
63 "	4	29	1	34	2	13	...	15
64 "	8	25	...	33	2	10	...	12
65 "	7	28	...	35	...	9	...	9
66 "	3	21	...	24	...	6	...	6
67 "	4	24	...	28	3	5	...	8
68 "	4	9	...	13	1	7	...	8
69 "	1	23	...	24	1	6	...	7
70 "	4	12	...	16	...	3	...	3

**AGES AND CONJUGAL CONDITION OF PERSONS MARRIED, 1913—Continued.  
COMMONWEALTH.**

Age at Marriage.	Bridegrooms.				Brides.			
	Bachelors	Widowers	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
71 years ...	2	11	...	13	1	1	...	2
72 " ...	2	6	...	8	...	3	...	3
73 " ...	3	4	...	7	...	1	...	1
74 " ...	1	5	...	6	...	5	...	5
75 " ...	1	6	...	7	...	...	...	...
76 " ...	...	1	...	1	...	1	...	1
77 " ...	...	2	...	2	...	1	...	1
78 " ...	...	2	...	2	...	...	...	...
79 " ...	...	1	...	1	...	...	...	...
80 " ...	...	2	...	2	...	1	...	1
82 " ...	...	2	...	2	...	...	...	...
83 " ...	...	2	...	2	...	...	...	...
84 " ...	...	3	...	3	...	...	...	...
85 " ...	...	1	...	1	...	...	...	...
86 " ...	1	1	...	2	...	...	...	...
88 " ...	...	1	...	1	...	...	...	...
95 " ...	...	...	...	...	1	...	...	1
Not stated ...	13	1	...	14	16	2	...	18
Total ...	38,997	2,362	235	41,594	39,298	1,976	320	41,594

(b) The relative ages of bridegrooms and brides are shown for single years in "Bulletin of Population and Vital Statistics, No. 31"; a condensation into age-groups of five years is here given:—

**RELATIVE AGES OF PERSONS MARRIED, COMMONWEALTH, 1913.**

Ages.	Total Bridegrooms.	Ages of Brides.								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 Bridegrooms. Under 20 ...	679	...	456	194	25	3	1	...	...	...
20 to 24 ...	12,977	5	3,198	7,807	1,690	225	39	10	3	...
25 to 29 ...	14,701	2	1,407	6,931	5,080	1,011	211	44	14	1
30 to 34 ...	6,554	...	364	2,046	2,361	1,332	332	83	35	1
35 to 39 ...	3,108	...	110	620	902	768	505	140	61	2
40 to 44 ...	1,467	...	34	164	315	353	302	198	100	1
45 to 49 ...	911	...	18	66	135	155	208	169	160	...
50 to 54 ...	526	...	4	25	50	66	99	107	175	...
55 to 59 ...	294	...	...	11	18	26	35	56	148	...
60 to 64 ...	163	...	2	1	10	12	24	16	98	...
65 and upwards	200	...	...	2	4	8	16	17	153	...
Not stated ...	14	...	...	...	...	1	...	...	...	13
Total Brides ...	41,594	7	5,593	17,867	10,590	3,960	1,772	840	947	18

**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 1913, was shown. In the following table the relative conjugal condition of the contracting parties is given:—

**RELATIVE CONJUGAL CONDITION OF PERSONS MARRIED, COMMONWEALTH, 1913.**

Conjugal Condition.	Total Bridegrooms.	Brides.			
		Spinsters.	Widows.	Divorced.	
Bridegrooms {	Bachelors ...	38,997	37,483	1,260	254
	Widowers ...	2,362	1,637	674	51
	Divorced ...	235	178	42	15
Total Brides ...	...	41,594	39,298	1,976	320

6. **Birthplaces of Persons Married.**—Information as to the birthplaces of persons who were married in 1913 was not obtained in the State of Western Australia; the following figures refer, therefore, only to New South Wales, Victoria, Queensland, South Australia, Tasmania, the Northern Territory and Federal Territory. As might be expected, there were more brides than bridegrooms who were natives of the Commonwealth. In "Bulletin No. 31, Commonwealth Demography," the relative birthplaces of bridegrooms and brides will be found tabulated.

## BIRTHPLACES OF PERSONS MARRIED, 1913.

## COMMONWEALTH (a).

Birthplaces.	Bridegrooms.	Brides.	Birthplaces.	Bridegrooms.	Brides.
AUSTRALASIA—			ASIA—cont.—		
New South Wales ...	11,873	13,402	Java ...	1	3
Victoria ...	10,446	10,741	Philippine Islands ...	5	1
Queensland... ..	3,805	4,540	Syria ...	17	1
South Australia ...	3,614	3,940	Other Asiatic Countries	1	10
Western Australia ...	46	48	AFRICA—		
Tasmania ...	1,646	1,815	Cape of Good Hope...	7	1
Northern Territory ...	5	8	Mauritius ...	5	5
New Zealand ...	547	283	Natal ...	1	...
EUROPE—			Transvaal ...	1	...
England ...	4,203	2,606	S. Africa (Undefined)	30	26
Wales ...	91	51	Egypt ...	2	3
Scotland ...	1,082	782	Other African Countries	4	...
Ireland ...	552	375	AMERICA—		
Isle of Man... ..	3	...	Canada ...	42	5
Other European British Possessions ...	18	11	Jamaica ...	1	1
Austria-Hungary ...	33	10	Other American British Possessions ...	1	...
Belgium ...	5	1	Chile ...	1	...
Denmark ...	58	10	Mexico ...	1	...
France ...	37	16	Peru ...	1	...
Germany ...	261	87	United States ...	122	38
Greece ...	14	5	Other American Countries	20	6
Italy ...	49	25	POLYNESIA—		
Netherlands ...	28	7	Fiji ...	13	13
Norway ...	25	11	Friendly Islands ...	...	1
Portugal ...	6	...	Papua ...	1	...
Russia ...	56	21	Other Polynesian British Possessions ...	3	2
Spain ...	9	5	New Caledonia ...	6	11
Sweden ...	44	5	Other Polynesian Islands ...	2	1
Switzerland ...	13	5	South Sea Islands (so described) ...	10	1
Other European Countries ...	8	4	At sea ...	16	17
ASIA—			Not stated ...	13	19
British India ...	59	30	Total ...	39,022	39,022
Ceylon ...	6	1			
Hong Kong ...	1	...			
Straits Settlements ...	3	2			
Afghanistan ...	6	...			
China ...	35	2			
Japan ...	8	8			

(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 to 1913. In "Bulletin No. 31" the 1913 tabulation is shown 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 27.95 in the Manufacturing class to 32.24 years in the Pastoral class. The averages for the five years 1907-1911 and the figures for 1912 have been added for the purposes of comparison. The results obtained are shewn in the following table:—

### OCCUPATIONS AND AGES OF BRIDEGROOMS, COMMONWEALTH, 1913.

Ages at Marriage.	Professional.	Domestic.	Mercantile.	Transport and Communication.	Industrial.			Primary Producers.				Indefinite.	
					Manu- facturing.	Building and Construction.	Indefinite Industrial Workers.	Agricultural.	Pastoral.	Mines and Quarries.	Other Primary Producers.		
15 years ...	1	...	...	...	...	...	1	...	...	...	...	...	...
16 " ...	...	...	...	...	...	...	...	...	...	...	...	...	...
17 " ...	1	2	7	1	10	3	7	2	...	...	...	...	...
18 " ...	2	4	28	29	24	10	41	7	1	3	1	...	...
19 " ...	9	12	60	65	98	32	142	22	5	35	5	...	...
20 " ...	20	19	139	104	172	69	268	61	13	45	7	...	...
21 " ...	56	72	320	326	435	174	650	163	48	139	11	...	...
22 " ...	105	66	388	345	530	226	680	240	47	121	20	...	...
23 " ...	150	93	542	481	547	238	778	331	59	148	26	...	...
24 " ...	180	78	596	423	613	286	744	364	56	123	24	...	...
25 " ...	223	81	608	398	535	295	762	426	96	144	22	...	...
26 " ...	223	81	543	353	444	281	678	411	90	129	21	...	...
27 " ...	227	78	537	309	423	231	628	372	74	109	30	...	...
28 " ...	223	62	475	278	348	185	543	367	70	107	25	...	...
29 " ...	155	60	379	231	266	145	429	310	85	62	7	...	...
30 " ...	122	58	311	166	225	124	381	291	70	69	9	...	...
31 " ...	114	35	234	145	154	77	303	184	69	56	18	...	...
32 " ...	95	38	240	130	160	65	245	206	59	75	9	...	...
33 " ...	78	38	197	105	123	64	214	181	54	38	9	...	...
34 " ...	82	21	163	93	102	60	146	157	37	37	7	...	...
35 to 39 years	245	85	543	271	347	126	580	570	155	128	38	...	...
40 " 44 "	105	54	245	117	138	79	285	257	80	82	14	...	...
45 " 49 "	72	37	134	69	105	62	173	148	55	45	5	...	...
50 years and upwards	79	33	182	83	123	119	195	183	66	47	11	...	...
Not stated	...	...	2	2	2	...	3	2	...	3	...	...	...
Total	2,567	1,107	6,873	4,524	5,924	2,951	8,876	5,255	1,289	1,753	319	156	
Average age—years (1913)	30.54	29.82	29.33	28.07	27.95	28.81	28.45	30.79	32.24	29.08	30.02	42.38	
" (1912)	30.75	30.29	29.45	28.70	27.58	30.33	28.57	30.85	32.09	28.94	29.54	41.90	
" (1907-1911)	31.12	30.32	29.73	28.65	28.27	29.11	28.83	30.99	32.50	29.14	29.43	41.60	

The average age at marriage of brides has slowly risen from 25.56 years in 1907 to 25.78 years in 1913. The figures for the seven years are:—1907, 25.56 years; 1908, 25.67 years; 1909, 25.74 years; 1910, 25.77 years; 1911, 25.74 years; 1912, 25.74 years; and 1913, 25.78 years. For the five years 1907-11 the average age was 25.70 years, compared with 25.74 years in 1912, and 25.78 years in 1913. As the average age of all bridegrooms during 1913 was 29.18 years, it follows that brides are on an average not quite three years and a half younger than bridegrooms.

8. **Fertility of Marriages.**—The quotient obtained by division of the nuptial births registered, say during the five years 1909 to 1913, by the number of marriages registered during the five years 1904 to 1908, *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 3.85, 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, generally furnishes results which agree fairly well with those found by more elaborate and careful investigation, but in this instance it is, owing chiefly to the fictitious increase in the number of births shewn in 1912, rather higher than for a number of years prior to 1912. For the period 1907-11 the result was 3.43, and for the year 1912, 3.87.

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 fluctuated during the last eleven years between 96.26 per cent. in 1903 and 97.55 per cent. in 1909. The figures for the individual States in 1913 were: New South Wales, 98.02 per cent.; Victoria, 97.17 per cent.; Queensland, 95.34 per cent.; South Australia, 95.24 per cent.; Western Australia, 86.55 per cent.; and Tasmania, 99.05 per cent., the percentage for the Commonwealth being 96.50. The registered ministers in 1913 belonged to more than forty different denominations, some of which, however, can hardly be regarded as having any valid existence. A number of these have been omitted from the tabulation, and are bracketed under the heading "Other Christians." The figures for 1913 are shewn in the following table:—

**MARRIAGES IN EACH DENOMINATION, COMMONWEALTH, 1913.**

Denomination.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N. Ter.	Fed. Ter.	Com'-wealth
Church of England ...	6,755	3,179	1,522	953	981	599	5	4	13,998
Roman Catholic Church ...	2,885	1,922	1,169	404	410	239	5	1	7,035
Presbyterian Church of Aust. . .	2,267	2,252	868	223	192	169	...	...	5,971
Methodist Church ...	2,398	1,634	991	1,292	412	315	5	1	7,048
Congregational Church ...	877	1,014	178	251	99	175	...	...	2,594
Baptist Church ...	299	449	289	320	68	84	...	...	1,509
Church of Christ ...	265	257	18	180	24	8	...	...	752
Lutheran Church ...	42	71	150	200	6	...	...	...	469
Greek Orthodox Church ...	5	4	...	...	...	...	...	...	9
Unitarian Church ...	26	1	...	4	...	...	...	...	31
Salvation Army ...	43	47	43	48	21	9	1	...	217
Seventh-Day Adventists ...	17	10	4	4	4	2	...	...	41
Other Christians ...	45	120	162	18	...	4	...	...	349
Hebrew ...	55	43	3	2	9	...	...	...	112
Registrar's Office ...	322	321	254	195	346	16	...	...	1,454
Unspecified ...	1	...	4	...	...	...	...	...	5
<b>Total</b> ...	<b>16,307</b>	<b>11,324</b>	<b>5,655</b>	<b>4,094</b>	<b>2,572</b>	<b>1,620</b>	<b>16</b>	<b>6</b>	<b>41,594</b>

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, 1903 to 1913.* For a number of years, with the exception of 1905, 1908, 1910, 1912, and 1913 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, 1903 to 1913.

Year. ...	1903.	1904.	1905.	1906.	1907	1908.	1909.	1910.	1911.	1912.	1913.
Male ...	1.17	0.95	0.91	0.92	0.81	0.71	0.65	0.56	0.56	0.43	0.36
Female	1.02	0.91	0.93	0.86	0.70	0.73	0.62	0.59	0.54	0.45	0.38

(ii.) *Mark Signatures in Commonwealth States, 1903 to 1913.* 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:—

## PERCENTAGE OF MARK SIGNATURES AT MARRIAGE, COMMONWEALTH, 1903 to 1913.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Terr.	C'wealth
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
1912 ...	0.33	0.27	0.60	0.54	0.61	1.29	25.00	...	0.44
1913 ...	0.33	0.17	0.45	0.34	0.78	1.20	8.33	...	0.37

(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, 1903 to 1913.*—The total number of deaths registered in the Commonwealth from 1903 to 1913 inclusive, gives an annual average of 26,801 males and 19,748 females, the details being as follow:—

## MALE DEATHS, COMMONWEALTH, 1903 to 1913.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Fed. Terr.	C'wealth.
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
1912 ...	11,094	9,072	4,305	2,409	2,210	1,130	61	4	30,285
1913 ...	11,508	8,495	4,195	2,563	1,852	1,189	53	4	29,859
Rate, (b) 1913	12.11	12.21	11.86	11.67	10.42	11.72	17.62	2.69	11.93

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

## FEMALE DEATHS, COMMONWEALTH, 1903 to 1913.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aus.	Tas.	North-Terr.	Fed. Terr.	C'wealth
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	2,434	1,859	1,000	890	6	(a) 5	20,278
1912 ...	7,768	7,517	2,616	1,927	1,125	927	6	6	21,892
1913 ...	8,191	6,979	2,588	2,130	1,082	942	11	7	21,990
Rate, (b) 1913	9.55	10.01	8.66	9.95	7.94	9.97	16.85	7.29	9.53

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

2. **Male and Female Death Rates, 1913.**—The crude male and female death rates for 1913 only are given, viz., in the last line of the preceding tables. Victoria has the highest rate both for males and for females, while Western Australia has the lowest male and 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 179) 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 three years 1910-1912, that is, for the census year and for the year immediately preceding and following, on page 174.

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.
Western Australia ...	1913	9.3	Switzerland ...	1911	15.8
New Zealand ...	1913	9.5	Finland ...	1912	16.3
Queensland ...	1913	10.4	Belgium ...	1911	16.4
South Australia ...	1913	10.8	Ireland ...	1912	16.5
Commonwealth ...	1913	10.8	France ...	1912	17.5
New South Wales ...	1913	10.9	Italy ...	1912	18.2
Tasmania ...	1913	10.9	Austria ...	1912	20.5
Victoria ...	1913	11.1	Japan ...	1910	21.1
Netherlands ...	1912	12.3	Servia ...	1912	21.1
Canada (Ontario) ...	1912	12.4	Spain ...	1912	21.8
Denmark ...	1912	18.0	Rumania ...	1912	22.9
England and Wales ...	1912	13.3	Hungary ...	1912	23.3
Norway ...	1912	13.4	Jamaica ...	1912	25.1
United Kingdom ...	1912	13.8	Bulgaria ...	1909	26.7
Sweden ...	1912	14.2	Russia, European ...	1909	28.9
Scotland ...	1912	15.3	Chile ...	1912	29.7
Prussia ...	1912	15.5	Ceylon ...	1912	32.4
German Empire ...	1912	15.6			

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

4. **Total Deaths, 1903 to 1913.**—The total number of deaths in each of the Commonwealth States during the eleven years 1903 to 1913, is shewn below

## TOTAL DEATHS, COMMONWEALTH, 1903 to 1913.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aus.	Tas.	North Terr.	Federal Terr.	C'wealth.
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	14,539	5,598	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
1912 ...	18,862	16,589	6,921	4,336	3,335	2,057	67	10	52,177
1913 ...	19,699	15,474	6,783	4,693	2,934	2,131	64	11	51,789

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

5. **Crude Death Rates, 1903 to 1913.**—The death rate for 1913 shewed an increase on that for 1912 in New South Wales, South Australia, and Tasmania, and a decrease in Victoria, Queensland, Western Australia, and the Commonwealth as a whole. The rates for New South Wales and South Australia are the highest experienced for the whole period, except those for 1903; for Victoria and Western Australia they are the lowest of the whole period; and for Queensland and Tasmania they are approximately equal to the average of the period. The Commonwealth rate for 1913 was lower than in any of the other years of the period under review excepting the years 1909, 1910, and 1911.

## CRUDE DEATH RATE (a), COMMONWEALTH, 1903 to 1913.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North Terr.	Federal Terr.	C'wealth.
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 ...	10.32	11.52	10.65	9.82	10.19	10.13	19.58	(b) 5.62	10.66
1912 ...	10.86	12.23	10.96	10.28	11.06	10.73	19.95	4.91	11.23
1913 ...	10.89	11.11	10.39	10.82	9.34	10.87	17.49	4.49	10.78

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

6. **Male and Female Death Rates, 1903 to 1913.**—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. From 1910 to 1911, and again from 1911 to 1912 the increase in the male rate was about one and a half times as strong as that in the female rate, while the decrease from 1912 to 1913 was more than twice as great for the male rate than for the female rate.

## MALE AND FEMALE DEATH RATES (a), COMMONWEALTH, 1903 to 1913.

Year.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
Male rate	13.37	12.12	12.14	12.01	12.11	12.24	11.51	11.54	11.82	12.51	11.93
F'male,,	10.80	9.88	9.50	9.73	9.77	9.81	9.06	9.24	9.40	9.84	9.53
Crude total rate	12.15	11.05	10.88	10.92	10.99	11.07	10.33	10.43	10.66	11.23	10.78

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

**7. Infantile Death Rate.**—(i.) *Deaths and Death Rates of Male and Female Infants, 1903 to 1913.* A marked improvement has taken place in the infantile death rate since 1903, in which year it stood at 111.36 per thousand births registered, while in 1913 it had fallen to 72.21 per thousand, a rate lower than that experienced in any previous year, 1909, 1911, and 1912 excepted. In the following table, which shews both the total number of deaths of children under one year and the rate per thousand births since 1903, males and females are distinguished. The universal experience that during the first few years of life the excess of male births tends to disappear, as a consequence of the higher death rate of male infants, is shewn by the fact that out of 645,427 male infants born from 1903 to 1913, 55,664 died during their first year of life, while of 613,719 female infants the number who died was only 43,614:—

**NUMBER OF INFANTILE DEATHS AND RATE OF INFANTILE MORTALITY,  
COMMONWEALTH, 1903 to 1913.**

Year.	Registered Deaths under one year.			Rate of Infantile Mortality (a).		
	Males.	Females.	Total.	Males.	Females.	Total.
1903 ...	6,004	4,959	10,963	119.11	103.23	111.36
1904 ...	4,718	3,800	8,518	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
1912 ...	5,446	4,102	9,548	80.06	63.04	71.74
1913 ...	5,472	4,328	9,800	78.81	65.30	72.21

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

(ii.) *Infantile Mortality, 1903 to 1913.* 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, 1903 to 1913.**

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Federal Territory.	Com'wealth.
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
1912 ...	71.00	74.48	71.73	61.68	82.06	66.80	121.21	76.92	71.74
1913 ...	77.78	70.53	63.35	69.83	70.30	70.68	115.88	22.73	72.21

(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 slight increases in the rate during 1906, 1910, and 1913. The 1911 rate was the lowest of the period in every State with the exception of Queensland, Western Australia, and Tasmania, where the minimum rates were experienced in 1913, 1913, and 1909 respectively. 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 exceptionally low, the 1909 rate was the lowest ever experienced up to that date in any of the States. A 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. In 1912 the rate shewed a rise in every State

except Tasmania, and this was followed by a decrease in 1913 in Victoria, Queensland, and Western Australia, and by a further rise in New South Wales, South Australia, and Tasmania. The Commonwealth rate in 1912 rose by more than 3 per 1000, and by less than  $\frac{1}{2}$  per 1000 in 1913.

(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 ...	1912	51	26.5	Switzerland ...	1911	123	24.1
Queensland ...	1913	63	30.2	United Kingdom ...	1911	125	24.4
Norway ...	1911	65	25.9	Prussia ...	1912	146	28.9
South Australia ...	1913	70	29.1	Servia ...	1911	146	36.2
Western Australia ...	1913	70	29.4	German Empire ...	1912	147	28.3
Victoria ...	1913	71	25.8	Italy ...	1911	153	31.5
Tasmania ...	1913	71	30.0	Spain ...	1907	158	33.6
Commonwealth ...	1913	72	28.3	Japan ...	1910	160	33.9
Sweden ...	1911	72	24.0	Belgium ...	1911	167	22.9
France ...	1912	78	19.0	Bulgaria ...	1909	171	40.7
New South Wales ...	1913	78	28.9	Austria ...	1912	180	31.3
Ireland ...	1912	86	23.0	Hungary ...	1912	186	36.3
Netherlands ...	1912	87	28.1	Rumania ...	1912	186	43.4
Denmark ...	1912	93	26.7	Jamaica ...	1912	193	38.8
England and Wales ...	1912	95	23.8	Ceylon ...	1912	215	33.3
Finland ...	1912	109	29.1	Russia, European ...	1909	248	44.0
Canada (Ontario) ...	1912	110	22.4	Chile ...	1911	332	38.5
Scotland ...	1911	112	25.6				

(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)
Amsterdam ...	1912	64	23.3	Belfast ...	1912	129	27.8
The Hague ...	"	66	23.6	Hamburg ...	"	130	21.8
Sydney ...	"	76	29.9	Leipzig ...	"	133	22.1
Rotterdam ...	"	79	29.0	Munich ...	"	134	21.9
Brisbane ...	"	82	32.8	Prague ...	"	139	19.9
Stockholm ...	"	82	21.0	Dublin (Registration area) ...	"	140	27.4
Melbourne ...	"	90	27.5	Budapest ...	"	141	25.5
London ...	"	91	24.5	Berlin ...	"	142	20.4
Buenos Aires ...	"	96	35.3	Vienna ...	"	149	19.1
Frankfort-on-Maine ...	"	102	20.9	Cologne ...	"	152	26.8
Milan ...	"	102	23.4	Breslau ...	"	163	26.3
Paris ...	"	103	16.8	Trieste ...	"	184	29.7
Christiania ...	"	107	22.7	Rio de Janeiro ...	"	185	28.2
Copenhagen ...	"	108	24.9	Montreal ...	1911	242	37.8
Edinburgh ...	"	113	20.9	St. Petersburg ...	1912	249	26.5
Toronto ...	1911	114	22.2	Moscow ...	"	333	28.9
Dresden ...	1912	116	20.2				
Glasgow ...	"	124	28.1				

(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, 1903 to 1913.**—A distribution into age-groups has been made of the 512,040 deaths which occurred in the Commonwealth from 1903 to 1913, 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, 1903 to 1913.**

Ages.	Males.	Females.	Total.	Percentage of Total Males.	Percentage of Total Females.	Percentage of Total.
Under 1 year ...	55,664	43,614	99,278	18.88	20.08	19.39
1 year and under 5 ...	16,590	15,063	31,653	5.63	6.93	6.18
5 years and under 20 ...	16,486	14,790	31,276	5.59	6.81	6.11
20 years and under 40 ...	39,126	34,916	74,042	13.27	16.07	14.46
40 years and under 60 ...	60,731	35,394	96,125	20.60	16.29	18.77
60 years and under 65 ...	17,098	10,358	27,456	5.80	4.77	5.36
65 years and over ...	88,556	62,992	151,548	30.04	29.00	29.60
Age not stated ...	559	103	662	0.19	0.05	0.13
Total ...	294,810	217,230	512,040	100.00	100.00	100.00

9. **Deaths at Single Ages and in Age-Groups, 1913.**—The 51,789 deaths which were registered in the Commonwealth in the year 1913 will be found tabulated under single years, and in groups of five years for each State and Territory, in "Bulletin No.

31, Commonwealth Demography, 1913." 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, 1913.

## COMMONWEALTH.

Ages.			Males.	Females.	Total.	Ages.			Males.	Females.	Total.
Under 1 week ...			1,676	1,312	2,988	10 years ...			88	74	162
1 week and under 2 ...			331	243	574	11 " ...			77	76	153
2 weeks " " 3 ...			235	177	412	12 " ...			76	64	140
3 " " " 4 ...			190	139	329	13 " ...			79	81	160
						14 " ...			86	70	156
Total under one month ...			2,432	1,871	4,303	Total 10 years and under 15			406	365	771
1 month and under 2 ...			491	357	848	15 years ...			91	88	179
2 months " " 3 ...			363	274	637	16 " ...			101	85	186
3 " " " 4 ...			360	289	649	17 " ...			126	105	231
4 " " " 5 ...			302	253	555	18 " ...			121	117	238
5 " " " 6 ...			300	233	533	19 " ...			150	123	273
6 " " " 7 ...			286	207	493	Total 15 years and under 20			589	518	1,107
7 " " " 8 ...			213	177	390	20 years ...			167	128	295
8 " " " 9 ...			211	169	380	21 " ...			185	148	333
9 " " " 10 ...			185	196	381	22 " ...			202	151	353
10 " " " 11 ...			162	157	319	23 " ...			217	187	404
11 " " " 12 ...			167	145	312	24 " ...			177	162	339
Total under 1 year ...			5,472	4,328	9,800	Total 20 years and under 25			948	776	1,724
12 months and under 13 ...			288	226	514	25 years ...			199	167	366
13 " " " 14 ...			86	74	160	26 " ...			182	181	363
14 " " " 15 ...			90	93	183	27 " ...			178	182	360
15 " " " 16 ...			99	75	174	28 " ...			189	203	392
16 " " " 17 ...			61	48	109	29 " ...			194	163	357
17 " " " 18 ...			40	52	92	Total 25 years and under 30			942	896	1,538
18 " " " 19 ...			62	69	131	30 years ...			207	160	367
19 " " " 20 ...			52	28	80	31 " ...			175	162	337
20 " " " 21 ...			34	48	82	32 " ...			190	181	371
21 " " " 22 ...			44	34	78	33 " ...			194	166	360
22 " " " 23 ...			35	32	67	34 " ...			193	150	343
23 " " " 24 ...			39	34	73	Total 30 years and under 35			959	819	1,778
Total under 2 years ...			6,402	5,141	11,543	35 years ...			207	172	379
2 years ...			368	333	721	36 " ...			169	163	332
3 " ...			231	219	450	37 " ...			227	172	399
4 " ...			162	142	304	38 " ...			255	173	428
Total under 5 years ...			7,183	5,835	13,018	39 " ...			199	160	359
5 years ...			122	127	249	Total 35 years and under 40			1,077	840	1,917
6 " ...			146	105	251						
7 " ...			103	106	209						
8 " ...			100	94	194						
9 " ...			87	73	160						

## DEATHS AT SINGLE AGES AND IN AGE-GROUPS, 1913—Continued.

Ages.			Males.	Females.	Total.	Ages.			Males.	Females.	Total.
40 years	...	...	280	195	475	75 years	...	...	429	348	777
41 "	...	...	220	149	369	76 "	...	...	416	315	731
42 "	...	...	302	178	480	77 "	...	...	385	310	695
43 "	...	...	275	179	454	78 "	...	...	457	346	803
44 "	...	...	231	152	383	79 "	...	...	392	293	685
Total 40 years and under 45			1,308	853	2,161	Total 75 years and under 80			2,079	1,612	3,691
45 years	...	...	391	198	589	80 years	...	...	382	337	719
46 "	...	...	276	162	438	81 "	...	...	281	207	488
47 "	...	...	287	185	472	82 "	...	...	302	273	575
48 "	...	...	361	164	525	83 "	...	...	300	229	529
49 "	...	...	334	216	550	84 "	...	...	285	227	512
Total 45 years and under 50			1,649	925	2,574	Total 80 years and under 85			1,550	1,273	2,823
50 years	...	...	437	185	622	85 years	...	...	211	190	401
51 "	...	...	306	165	471	86 "	...	...	196	159	355
52 "	...	...	375	219	594	87 "	...	...	157	141	298
53 "	...	...	388	212	600	88 "	...	...	130	113	243
54 "	...	...	344	192	536	89 "	...	...	87	74	161
Total 50 years and under 55			1,850	973	2,823	Total 85 years and under 90			781	677	1,458
55 years	...	...	345	214	559	90 years	...	...	65	75	140
56 "	...	...	386	221	607	91 "	...	...	47	46	93
57 "	...	...	361	169	530	92 "	...	...	32	41	73
58 "	...	...	398	200	598	93 "	...	...	29	37	66
59 "	...	...	361	171	532	94 "	...	...	31	28	59
Total 55 years and under 60			1,851	995	2,846	Total 90 years and under 95			204	227	431
60 years	...	...	463	189	652	95 years	...	...	17	18	35
61 "	...	...	251	163	414	96 "	...	...	11	23	34
62 "	...	...	370	224	594	97 "	...	...	4	17	21
63 "	...	...	327	227	554	98 "	...	...	12	10	22
64 "	...	...	373	196	569	99 "	...	...	2	1	3
Total 60 years and under 65			1,784	999	2,783	Total 95 yrs. and under 100			46	69	115
65 years	...	...	449	265	714	100 years	...	...	5	5	10
66 "	...	...	334	230	564	101 "	...	...	3	...	3
67 "	...	...	350	229	579	102 "	...	...	2	1	3
68 "	...	...	409	295	704	104 "	...	...	1	...	1
69 "	...	...	394	273	667	105 "	...	...	1	...	1
Total 65 years and under 70			1,936	1,292	3,228	107 "	...	...	1	1	2
70 years	...	...	469	325	794	108 "	...	...	...	1	1
71 "	...	...	362	217	579	110 "	...	...	1	...	1
72 "	...	...	434	313	747	112 "	...	...	1	...	1
73 "	...	...	450	314	764	Total 100 years and over...			15	8	23
74 "	...	...	387	296	683	Age not stated	...	...	42	8	50
Total 70 years and under 75			2,102	1,465	3,567	Total all ages	...	...	29,859	21,930	51,789

The following tables shew the death rate per 1000 living at each age for the three years 1910, 1911 and 1912, viz., the Census year 1911, and the years immediately preceding and following. The Northern Territory is included with South Australia, and the Federal Territory with New South Wales :—

**AVERAGE ANNUAL DEATH RATES PER 1000 LIVING IN VARIOUS AGE-GROUPS, 1910 to 1912.**

**MALES.**

Age Group.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.
0 to 4 years	25.40	24.71	23.30	21.30	28.44	24.65	24.71
5 " 9	2.11	2.39	2.39	1.85	2.61	2.53	2.26
10 " 14	1.75	1.69	1.74	1.40	2.16	1.70	1.72
15 " 19	2.42	2.41	2.92	2.43	2.86	2.59	2.52
20 " 24	3.37	3.27	4.83	3.00	5.17	3.57	3.65
25 " 29	3.91	4.13	5.57	3.57	5.86	4.49	4.35
30 " 34	4.90	4.83	5.96	5.40	6.75	3.77	5.20
35 " 39	6.08	6.31	7.54	7.15	8.41	6.28	6.68
40 " 44	8.25	8.26	9.65	8.31	10.37	6.17	8.58
45 " 49	10.91	11.05	13.83	10.27	14.96	9.25	11.58
50 " 54	14.78	15.33	17.77	13.02	17.66	14.08	15.36
55 " 59	21.93	21.41	23.01	19.99	24.65	16.24	21.67
60 " 64	30.99	31.52	31.25	31.94	35.06	23.39	31.38
65 " 69	45.80	50.53	51.53	45.94	45.96	38.29	47.69
70 " 74	71.49	74.28	70.94	58.38	78.74	58.79	70.88
75 " 79	117.05	115.68	112.40	99.49	110.54	108.60	114.04
80 " 84	181.34	174.56	190.89	165.68	185.23	148.67	176.32
85 " 89	252.58	270.76	202.56	225.42	328.21	313.87	257.73
90 and over	375.35	365.88	272.73	279.57	321.43	465.61	357.11

**FEMALES.**

0 to 4 years	20.96	19.79	20.07	16.96	21.76	21.27	20.22
5 " 9	1.78	2.27	2.29	1.71	2.58	1.88	2.04
10 " 14	1.41	1.81	1.45	1.25	1.77	2.51	1.59
15 " 19	1.96	2.42	2.20	2.19	2.01	3.47	2.22
20 " 24	3.22	3.74	3.76	3.44	3.82	4.09	3.53
25 " 29	4.02	4.31	4.68	4.79	4.42	4.66	4.31
30 " 34	4.51	4.98	4.46	4.92	4.88	4.93	4.73
35 " 39	5.84	6.02	5.79	5.71	6.15	7.68	5.97
40 " 44	6.24	6.63	7.11	5.80	6.73	5.67	6.44
45 " 49	7.63	8.05	9.07	7.91	8.40	7.02	7.98
50 " 54	11.22	11.30	11.73	9.72	11.82	8.76	11.07
55 " 59	14.93	15.55	14.13	12.63	14.18	15.80	14.60
60 " 64	21.69	22.27	21.64	20.54	20.44	19.50	21.60
65 " 69	37.81	36.48	34.69	35.01	34.59	35.09	36.47
70 " 74	55.75	58.36	57.82	48.28	54.52	55.11	56.13
75 " 79	97.62	98.27	86.11	91.32	92.45	93.30	95.91
80 " 84	154.31	157.19	138.33	137.87	144.14	150.77	151.89
85 " 89	184.60	225.65	200.82	202.17	186.67	254.45	208.59
90 and over	307.43	361.44	351.52	328.17	358.97	317.88	334.87

**PERSONS.**

0 to 4 years	23.21	22.29	21.72	19.16	25.15	23.00	22.50
5 " 9	1.95	2.33	2.34	1.78	2.60	2.21	2.15
10 " 14	1.58	1.75	1.60	1.33	1.97	2.10	1.66
15 " 19	2.19	2.42	2.57	2.31	2.45	3.03	2.37
20 " 24	3.30	3.51	4.33	3.22	4.60	3.84	3.59
25 " 29	3.96	4.22	5.17	4.17	5.29	4.58	4.33
30 " 34	4.71	4.92	5.29	5.16	6.00	4.34	4.97
35 " 39	5.97	6.16	6.78	6.44	7.51	6.94	6.34
40 " 44	7.31	7.44	8.58	7.09	9.06	5.94	7.59
45 " 49	9.45	9.59	11.95	9.14	12.73	8.20	9.96
50 " 54	13.25	13.40	15.48	11.49	15.64	11.63	13.48
55 " 59	18.63	18.52	19.59	16.67	20.87	16.04	18.52
60 " 64	26.79	26.86	27.44	26.43	29.25	24.08	26.87
65 " 69	42.18	43.26	44.44	40.58	41.22	36.66	42.37
70 " 74	64.41	65.98	65.87	53.36	68.67	56.91	63.91
75 " 79	108.56	107.11	101.89	95.17	103.30	100.66	105.58
80 " 84	169.10	171.29	166.15	150.82	170.12	149.75	164.97
85 " 89	217.51	248.40	201.72	211.72	266.67	284.83	232.64
90 and over	337.70	363.94	308.54	307.81	333.33	404.98	345.44

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 1.66 per 1000 is shewn, which is the lowest at any age. The rate then gradually rises with increasing age until, at the ages 90 and over, more than one-third die every year.

10. **Deaths of Centenarians, 1913.**—Particulars as to the twenty-three persons who died in 1913, 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, 1913.—COMMONWEALTH.

## MALES.

Age	Locality where Death occurred.	State.	Cause of Death.	Occupation.	Birth-place.	Length of Residence in Commonwealth.
Yrs.						
113	Stroud ...	N.S.W. ...	Fall ...	Grazier ...	England ...	96 years
110	Portland ...	" ...	Senility ...	Labourer ...	N.S.W. ...	Native
107	Granville ...	" ...	" ...	Groom ...	At Sea ...	107 years
105	Adelong ...	" ...	" ...	Farmer ...	Germany ...	60
104	Granville ...	" ...	" ...	Labourer ...	Ireland ...	Not stated
102	Richmond ...	Tasmania ...	" ...	" ...	" ...	65 years
102	Beechworth ...	Victoria ...	Diarrhœa ...	" ...	N.S.W. ...	Native
101	Peak Hill ...	N.S.W. ...	Dysentery ...	Miner ...	Austria ...	61 years
101	Kempsey ...	" ...	Senility ...	Gardener ...	England ...	59
101	Gordon ...	Victoria ...	" ...	Farmer ...	Ireland ...	Not stated
100	Cheltenham ...	" ...	" ...	Dependent ...	Scotland ...	41 years
100	Devonport ...	Tasmania ...	Cerebral Softening ...	Labourer ...	Ireland ...	50
100	Taunton ...	South Aust. ...	Senility ...	Farmer ...	Germany ...	36
100	Romsey ...	Victoria ...	" ...	Nil ...	England ...	73
100	Adelaide ...	South Aust. ...	" ...	Labourer ...	Ireland ...	47

## FEMALES.

108	Lismore ...	N.S.W. ...	Burns ...	" ...	England ...	93 years
107	Bungaree ...	Victoria ...	Bronchitis ...	" ...	Ireland ...	47
102	Wollongong ...	N.S.W. ...	Burns ...	" ...	" ...	70
100	Norwood ...	S. Australia ...	Cerebral Apoplexy ...	" ...	Germany ...	64
100	Tamworth ...	N.S.W. ...	Senility ...	" ...	Ireland ...	73
100	Bendigo ...	Victoria ...	Diarrhœa ...	" ...	" ...	54
100	Fitzroy ...	" ...	Senility ...	" ...	England ...	70
100	Wallsend ...	N.S.W. ...	Gastro-Enteritis ...	" ...	Scotland ...	63

11. **Length of Residence in the Commonwealth of Persons who Died in 1913.**—The length of residence in the Commonwealth of all persons whose deaths were registered in the year 1913 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 1913.

Length of Residence.	Male Deaths.	Female Deaths.	Total Deaths.	Length of Residence.	Male Deaths.	Female Deaths.	Total Deaths.
Born in the C'wealth...	16,696	13,851	30,547	Resident 25 to 29 years	889	525	1,414
Resident under 1 year	332	142	474	" 30 to 34 "	1,065	543	1,608
" 1 year	211	128	339	" 35 to 39 "	776	406	1,182
" 2 years	186	68	254	" 40 to 44 "	790	445	1,235
" 3 "	99	47	146	" 45 to 49 "	784	591	1,375
" 4 "	69	39	108	" 50 to 54 "	1,364	1,049	2,433
" 5 "	60	30	90	" 55 to 59 "	1,409	1,206	2,615
" 6 "	50	17	67	" 60 to 64 "	1,320	1,169	2,489
" 7 "	49	10	59	" 65 yrs. & over	588	586	1,174
" 8 "	47	8	55	Length of residence not stated...	2,112	598	2,710
" 9 "	26	13	39				
" 10 to 14 years	198	80	278				
" 15 to 19 "	225	94	319				
" 20 to 24 "	494	285	779				
				Total ...	29,859	21,930	51,789

12. Birthplaces of Persons who Died in 1913.—In the following table are shewn the birthplaces of persons whose deaths were registered in 1913:—

### BIRTHPLACES OF PERSONS WHO DIED IN 1913.

#### COMMONWEALTH.

Birthplaces.	Males.	Females.	Total.	Birthplaces.	Males.	Females.	Total.
<b>AUSTRALASIA—</b>				Java ... ..	11	1	12
Commonwealth of				Philippine Islands	6	1	7
Australia—				Syria ... ..	12	7	19
New South Wales ...	6,541	5,550	12,091	Other Asiatic			
Victoria ... ..	5,068	4,001	9,069	Countries ...	9	1	10
Queensland ... ..	1,716	1,418	3,134	<b>AFRICA—</b>			
South Australia ...	1,650	1,403	3,053	Cape of Good Hope	5	2	7
Western Australia...	628	532	1,160	Mauritius ... ..	8	4	12
Tasmania ... ..	1,084	938	2,022	S. Africa (undefined)	13	8	21
Northern Territory	9	9	18	Other African Brit.			
New Zealand ... ..	131	85	216	Possessions ...	2	2	4
<b>EUROPE—</b>				Other African			
England ... ..	5,647	3,550	9,197	Countries ...	3	1	4
Wales ... ..	167	59	226	<b>AMERICA—</b>			
Scotland ... ..	1,613	1,039	2,652	Canada ... ..	65	9	74
Ireland ... ..	2,727	2,595	5,322	Jamaica... ..	13	...	13
Isle of Man ... ..	13	6	19	Newfoundland ...	5	2	7
Other European				Other American			
Brit'h Possessions	27	10	37	Brit. Possessions	1	2	3
Austria-Hungary ...	51	2	53	Argentine Republic	1	1	2
Belgium ... ..	10	...	10	Brazil ... ..	...	1	1
Denmark ... ..	101	26	127	Chili ... ..	3	...	3
France ... ..	70	21	91	Mexico ... ..	2	...	2
Germany ... ..	569	263	832	Peru ... ..	1	...	1
Greece ... ..	18	4	22	United States of			
Italy ... ..	76	14	90	America ... ..	92	32	124
Netherlands ... ..	20	2	22	Other American			
Norway ... ..	56	8	64	Countries ...	29	9	38
Portugal... ..	6	...	6	<b>POLYNESIA—</b>			
Russia ... ..	70	21	91	Fiji ... ..	1	1	2
Spain ... ..	6	4	10	Papua ... ..	4	...	4
Sweden ... ..	116	6	122	Other Polynesian			
Switzerland ... ..	35	10	45	Brit. Possessions	1	...	1
Other European				New Caledonia ...	3	...	3
Countries ... ..	6	1	7	New Hebrides ...	4	...	4
<b>ASIA—</b>				Samoa ... ..	1	1	2
British India ... ..	76	32	108	Other Polynesian			
Ceylon ... ..	12	1	13	Islands ... ..	2	1	3
Hong Kong ... ..	2	...	2	South Sea Islands			
Straits Settlements	9	...	9	(so described) ...	34	...	34
Other Asiatic British				At Sea ... ..	57	42	99
Possessions ... ..	5	1	6	Not stated... ..	720	186	906
Afghanistan ... ..	2	...	2				
Arabia ... ..	2	...	2				
China ... ..	348	5	353				
Japan ... ..	64	...	64				
				Total Deaths ...	29,859	21,930	51,789



## OCCUPATIONS OF DECEASED MALES, 1913—Continued.

Occupation.	No. of Deaths.	Occupation.	No. of Deaths
<b>INDUSTRIAL—Continued.</b>		<b>CLASS VI.—AGRICULTURAL, PASTORAL, MINING PURSUITS, ETC.</b>	
Textile fabrics ... ..	10	Agricultural ... ..	2,880
Dress ... ..	419	Pastoral ... ..	770
Fibrous materials ... ..	11	Dairy farming ... ..	82
Animal food ... ..	22	Bees, fisheries and wild animals ... ..	147
Vegetable food ... ..	203	Forestry ... ..	55
Groceries and stimulants ... ..	65	Water conservation and supply ... ..	26
Animal matter ... ..	82	Mines and quarries ... ..	1,756
Workers in wood not elsewhere classed ... ..	42		
Fodder ... ..	1	Total Primary Producers ... ..	5,716
Paper ... ..	2		
Stone, clay, glass ... ..	74	<b>CLASS VII.—INDEFINITE.</b>	
Jewellery and precious stones ... ..	42	Independent means, having no specific occupation ... ..	861
Metals, other than gold and silver ... ..	342	Occupation unspecified ... ..	516
Gas, electric lighting, etc. ... ..	51		
<b>Buildings—</b>		Total Indefinite ... ..	1,377
Builders ... ..	95	<b>CLASS VIII.—DEPENDENTS.</b>	
Stonemasons... ..	99	Dependent relatives (including persons under 20 years of age with no specified occupation) ... ..	8,394
Bricklayers ... ..	106	Supported by voluntary and State contributions ... ..	373
Slaters ... ..	3		
Carpenters ... ..	482	Total Dependents ... ..	8,767
Plasterers ... ..	47		
Painters and glaziers ... ..	201	<b>CLASS VIII.—DEPENDENTS.</b>	
Plumbers ... ..	85	Dependent relatives (including persons under 20 years of age with no specified occupation) ... ..	8,394
Signwriters ... ..	5	Supported by voluntary and State contributions ... ..	373
Others ... ..	13		
Roads, railways, and earthworks... ..	44	Total Dependents ... ..	8,767
Disposal of the dead ... ..	15		
Disposal of refuse ... ..	34	<b>CLASS VIII.—DEPENDENTS.</b>	
<b>Other industrial workers—</b>		Dependent relatives (including persons under 20 years of age with no specified occupation) ... ..	8,394
Manufacturers ... ..	25	Supported by voluntary and State contributions ... ..	373
Engineers, firemen ... ..	374		
Contractors ... ..	163	Total Dependents ... ..	8,767
Labourers, undefined ... ..	4,088		
Others ... ..	21	<b>CLASS VIII.—DEPENDENTS.</b>	
		Dependent relatives (including persons under 20 years of age with no specified occupation) ... ..	8,394
		Supported by voluntary and State contributions ... ..	373
		Total Dependents ... ..	8,767
Total Industrial ... ..	8,043	Total Male Deaths ... ..	29,859

14. **Index of Mortality.**—The death rates, those for age-groups on pages 171 and 174 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 1913 is shewn below for each of the States and Territories and for the Commonwealth, the distribution of the mean population of 1913 into age-groups being in accordance with the distribution as found at the Census of 1911:—

## INDEX OF MORTALITY, 1913.—(STATES AND COMMONWEALTH).

Age-Group.	Mean Population, 1913, distributed according to Results of Census of 1911.	Number of Deaths, 1913.	No. of Deaths per 1000 of Mean Population, 1913, in each Age-Group.	Age Distribution per 1000 of Standard Population.	Index of Mortality.
<b>NEW SOUTH WALES.</b>					
Under 1 year	49,723	4,065	81.75	25.5	2.08
1 year and under 20	712,064	2,453	3.44	398.0	1.37
20 years " 40	605,826	2,747	4.53	269.6	1.22
40 " " 60	327,069	3,787	11.58	192.3	2.23
60 " and upwards	113,539	6,647	58.54	114.6	6.71
Total	1,808,241	19,699	10.89	1,000.0	13.61
<b>VICTORIA.</b>					
Under 1 year	32,961	2,538	77.00	25.5	1.96
1 year and under 20	536,261	1,619	3.02	398.0	1.20
20 years " 40	440,998	1,917	4.35	269.6	1.17
40 " " 60	280,777	3,138	11.18	192.3	2.15
60 " and upwards	102,183	6,262	61.28	114.6	7.02
Total	1,393,180	15,474	11.11	1,000.0	13.50
<b>QUEENSLAND.</b>					
Under 1 year	17,646	1,252	70.91	25.5	1.81
1 year and under 20	267,324	893	3.34	398.0	1.33
20 years " 40	213,803	1,083	5.07	269.6	1.37
40 " " 60	115,922	1,481	12.78	192.3	2.46
60 " and upwards	37,860	2,074	54.78	114.6	6.28
Total	632,555	6,783	10.39	1,000.0	13.25
<b>SOUTH AUSTRALIA.</b>					
Under 1 year	11,166	883	79.08	25.5	2.02
1 year and under 20	169,786	511	3.01	398.0	1.20
20 years " 40	142,865	655	4.58	269.6	1.23
40 " " 60	79,266	846	10.67	192.3	2.05
60 " and upwards	30,505	1,798	58.94	114.6	6.75
Total	433,588	4,693	10.82	1,000.0	13.25
<b>WESTERN AUSTRALIA.</b>					
Under 1 year	8,395	649	77.31	25.5	1.97
1 year and under 20	114,999	390	3.39	398.0	1.35
20 years " 40	115,301	553	4.80	269.6	1.29
40 " " 60	62,711	703	11.21	192.3	2.16
60 " and upwards	12,596	639	50.73	114.6	5.81
Total	314,003	2,934	9.34	1,000.0	12.58
<b>TASMANIA.</b>					
Under 1 year	5,509	416	75.51	25.5	1.93
1 year and under 20	83,448	288	3.45	398.0	1.37
20 years " 40	59,945	297	4.95	269.6	1.33
40 " " 60	34,836	433	12.43	192.3	2.39
60 " and upwards	12,248	697	56.91	114.6	6.52
Total	195,986	2,131	10.87	1,000.0	13.54
<b>NORTHERN TERRITORY.</b>					
Under 1 year	33	6	181.82	25.5	4.64
1 year and under 20	673	9	13.37	398.0	5.32
20 years " 40	976	11	11.27	269.6	3.04
40 " " 60	1,645	26	15.80	192.3	3.04
60 " and upwards	333	12	36.04	114.6	4.13
Total	3,660	64	17.49	1,000.0	20.17
<b>FEDERAL TERRITORY.</b>					
Under 1 year	56	1	17.86	25.5	0.46
1 year and under 20	1,004	2	1.99	398.0	0.79
20 years " 40	753	...	...	269.6	...
40 " " 60	456	1	2.19	192.3	0.42
60 " and upwards	180	7	33.89	114.6	4.46
Total	2,449	11	4.49	1,000.0	6.13

## INDEX OF MORTALITY, 1913.—(STATES AND COMMONWEALTH)—Continued.

Age-Group.	Mean Population, 1913, distributed according to Results of Census of 1911.	Number of Deaths, 1913.	No. of Deaths per 1000 of Mean Population, 1913, in each Age-Group.	Age Distribution per 1000 of Standard Population.	Index of Mortality
<b>COMMONWEALTH.</b>					
Under 1 year	125,489	9,810	78.17	35.5	1.99
1 year and under 20	1,885,559	6,165	3.27	398.0	1.30
20 years " 40	1,580,467	7,263	4.60	269.6	1.24
40 " 60	902,702	10,415	11.54	192.3	2.22
60 " and upwards	309,444	18,136	58.61	114.6	6.72
Total	4,803,661	51,789	10.78	1,000.0	13.47

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 50 persons who died in 1913, and whose ages were not stated in the certificates of death.

It will be seen that while Victoria had in 1913, apart from the territories, the highest crude death rate, the index was highest in New South Wales; and that both the index and the crude rate were lowest in Western Australia. The range of the indexes was much below that of the crude rates, the latter varying from 9.34 per thousand in Western Australia to 11.11 per thousand in Victoria, a range of 1.77 per thousand, while the index varied from 12.58 per thousand in Western Australia to 13.61 per thousand in New South Wales, a range of 1.03 per thousand only.

For purposes of comparison with previous years the index of mortality is shown in the following table for each of the eleven years 1903-1913 :—

## INDEX OF MORTALITY, 1903-1913 (STATES AND TERRITORIES).

Year.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Northern Territory.	Federal Territory.	Commonwealth.
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	(a) 17.91	(b) 6.53	13.55
1912	13.63	14.94	13.91	12.76	14.55	13.69	17.23	6.36	14.08
1913	13.61	13.50	13.25	13.25	12.58	13.54	20.17	6.13	13.47

(a) Included in South Australia prior to 1911. (b) Part of New South Wales prior to 1911.

A comparison of the above figures with the crude death rates given on a previous page shows that while the crude rate was highest in Victoria ten times in 11 years and once in Western Australia, the index was highest in Victoria six times, in Western Australia four times, and in New South Wales once in the same period. South Australia had the lowest index six times, Queensland twice, and New South Wales, Western Australia, and Tasmania once each, while the crude rate was lowest five times in South Australia, three times in Queensland, twice in Tasmania, and once in Western Australia. 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. Monthly Variations in Death Rates.**—(i.) *General Death Rates.* The annual death rates, corresponding to the number of deaths registered in each equalised month, have been calculated for the six years 1907-1912, and a series of diagrams shewing the results for each State and the Commonwealth as a whole appears on page 209 of this issue, distinguishing the rates for males, females, and persons. The curves shewing the male and female rate exhibit in each State a fairly parallel course,

irregularities being, however, more strongly marked in the case of the male curve. The minimum rates in New South Wales and Queensland fall within the autumn months, from March to May, while in Victoria, South Australia, Western Australia, and Tasmania they fall in the spring months, October and November. In no case is there, however, a very great difference between the rates in spring and in autumn, the figures for the Commonwealth being 10.19 per thousand in March, and 10.34 per thousand in October. The maximum rates in New South Wales, Victoria, and Tasmania are experienced in August, and in Queensland in September, with the rates for December and January as secondary maxima. In South Australia the maximum rate of 11.33 per thousand falls in January, the rate for August standing next with 10.80 per thousand. In Western Australia the maximum rate is found in May.

(ii.) *Infantile Death Rates.* A similar series of diagrams, shewing the monthly variations in the infantile death rates, appears on page 210. With the exception of Western Australia, where the maximum occurs in May, the maxima are found in the summer months in every State. The rates gradually decrease from January to March, shewing in several States a slight increase in April, with a further diminution until July. In July and August the rates rise to some extent, to fall again until October or November. From that time a rapid rise takes place, until the maximum is reached in December or January. Tasmania, where the seasons are rather later than in the continental States, shews two distinct minima in May and November, with a summer maximum in February, and a fairly high rate in September. In Western Australia the rates are moderately high in December and January, and drop until March, to rise rapidly in April and May when the maximum is reached. From May to September there is a gradual decrease, with a quick rise from the latter month until December.

16. **Causes of Death.**—(i.) Information regarding the changes in the classification of causes of death will be found in previous editions of this Year Book (*e.g.*, Year Book No. 5, pages 222 and 223). The statement will suffice, therefore, that the classification adopted by the Commonwealth Bureau of Census and Statistics is that of the International Institute of Statistics, as amended by the Committee of Revision which met in 1909. The detailed classification groups causes of death under 189 different headings in fourteen categories, as follows:—

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>i. General Diseases.</li> <li>ii. Diseases of the Nervous System and Organs of Special Sense.</li> <li>iii. Diseases of the Circulatory System.</li> <li>iv. Diseases of the Respiratory System.</li> <li>v. Diseases of the Digestive System.</li> <li>vi. Diseases of the Genito-urinary System and Adnexa.</li> <li>vii. Puerperal Condition.</li> </ul> | <ul style="list-style-type: none"> <li>viii. Diseases of the Skin and Cellular Tissue.</li> <li>ix. Diseases of the Organs of Locomotion.</li> <li>x. Malformations.</li> <li>xi. Infancy.</li> <li>xii. Old Age.</li> <li>xiii. Violence.</li> <li>xiv. Ill-defined Diseases.</li> </ul> |
|--|---|

(ii.) *Compilation of Vital Statistics for 1907 and Subsequent Years in Commonwealth Bureau.* The vital statistics of the Commonwealth from the year 1907 onward 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.

(iii.) *Classification of Causes of Death, 1907 to 1913, according to Abridged International Classification.* An abridged classification, which enumerates thirty-eight diseases and groups of diseases according to the revised classification, is in use in many European and American States, while the Commonwealth Statistics have been compiled on the detailed classification of 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 the years 1907 to 1913 will be found in full in "Bulletins Nos. 8, 14, 20, 25, 29, 30, and 31 of Population and Vital Statistics"; here it will suffice to give the abridged classification under thirty-eight headings for the year 1913:—

## CAUSES OF DEATH—COMMONWEALTH, 1913.

(a) MALES.

Cause.	N.S.W.	Vic.	Q'land.	S.Aust.	W.Aus.	Tas.	Nor. Ter.	Ed. Ter.	C'with.
1 Typhoid Fever ...	149	63	91	32	45	13	...	...	393
2 Typhus ...	...	...	...	...	...	...	...	...	...
3 Malaria ...	6	2	9	1	2	...	1	...	21
4 Small-pox ...	...	...	...	...	...	...	...	...	...
5 Measles ...	22	26	27	9	8	5	...	...	95
6 Scarlet Fever ...	10	2	1	4	1	1	...	...	19
7 Whooping Cough ...	120	44	28	35	5	11	1	...	244
8 Diphtheria and Croup ...	146	136	43	42	16	26	...	...	409
9 Influenza ...	46	53	60	11	4	10	1	...	185
10 Asiatic Cholera ...	...	...	...	...	...	...	...	...	...
11 Cholera Nostras ...	1	1	...	...	...	...	...	...	2
12 Other Epidemic Diseases ...	32	16	31	11	10	4	...	...	104
13 Tuberculosis of the Lungs	727	533	220	171	143	57	10	...	1,861
14 Tuberculosis of the Men- inges ...	51	37	7	9	9	6	...	...	119
15 Other forms of Tubercu- losis ...	62	51	16	8	7	6	1	...	151
16 Cancer and other Malig- nant Tumours ...	746	574	251	183	92	69	1	...	1,916
17 Simple Meningitis ...	164	113	54	40	33	26	...	...	430
18 Congestion, Hæmorrhage and Softening of Brain	477	351	142	104	55	58	1	...	1,188
19 Organic Diseases of the Heart ...	1,016	890	427	269	136	109	3	3	2,853
20 Acute Bronchitis ...	101	50	21	23	4	11	...	...	210
21 Chronic Bronchitis ...	201	186	70	56	16	26	...	...	555
22 Pneumonia ...	457	370	131	106	76	83	1	...	1,224
23 Other Diseases of the Res- piratory System (Tuber- culosis excepted) ...	344	436	164	91	62	38	2	...	1,197
24 Diseases of the Stomach (Cancer excepted) ...	87	61	31	17	15	8	1	...	220
25 Diarrhœa & Enteritis (child- ren under 2 years only)	842	415	225	133	113	28	...	...	1,756
26 Appendicitis and Typhlitis	88	58	35	12	10	14	...	...	217
27 Hernia, Intestinal Ob- structions ...	97	58	40	20	24	9	...	...	248
28 Cirrhosis of the Liver ...	95	81	43	13	18	3	...	...	253
29 Nephritis and Bright's Disease ...	537	494	192	108	55	37	...	...	1,363
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 ...	845	581	274	208	149	104	3	...	2,164
34 Senile Debility ...	878	763	239	205	120	95	2	...	2,302
35 Violence ...	956	535	468	185	239	111	9	...	2,503
36 Suicide ...	210	104	106	35	49	12	...	...	516
37 Other Diseases ...	1,822	1,389	718	373	290	192	9	1	4,794
38 Unspecified or Ill-defined Diseases ...	173	82	31	49	48	17	7	...	407
Total—Males ...	11,508	8,495	4,195	2,563	1,852	1,189	53	4	29,859

## CAUSES OF DEATH—COMMONWEALTH, 1913.

## (b) FEMALES.

Cause.	N.S.W.	Vic.	Q'land.	S. A.	W.A.	Tas.	Nor. Ter.	Fed. Ter.	C'wth.
1 Typhoid Fever ... ..	78	33	34	17	18	3	...	...	183
2 Typhus ... ..	...	...	...	...	...	...	...	...	...
3 Malaria ... ..	...	1	2	...	...	...	...	...	3
4 Small-pox ... ..	1	...	...	...	...	...	...	...	1
5 Measles ... ..	19	23	28	12	2	7	...	...	91
6 Scarlet Fever ... ..	12	3	...	3	...	2	...	...	20
7 Whooping Cough... ..	166	58	41	27	14	10	...	...	316
8 Diphtheria and Croup ... ..	174	106	41	34	30	12	2	...	399
9 Influenza ... ..	40	34	50	14	4	12	1	1	156
10 Asiatic Cholera ... ..	...	...	...	...	...	...	...	...	...
11 Cholera Nostras ... ..	...	1	...	...	...	...	...	...	1
12 Other Epidemic Diseases ... ..	30	17	14	8	9	3	...	...	81
13 Tuberculosis of the Lungs... ..	471	500	186	163	63	58	...	...	1,391
14 Tuberculosis of the Meninges ... ..	47	44	5	20	7	10	...	...	133
15 Other forms of Tuberculosis ... ..	59	52	5	18	3	8	...	...	145
16 Cancer and other Malignant Tumours ... ..	577	590	176	181	86	75	1	1	1,687
17 Simple Meningitis ... ..	123	97	42	31	16	14	...	...	323
18 Congestion, Hæmorrhage, & Softening of the Brain ... ..	399	370	107	135	37	44	1	...	1,093
19 Organic Diseases of the Heart ... ..	702	792	260	210	70	101	...	1	2,136
20 Acute Bronchitis ... ..	88	42	18	23	9	7	...	...	187
21 Chronic Bronchitis ... ..	169	132	60	46	18	11	...	...	436
22 Pneumonia ... ..	260	245	80	63	39	54	1	...	742
23 Other Diseases of the Respiratory System (Tuberculosis excepted) ... ..	261	256	53	39	28	38	...	...	675
24 Diseases of the Stomach (Cancer excepted) ... ..	87	75	31	16	10	7	...	1	227
25 Diarrhœa and Enteritis (children under 2 yrs only) ... ..	644	329	183	107	123	34	...	...	1,420
26 Appendicitis and Typhlitis... ..	55	51	22	11	6	2	...	...	147
27 Hernia, Intestinal Obstructions... ..	79	78	27	28	15	11	...	...	238
28 Cirrhosis of the Liver ... ..	37	40	19	9	5	2	...	...	112
29 Nephritis & Bright's Disease ... ..	290	313	128	59	39	19	...	...	848
30 Non-cancerous Tumours and other Diseases of the Female Genital Organs ... ..	63	39	20	10	12	9	...	...	153
31 Puerperal Septicæmia (Puerperal Fever, Puerperal Peritonitis, Puerperal Phlebitis) ... ..	115	57	22	24	9	8	...	...	235
32 Other Puerperal Accidents of Pregnancy & Confinement ... ..	180	113	60	34	24	17	...	...	428
33 Congenital Debility and Malformations ... ..	644	460	209	156	97	91	2	...	1,659
34 Senile Debility ... ..	632	661	131	232	52	105	...	1	1,814
35 Violence... ..	267	180	102	46	50	19	1	...	665
36 Suicide ... ..	58	42	12	11	5	3	...	...	131
37 Other Diseases ... ..	1,271	1,083	464	318	173	135	1	2	3,447
38 Unspecified or Ill-defined Diseases ... ..	93	62	6	25	9	11	1	...	207
Total—Females ... ..	8,191	6,979	2,588	2,130	1,082	942	11	7	21,930

## CAUSES OF DEATH—COMMONWEALTH, 1913.

(c) TOTAL, MALES AND FEMALES.

Cause.	N.S. W.	Vic.	Qld.	S.A.	W.A.	Tas.	Nor. Ter.	Fed. Ter.	Commonwealth
1 Typhoid Fever ...	227	96	125	49	63	16	...	...	576
2 Typhus ...	...	...	...	...	...	...	...	...	...
3 Malaria ...	6	3	11	1	2	...	1	...	24
4 Small-pox ...	1	...	...	...	...	...	...	...	1
5 Measles ...	41	49	55	21	8	12	...	...	186
6 Scarlet Fever ...	22	5	1	7	1	3	...	...	39
7 Whooping Cough ...	286	102	69	62	19	21	1	...	560
8 Diphtheria and Croup ...	320	242	84	76	46	38	2	...	808
9 Influenza ...	86	87	110	25	8	22	2	1	341
10 Asiatic Cholera ...	...	...	...	...	...	...	...	...	...
11 Cholera Nostras ...	1	2	...	...	...	...	...	...	3
12 Other Epidemic Diseases ...	62	33	45	19	19	7	...	...	185
13 Tuberculosis of the Lungs .	1,198	1,033	356	334	206	115	10	...	3,252
14 Tuberculosis of the Meninges	98	81	12	29	16	16	...	...	252
15 Other forms of Tuberculosis	121	103	21	26	10	14	1	...	296
16 Cancer and other Malignant Tumours ...	1,323	1,164	427	364	178	144	2	1	3,603
17 Simple Meningitis ...	287	210	96	71	49	40	...	...	753
18 Congestion, Hæmorrhage, & Softening of the Brain ...	876	721	249	239	92	102	2	...	2,281
19 Organic Diseases of Heart .	1,718	1,682	687	479	206	210	3	4	4,989
20 Acute Bronchitis ...	189	92	39	46	13	18	...	...	397
21 Chronic Bronchitis ...	370	318	130	102	34	37	...	...	991
22 Pneumonia ...	717	615	211	169	115	137	2	...	1,966
23 Other Diseases of the Respiratory System (Phthisis excepted) ...	605	692	217	130	90	76	2	...	1,812
24 Diseases of the Stomach (Cancer excepted) ...	174	136	62	33	25	15	1	1	447
25 Diarrhœa and Enteritis (children under 2 yrs. only)	1,486	744	408	240	236	62	...	...	3,176
26 Appendicitis and Typhlitis .	143	109	57	23	16	16	...	...	364
27 Hernia, Intestinal Obstructions ...	176	136	67	48	39	20	...	...	486
28 Cirrhosis of the Liver ...	132	121	62	22	23	5	...	...	365
29 Nephritis & Bright's Disease	827	747	320	167	94	56	...	...	2,211
30 Non-cancerous Tumours & other Diseases of the Female Genital Organs ...	63	39	20	10	12	9	...	...	153
31 Puerperal Septicæmia (Puerperal Fever, Puerperal Peritonitis, Puerperal Phlebitis) ...	115	57	22	24	9	8	...	...	235
32 Other Puerperal Accidents of Pregnancy and Confinement ...	180	113	60	34	24	17	...	...	428
33 Congenital Debility and Malformations ...	1,489	1,041	483	364	246	195	5	...	3,823
34 Senile Debility ...	1,510	1,424	370	437	172	200	2	1	4,116
35 Violence ...	1,223	715	570	231	289	130	10	...	3,168
36 Suicide ...	268	146	118	46	54	15	...	...	647
37 Other Diseases ...	3,093	2,472	1,182	691	463	327	10	3	8,241
38 Unspecified or Ill-defined Diseases ...	266	144	37	74	57	28	8	...	614
Total—Males and Females	19,699	15,474	6,783	4,693	2,934	2,131	64	11	51,789

(d) The classification for the years 1908 to 1912 is shewn for the Commonwealth in the following table, and for purposes of comparison the figures for the year 1913 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, for 1910 on pages 202 and 203 of the fifth issue, for 1911 on pages 224 and 225 of the sixth issue, and for 1912 on pages 182 and 183 of the seventh issue of this Year Book; while the figures for 1913 are given on pages 182 and 183.

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 1913.

## MALES AND FEMALES.

Cause.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
1 Typhoid Fever ... ..	564	736	661	648	488	619	576
2 Typhus ... ..	...	...	...	...	...	...	...
3 Malaria ... ..	42	52	59	55	19	17	24
4 Small-pox ... ..	...	...	1	4	1	...	1
5 Measles ... ..	147	125	31	124	206	519	186
6 Scarlet Fever ... ..	37	63	74	58	24	41	39
7 Whooping Cough ... ..	1,070	249	257	476	291	301	560
8 Diphtheria and Croup ... ..	403	421	435	555	696	754	808
9 Influenza ... ..	902	588	326	324	447	386	341
10 Asiatic Cholera ... ..	...	...	...	...	...	...	...
11 Cholera-Nostras ... ..	5	4	1	1	6	5	3
12 Other Epidemic Diseases ... ..	276	268	221	184	295	224	185
13 Tuberculosis of the Lungs ... ..	3,206	3,409	3,169	3,059	3,164	3,146	3,252
14 Tuberculosis of the Meninges ... ..	237	205	220	215	269	215	252
15 Other forms of Tuberculosis ... ..	415	352	332	343	303	327	296
16 Cancer and other Mal. Tumours ... ..	2,940	2,921	3,112	3,205	3,321	3,537	3,603
17 Simple Meningitis ... ..	648	676	616	567	636	749	753
18 Congestion, Hæmorrhage, and Softening of the Brain ... ..	1,901	1,867	1,665	1,704	2,178	2,176	2,281
19 Organic Diseases of the Heart ... ..	3,801	4,066	3,940	4,378	4,896	5,267	4,989
20 Acute Bronchitis ... ..	514	412	422	420	515	460	397
21 Chronic Bronchitis ... ..	844	818	897	859	1,046	1,053	991
22 Pneumonia ... ..	1,788	1,871	1,752	1,612	1,869	2,107	1,966
23 Other Diseases of the Respir. System (Tuberculosis except.) ... ..	1,689	1,569	1,565	1,544	1,872	1,863	1,812
24 Diseases of the Stomach (Cancer excepted) ... ..	334	308	272	297	370	457	447
25 Diarrhœa and Enteritis (Children under two years only) ... ..	2,733	3,236	2,803	3,145	2,462	3,248	3,176
26 Appendicitis and Typhlitis ... ..	305	293	344	315	320	347	364
27 Hernia, Intest. Obstructions... ..	411	389	396	398	439	463	486
28 Cirrhosis of the Liver ... ..	325	362	331	368	385	426	365
29 Nephritis and Bright's Disease ... ..	1,760	1,864	1,799	1,771	1,951	2,188	2,211
30 Non-cancerous Tumours and other Diseases of the Female Genital Organs ... ..	128	159	130	149	120	145	153
31 Puerperal Septicæmia (Puer. Fever, Peritonitis, Phlebitis) ... ..	179	202	201	218	209	231	235
32 Other Puerperal Accidents of Pregnancy and Confinement ... ..	435	404	376	373	406	413	428
33 Congenital Debility, etc. ... ..	3,038	2,973	2,905	3,221	3,142	3,611	3,823
34 Senile Debility ... ..	3,136	3,466	3,194	3,353	3,849	4,124	4,116
35 Violence ... ..	2,679	2,922	2,664	2,738	3,018	3,237	3,168
36 Suicide ... ..	461	497	495	516	544	631	647
37 Other Diseases ... ..	6,677	7,417	7,419	7,795	7,652	8,300	8,241
38 Unspecified or Ill-defined Dis. ... ..	1,275	1,262	1,087	598	460	590	614
Total ... ..	45,305	46,426	44,172	45,590	47,869	52,177	51,789

17. **Certification of Deaths.**—Information was obtained in 1913 as to the persons by whom the 51,789 deaths which occurred in the Commonwealth were certified. The result of the enquiry shews that approximately 88.7 per cent. (in 1910, 88.1 per cent., in 1911, 88.2 per cent., and in 1912, 88.1 per cent.) were certified by medical practitioners, and 10.8 per cent. (in 1910, 11.1 per cent., in 1911, 10.9 per cent., and in 1912, 10.9 per cent.) by coroners after inquests, or magisterial enquiries, while in 0.5 per cent. (in 1910, 0.8 per cent., in 1911, 0.9 per cent., and in 1912, 1.0 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. 31; a short summary will therefore suffice here:—

**CERTIFICATION OF DEATHS, COMMONWEALTH, 1913.**

Death Certified by—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Fed. Ter.	C'with.
Medical practitioner	17,340	13,597	6,220	4,268	2,585	1,887	34	9	45,940
Coroner ... ..	2,351	1,877	404	414	298	225	30	2	5,601
Not certified or not stated ... ..	8	...	159	11	51	19	...	...	248
<b>Total Deaths ...</b>	<b>19,699</b>	<b>15,474</b>	<b>6,783</b>	<b>4,693</b>	<b>2,934</b>	<b>2,131</b>	<b>64</b>	<b>11</b>	<b>51,789</b>

Of the cases certified by coroners, violent deaths numbered 2387, ill-defined causes 296, organic heart disease 470, senile decay 464, congenital debility 175, diarrhœa and enteritis 82, Bright's disease 101, cerebral hæmorrhage and apoplexy 98, tuberculosis of lungs 83, pneumonia 115, infantile convulsions 60, broncho-pneumonia 43, diseases of arteries, aneurysms, etc. 29, acute and chronic alcoholism 49, other diseases peculiar to early infancy 40, epilepsy 30, general paralysis 29, diphtheria and croup 23, puerperal septicæmia, 18; a total of 5092 out of 5601.

Of uncertified causes of death, violent deaths numbered 64, senile debility 40, ill-defined causes 23, infantile convulsions 12, congenital debility 25, diarrhœa and enteritis 5, tuberculosis of the lungs 3, organic heart disease 8, pneumonia 5, influenza 4, beri beri 4, cerebral hæmorrhage and apoplexy 3, chronic bronchitis 5, and Bright's disease 3; a total of 204 out of 248.

18. **Deaths from Special Causes.**—The table on p. 185 furnishes comparisons for the last seven years only, and comparisons will, therefore, be restricted to that period.

(i.) *Typhoid Fever.* Deaths from typhoid fever were more numerous in 1903 than in 1907, numbering 736, against 564 in 1907. In 1909 the number fell to 661, in 1910, to 648, and to 488 in 1911. In 1912 the number increased to 619, and fell to 576 in 1913, of which 227 occurred in New South Wales, 96 in Victoria, 125 in Queensland, 49 in South Australia, 63 in Western Australia, and 16 in Tasmania.

(ii.) *Typhus.* No deaths from typhus have been registered from 1907 to 1913.

(iii.) *Malaria.* Deaths from malarial diseases are practically confined to the tropical districts of Northern Queensland and Western Australia, and to the Northern Territory, 11 out of 24 deaths registered in 1913 having occurred in Queensland, 2 in Western Australia, and one 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, and in 1911, only one death occurred in New South Wales. No deaths were registered in 1912, but in 1913 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. In 1912 New South Wales experienced a slight epidemic, and was responsible for 352 deaths out of 519 registered. In 1913 the number of deaths fell to 186, which were fairly evenly distributed among the six States.

(vi.) *Scarlet Fever*. 39 deaths were registered in 1913, distributed over all six States, with a maximum of 22 in New South Wales.

(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, and in 1912, 301 deaths were registered. In 1913 the number of deaths increased to 560, of which 286 occurred in New South Wales, and 102 in Victoria.

(viii.) *Diphtheria and Group*. Deaths in 1907, 403; in 1908, 421; in 1909, 435; in 1910, 555; in 1911, 696, in 1912, 754, and in 1913, 808, of which 320 occurred in New South Wales, 242 in Victoria, 84 in Queensland, 76 in South Australia, 46 in Western Australia, 38 in Tasmania, and two in the Northern Territory.

(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; in 1911, 447; in 1912, 386; and in 1913, 341, of which 86 occurred in New South Wales, 87 in Victoria, 110 in Queensland, 25 in South Australia, 8 in Western Australia, 22 in Tasmania, 2 in the Northern Territory, and 1 in the Federal Territory.

(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 seven years. Three deaths from this cause occurred during 1913.

(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, 295 in 1911, 224 in 1912, and 185 in 1913. The list in 1913 includes the following diseases:—Dysentery 74, erysipelas 90, leprosy 9, of which 8 occurred in Queensland, other epidemic diseases, 12. Prior to 1910 beri-beri was included in other epidemic diseases, but is now included in No. 37 of the revised classification. Of the 74 deaths from leprosy in the years 1907 to 1913, 58 occurred in Queensland. There were no deaths from plague in the Commonwealth during 1910, 1911, and 1913. In 1907, 48 deaths were registered; in 1908, 14 deaths; in 1909, 13 deaths, and in 1912, 1 death.

(xiii.) *Tuberculosis of the Lungs and Acute Miliary Tuberculosis*. The deaths in 1913 numbered 3252, viz., 1861 males and 1391 females. The figures for the years 1907 to 1912 were 3206, 3409, 3169, 3059, 3164, and 3146 respectively. Of the deaths in 1913, 1198 occurred in New South Wales, 1033 in Victoria, 356 in Queensland, 334 in South Australia, 206 in Western Australia, 115 in Tasmania, and 10 in the Northern 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 185, deaths from tuberculosis of the larynx have been included with tuberculosis of the lungs, so that the figures allow of correct comparison.

(xiii.) *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 are not now repeated.

(xiv.) *Tuberculosis of the Meninges.* The number of deaths registered in 1907 was 237; in 1908, 205; in 1909, 220; in 1910, 215; in 1911, 269; in 1912, 215, and in 1913, 252.

(xv.) *Other Forms of Tuberculosis.* Deaths numbered in 1907, 415; in 1908, 352; in 1909, 332; in 1910, 343; in 1911, 303; in 1912, 327, and in 1913, 296. The deaths in 1913 include the following forms of tuberculosis:—Abdominal tuberculosis, 114; Pott's disease, 60; white swellings, 18; tuberculosis of other organs, 52; and disseminated tuberculosis, 52. Tuberculosis of the larynx (see paragraph xiii.)

(xvi.) *All Forms of Tuberculosis.* A complete tabulation of all the different tubercular diseases from which deaths occurred in 1913, will be found in Bulletin No. 31 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 3800, viz., 2131 males and 1669 females. The following table shews the ages of these 3800 persons:—

### AGES OF PERSONS WHO DIED FROM TUBERCULAR DISEASES, 1913.

#### COMMONWEALTH.

Ages.	Male.	Female.	Total.	Ages.	Male.	Female.	Total.
Under 5 years ...	137	123	260	55 years and under 60	152	51	203
5 years and under 10	25	26	51	60 " " 65	88	38	126
10 " " 15	25	41	66	65 " " 70	75	33	108
15 " " 20	74	158	232	70 " " 75	35	22	57
20 " " 25	179	237	416	75 " " 80	11	6	17
25 " " 30	216	270	486	80 " " over ...	3	4	7
30 " " 35	246	201	447	Unspecified ...	4	...	4
35 " " 40	222	153	375				
40 " " 45	218	132	350				
45 " " 50	196	101	297				
50 " " 55	225	73	298				
				Total Deaths ...	2,131	1,669	3,800

A tabulation has been made of the occupations of males dying from tubercular diseases during 1913. A summary is here given:—



It may be of interest to state that while deaths from tubercular diseases in the Commonwealth were 0.79 per thousand in 1913, they were 1.29 per thousand in Belgium in 1911; 1.44 per thousand in the Netherlands in 1912; 1.47 per thousand in England and Wales in 1911; 1.53 per thousand in Germany in 1912; 1.61 per thousand in Spain in 1911; 1.72 per thousand in Italy in 1911; 2.18 per thousand both in France and in Switzerland in 1911; 2.20 per thousand in Ireland in 1911; 2.21 per thousand in Norway in 1911; 3.56 per thousand in Austria in 1911; and 3.67 per thousand in Hungary in 1911. 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; 1910, 3205 deaths; 1911, 3321 deaths; 1912, 3537 deaths; and 1913, 3603 deaths. Of the deaths registered in 1913, 1916 were those of males, viz., 746 in New South Wales, 574 in Victoria, 251 in Queensland, 183 in South Australia, 92 in Western Australia, 69 in Tasmania, and 1 in the Northern Territory; while 1687 were those of females, viz., 577 in New South Wales, 590 in Victoria, 176 in Queensland, 181 in South Australia, 86 in Western Australia, and 75 in Tasmania, 1 in the Northern Territory, and 1 in the Federal Territory. Bulletin No. 31 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, 1913.

Seat of Disease.	Male.	Female	Total.
Cancer, etc., of the buccal cavity ... ..	248	24	272
„ „ the stomach and liver ... ..	816	528	1,344
„ „ the peritoneum, the intestines, and the rectum ... ..	232	219	451
„ „ the female genital organs ... ..	...	350	350
„ „ the breast ... ..	...	246	246
„ „ the skin ... ..	86	43	129
„ „ other organs ... ..	534	277	811
Total Deaths ... ..	1,916	1,687	3,603

Of these deaths 1021 were described as cancer, 1627 as carcinoma, 168 as epithelioma, 440 as "malignant disease," 34 as "malignant tumour," 22 as neoplasm, 35 as "rodent ulcer," 230 as sarcoma, and 26 as scirrhus.

The ages of the 3603 persons who died from cancer in 1913, 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, 1913.

##### COMMONWEALTH.

Ages.	Males.	Female	Total.	Ages.	Males.	Female	Total.
Under 15 years ...	22	15	37	55 years and under 60	250	204	454
15 years and under 20	8	3	11	60 " " 65	274	193	467
20 " " 25	25	9	17	65 " " 70	278	206	484
25 " " 30	21	21	42	70 " " 75	227	173	400
30 " " 35	23	32	55	75 " " 80	177	141	318
35 " " 40	50	75	125	80 " " 85	84	81	165
40 " " 45	87	116	203	85 years and over ...	39	40	79
45 " " 50	162	186	348	Total Deaths ...	1,916	1,687	3,603
50 " " 55	205	193	398				

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

## OCCUPATION OF PERSONS WHO DIED FROM CANCER, 1913.

## COMMONWEALTH.

Occupation.	No. of Deaths.	Occupation.	No. of Deaths.
Professional class ... ..	92	Pastoral class ... ..	85
Domestic class ... ..	71	Working in mines and quarries ...	136
Mercantile class ... ..	200	Other primary producers ...	11
Engaged in transport and communication ... ..	139	Independent means ... ..	72
Manufacturing class ... ..	204	Dependents ... ..	63
Engaged in building and construction ... ..	102	Occupation not stated ... ..	34
Other industrial workers ... ..	398		
Agricultural class ... ..	309	Total Male Deaths ... ..	1,916

As the following tables shew, the total death rates from cancer are below those for tubercular diseases in all the States with the exception of Queensland. The male death rate from cancer was, in 1913, in excess of that from tuberculosis in Queensland, and equal to it in Tasmania, while the female death rates were in excess of it in Queensland and Western Australia, and equal to it in New South Wales and Victoria. While the death rates from tuberculosis have a general tendency to decrease, the death rates from cancer have, on the contrary, shewn an increase in nearly every recent year. Thus for the whole Commonwealth in 1907 the death rate from tuberculosis was 0.22 per thousand greater than that from cancer, and in 1908 the excess amounted to 0.25 per thousand. In 1909 this decreased to 0.14; in 1910 to 0.10; in 1911 to 0.09; and in 1912 to 0.03 per thousand, while 1913 shews a slight increase in the excess to 0.04 per thousand.

## DEATH RATES (a) FROM CANCER AND PERCENTAGE ON TOTAL DEATHS, 1913.

## COMMONWEALTH.

State.	Death Rates (a) from Cancer.			Percentage on Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	0.79	0.67	0.73	6.48	7.04	6.72
Victoria ...	0.83	0.85	0.84	6.76	8.45	7.52
Queensland ...	0.71	0.59	0.65	5.98	6.80	6.29
South Australia ...	0.83	0.85	0.84	7.14	8.50	7.76
Western Australia	0.52	0.63	0.57	4.97	7.95	6.07
Tasmania ...	0.68	0.79	0.73	5.80	7.96	6.76
Northern Territ'y	0.33	1.53	0.55	1.89	9.09	3.13
Federal Territory	...	1.04	0.41	...	14.28	9.09
Commonwealth	0.77	0.73	0.75	6.42	7.69	6.96

(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.
Hungary ...	1911	0.46	France ...	1911	0.80
Spain ...	1911	0.53	Prussia ...	1911	0.81
Denmark ...	1911	0.57	Ireland ...	1911	0.82
Western Australia ...	1913	0.57	Victoria ...	1913	0.84
Canada (Ontario) ...	1911	0.63	South Australia ...	1913	0.84
Queensland ...	1913	0.65	German Empire ...	1912	0.90
Italy ...	1911	0.67	Norway ...	1911	0.97
Belgium ...	1911	0.69	United Kingdom ...	1910	0.96
Tasmania ...	1913	0.73	England and Wales ...	1911	0.99
United States (Registration Area) ...	1911	0.74	Austria ...	1911	1.00
Commonwealth ...	1913	0.75	Scotland ...	1910	1.03
New Zealand ...	1912	0.78	Netherlands ...	1912	1.09
New South Wales ...	1913	0.79	Switzerland ...	1911	1.24

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, 636 in 1911, 749 in 1912, and 753 in 1913.

(xviii.) *Apoplexy, 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; in 1911, 2178, viz., 1122 males and 1056 females; in 1912, 2176, viz., 1146 males and 1030 females, and in 1913, 2281, viz., 1188 males and 1093 females. The 1913 figures are made up of hæmorrhage of the brain and apoplexy—1128 males, 1031 females, total 2159; and softening of the brain—60 males, 62 females, total 122.

(xix.) *Organic Diseases of the Heart.* The number of deaths registered in 1913 was 4989, viz., 2853 males and 2136 females. Of these deaths, New South Wales was responsible for 1016 males and 702 females; Victoria for 890 males and 792 females; Queensland for 427 males and 260 females; South Australia for 269 males and 210 females; Western Australia for 186 males and 70 females; Tasmania for 109 males and 101 females; the Northern Territory for 3 males; and the Federal Territory for 3 males and 1 female. To the figures for 1913 correspond the following death rates and percentages to total deaths:—

## DEATH RATES (a) FROM ORGANIC HEART DISEASE AND PERCENTAGE ON TOTAL DEATHS, COMMONWEALTH, 1913.

State.	Death Rates (a) from Organic Heart Disease.			Percentage on Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	1.07	0.82	0.95	8.83	8.57	8.72
Victoria ...	1.28	1.14	1.21	10.48	11.35	10.87
Queensland ...	1.21	0.87	1.05	10.18	10.05	10.13
South Australia ...	1.29	0.98	1.11	10.50	9.86	10.21
Western Australia ...	0.77	0.51	0.66	7.34	6.47	7.02
Tasmania ...	1.07	1.07	1.07	9.17	10.72	9.86
Northern Territory	1.00	...	0.82	5.66	...	4.69
Federal Territory	2.01	1.04	1.63	75.00	14.28	36.37
Commonwealth ...	1.14	0.93	1.04	9.56	9.74	9.63

(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 1907-1913, with the result that acute bronchitis is credited with 514 deaths in 1907, 412 deaths in 1908, 422 deaths in 1909, 420 deaths in 1910, 515 deaths in 1911, 460 deaths in 1912, and 397 in 1913, viz., 210 males and 187 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, 1046 in 1911, 1053 in 1912, and 991 in 1913, viz., 555 males and 436 females.

(xxii.) *Pneumonia.* The 1913 figures were 1224 males and 742 females, a total of 1966 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; in 1911, 1872; in 1912, 1863; and in 1913, 1812. The total for 1913 is made up as follows, viz.:—Diseases of the nasal fossæ, 4 deaths; diseases of the larynx, 97 deaths; diseases of the thyroid body, 16 deaths; broncho-pneumonia, 953 deaths; pleurisy, 192 deaths; pulmonary congestion and apoplexy, 149 deaths; gangrene of the lung, 30 deaths; asthma, 119 deaths; pulmonary emphysema, 9 deaths; fibroid phthisis, miners' complaint, 174 deaths; other diseases of the respiratory system (tuberculosis excepted), 59 deaths.

(xxiv.) *Diseases of the Stomach (Cancer excepted).* In 1913 this heading includes: Ulcer of the stomach, 65 males, 65 females; and other diseases of the stomach (cancer excepted), 155 males, 162 females; a total of 447 deaths. The corresponding figures for the years 1907 to 1912 were 334, 308, 272, 297, 370, and 457 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; in 1911, 2462, viz., 1388 boys and 1074 girls; in 1912, 3248, viz., 1794 boys and 1454 girls; and in 1913, 3176, viz., 1756 boys and 1420 girls. The 1913 deaths were distributed amongst the six States as follows:—New South Wales, 842 males, 641 females, total 1486; Victoria, 415 males, 329 females, total 744; Queensland, 225 males, 183 females, total 408; South Australia, 133 males, 107 females, total 240; Western Australia, 113 males, 123 females, total 236; and Tasmania, 28 males, 34 females, total 62.

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 1913:—

**DEATH RATES (a) FROM INFANTILE DIARRHŒA AND ENTERITIS, AND PERCENTAGE ON TOTAL DEATHS, COMMONWEALTH, 1913.**

State.	Death Rate (a) from Infantile Diarrhœa and Enteritis.			Percentage on Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	0.89	0.75	0.82	7.31	7.86	7.54
Victoria	0.60	0.47	0.53	4.89	4.71	4.81
Queensland	0.64	0.61	0.63	5.36	7.07	6.01
South Australia	0.61	0.50	0.55	5.19	5.02	5.11
Western Australia	0.64	0.90	0.75	6.10	11.37	8.04
Tasmania	0.28	0.36	0.32	2.35	3.61	2.91
Northern Territory	...	...	...	...	...	...
Federal Territory	...	...	...	...	...	...
Commonwealth	0.70	0.62	0.66	5.88	6.48	6.13

(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. The rate in 1912 was higher in every State, Tasmania excepted, than that for 1911, the increase being particularly noticeable in New South Wales, Queensland, and Western Australia, where the 1911 rate had been 0.57, 0.58, and 0.87 respectively, compared with 0.80, 0.78, and 1.09 for 1912. In 1913 all the States, with the exception of New South Wales and South Australia, experienced lower rates than in 1912.

(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, 320 in 1911, 347 in 1912, and in 1913, 364, viz., 217 males and 147 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; in 1911, 439; in 1912, 463; and in 1913, 486, viz., 248 males and 238 females.

(xxviii.) *Cirrhosis of the Liver*. The deaths in 1907 numbered 325; in 1908, 362; in 1909, 331; in 1910, 368; in 1911, 385; and in 1912, 426; and in 1913, 365, viz., 253 males and 112 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; in 1911, 1951, 1197 males and 754 females; in 1912, 2188, 1352 males and 836 females; and in 1913, 2211, 1363 males and 848 females. Of the deaths registered in 1913, those of 89 males and 43 females were ascribed to acute nephritis, and those of 1274 males and 805 females to Bright's disease. New South Wales was responsible for 827 deaths; Victoria for 747; Queensland for 320; South Australia for 167; Western Australia for 94; and Tasmania for 56; making a total of 2211.

(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; in 1911, 120; in 1912, 145; and in 1913, 153. Included in the 153 deaths registered in 1913 were the following:—Non-puerperal uterine hæmorrhage, 3; non-cancerous uterine tumours, 43; other diseases of the uterus, 27; cysts and other ovarian tumours, 33; salpingitis and other diseases of the female genital organs, 47.

(xxxi.) *Puerperal Septicæmia (Puerperal Fever, Puerperal Peritonitis, Puerperal Phlebitis)*. Deaths in 1907 were 179; in 1908, 202; in 1909, 201; in 1910, 218; in 1911, 209, in 1912, 231, and in 1913, 235.

(xxxii.) *Other Puerperal Accidents of Pregnancy and Confinement*. The deaths in 1907 numbered 435; in 1908, 404; in 1909, 376; in 1910, 373; in 1911, 406; in 1912, 413; and in 1913, 428. Included in the 428 deaths registered in 1913 were the following:—Accidents of pregnancy, 75; puerperal hæmorrhage, 83; other accidents of child-

birth, 107; puerperal albuminuria and convulsions, 122; puerperal phlegmasia alba dolens, embolus, sudden death, 32; death following childbirth, 8; puerperal diseases of the breast, 1.

(xxxiii.) *All Puerperal Diseases.* The 663 deaths registered in 1913 under the two preceding headings will be found tabulated in "Bulletin No. 31; Commonwealth Demography" under various aspects. It will suffice to repeat here the following acts:—

Of the 663 mothers who died in childbirth during the year 1913, 605 were married and 58 were single. As the total number of nuptial confinements was 126,963, and of ex-nuptial confinements 7380, it follows that one in 210 of married mothers, and one in 127 of single mothers, died of puerperal disease, the general proportion being one in 203, as against one in 205 in 1912, one in 197 in 1911, 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 48 years, and are shewn in the following table:—

#### AGES OF MOTHERS WHO DIED IN CHILDBIRTH, COMMONWEALTH, 1913.

Age at Death.	Married Women.	Single Women.	Total.	Age at Death.	Married Women.	Single Women.	Total.
17 years ...	3	2	5	34 years ...	25	...	25
18 " ...	4	5	9	35 " ...	30	1	31
19 " ...	5	2	7	36 " ...	29	2	31
20 " ...	14	4	18	37 " ...	25	1	26
21 " ...	19	4	23	38 " ...	21	1	22
22 " ...	13	7	20	39 " ...	19	...	19
23 " ...	31	4	35	40 " ...	18	...	18
24 " ...	24	1	25	41 " ...	15	...	15
25 " ...	26	5	31	42 " ...	12	...	12
26 " ...	21	6	27	43 " ...	8	...	8
27 " ...	39	...	39	44 " ...	7	...	7
28 " ...	42	2	44	45 " ...	3	...	3
29 " ...	28	...	28	46 " ...	2	...	2
30 " ...	28	2	30	47 " ...	1	...	1
31 " ...	22	6	28	48 " ...	1	...	1
32 " ...	35	2	37				
33 " ...	35	1	36	Total deaths	605	58	663

Of the 605 married women shewn in the above table, 231 died at their first confinement, 84 at their second, 83 at their third, 51 at their fourth, 62 at their fifth, 29 at their sixth, 23 at their seventh, 10 at their eighth, 11 at their ninth, 5 at their tenth, 5 at their eleventh, 5 at their twelfth, 2 at their thirteenth, 2 at their fourteenth, and 1 at her fifteenth. In one case no particulars are available. The total number of children of the 604 mothers was 1688.

Thirty-nine of the mothers who died had been married less than one year, 111 between one and two years, 51 between two and three years, the duration of marriage ranging up to 31 years, apart from 8 cases in which the date of marriage cannot be stated. This tabulation will be found in detail, and distinguishing the ages at marriage, in "Bulletin No. 31; 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 17 years, died at the age of 48, in the 31st year of her marriage, at her twelfth confinement.

(xxxiii.) *Congenital Debility and Malformations.* The total deaths registered under these heads in 1913 were 3823, of whom 3777 were children under 1 year of age, inclusive of 3300 under three months. The figures include:—Malformations, 290 males, 226 females, total 516; and congenital debility, icterus, and sclerema of children under one year of age, 1874 males and 1433 females, total 3307; or a grand total of 3823. Of these deaths, 1489 were registered in New South Wales, viz., 845 males and 644 females; 1041 in Victoria, viz., 581 males and 460 females; 483 in Queensland, viz., 274 males and 209 females; 364 in South Australia, viz., 208 males and 156 females; 246 in Western Australia, viz., 149 males and 97 females; 195 in Tasmania, viz., 104 males and 91 females; and 5 in the Northern Territory, viz., 3 males and 2 females.

(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; in 1911, 3849, viz., 2225 males and 1624 females; in 1912, 4124, viz., 2362 males and 1762 females; and in 1913, 4116, viz., 2302 males and 1814 females. Of the deaths registered in 1913, 1510 occurred in New South Wales, viz., 878 males and 632 females; 1424 in Victoria, viz., 763 males and 661 females; 370 in Queensland, viz., 239 males and 131 females; 437 in South Australia, viz., 205 males and 232 females; 172 in Western Australia, viz., 120 males and 52 females; 200 in Tasmania, viz., 95 males and 105 females; 2 males in the Northern Territory and 1 female in the Federal Territory.

Of the males whose death was described as due to senility, 13 were aged between 55 and 59; 43 between 60 and 64; 146 between 65 and 69; 387 between 70 and 74; 567 between 75 and 79; 612 between 80 and 84; 377 between 85 and 89; 119 between 90 and 94; 25 between 95 and 99; while 11 were 100 years old and upwards; and of two the age was not stated.

Of the females, 3 were between 55 and 59; 23 were between 60 and 64; 90 between 65 and 69; 238 between 70 and 74; 422 between 75 and 79; 519 between 80 and 84; 323 between 85 and 89; 140 between 90 and 94; 53 between 95 and 99; while 2 were 100 years old and upwards; and of one the age was not stated.

(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; in 1911, 3018, viz., 2323 males and 695 females; in 1912, 3237, viz., 2559 males and 678 females; and in 1913, 3168, viz., 2503 males and 665 females. Of the deaths registered in 1913, those of 956 males and 267 females occurred in New South Wales; those of 535 males and 180 females in Victoria; those of 468 males and 102 females in Queensland; those of 185 males and 46 females in South Australia; those of 239 males and 50 females in Western Australia; those of 111 males and 19 females in Tasmania; and those of 9 males and one female in the Northern Territory.

The following table shews the various kinds of accidental deaths which occurred in 1913, distinguishing males and females:—

## DEATHS FROM VIOLENCE, COMMONWEALTH, 1913.

Cause of Death.	Males.	Females.	Total
Poisoning by food ... ..	18	11	29
Venomous bites and stings ... ..	11	5	16
Other acute poisonings ... ..	50	30	80
Conflagration ... ..	4	6	10
Burns (conflagration excepted) ... ..	149	200	349
Absorption of deleterious gases (conflagration excepted) ... ..	73	26	99
Accidental drowning ... ..	512	94	606
Traumatism by firearms ... ..	94	12	106
Traumatism by cutting or piercing instruments	1	1	2
Traumatism by fall ... ..	306	48	354
Traumatism in mines or quarries ... ..	151	...	151
Traumatism by machines ... ..	25	...	25
Traumatism by other crushing (vehicles, rail- ways, etc.) ... ..	454	58	512
Injuries by animals ... ..	61	8	69
Starvation, thirst, fatigue ... ..	51	5	56
Excessive cold ... ..	...	...	...
Effects of heat ... ..	70	30	100
Lightning ... ..	17	...	17
Electricity (lightning excepted) ... ..	5	...	5
Homicide by firearms ... ..	13	10	23
Homicide by cutting or piercing instruments...	5	5	10
Homicide by other means ... ..	40	20	60
Fractures (cause not specified) ... ..	116	56	172
Other external violence ... ..	277	40	317
<b>Total Deaths</b> ... ..	<b>2,508</b>	<b>665</b>	<b>3,168</b>

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.

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 the deaths fell to 78, while in 1912 they numbered 127, and in 1913, 100.

(xxxvi.) *Suicide.* 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; in 1911, 544, viz., 446 males and 98 females, in 1912, 631, viz., 514 males and 117 females; and in 1913, 647, viz., 516 males and 131 females. Of the suicides in 1913, a number considerably in excess of the number in previous years, those of 210 males and 58 females, happened in New South Wales; those of 104 males and 42 females in Victoria; those of 106 males and 12 females in Queensland; those of 35 males and 11 females in South Australia; those of 49 males and 5 females in Western Australia; and those of 12 males and 3 females in Tasmania.

The modes adopted by persons who committed suicide in the years 1907 to 1913 were as follows:—

## NUMBER OF MALE AND FEMALE SUICIDES, COMMONWEALTH, 1907 to 1913.

Mode of Death	Males.		Females.		Total.	
	Total of 6 years 1907-12.	1913.	Total of 6 years 1907-12.	1913.	Total of 6 years 1907-12.	1913.
Poisoning ... ..	515	127	277	76	792	203
Asphyxia ... ..	11	2	1	1	12	3
Hanging or Strangulation ... ..	426	79	68	22	494	101
Drowning ... ..	211	25	95	14	306	39
Firearms ... ..	848	163	41	9	889	172
Cutting instruments ... ..	409	88	46	4	455	92
Precipitation from a height ... ..	22	6	5	2	27	8
Crushing ... ..	36	10	6	1	42	11
Other modes ... ..	110	10	17	2	127	18
Total ... ..	2,588	516	556	131	3,144	647

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

DEATH RATES (a) FROM SUICIDE AND PERCENTAGE ON TOTAL DEATHS, 1913.  
COMMONWEALTH.

State.	Death Rates (a) from Suicide.			Percentage on Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	0.22	0.07	0.15	1.82	0.71	1.36
Victoria ... ..	0.15	0.06	0.10	1.22	0.60	0.94
Queensland ... ..	0.30	0.04	0.18	2.53	0.46	1.74
South Australia ... ..	0.16	0.05	0.11	1.64	0.51	0.98
Western Australia	0.28	0.04	0.17	2.65	0.46	1.84
Tasmania ... ..	0.12	0.03	0.08	1.01	0.32	0.70
Northern Territory	...	...	...	...	...	...
Federal Territory	...	...	...	...	...	...
Commonwealth	0.21	0.06	0.13	1.73	0.59	1.25

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

From the following table, which shows the ages of the persons who committed suicide in 1913, it will be seen that both extreme youth and extreme old age are represented:—

## AGES OF PERSONS WHO COMMITTED SUICIDE, COMMONWEALTH, 1913.

Ages.	M.	F.	Total.	Ages.	M.	F.	Total.
10 years and under 15	1	1	2	60 years and under 65	25	5	30
15 " " 20	8	6	14	65 " " 70	26	2	28
20 " " 25	36	20	56	70 " " 75	12	3	15
25 " " 30	47	20	67	75 " " 80	7	...	7
30 " " 35	51	17	68	80 " " 85	3	...	3
35 " " 40	66	12	78	85 " " 90	1	...	1
40 " " 45	51	14	65	Age not stated	6	...	6
45 " " 50	59	19	78				
50 " " 55	74	9	83				
55 " " 60	43	3	46	Total Deaths ...	516	131	647

The following table shows the occupations of the 516 males who committed suicide:—

### OCCUPATIONS OF MALE PERSONS WHO COMMITTED SUICIDE, 1913.

#### COMMONWEALTH.

Occupations.	Deaths.	Occupations.	Deaths.
Professional class ... ..	38	Pastoral class ... ..	19
Domestic class ... ..	25	Working in mines and quarries ...	31
Mercantile class ... ..	66	Other primary producers ... ..	7
Engaged in transport and communication ... ..	43	Independent means ... ..	4
Manufacturing class ... ..	52	Dependents ... ..	5
Engaged in building and construction ... ..	25	Occupation not stated ... ..	17
Indefinite industrial workers ...	133		
Agricultural class ... ..	51	Total Deaths ... ..	516

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 were practically the same as those for 1886-90 and 1891-95. The figures for the three years 1911-13, which have been added to the table, shew, however, a regrettable increase, not only absolutely, but also in proportion to the population. 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 1911-13.

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
1911-13	1,476	346	1,822	203.40	51.78	130.71	23.44	25.46

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

In the fifth issue of this Year Book (pp. 240, etc.), the result of a series of investigations into the periodicity of suicide was published. The paper was partly reprinted in the sixth issue (pp. 241, etc.), but is not repeated in the present issue.

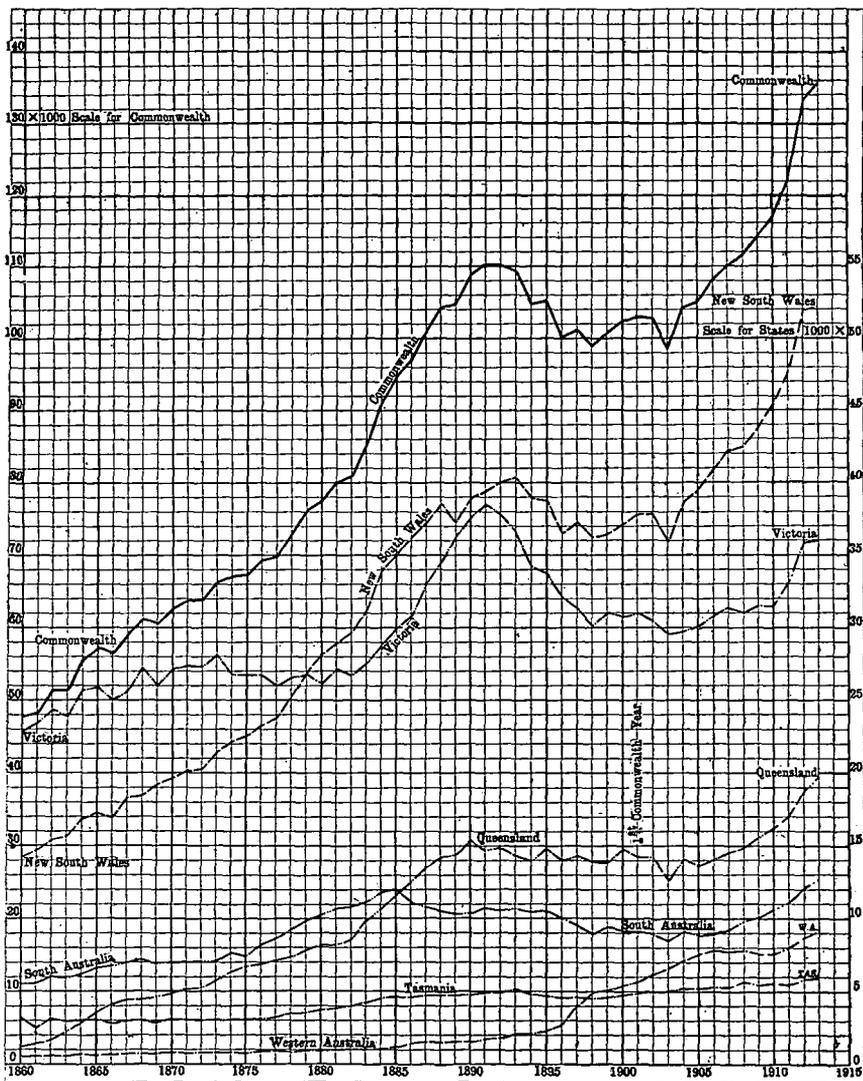
(xxxvii.) *Other Diseases.* The number of causes included under this heading is a very large one, amounting to no less than 79 of the items shewn in the detailed classification, and deaths were recorded under every one of these with the exception of the following four:—Glanders, rabies, pellagra, and non-puerperal diseases of the breast. The total number of deaths under "other diseases" in 1907 was 6677, viz., 3393 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; in 1911, 7652, viz., 4508 males, 3144 females; in 1912, 8300, viz., 4777 males and 3523 females; and in 1913, 8241, viz., 4794 males and 3447 females. 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 (1812 deaths) are now shewn under a new head (xxiii.), and appendicitis and typhlitis (364 deaths) under head xxvi. Some of the diseases included here account for very considerable numbers of deaths. Thus there were 791 deaths ascribed to diarrhoea and enteritis of children over two years of age and of adults; 486 to diabetes; 479 to diseases of the arteries, atheroma, and aneurysm; 401 to embolism and thrombosis; 369 to convulsions of children under five years of age; 310 to paralysis without indicated cause; 276 to acute endocarditis; and 263 to anæmia and chlorosis. Particulars of the deaths included in 1913 are shewn in the following table:—

CAUSES OF DEATH INCLUDED UNDER "OTHER DISEASES," COMMONWEALTH, 1913.

Causes.	M.	F.	T'tal.	Causes.	M.	F.	T'tal.
Purulent Infection and Septicæmia ... ..	92	96	188	Diseases of the Lymphatic System ... ..	3	8	11
Anthrax ... ..	5	...	5	Hæmorrhages, Other Diseases of Circulatory System ...	25	20	45
Tetanus ... ..	77	34	111	Diseases of the Mouth and its Associated Organs ...	11	1	12
Mycoses ... ..	3	...	3	Diseases of the Pharynx ...	29	40	69
Beri-beri ... ..	20	...	20	Diseases of the Oesophagus ...	7	5	12
Rickets ... ..	4	3	7	Diarrhoea and Enteritis of Children over two years of age and Adults ...	411	380	791
Syphilis ... ..	105	69	174	Ankylostomiasis ... ..	2	2	4
Gonococcus Infection ...	3	1	4	Intestinal Parasites ... ..	1	1	2
Other Tumours (Tumours of the female genital organs excepted) ... ..	15	24	39	Other Diseases of the Intestina	32	30	62
Acute Articular Rheumatism	77	93	170	Acute Yellow Atrophy of the Liver ... ..	5	5	10
Chronic Rheumatism & Gout	74	73	147	Hydatid Tumours of the Liver	28	19	47
Scurvy ... ..	10	8	18	Biliary Calculi ... ..	27	54	81
Diabetes ... ..	238	248	486	Other Diseases of the Liver ...	89	98	187
Exophthalmic Goitre ... ..	6	46	52	Diseases of the Spleen ... ..	2	2	4
Addison's Disease ... ..	16	13	29	Simple Peritonitis (non-puerperal) ... ..	89	118	207
Leucæmia ... ..	44	40	84	Other Diseases of the Digestive System ... ..	17	22	39
Anæmia, Chlorosis ... ..	127	136	263	Chyluria ... ..	2	2	4
Other General Diseases ...	62	42	104	Other Diseases of the Kidneys and their Adnexa ...	73	36	109
Acute and Chronic Alcoholism	142	24	166	Calculi of Urinary Passages ...	28	8	36
Chronic Lead Poisoning ...	9	1	10	Diseases of the Bladder ...	120	18	138
Other Chronic Poisonings due to occupations ... ..	2	...	2	Other Diseases of the Urethra, Urinary Abscess, etc. ...	13	...	13
Other Chronic Poisonings ...	5	...	5	Diseases of the Prostate ...	209	...	209
Encephalitis ... ..	43	26	69	Non-venereal Diseases of the Male Genital Organs ...	6	...	6
Progressive Locomotor Ataxia	62	15	77	Gangrene ... ..	65	62	127
Other Diseases of the Spinal Cord ... ..	128	64	192	Furuncle ... ..	12	4	16
Paralysis without indicated cause ... ..	202	108	310	Acute Abscess ... ..	42	37	79
General Paralysis ... ..	97	13	110	Other Diseases of the Skin and Adnexa ... ..	33	31	64
Other Forms of Mental Alienation ... ..	36	40	76	Non-tuberculous Diseases of the Bones ... ..	34	15	49
Epilepsy ... ..	135	78	213	Other Diseases of the Joints (Tuberculosis & Rheumatism excepted) ... ..	13	4	17
Convulsions (non-puerperal) ...	7	15	22	Amputations ... ..	2	...	2
Convulsions of Children under five years of age ... ..	209	160	369	Other Diseases of the Organs of Locomotion ... ..	1	...	1
Chorea ... ..	1	9	10	Other Diseases peculiar to Infancy ... ..	324	284	608
Neuralgia and Neuritis ...	13	10	23	Want of Care (Infants) ...	4	7	11
Other Diseases of the Nervous System ... ..	124	97	221				
Diseases of the Eye ... ..	1	1	2				
Diseases of the Ear ... ..	30	21	51				
Pericarditis ... ..	48	25	73				
Acute Endocarditis ... ..	160	116	276				
Angina Pectoris ... ..	59	33	92				
Diseases of the Arteries, Atheroma, Aneurysm ... ..	359	120	479				
Embolism and Thrombosis ...	181	220	401				
Diseases of the Veins (Varices, Varicose Ulcers, Hæmorrhoids) ... ..	4	12	16				
				Total Deaths ... ..	4,794	3,447	8,241

GRAPHS SHEWING TOTAL ANNUAL BIRTHS IN THE COMMONWEALTH AND STATES OF AUSTRALIA, 1860-1913.



(See Table page 146.)

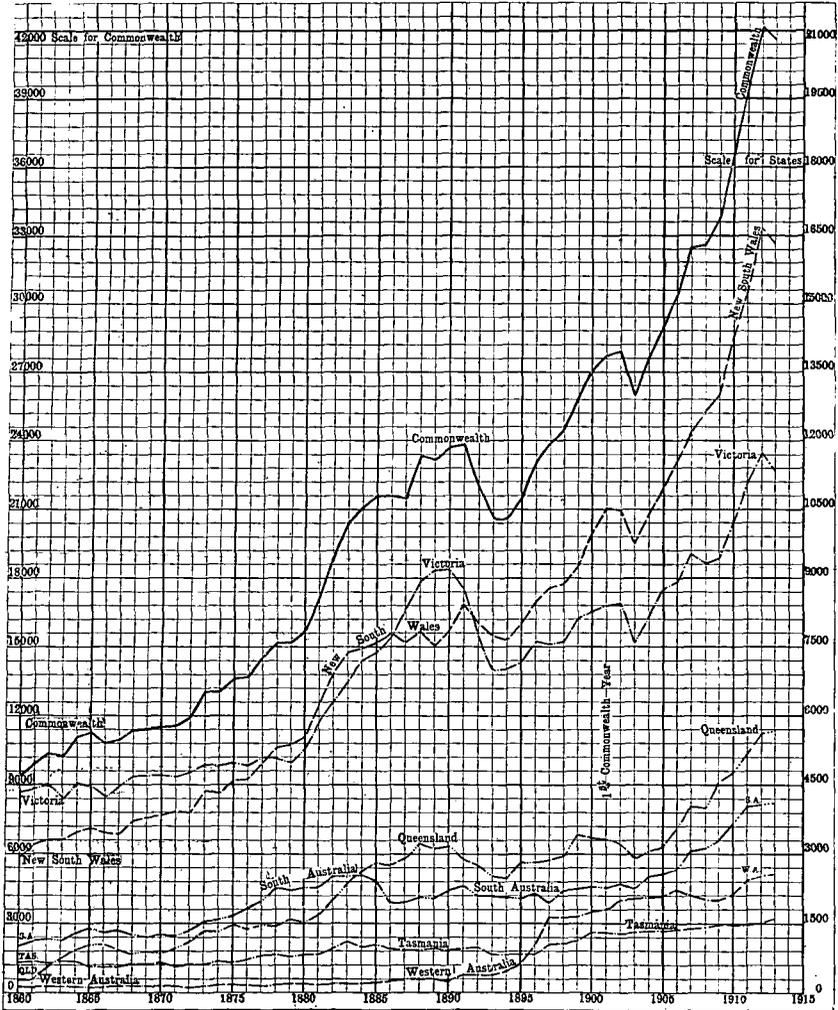
EXPLANATION OF GRAPHS.—The base of each small square represents an interval of one year for both Commonwealth and States, and the vertical height represents 2000 persons for the Commonwealth, and 1000 for the States.

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, 1860-1913.



(See Table page 159.)

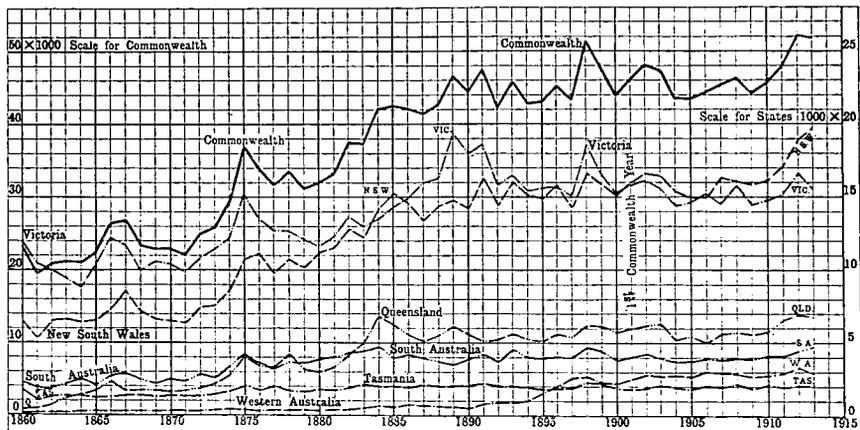
EXPLANATION OF GRAPHS.—The base of each small square represents an interval of one year for both Commonwealth and States, and the vertical height represents 600 marriages for the Commonwealth and 300 for the States.

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 201.

GRAPHS SHEWING TOTAL ANNUAL DEATHS IN THE COMMONWEALTH AND STATES OF AUSTRALIA, 1860-1913.



(See Table page 168.)

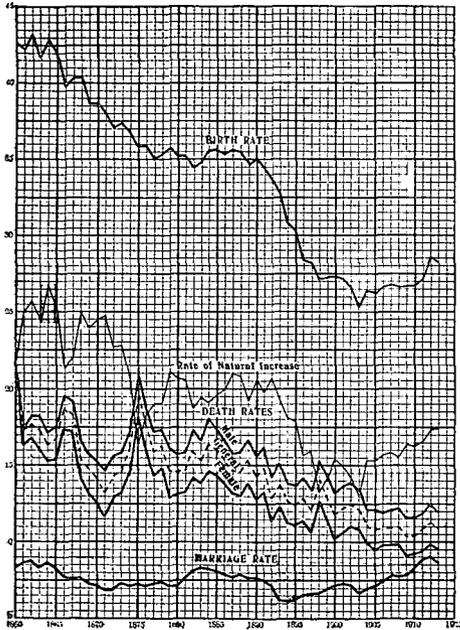
EXPLANATION OF GRAPHS.—The base of each small square represents an interval of one year for both Commonwealth and States, and the vertical height represents 2000 persons for the Commonwealth and 1000 for the States.

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 201.

GRAPHS SHEWING GENERAL BIRTH, NATURAL INCREASE, DEATH (MALE, GENERAL, AND FEMALE), AND MARRIAGE RATES IN THE COMMONWEALTH OF AUSTRALIA, 1860-1913.



(See pages 99, 146, 160, 168 and 218.)

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.

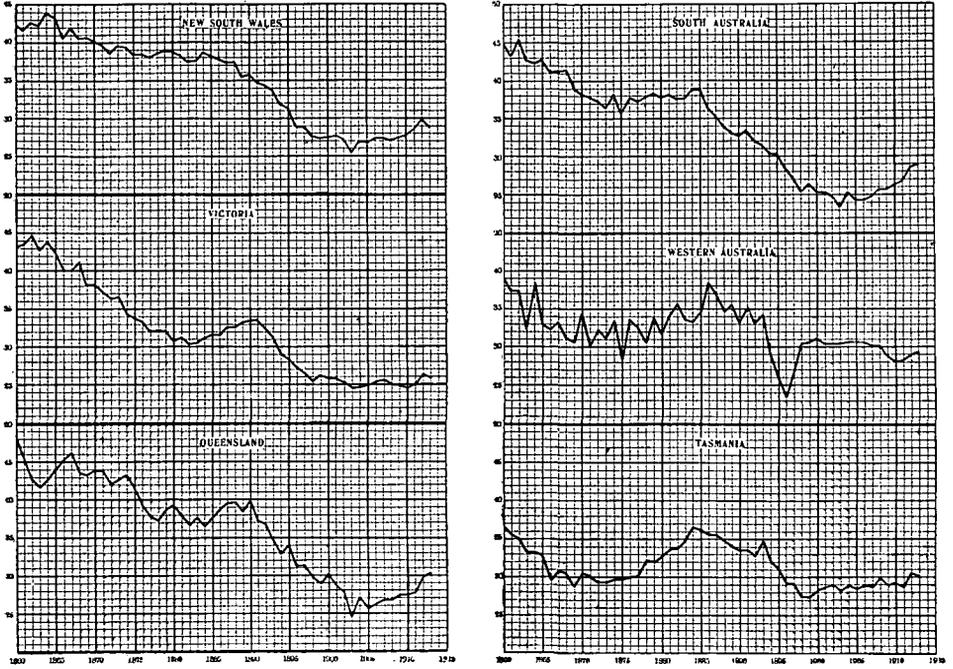
BIRTH RATE GRAPHS. (See nextpage.)

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.

DEATH RATE GRAPHS. (See nextpage.)

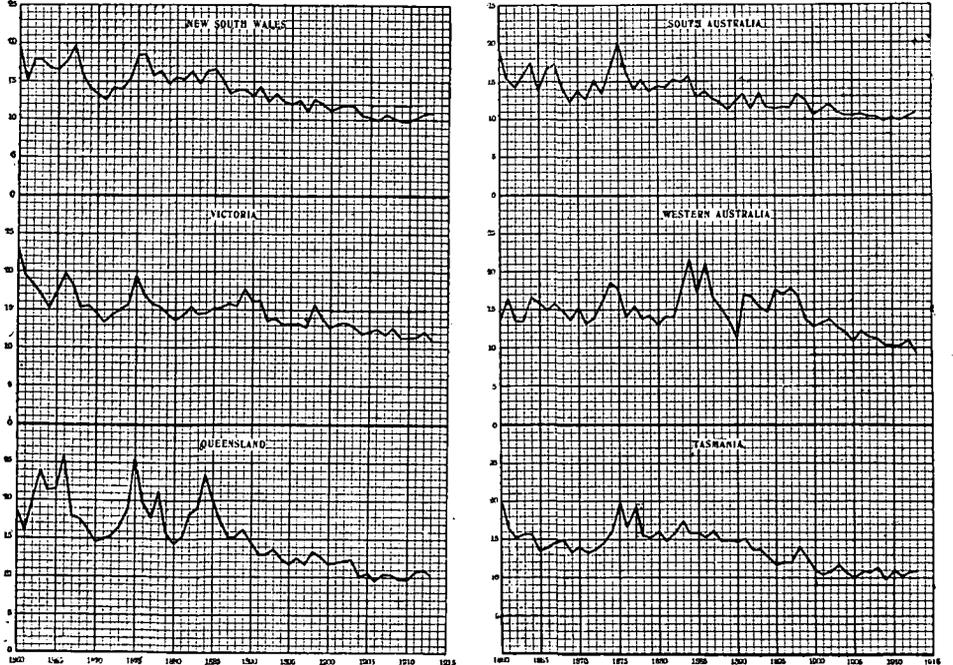
EXPLANATION OF GRAPHS.—The base of each small square represents one year's interval, and the vertical height one death per thousand of the population. The zero for each State is shewn by a thickened line.

GRAPHS SHEWING BIRTH RATES IN THE STATES OF NEW SOUTH WALES, VICTORIA, QUEENSLAND, SOUTH AUSTRALIA, WESTERN AUSTRALIA, AND TASMANIA, 1860-1913.



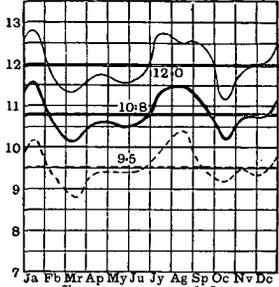
(See Table page 146.)

GRAPHS SHEWING DEATH RATES IN THE STATES OF NEW SOUTH WALES, VICTORIA, QUEENSLAND, SOUTH AUSTRALIA, WESTERN AUSTRALIA, AND TASMANIA, 1860-1913

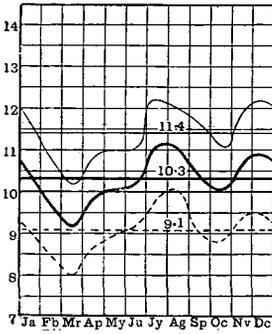


(See Table page 168.) For explanation of above graphs see page 204.

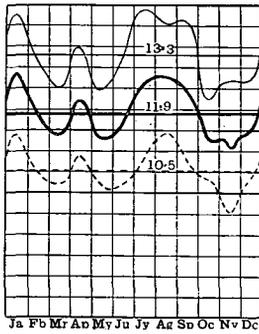
GRAPHS SHEWING GENERAL MONTHLY DEATH RATES, 1907-1912.



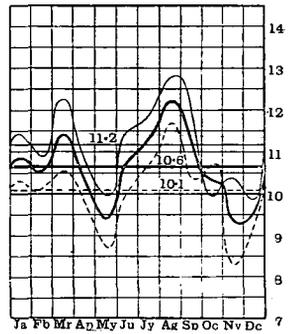
COMMONWEALTH.



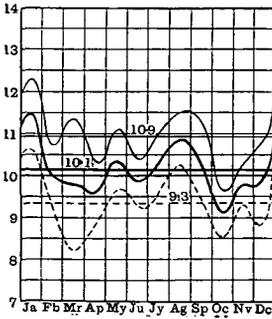
NEW SOUTH WALES.



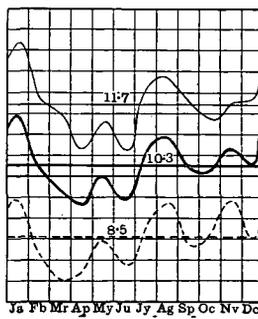
VICTORIA.



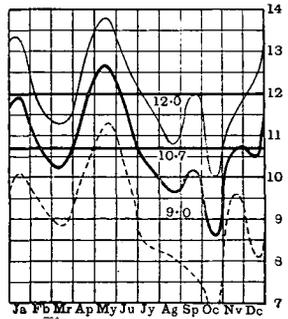
TASMANIA.



SOUTH AUSTRALIA.



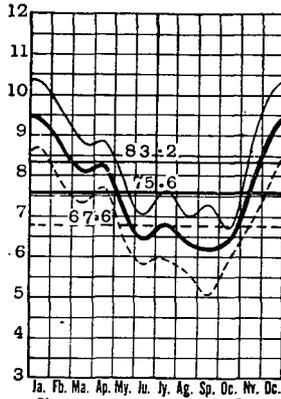
QUEENSLAND.



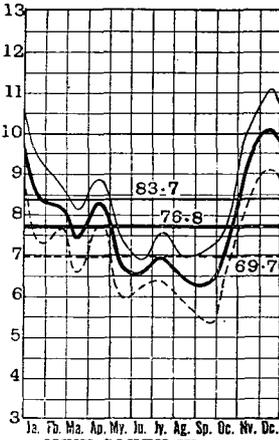
WESTERN AUSTRALIA

Male Death Rates shewn: \_\_\_\_\_  
 Female " " " \_\_\_\_\_  
 General " " " \_\_\_\_\_

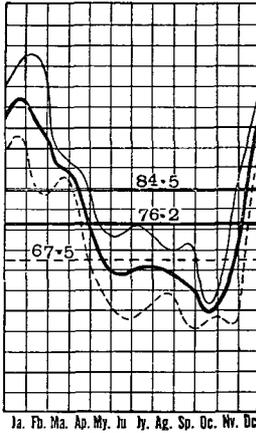
GRAPHS SHEWING INFANTILE MONTHLY DEATH RATES, 1907-1912.



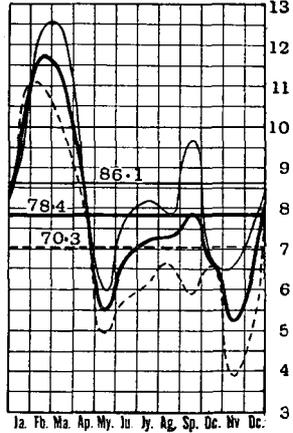
COMMONWEALTH.



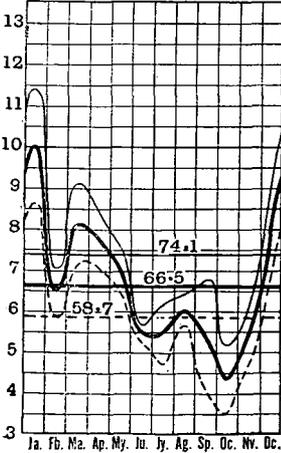
NEW SOUTH WALES.



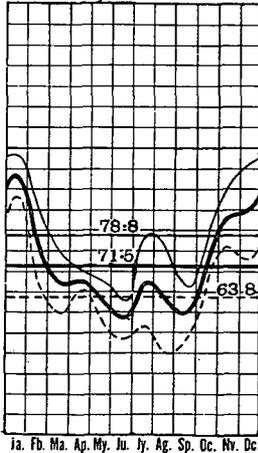
VICTORIA.



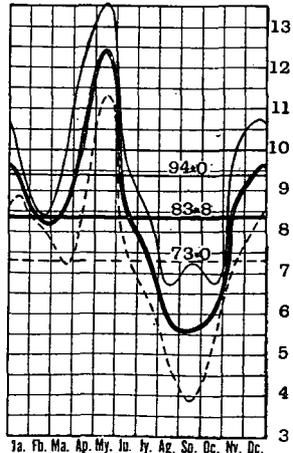
TASMANIA.



SOUTH AUSTRALIA.



QUEENSLAND.



WESTERN AUSTRALIA.

Male Death Rates shewn : \_\_\_\_\_  
 Female " " " " \_\_\_\_\_  
 General " " " " \_\_\_\_\_



(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 in 1910, 460 in 1911, 590 in 1912, and 614, viz., 407 males and 207 females in 1913. The detailed classification distinguishes these ill-defined diseases under three headings:—Ill-defined organic diseases, including such definitions as dropsy, 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 1913 the number of cases of death which would have to be classed under the first of these categories was 29; those belonging to the second, 19; and those belonging to the third, 566. 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.

19. **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, 1913.—COMMONWEALTH.**

Class.	Total Deaths.			Death Rate. (a)			Percentage on Total Deaths.		
	M.	F.	Total.	M.	F.	Total	M.	F.	Total.
1. General diseases ... ..	6,655	5,558	12,213	2.66	2.40	2.54	22.29	25.34	23.58
2. Diseases of the Nervous System & of the Organs of Special Sense...	2,706	2,073	4,779	1.08	0.90	0.99	9.06	9.45	9.23
3. Diseases of the Circulatory System	3,692	2,690	6,382	1.48	1.17	1.33	12.37	12.28	12.31
4. Diseases of the Respiratory System	3,126	2,040	5,166	1.25	0.89	1.08	10.47	9.30	9.98
5. Diseases of the Digestive Organs...	3,444	2,921	6,365	1.38	1.27	1.33	11.52	13.32	12.29
6. Diseases of the Genito-Urinary System and Adnexa ... ..	1,814	1,065	2,879	0.72	0.46	0.60	6.03	4.86	5.56
7. Puerperal Condition ... ..	...	663	663	...	0.29	0.14	...	3.02	1.28
8. Diseases of the Skin and of the Cellular Tissue... ..	152	134	286	0.06	0.06	0.06	0.51	0.61	0.55
9. Diseases of the Organs of Locomotion ... ..	50	19	69	0.02	0.01	0.01	0.17	0.09	0.13
10. Malformations ... ..	290	226	516	0.12	0.10	0.10	0.97	1.03	1.00
11. Infancy ... ..	2,202	1,724	3,926	0.88	0.75	0.82	7.38	7.86	7.58
12. Old Age ... ..	2,302	1,814	4,116	0.92	0.79	0.86	7.71	8.27	7.95
13. Violence ... ..	3,019	796	3,815	1.20	0.35	0.79	10.11	3.67	7.97
14. Ill-defined Diseases ... ..	407	207	614	0.16	0.09	0.13	1.36	0.94	1.19
Total ... ..	29,859	21,930	51,789	11.93	9.53	10.78	100.00	100.00	100.00

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

20. **Deaths of Children under 1 Year.**—“Bulletin No. 31; Commonwealth Demography” contains tables shewing the age at death of children dying during the first year of life from twenty-one causes. In the Bulletin mentioned the particulars are published for males and females separately for the States, Territories and Commonwealth, but the totals for the Commonwealth only are here shewn for both sexes combined:—

## DEATHS OF CHILDREN UNDER 1 YEAR, COMMONWEALTH, 1913.

Age at Death.	Whooping Cough.	Pulmonary Tuberculosis.	Acute Miliary Tuberculosis.	Tubercular Meningitis.	Abdominal Tuberculosis.	White Swellings.	Tuberculosis of other Organs.	Disseminated Tuberculosis.	Syphilis.	Meningitis.	Convulsions.	Acute Bronchitis.
Under 1 week ...	2	1	...	...	...	...	...	...	16	8	86	3
1 week and under 2 ...	...	...	...	...	...	...	...	...	7	10	35	17
2 weeks " 3 ...	6	...	...	...	...	...	...	...	7	2	20	17
3 " " 1 mth 16	...	...	...	...	1	...	...	...	10	1	14	18
1 month " 2 ...	74	...	...	...	...	...	...	...	29	13	23	48
2 months " 3 ...	47	...	1	1	3	...	...	...	10	8	15	33
3 " " 4 ...	44	2	...	5	3	...	...	1	10	22	13	20
4 " " 5 ...	38	...	...	1	6	...	...	...	9	22	7	8
5 " " 6 ...	14	3	1	3	4	...	1	...	4	27	11	11
6 " " 7 ...	19	1	...	3	1	...	...	...	9	29	9	10
7 " " 8 ...	17	1	1	4	...	1	...	1	4	20	9	12
8 " " 9 ...	25	2	...	4	1	...	...	...	3	27	7	9
9 " " 10 ...	19	...	...	12	2	...	...	1	1	20	12	7
10 " " 11 ...	24	1	...	3	2	...	...	1	2	22	8	7
11 " " 12 ...	20	2	...	4	...	...	...	...	3	28	11	7
Total under 1 year	365	13	3	40	23	1	1	4	124	259	280	227

Age at Death.	Broncho-Pneumonia.	Pneumonia.	Diarrhoea and Enteritis.	Hernia and Intestinal Obstruction.	Malformations.	Congenital Debility, Icterus and Sclerema.	Other Diseases peculiar to Early Infancy.	Lack of Care.	Other External Violence.	Other Causes.	Total.
Under 1 week ...	2	16	15	10	223	1,975	508	9	1	113	2,988
1 week & under 2	12	9	38	3	53	277	61	...	...	52	574
2 weeks " 3	10	7	59	1	16	198	20	...	...	49	412
3 " " 1 mth 15	8	53	2	19	128	5	...	...	1	38	329
1 month " 2	47	29	205	5	40	222	10	1	1	101	848
2 months " 3	43	25	240	2	21	128	4	...	...	56	637
3 " " 4	29	21	291	6	36	106	...	1	...	49	649
4 " " 5	22	16	285	8	20	72	...	...	...	41	555
5 " " 6	23	14	305	18	10	58	...	...	...	26	533
6 " " 7	21	22	244	12	10	46	...	...	...	57	493
7 " " 8	25	18	214	8	6	21	...	...	...	28	390
8 " " 9	11	19	193	6	7	24	...	...	1	41	380
9 " " 10	20	20	184	5	8	24	...	...	...	46	381
10 " " 11	22	13	149	3	2	17	...	...	...	43	319
11 " " 12	28	16	128	...	9	11	...	...	...	45	312
Total under 1 year	330	253	2,603	89	470	3,307	608	11	4	785	9,800

It will be seen that the maximum number of deaths from syphilis, convulsions, pneumonia, acute bronchitis, 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 broncho-pneumonia was most fatal during

the second month. Diarrhoea and enteritis carried off more children in the fourth 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.

21. **Age at Death of Married Males and Females, and Issue.**—"Bulletin No. 31; 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 1913. A short summary of the tables mentioned is given hereunder. Deaths of married males in 1913 numbered 13,019, and of married females, 11,985. The ages at death of the males ranged from 19 to 112 years, and those of the females, from 16 to 108 years. The total number of children in the families of the 13,019 males was 68,072, the maximum in one family being 27; and of the 11,985 females, 62,213, with a maximum of 21. 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, 1913.

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 ...	...	0.72	70 to 74 years ...	6.23	6.46
20 to 24 years ...	0.99	1.13	75 " 79 " ...	6.64	6.36
25 " 29 " ...	1.30	1.70	80 " 84 " ...	6.71	6.39
30 " 34 " ...	2.01	2.59	85 " 89 " ...	6.95	6.32
35 " 39 " ...	2.63	3.49	90 " 94 " ...	6.48	5.99
40 " 44 " ...	3.30	4.01	95 " 99 " ...	6.97	5.64
45 " 49 " ...	4.11	4.12	100 years and upwards	9.00	4.43
50 " 54 " ...	4.50	4.86	Age not stated ...	5.33	7.00
55 " 59 " ...	5.05	5.69			
60 " 64 " ...	5.55	5.84			
65 " 69 " ...	5.97	6.40	All ages ...	5.23	5.19

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 306, or, roughly speaking, as ten to three. The totals are shewn in the following table:—

**ISSUE OF MARRIED MALES AND FEMALES.**

COMMONWEALTH, 1913.

Issue of Married Males.	Males.	Females.	Total.	Issue of Married Females.	Males.	Females.	Total.
Living ...	27,040	26,337	53,377	Living ...	23,486	22,956	46,442
Dead ...	7,839	6,856	14,695	Dead ...	8,394	7,377	15,771
Total ...	34,879	33,193	68,072	Total ...	31,880	30,333	62,213

These figures show a masculinity in the births of 105.09, which agrees fairly well with the experience of the birth statistics, the masculinity of the births in the Commonwealth from 1903 to 1913 having ranged from 104.54 to 106.38.

**22. Age at Marriage of Males and Females, and Issue.**—While the table giving the average families of married males and females naturally shows an increase in the averages with advancing ages at death, the following table, which gives the average families of males and females according to the age at marriage of the deceased parents, shows a corresponding decrease in the averages as the age at marriage advances:—

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

COMMONWEALTH, 1913.

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 ...	6.50	7.01	55 to 59 years ...	1.21	...
20 to 24 years ...	6.26	5.62	60 " 64 " ...	0.58	...
25 " 29 " ...	5.43	4.23	65 years and upwards ...	0.11	...
30 " 34 " ...	4.77	2.83	Age not stated ...	5.07	4.95
35 " 39 " ...	3.96	1.57			
40 " 44 " ...	3.21	0.37			
45 " 49 " ...	2.05	0.09			
50 " 54 " ...	1.92	...	All ages ...	5.23	5.19

It will be seen that of women who were married at ages from 40 to 44 years, one in every three 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 eleven.

**23. 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. 31 of Commonwealth Demography," pages 186 to 191.

**24. Birthplaces of Married Males and Females, and Issue.**—The following table shows the birthplaces of married males and females whose deaths were registered in 1913, 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. The average family of all deceased males who were natives of the Commonwealth was 4.56, and that of deceased females who were natives of the Commonwealth, 4.48.

**BIRTHPLACES AT MARRIAGE OF MALES AND FEMALES, AND AVERAGE ISSUE.  
COMMONWEALTH, 1913.**

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 ...	1,927	5.04	2,084	4.94	Japan ...	3	2.67	...	...
Victoria ...	1,580	3.96	1,527	3.94	Java ...	1	...	...	...
Queensland ...	268	3.77	322	3.58	Philippine Islands ...	2	2.50	1	1.00
South Australia ...	552	4.47	603	4.31	Syria ...	10	5.50	5	6.00
Western Australia ...	52	4.27	79	4.53	Other Asiatic Countries ...	2	4.00	1	10.00
Tasmania ...	432	5.32	446	5.06	Cape of Good Hope ...	2	3.50	2	0.50
New Zealand... ..	67	4.0	68	2.79	Mauritius ...	6	5.00	5	4.00
England ...	4,067	5.0	3,088	5.65	South Africa (so descd.)	7	3.86	6	5.50
Wales ...	119	.33	55	4.98	Other African British Possessions ...	1	4.00	5	4.40
Scotland ...	1,081	.63	926	5.91	Other African Countries	1	13.00	...	...
Ireland ...	1,773	5.87	2,241	5.84	Canada ...	40	5.28	7	7.29
Isle of Man ...	8	6.50	2	4.00	Jamaica ...	8	5.88	...	...
Other European British Possessions ...	20	3.95	13	6.38	Newfoundland ...	4	4.75	1	9.00
Austria-Hungary ...	16	4.44	...	...	Other American British Possessions ...	...	2.00	2	4.50
Belgium ...	3	5.33	...	...	Argentina ...	1	7.00	...	...
Denmark ...	47	4.89	25	6.64	Brazil ...	...	...	1	15.00
France ...	35	5.86	20	4.05	Chile ...	1	5.00	...	...
Germany ...	390	6.05	251	6.27	United States ...	56	4.38	26	3.77
Greece ...	10	2.00	4	2.50	Other American Countries ...	24	6.13	7	6.43
Italy ...	37	3.03	11	4.36	Fiji ...	...	...	1	1.00
Netherlands ...	14	3.21	2	3.00	New Caledonia ...	1	1.00	...	...
Norway ...	29	4.52	7	3.71	Samoa ...	1	3.00	...	1.00
Portugal ...	6	6.33	...	...	Other Polynesian Islands ...	1	1.00	...	...
Russia ...	39	5.10	19	4.53	S. Sea Islands (so descd.)	8	3.63	...	...
Spain ...	5	7.00	3	2.33	At Sea... ..	41	5.63	35	6.34
Sweden ...	43	3.95	4	4.00	Not stated ...	49	3.86	49	3.79
Switzerland ...	19	5.26	7	5.29					
Other Europ. Countries	4	2.75	1	2.00					
British India ...	36	5.11	26	5.70					
Ceylon ...	5	4.60	1	4.00					
China ...	63	2.29	2	7.00					
					Total ...	13,019	5.23	11,985	5.19

25.—Occupations of Married Males, and Issue.—A final tabulation shews 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, 1913.**

Occupations.	Deaths of Married Males.	Average Family.
Professional class ...	749	4.48
Domestic class ...	510	3.81
Mercantile class... ..	1,565	4.44
Engaged in transport and communication	1,078	4.66
Manufacturing class ...	1,442	5.09
Engaged in building and construction	841	5.30
Indefinite industrial workers	2,089	5.07
Agricultural class ...	2,158	6.47
Pastoral class ...	529	6.16
Working in mines and quarries	986	5.33
Other primary producers	89	4.82
Independent means	607	5.92
Dependents ...	78	3.94
Occupation not stated	298	5.40
Total ...	13,019	5.23

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 201 and 202), shewing these fluctuations from 1860 to 1913, 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 shows a falling off in marriages after 1891 (see page 202), it shows 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 shows 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 1913,  
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	108,688		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	27,682	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
1912	133,088	162,477	52,177	66,468	42,147	35,487
1913	135,714	168,032	51,789	68,740	41,594	36,700

**2. Graphs of Annual Births, Commonwealth and States** (page 201).—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 prior to 1909 and subsequent years 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 1913.

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 ...	1913	1891	1913	1913	1913	1913	1913

3. **Graphs of Annual Marriages, Commonwealth and States** (page 202).—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 1912 was greater than in any preceding year, while a slight decline is shewn in 1913.

4. **Graphs of Annual Deaths, Commonwealth and States** (page 203).—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 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 204).—(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 1913.

(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 28.25 per 1000 in 1913. 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 28.25 in 1913. 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 but small 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 10.78 in 1913. 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 rates 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 1913, the final year of the period, viz., 8.66, 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 205 and 206).—These graphs furnish for the several States information similar to that supplied in the graph on page 204 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 1885 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), 36.63. 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 207 and 208).—These graphs furnish for the several States similar information to that given for the Commonwealth as a whole in the diagram on page 204, 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 (1913), 11.11 ; Queensland (1906), 9.50 ; South Australia (1909), 9.74 ; Western Australia (1913), 9.34 ; and Tasmania (1909), 9.68.

8. **Graphs shewing Variations in Annual Death Rates from Month to Month.**—The graphs on pages 209 and 210 shew for the Commonwealth as a whole and for each of the six States the annual death rates for males, females, and persons calculated for equalised months, and the infantile death rate, calculated in the same way, and also distinguishing males, females, and persons. Further particulars in regard to these graphs will be found on pages 180 and 181.