

SECTION IV.

POPULATION.

[In order to permit of the incorporation of the latest available details in regard to the Census of 1921, this Section has been transferred to the end of the present issue of the Official Year Book, and appears after Section XXXIV. It will, however, be placed in its usual order in succeeding issues.]

SECTION V.

VITAL STATISTICS.

NOTE.—The rates quoted throughout this Section for the years 1914 to 1920 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, 1914 to 1920.—The total number of male and female births registered in the Commonwealth during the years 1914 to 1920 is shewn in the two tables hereunder :—

TOTAL MALE BIRTHS, COMMONWEALTH, 1914 TO 1920.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Federal Territory.	Common- wealth.
1914 ..	27,452	18,545	10,120	6,668	4,663	3,094	31	31	70,604
1915 ..	27,085	17,820	10,444	6,076	4,578	2,991	33	22	69,049
1916 ..	26,615	17,623	9,673	6,200	4,439	2,873	44	38	67,505
1917 ..	27,002	17,220	10,058	5,762	4,058	2,720	42	21	66,883
1918 ..	26,002	16,172	10,080	5,787	3,615	2,717	59	26	64,458
1919 ..	24,924	16,225	9,746	5,776	3,477	2,718	55	10	62,931
1920 ..	27,691	18,647	10,537	6,178	4,256	2,908	31	8	70,256

TOTAL FEMALE BIRTHS, COMMONWEALTH, 1914 TO 1920.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Federal Territory.	Common- wealth.
1914 ..	26,189	17,677	9,762	6,236	4,541	2,923	27	24	67,379
1915 ..	25,846	17,189	9,719	5,722	4,439	2,854	28	25	65,822
1916 ..	25,465	16,612	9,239	5,657	4,124	2,769	30	25	63,921
1917 ..	25,446	15,813	9,729	5,564	3,824	2,656	27	23	63,082
1918 ..	24,707	15,425	9,456	5,570	3,491	2,563	46	23	61,281
1919 ..	23,608	15,394	8,953	5,284	3,460	2,592	51	17	59,359
1920 ..	26,251	17,566	9,719	5,850	3,893	2,832	32	7	66,150

2. Total Births, 1914 to 1920.—The total number of births for the Commonwealth in 1914 was the greatest number ever recorded, but the figures for the five years 1915 to 1919 shewed a falling off as compared with those for 1914. There was a recovery in 1920 when the total reached 136,406, which was the second greatest number of births registered in one year.

TOTAL BIRTHS, COMMONWEALTH, 1914 TO 1920.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Federal Terr.	C'wealth.
1914 ..	53,641	36,222	19,882	12,904	9,204	6,017	58	55	137,983
1915 ..	52,931	35,009	20,163	11,798	9,017	5,845	61	47	134,871
1916 ..	52,080	34,235	18,912	11,857	8,563	5,642	74	63	131,426
1917 ..	52,448	33,033	19,787	11,326	7,882	5,376	69	44	129,965
1918 ..	50,709	31,597	19,536	11,357	7,106	5,280	105	49	125,739
1919 ..	48,532	31,619	18,699	11,060	6,937	5,310	106	27	122,290
1920 ..	53,942	36,213	20,256	12,028	8,149	5,740	63	15	136,406

3. *Birth Rates, 1914 to 1920.*—(i) *Crude Birth Rate.* The most notable feature of the table shewing the crude birth rate is the continual fall from 1914 to 1919. This feature, which is doubtless due to the war, is exhibited in all the States. Though an increase took place in 1920, the birth rate is still very much below that of pre-war years. The rates in the Territories shew considerable fluctuation, but the numbers are too small to allow of any deductions therefrom.

CRUDE BIRTH RATE (a), COMMONWEALTH, 1914 TO 1920.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	North. Terr.	Federal Territory.	C'wlth.
1914 ..	28.96	25.45	29.46	29.33	28.45	30.33	15.46	20.79	28.05
1915 ..	28.33	24.55	29.35	26.84	27.97	29.32	13.85	19.05	27.25
1916 ..	27.89	24.29	27.91	27.39	27.21	28.47	15.26	24.11	26.78
1917 ..	28.06	23.50	29.09	26.21	25.54	27.03	13.92	17.65	26.51
1918 ..	26.53	22.29	28.37	25.80	22.84	25.91	21.03	20.19	25.25
1919 ..	24.68	21.56	26.23	24.27	21.44	25.12	22.05	11.68	23.78
1920 ..	26.59	24.07	27.58	25.45	24.40	26.37	14.37	6.90	25.74
Density (b) (No. per square mile) ..	6.62	17.29	1.10	1.25	0.34	8.41	0.008	2.10	1.80

(a) Number of births per 1,000 of the mean annual population. (b) On 31st December, 1919.

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, however, 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 1,000 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 1,000 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 shews that the Australian States occupy a rather 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." It will be noticed that, owing to the difficulty of procuring statistics in regard to the belligerent countries in the late war, many of the rates quoted for continental countries are for rather remote years. Consequently it is not suggested that the comparison instituted in the attached table is exact. This does not however affect the general proposition that Australia takes a low position amongst the countries of the world, both as regards crude birth rate and crude death rate.

CRUDE BIRTH RATE (a) OF VARIOUS COUNTRIES.

Country.	Year.	Rate.	Country.	Year.	Rate.
Russia, European ..	1909	44.0	Australia ..	1920	25.7
Rumania ..	1914	42.5	South Australia ..	1920	25.5
Bulgaria ..	1911	40.2	United Kingdom ..	1920	25.4
Serbia ..	1912	38.0	England and Wales	1920	25.4
Chile ..	1914	37.0	United States (b) ..	1918	24.4
Hungary ..	1912	36.3	Norway ..	1918	24.4
Quebec (Canada) ..	1917	35.7	Western Australia ..	1920	24.4
Ceylon ..	1919	34.2	Finland ..	1917	24.3
Jamaica ..	1917	34.1	Netherlands ..	1919	24.2
Japan ..	1916	32.9	Victoria ..	1920	24.1
Austria ..	1912	31.3	Denmark ..	1919	22.7
Union of South Africa			Ireland ..	1920	22.7
(whites) ..	1918	28.6	Belgium ..	1912	22.6
Spain ..	1919	28.3	Ontario (Canada) ..	1919	22.1
Prussia ..	1913	28.2	New Zealand ..	1919	21.5
Scotland ..	1920	28.1	Sweden ..	1918	20.3
Queensland ..	1920	27.6	Italy ..	1917	19.0
Germany ..	1913	27.5	France ..	1913	19.0
New South Wales ..	1920	26.6	Switzerland ..	1918	18.4
Tasmania ..	1920	26.4			

(a) Number of births per 1,000 of the mean population. (b) Figures for "provisional birth-registration area," which includes about 53 per cent. of the population.

The wide discrepancies among the crude birth rates of the various countries are, to some extent, due to differences in sex and age constitution and in conjugal condition. If the birth rates be calculated per 1,000 women of child-bearing ages, the comparison shews very different results. The report for 1908 of the Registrar-General for England and Wales contains a table shewing the nuptial births per 1,000 married women of ages 15 to 45 in a number of countries, and the information here given in regard to the period 1900-1902, is taken therefrom.

NUPTIAL BIRTHS PER 1,000 MARRIED WOMEN, AGED 15-45 YEARS, 1900-1902.

Country.	Rate.	Country.	Rate.
Netherlands ..	314.6	Switzerland ..	265.9
Norway ..	302.8	Denmark ..	259.1
Prussia ..	290.4	Spain ..	258.7
Ireland ..	289.4	Belgium ..	250.7
Germany ..	284.2	New Zealand ..	243.2
Austria ..	283.7	Australia ..	235.8
Scotland ..	271.8	England and Wales	235.5
Italy ..	269.4	France ..	157.5
Sweden ..	269.0		

5. **Masculinity at Birth.**—The masculinity of births, i.e., the excess of males over females per 100 births, registered during the last seven 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 0.25 in Western Australia in 1919 to 4.58 in South Australia in 1916. The following table, which gives the values for the States and Commonwealth for 1914 to 1920, shews that for the Commonwealth there was a steady increase of masculinity from 1914 to 1917, with a sharp fall in 1918, and a recovery in 1919 and 1920.

MASCULINITY (a) OF BIRTHS REGISTERED, COMMONWEALTH, 1914 TO 1920.

Year.	N.S.W.	Vict.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Territory.	C'wealth.
1914 ..	2.35	2.40	1.80	3.35	1.33	2.84	6.90	12.73	2.34
1915 ..	2.34	1.80	3.60	3.00	1.54	2.34	8.20	—6.38	2.39
1916 ..	2.21	2.95	2.29	4.58	3.68	1.84	18.92	20.63	2.73
1917 ..	2.97	4.26	1.66	1.75	2.97	1.19	21.74	—4.55	2.92
1918 ..	2.55	2.36	3.19	1.91	1.75	2.92	12.38	6.12	2.53
1919 ..	2.71	2.63	4.24	4.45	0.25	2.37	3.77	—25.93	2.92
1920 ..	2.67	2.99	4.04	2.73	4.45	1.32	—1.59	6.67	3.01

(a) Excess of males over females per 100 total births.

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 in various countries ranged from 3.98 to 1.77, and from 3.80 to 0.79 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	3.98	3.80	Germany	2.53	2.29
Rumania	3.71	1.67	Finland	2.44	2.53
Portugal	3.61	3.10	Hungary	2.44	1.43
Austria	2.82	2.68	Sweden	2.44	2.10
Italy	2.82	2.15	Denmark	2.34	2.44
Norway	2.82	2.87	Serbia	2.30	1.72
Ireland	2.68	2.34	France	2.25	1.43
Netherlands ..	2.68	2.29	Belgium	2.20	1.08
Scotland	2.68	2.87	Switzerland ..	2.20	0.79
Russia, European ..	2.63	2.20	England	1.77	2.15

(a) Excess of males over females per 100 total births.

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

MASCULINITY (a) OF EX-NUPTIAL BIRTHS REGISTERED, COMMONWEALTH, 1914 TO 1920.

Year	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Territory.	C'with.
1914 ..	4.44	3.92	2.26	5.20	3.61	0.85	14.29	..	3.73
1915 ..	-0.72	1.09	-0.37	0.85	0.26	0.32	-17.65	..	0.00
1916 ..	1.67	4.71	6.83	5.68	0.31	-5.26	-6.67	33.33	3.22
1917 ..	2.21	3.61	3.43	0.00	-7.65	5.63	25.00	-100.00	2.34
1918 ..	1.33	-1.68	5.07	-6.14	-5.59	-0.36	14.29	..	0.24
1919 ..	4.93	0.22	8.91	4.84	-2.74	7.98	0.00	-100.00	4.03
1920 ..	3.87	8.20	11.52	-2.22	5.36	-3.63	-6.67	..	5.60

(a) Excess of males over females per 100 total births.

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 in the period under review, this has not been the case in regard to ex-nuptial births, since in Tasmania, South Australia and Western Australia a large negative masculinity has been experienced. 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 and Federal Territory are not taken into consideration.

6. **Ex-nuptiality of Births.**—The number of ex-nuptial births reached its maximum in 1913. From that year there was a sharp fall till 1916, with a subsequent slight recovery.

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, 1914 TO 1920.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Territory.	C'wealth.
1914 ..	2,836	2,015	1,148	500	388	355	21	..	7,263
1915 ..	2,633	2,012	1,082	472	383	311	17	..	6,910
1916 ..	2,461	1,763	966	458	321	285	15	3	6,272
1917 ..	2,485	1,826	992	448	327	284	16	1	6,379
1918 ..	2,625	1,849	1,066	456	286	279	21	..	6,582
1919 ..	2,495	1,826	1,078	433	292	326	26	1	6,477
1920 ..	2,582	1,902	1,033	450	317	303	15	..	6,602

(i) *Rate of Ex-nuptiality, 1914 to 1920.* The rate of ex-nuptiality, i.e., the percentage on ex-nuptial to total births, has been fairly stationary during the last seven years on the whole, although 1916, 1917, and 1920 shewed a decline.

**PERCENTAGE OF EX-NUPTIAL ON TOTAL BIRTHS, COMMONWEALTH,
1914 TO 1920.**

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Territory.	C'wealth.
	%	%	%	%	%	%	%	%	%
1914 ..	5.29	5.56	5.77	3.87	4.22	5.90	36.21	..	5.26
1915 ..	4.97	5.74	5.36	4.00	4.24	5.32	27.87	..	5.12
1916 ..	4.73	5.15	5.11	3.80	3.75	5.05	20.27	4.76	4.77
1917 ..	4.74	5.53	5.01	3.96	4.15	5.28	23.19	2.27	4.91
1918 ..	5.18	5.85	5.46	4.02	4.02	5.28	20.00	..	5.23
1919 ..	5.14	5.77	5.76	3.92	4.21	6.14	24.53	3.70	5.30
1920 ..	4.79	5.25	5.10	3.74	3.89	5.28	23.81	..	4.84

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 1,000 unmarried women of ages 15 to 45 has been found to be as follows:—Years 1880–82, 14.49; years 1890–92, 15.93; years 1900–02, 13.30; years 1910–12, 12.53. Corresponding figures for the countries the nuptial birth rates of which were shewn in a preceding paragraph are here given for the sake of comparison:—

**EX-NUPTIAL BIRTHS PER 1,000 UNMARRIED WOMEN AGED 15-45 YEARS,
1900 TO 1902.**

Country.	Rate.	Country.	Rate.
Austria	40.1	Spain	15.5
Germany	27.4	Scotland	13.4
Sweden	24.3	Australia	13.3
Denmark	24.2	Switzerland	9.8
Prussia	23.7	New Zealand	8.9
Italy	19.4	England and Wales	8.5
France	19.1	Netherlands	6.8
Belgium	17.8	Ireland	3.8
Norway	17.2		

(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, which shews that this is not the case:—

**CRUDE EX-NUPTIAL, NUPTIAL, AND TOTAL BIRTH RATES (a),
COMMONWEALTH, 1914 TO 1920.**

Rates.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
Ex-nuptial ..	1.48	1.40	1.28	1.30	1.32	1.26	1.24
Nuptial ..	26.57	25.85	25.50	25.21	23.93	22.52	24.50
Total ..	28.05	27.25	26.78	26.51	25.25	23.78	25.74

(a) Number of births per 1,000 of mean population.

7. **Multiple Births.**—Among the total number of 136,406 births registered in the Commonwealth in 1920 there were 133,354 single births, 3,005 twins, and 47 triplets. The number of cases of twins was 1,505, there being 5 stillbirths, and the

number of cases of triplets 16. The total number of mothers was, therefore (1 still-birth), 134,875, the proportion of mothers of twins being one in every 90, and of mothers of triplets one in every 8,430 of total mothers. The proportion of multiple births is a fairly constant one. In 1914 they numbered 1,401, or one in 97; in 1915, 1,417, or one in 94; in 1916, 1,383, or one in 95; in 1917, 1,477, or one in 86; in 1918, 1,370, or one in 91; in 1919, 1,327, or one in 91; and in 1920, 1521, or 1 in 89. The number of cases of triplets is so small that a slight alteration in the total will completely change the proportion. Thus, they were one in 12,415 in 1914; one in 13,444 in 1915; one in 10,952 in 1916; one in 7,558 in 1917; one in 15,545 in 1918; one in 8,064 in 1919; and one in 8,430 in 1920. A case of quadruplets occurred in 1917, and another in 1919.

8. Ages of Parents.—The relative ages of the parents of children registered in 1920 have been tabulated separately for male and female births, 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. 38; Commonwealth Demography, 1920 and previous years." In the present work the exigencies of space allow only the insertion of corresponding tables shewing the relative ages of parents in groups of five years. It will be seen from the tables that the largest number of single births occurred where the ages of both father and mother were between 25 and 29. The largest number of mothers was also found at ages 25 to 29.

AGES OF PARENTS IN CASES OF SINGLE BIRTHS, COMMONWEALTH, 1920.

Ages of Fathers and Sexes of Children.		Total Children.	Ages of Mothers.								
			Under 15.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 and upwards.	Un-specified
Under 20	Males ..	258	1	171	79	7	..	..	..	..	..
	Females ..	234	1	150	79	2	1	1	..	..	..
20 to 24	Total ..	492	2	321	158	9	1	1	..	..	..
	Males ..	6,276	..	1,102	4,168	910	77	15	..	..	4
25 to 29	Females ..	6,007	..	1,125	3,911	862	96	10	3	..	..
	Total ..	12,283	..	2,227	8,079	1,772	173	25	3	..	4
30 to 34	Males ..	16,940	..	627	6,494	8,180	1,479	197	11	..	2
	Females ..	15,777	..	565	6,018	7,564	1,444	174	9	1	2
35 to 39	Total ..	32,717	..	1,192	12,512	15,694	2,923	371	20	1	4
	Males ..	17,498	..	157	2,681	7,238	6,273	1,043	103	..	3
40 to 44	Females ..	16,271	..	165	2,428	6,582	6,024	990	79	2	1
	Total ..	33,769	..	322	5,109	13,820	12,297	2,033	182	2	4
45 to 49	Males ..	12,163	..	59	757	2,772	4,717	3,472	377	9	..
	Females ..	11,670	..	44	768	2,626	4,381	3,446	393	9	3
50 to 54	Total ..	23,833	..	103	1,525	5,398	9,098	6,918	770	18	3
	Males ..	6,863	..	16	238	772	1,917	2,620	1,264	35	1
55 to 59	Females ..	6,681	..	11	195	802	1,898	2,553	1,187	35	..
	Total ..	13,544	..	27	433	1,574	3,815	5,173	2,451	70	1
60 to 64	Males ..	3,438	..	5	74	283	677	1,308	968	122	1
	Females ..	3,170	..	7	81	241	623	1,171	909	133	..
65 and upwards	Total ..	6,608	..	12	155	524	1,305	2,479	1,877	255	1
	Males ..	1,247	..	2	21	91	220	392	428	92	1
Not stated	Females ..	1,225	..	4	18	88	233	410	389	83	..
	Total ..	2,472	..	6	39	179	453	802	817	175	1
Nuptial children	Males ..	416	..	..	9	24	63	173	107	40	..
	Females ..	398	..	1	5	26	56	135	130	45	..
Ex-nuptial children	Total ..	814	..	1	14	50	119	308	237	85	..
	Males ..	106	..	..	5	5	20	38	34	4	..
Total children	Females ..	115	..	2	3	8	27	29	39	7	..
	Total ..	221	..	2	8	13	47	67	73	11	..
Total children	Males ..	44	..	..	2	8	11	13	9	1	..
	Females ..	51	..	..	1	3	12	17	12	6	..
Total children	Total ..	95	..	..	3	11	23	30	21	7	..
	Males ..	8	..	..	4	..	3	..	1	..	..
Total children	Females ..	6	..	..	2	..	1	..	1	..	2
	Total ..	14	..	..	6	..	4	..	2	..	2
Total children	Males ..	65,257	1	2,139	14,532	20,240	15,457	9,271	3,302	303	12
	Females ..	61,605	1	2,074	13,509	18,804	14,801	8,936	3,151	321	8
Total children	Total ..	126,862	2	4,213	28,041	39,044	30,258	18,207	6,453	624	20
	Males ..	3,426	18	824	1,278	648	361	227	61	4	5
Total children	Females ..	3,066	11	735	1,192	569	293	197	64	4	1
	Total ..	6,492	29	1,559	2,470	1,217	654	424	125	8	6
Total children	Males ..	68,683	19	2,963	15,810	20,888	15,818	9,498	3,363	307	17
	Females ..	64,671	12	2,809	14,701	19,373	15,094	9,133	3,215	325	9
	Total ..	133,354	31	5,772	30,511	40,261	30,912	18,631	6,578	632	26

AGES OF PARENTS OF TWINS, COMMONWEALTH, 1920.

Ages of Fathers and Sexes of Children.			Total Children.	Ages of Mothers.						
				Under 20.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 and upwards.
Under 20	Females	..	4	4	..	..	..	..	..	..
	Total	..	4	4	..	..	..	..	..	..
20 to 24	Males	..	106	17	65	20	4	..	..	..
	Total	..	88	11	63	12	2	..	..	..
25 to 29	Females	..	194	28	128	32	6	..	..	..
	Total	..	297	4	81	165	39	7	1	..
30 to 34	Males	..	330	4	91	192	37	5	1	..
	Total	..	627	8	172	357	76	12	2	..
35 to 39	Females	..	452	..	41	181	182	41	7	..
	Total	..	359	..	39	148	144	25	3	..
40 to 44	Males	..	811	..	80	329	326	66	10	..
	Total	..	308	..	12	72	108	106	10	..
45 to 49	Females	..	309	2	14	75	84	124	10	..
	Total	..	617	2	26	147	192	230	20	..
50 to 54	Males	..	194	..	2	18	52	87	35	..
	Total	..	184	..	..	10	48	93	33	..
55 to 59	Females	..	378	..	2	28	100	180	68	..
	Total	..	80	..	..	2	11	43	23	..
60 and over	Males	..	98	..	..	8	11	45	31	3
	Total	..	178	..	..	10	22	88	54	4
Nuptial children	Males	..	31	..	..	5	2	12	12	..
	Total	..	29	..	..	3	2	14	10	..
Ex-nuptial children	Females	..	60	..	..	8	4	26	22	..
	Total	..	15	..	..	..	7	5	2	1
Total children	Males	..	9	..	..	..	1	3	4	1
	Total	..	24	..	..	2	8	8	6	2
Total children	Males	..	2	..	..	..	..	..	..	..
	Total	..	2	..	..	2	..	..	..	..
Total children	Males	..	1,485	21	201	465	405	301	90	2
	Total	..	1,410	21	207	448	329	309	92	4
Total children	Males	..	2,895	42	408	913	734	610	182	6
	Total	..	60	3	20	15	18	2	2	..
Total children	Males	..	50	7	10	19	12	2	..	..
	Total	..	110	10	30	34	30	4	2	..
Total children	Males	..	1,545	24	221	480	423	303	92	2
	Total	..	1,460	28	217	467	341	311	92	4
Total children	Males	..	3,005	52	438	947	764	614	184	6
	Total	..	..	..	..	..	..	..	..	..

AGES OF PARENTS OF TRIPLETS, COMMONWEALTH, 1920.

Ages of Fathers and Sexes of Children.			Total Children.	Ages of Mothers.				
				Under 20.	20 to 24.	25 to 29.	30 to 34.	35 to 39.
20 to 24	Males	..	4	2	2	..	..	..
	Total	..	1	..	1	..	..	..
25 to 29	Females	..	5	2	3	..	..	..
	Total	..	3	..	..	..	3	..
30 to 34	Males	..	..	..	..	..	..	..
	Total	..	3	..	..	2	3	..
35 to 39	Females	..	10	..	..	..	8	..
	Total	..	5	..	..	1	4	..
40 to 44	Males	..	15	..	..	3	12	..
	Total	..	4	..	..	..	2	2
45 to 49	Females	..	11	..	..	3	4	4
	Total	..	15	..	..	3	6	6
50 to 54	Males	..	5	..	..	3	..	2
	Total	..	1	..	..	..	..	1
55 to 59	Females	..	6	..	..	3	..	3
	Total	..	2	..	..	..	2	..
60 and over	Males	..	1	..	..	..	1	..
	Total	..	3	..	..	..	3	..
Nuptial children	Males	..	28	2	2	5	15	4
	Total	..	19	..	1	4	9	5
Total children	Males	..	47	2	3	9	24	9
	Total	..	28	2	2	5	15	4
Total children	Males	..	19	..	1	4	9	5
	Total	..	47	2	3	9	24	9

No conclusions can, of course, be drawn from one year's figures as to variations in the masculinity of the births at different ages of the parents, but so far as the figures go they indicate a few conclusions which may be mentioned, viz. :—In cases where the father is older than the mother the masculinity has a tendency to be above the average, while in cases where both parents belong to the same age group, or where the father is younger than the mother, the masculinity is rather below the average. It is also below the average in cases where the father, or both father and mother, are under 25; and it is above the average where the mother alone is under 25.

9. Birthplaces of Parents.—The relative birthplaces of the parents of children whose births were registered during the year 1920 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, 1920.

Birthplaces.	Fathers.			Mothers of Nuptial Children.			Mothers of Ex-nuptial Children.	
	Single Births.	Twins.	Trip-lets.	Single Births.	Twins.	Trip-lets.	Single Births.	Twins.
AUSTRALASIA—								
Commonwealth of Australia—								
New South Wales	40,257	442	7	42,324	487	4	2,328	22
Victoria ..	33,498	387	4	32,337	368	7	1,776	12
Queensland ..	13,110	130	2	15,139	157	2	904	9
South Australia	11,553	139	..	11,319	135	2	436	2
Western Australia	1,939	27	..	2,437	35	..	197	3
Tasmania ..	5,757	58	..	5,783	62	..	385	5
North. Territory	26	..	..	28	..	..	15	..
Federal Territory	13	..	..	8	..	..	..	..
New Zealand ..	1,185	17	..	771	14	..	47	..
EUROPE—								
England ..	11,824	150	3	11,349	119	1	255	2
Wales ..	334	4	..	248	6	..	7	..
Scotland ..	2,765	37	..	2,502	31	..	56	..
Ireland ..	1,508	20	..	1,031	12	..	29	..
Isle of Man ..	30	..	..	21	1	..	..	..
Other European British Possessions ..	51	..	..	47	..	..	3	..
Austria-Hungary ..	84	2	..	50	1	..	..	..
Belgium ..	17	..	..	37	..	..	..	..
Denmark ..	154	1	..	36	1	..	1	..
France ..	49	..	..	103	2	..	1	..
Germany ..	512	8	..	178	2	..	5	..
Greece ..	149	3	..	71	2	..	..	..
Italy ..	287	2	..	162	1	..	5	..
Netherlands ..	58	..	..	26	..	..	..	..
Norway ..	93	3	..	22	1	..	2	..
Portugal ..	2	..	..	2	..	..	..	..
Russia ..	274	6	..	120	4	..	2	..
Spain ..	27	..	..	16	..	..	..	..
Sweden ..	133	2	..	19	1	..	1	..
Switzerland ..	34	2	..	15	..	..	..	..
Other European Countries ..	31	..	..	15	..	..	..	..
ASIA—								
British India ..	131	..	..	78	2	..	2	..
Ceylon ..	11	..	..	13	..	..	..	..
Hong Kong ..	..	..	..	2	..	..	..	..
Straits Settlements	12	..	..	2	..	..	..	..
Other Asiatic British Possessions ..	2	..	..	4	..	..	..	..

BIRTHPLACES OF PARENTS OF CHILDREN—*continued.*

Birthplaces.	Fathers.			Mothers of Nuptial Children.			Mothers of Ex-nuptial Children.	
	Single Births.	Twins.	Trip-lets.	Single Births.	Twins.	Trip-lets.	Single Births.	Twins.
ASIA—<i>continued.</i>								
Arabia	3	..	..	..	..	..	..	..
China	123	..	..	28	..	..	3	..
Japan	22	..	..	15	..	..	1	..
Java	8	..	..	1	..	..	..	..
Philippine Islands ..	8	..	..	..	..	..	..	..
Syria	97	..	..	78	..	..	1	..
Other Asiatic Countries	12	..	..	11	..	..	..	..
AFRICA—								
Mauritius	11	1	..	1	..	..	..	..
S. Africa, Union of ..	110	..	..	92	1	..	4	..
Egypt	15	..	..	12	..	..	..	..
Other African British Possessions ..	2	..	..	..	..	..	..	..
Other African Countries	5	..	..	4	..	..	..	..
AMERICA—								
Canada	101	2	..	44	2	..	2	..
Jamaica .. ..	..	..	..	1	..	..	..	..
Newfoundland	2	..	..	2	..	..	..	..
Other American British Possessions ..	4	..	..	3	..	..	..	..
Argentine Republic ..	6	..	..	1	..	..	..	..
Brazil	1	..	..	3	..	..	..	..
Chile	1	..	..	1	..	..	..	..
Mexico	2	..	..	..	..	..	..	..
United States of America	199	3	..	105	3	..	6	..
Other American Countries	30	..	..	25	..	..	1	..
POLYNESIA—								
Fiji	33	1	..	17	..	..	1	..
Friendly Islands	2	..	..	1	..	..	..	..
Papua	2	..	..	2	..	..	..	..
Other Polynesian British Possessions ..	5	..	..	1	..	..	..	..
New Caledonia	11	1	..	18	..	..	2	..
New Hebrides	6	1	..	1	..	..	..	..
Samoa	4	..	..	..	..	..	..	..
Other Polynesian Islands	4	1	..	5	..	..	..	..
South Sea Islands (so described) ..	14	..	..	2	..	..	1	..
At Sea	89	..	..	41	..	..	6	..
Unspecified	20	..	..	32	..	..	7	..
Total	126,862	1,450	16	126,862	1,450	16	6,492	55

10. Occupations of Fathers.—A summary of the occupations of the fathers of all nuptial children, whose births were registered in 1920, 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, 1920.

Occupations.	Number of Fathers.	Occupations.	Number of Fathers.
CLASS I.—PROFESSIONAL.		CLASS III.—COMMERCIAL—<i>contd.</i>	
General Government	755	Stone, Clay and Glass	28
Local Government	113	Ironmongery	150
Defence	813	Merchants, Importers	499
Law and Order	1,150	Shopkeepers and Assistants	1,177
Religion	399	Dealers and Hawkers	363
Charities	6	Agents and Brokers	568
Health	1,118	Clerks, Bookkeepers, &c.	4,779
Literature	140	Commercial Travellers, Salesmen	1,800
Science	82	Others engaged in Commercial Pursuits	1,438
Civil Engineering, Architecture, and Surveying	464	Speculators on Chance Events	68
Education	824	Storage	7
Fine Arts	142	Total Commercial	18,208
Music	131		
Amusements	501		
Total Professional	6,638	CLASS IV.—TRANSPORT AND COMMUNICATION.	
CLASS II.—DOMESTIC.		Aviation	6
Hotelkeepers and Assistants	967	Railway Traffic	5,069
Others engaged in providing board and lodging	137	Tramway Traffic	1,329
House Servants	2	Road Traffic	5,837
Coachmen and Grooms	88	Sea and River Traffic	1,766
Hairdressers	605	Postal Service	637
Laundrymen	43	Telegraph and Telephone Service	626
Others engaged in domestic occupations	323	Messengers, &c.	15
Total Domestic	2,165	Total Transport & Communication	15,285
CLASS III.—COMMERCIAL.		CLASS V.—INDUSTRIAL.	
Banking and Finance	472	Books and Publications	817
Insurance and Valuation	552	Musical Instruments	56
Landed and House Property	183	Prints, Pictures and Art Materials	72
Property Rights n.e.i.	8	Ornaments and Small Wares	155
Books, Publications, Advertising	170	Equipment for Sports and Games	4
Musical Instruments	8	Medals, Type, and Dies	43
Prints, Pictures and Art Materials	5	Watches, Clocks, and Scientific Instruments	136
Ornaments and Small Wares	5	Surgical Instruments	12
Watches, Clocks, Jewellery	4	Arms and Ammunition	52
Surgical Instruments	1	Engines, Machines, Tools, and Implements	1,625
Arms and Ammunition	2	Carriages and Vehicles	1,415
Machinery	19	Harness, Saddlery & Leatherware	395
Carriages and Vehicles	28	Ships, Boats, &c.	173
Harness, Saddlery & Leatherware	3	Furniture	829
Ships and Boats	9	Building Materials	841
Building Materials	18	Chemicals and By-products	64
Furniture	64	Textile Fabrics	256
Chemicals and By-products	6	Dress	1,988
Paper and Stationery	52	Fibrous Materials	52
Textile Fabrics	443	Animal Food	383
Dress	185	Vegetable Food	1,603
Fibrous Materials	7	Groceries, Drinks, Narcotics, and Stimulants	352
Animal Food	2,319	Animal Matter not elsewhere clsd.	428
Vegetable Food	702	Workers in Wood not elsewhere clsd.	238
Groceries, Drinks, Narcotics, and Stimulants	1,329	Vegetable Produce for Fodder	9
Living Animals	193	Paper	15
Leather, Raw Materials	45	Stone, Clay, Glass, &c.	655
Wool and Tallow	67	Jewellery and Precious Stones	240
Hay, Corn, &c.	185	Metals, other than Gold & Silver	3,338
Other Vegetable Matter, n.e.i.	104	Gas, Electric Lighting, &c.	1,103
Wood and Coal	143		

OCCUPATIONS OF FATHERS OF ALL NUPTIAL CHILDREN—*continued*.

Occupations.	Number of Fathers.	Occupations.	Number of Fathers.
CLASS V.—INDUSTRIAL—<i>contd.</i>		CLASS VI.—AGRICULTURAL, PASTORAL, MINING, ETC.	
Building—		Agricultural	21,006
Builders	567	Pastoral	4,044
Stonemasons	212	Dairy Farming	1,071
Bricklayers	631	Bees, Fisheries, and Wild Animals	481
Carpenters	3,080	Forestry	825
Slaters	71	Water Conservation and Supply	128
Plasterers	359	Mines and Quarries	4,189
Painters	1,226	Total Primary Producers	31,744
Plumbers	871		
Signwriters	64	CLASS VII.—INDEFINITE.	
Others	31	Independent Means, having no	
Roads, Railways, Earthworks ..	205	specific occupation	88
Disposal of the Dead	34	Occupation not stated	59
Disposal of Refuse	119	Total Indefinite	147
Other Industrial Workers—			
Manufacturers, etc.	655	CLASS VIII.—DEPENDENTS.	
Engineers, Firemen	3,420	Dependent Relatives	44
Contractors	1,229	Dependent on State	11
Labourers, undefined	23,554	Total Dependents	55
Others	409	Total all Occupations	128,328
Total Industrial	54,086		

11. *Mother's 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 1920 was 128,328, viz., 126,862 single births, 1,450 cases of twins, and 16 cases of triplets. Account has been taken in the number of births of only 2,895 twins and 47 triplets, 6 cases of stillbirths having been excluded. From this number 97 mothers must be deducted, in whose cases 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 128,231 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. 38; Commonwealth Demography, 1920, and previous years."

DURATION OF MARRIAGE AND ISSUE OF MOTHERS OF ALL AGES,
COMMONWEALTH, 1920.

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 ..	21,551	21,825	1.01	18-19 ..	1,459	10,818	7.41
1-2 ..	11,104	12,119	1.09	19-20 ..	1,131	8,790	7.77
2-3 ..	8,713	14,846	1.70	20-21 ..	1,084	8,969	8.27
3-4 ..	9,536	18,838	1.98	21-22 ..	694	5,902	8.50
4-5 ..	9,522	21,629	2.27	22-23 ..	520	4,638	8.92
5-6 ..	9,518	25,244	2.65	23-24 ..	382	3,492	9.14
6-7 ..	8,315	25,626	3.08	24-25 ..	277	2,684	9.69
7-8 ..	7,243	24,952	3.44	25-26 ..	180	1,762	9.79
8-9 ..	6,674	25,529	3.83	26-27 ..	98	1,021	10.42
9-10 ..	5,810	24,175	4.16	27-28 ..	60	619	10.32
10-11 ..	4,921	22,369	4.55	28-29 ..	43	466	10.84
11-12 ..	3,980	19,618	4.93	29-30 ..	22	226	10.27
12-13 ..	3,600	19,047	5.29	30-31 ..	10	114	11.40
13-14 ..	3,215	18,047	5.61	31-32 ..	2	16	8.00
14-15 ..	2,754	16,562	6.01	32-33 ..	1	9	9.00
15-16 ..	2,268	14,301	6.31	35-36 ..	1	14	14.00
16-17 ..	1,975	13,198	6.68				
17-18 ..	1,568	11,010	7.02	Total ..	128,231	398,475	3.11

AGES AND ISSUE OF MOTHERS, COMMONWEALTH, 1920.

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	4,234	4,975	1.18	40-44 years ..	6,539	42,273	6.46
20-24 years ..	28,228	46,754	1.66	45 yrs. and over	627	4,814	7.68
25-29 " ..	39,481	98,218	2.49				
30-34 " ..	30,617	109,707	3.58				
35-39 " ..	18,505	91,734	4.96	All ages ..	128,231	398,475	3.11

PREVIOUS ISSUE OF MOTHERS OF VARIOUS AGES, COMMONWEALTH, 1920.

Previous Issue.	Mothers' Ages.							
	Under 20 Years.	20-24 Years.	25-29 Years.	30-34 Years.	35-39 Years.	40-44 Years.	45 Years and Over.	Total.
0	3,580	16,068	12,869	5,107	1,679	351	24	39,678
1	595	7,666	10,032	5,589	1,914	388	31	26,215
2	53	3,161	7,617	5,934	2,517	540	29	19,851
3	6	1,062	4,972	4,839	2,607	653	39	14,178
4	..	219	2,537	3,752	2,577	727	50	9,862
5	..	45	980	2,636	2,202	773	54	6,690
6	..	5	329	1,513	1,834	668	54	4,403
7	..	1	109	752	1,347	638	80	2,927
8	..	1	25	336	837	648	65	1,912
9	..	..	7	103	541	472	71	1,194
10	..	..	2	41	250	289	44	626
11	..	..	1	7	117	206	39	370
12	..	..	1	5	52	104	31	193
13	..	..	..	2	18	40	5	65
14	..	..	..	1	11	27	7	46
15	..	..	..	..	..	9	3	12
16	..	..	..	..	1	3	1	5
17	..	..	..	..	..	2	..	2
18	..	..	..	..	1	1	..	2
Total Mothers	4,234	28,228	39,481	30,617	18,505	6,539	627	128,231

The tables shew a fairly regular increase in the number of children up to the period ° where the marriage has lasted twenty years, and it appears that the average interval between successive confinements up to that period was rather more than two years and eight months. The average number of children of all marriages was 3.11, the corresponding figures for 1919 having been 3.33; for 1918, 3.34; for 1917, 3.29; for 1916, 3.29; for 1915, 3.26; and for 1914, 3.22.

A similar table has been prepared shewing the previous issue of mothers of twins and triplets, from which it appears that 362 mothers had twins at their first confinement; 255 at their second; 225 at their third; 186 at their fourth; 141 at their fifth; 98 at

their sixth; 70 at their seventh; 35 at their eighth; 35 at their ninth; 16 at their tenth; 11 at their eleventh; 9 at their twelfth; 3 at their thirteenth; 2 at their fourteenth; and 2 at their fifteenth.

Of the 16 cases of triplets, 2 occurred at the first confinement; 3 at the second; 5 at the third; 2 at the fourth; 2 at the fifth; and 2 at the sixth.

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

INTERVAL BETWEEN MARRIAGE AND FIRST BIRTH, COMMONWEALTH, 1920.

Interval.			Number of First Children.	Interval.			Number of First Children.
Under 1 month	..	..	424	2 years	..	..	2 930
1 month	..	..	564	3 "	..	..	1,706
2 months	..	..	745	4 "	..	..	1,496
3 "	..	..	999	5 "	..	..	756
4 "	..	..	1,346	6 "	..	..	328
5 "	..	..	1,652	7 "	..	..	229
6 "	..	..	2,153	8 "	..	..	159
7 "	..	..	2,123	9 "	..	..	97
8 "	..	..	1,855	10 "	..	..	61
9 "	..	..	3,821	11 "	..	..	42
10 "	..	..	3,442	12 "	..	..	42
11 "	..	..	2,388	13 "	..	..	23
12 "	..	..	1,908	14 "	..	..	21
13 "	..	..	1,606	15 "	..	..	13
14 "	..	..	1,288	16 "	..	..	9
15 "	..	..	1,141	17 "	..	..	2
16 "	..	..	910	18 "	..	..	6
17 "	..	..	775	19 "	..	..	2
18 "	..	..	639	20 "	..	..	3
19 "	..	..	577	21 "	..	..	2
20 "	..	..	455	22 "	..	..	2
21 "	..	..	400	23 "	..	..	1
22 "	..	..	320	24 "	..	..	1
23 "	..	..	215	27 "	..	..	1
				Total	..	..	39,678

Of these 39,678 children, 20,398 were males and 19,280 were females; the masculinity of first births was therefore 2.82 as compared with 3.01 for total births.

The previous issue of mothers of ex-nuptial children is not recorded, but for the purposes of the following table all ex-nuptial births have been assumed to be first births. The table shews the ages of mothers of ex-nuptial births, of nuptial births occurring less than nine months after marriage, and of nuptial births occurring nine months or more after marriage. A comparison of the combined total of the first two columns with the total of nuptial children born nine months or more after marriage reveals the fact that for all ages the ratio of the two was about as 2 is to 3. At all ages up to and including 21, however, there was a great preponderance of ex-nuptial births and of births following on ante-nuptial conception. It must, of course, be understood that a certain number of premature births 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, 1920.

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.
13 years ..	5	..	5	..	..	5
14 " ..	24	2	26	..	2	28
15 " ..	44	21	65	2	23	88
16 " ..	174	110	284	20	130	414
17 " ..	298	356	654	89	445	1,099
18 " ..	461	783	1,244	321	1,104	2,348
19 " ..	587	1,158	1,745	718	1,876	3,621
20 " ..	599	1,332	1,931	1,184	2,516	4,447
21 " ..	540	1,417	1,957	1,664	3,081	5,038
22 " ..	503	1,312	1,815	2,185	3,497	5,312
23 " ..	464	1,093	1,557	2,457	3,550	5,107
24 " ..	379	914	1,293	2,510	3,424	4,717
25 " ..	301	678	979	2,511	3,189	4,168
26 " ..	306	648	954	2,377	3,025	3,979
27 " ..	228	464	692	2,104	2,568	3,260
28 " ..	227	353	580	1,830	2,183	2,763
29 " ..	172	292	464	1,612	1,904	2,368
30 " ..	168	208	376	1,350	1,558	1,934
31 " ..	129	132	261	991	1,123	1,384
32 " ..	128	154	282	862	1,016	1,298
33 " ..	124	102	226	634	736	962
34 " ..	120	89	209	585	674	883
35 " ..	128	58	186	477	535	721
36 " ..	102	53	155	390	443	598
37 " ..	75	36	111	252	288	399
38 " ..	71	27	98	222	249	347
39 " ..	50	15	65	149	164	229
40 " ..	48	24	72	114	138	210
41 " ..	17	15	32	86	101	133
42 " ..	26	6	32	55	61	93
43 " ..	22	4	26	37	41	67
44 " ..	13	1	14	9	10	24
45 " ..	4	3	7	10	13	20
46 " ..	1	..	1	7	7	8
47 " ..	2	1	3	1	2	5
48 " ..	..	..	..	2	2	2
50 " ..	1	..	1	..	..	1
Not stated ..	6	..	6	..	..	6
Total ..	6,547	11,861	18,408	27,817	39,678	58,086

13. **Interval between Birth and Registration of Birth.**—Information was obtained during 1920 as to the period elapsing between birth and registration. The law relating to maternity allowances has tended to accelerate the registration of births; and during the year under review it was found that approximately 36 per cent. were registered in the first week.

INTERVAL BETWEEN BIRTH AND REGISTRATION, COMMONWEALTH, 1920.

Interval.	Nuptial Births.	Ex-nuptial Births.	Total Births.	Interval.	Nuptial Births.	Ex-nuptial Births.	Total Births.
Under 1 day	1,535	107	1,642	39 days ..	592	22	614
1 day ..	5,797	540	6,337	40 " ..	574	25	599
2 days ..	7,681	694	8,375	41 " ..	607	26	633
3 " ..	8,321	469	8,790	42 " ..	484	22	506
4 " ..	7,967	351	8,318	43 " ..	386	17	403
5 " ..	7,566	238	7,804	44 " ..	373	18	391
6 " ..	7,204	222	7,426	45 " ..	331	14	345
7 " ..	6,547	173	6,720	46 " ..	336	24	360
8 " ..	5,568	136	5,704	47 " ..	276	10	286
9 " ..	5,232	150	5,382	48 " ..	243	9	252
10 " ..	4,909	206	5,115	49 " ..	207	15	222
11 " ..	4,774	254	5,028	50 " ..	243	15	258
12 " ..	4,633	259	4,892	51 " ..	216	10	226
13 " ..	4,636	275	4,911	52 " ..	239	14	253
14 " ..	3,943	238	4,181	53 " ..	200	13	213
15 " ..	3,336	190	3,526	54 " ..	214	12	226
16 " ..	2,972	160	3,132	55 " ..	221	7	228
17 " ..	2,727	185	2,912	56 " ..	184	16	200
18 " ..	2,626	152	2,778	57 " ..	180	8	188
19 " ..	2,319	135	2,454	58 " ..	222	15	237
20 " ..	2,177	136	2,313	59 " ..	184	10	194
21 " ..	2,073	125	2,198	60 " ..	148	14	162
22 " ..	1,853	100	1,953	61 to 69 days	315	27	342
23 " ..	1,612	97	1,709	70 " 79 "	158	7	165
24 " ..	1,506	72	1,578	80 " 89 "	99	12	111
25 " ..	1,397	58	1,455	90 " 99 "	35	5	40
26 " ..	1,259	47	1,306	100 " 109 "	21	1	22
27 " ..	1,230	50	1,280	110 " 119 "	15	5	20
28 " ..	1,121	43	1,164	120 " 129 "	15	3	18
29 " ..	1,052	50	1,102	130 " 139 "	15	1	16
30 " ..	962	40	1,002	140 " 149 "	5	2	7
31 " ..	897	35	932	150 " 159 "	5	..	5
32 " ..	857	40	897	160 " 169 "	10	1	11
33 " ..	808	33	841	170 " 179 "	4	3	7
34 " ..	714	30	744	180 " 365 "	28	8	36
35 " ..	695	21	716	1 to 2 years	2	..	2
36 " ..	675	28	703	2 years and over	2	..	2
37 " ..	603	23	626				
38 " ..	631	29	660	Total Births	129,804	6,602	136,406

The weighted average interval between the dates of birth and registration has been found to be about 13 days both for nuptial and ex-nuptial children since the granting of the maternity allowance.

2. Marriages.

1. **Marriages, 1914 to 1920.**—The number of marriages registered in the Commonwealth in 1920 was 51,552, the highest number ever recorded. In 1914 the number of marriages and the marriage rate increased in all the States with the exception of South Australia and Tasmania, and in 1915 there were further increases

both in the actual number of marriages and in the marriage rate in all States, with the exception of South Australia and Western Australia. A considerable decrease, however, took place in 1916, and a still further fall in 1917 and 1918, the actual number of marriages in the latter years being about the same as in 1909. In 1919 and 1920 there was a substantial recovery. The number of marriages in each State since 1914 is shewn below:—

TOTAL MARRIAGES, COMMONWEALTH, 1914 TO 1920.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Federal Terr.	Common- wealth
1914 ..	17,357	11,829	5,894	4,010	2,660	1,543	17	1	43,311
1915 ..	18,095	12,832	6,135	3,965	2,581	1,600	12	4	45,224
1916 ..	16,316	11,342	5,208	3,602	2,365	1,433	19	4	40,289
1917 ..	13,246	9,505	4,868	3,252	1,621	1,138	34	2	33,666
1918 ..	13,194	9,156	4,815	3,190	1,612	1,131	39	4	33,141
1919 ..	15,809	11,706	5,429	3,855	2,194	1,513	25	9	40,540
1920 ..	20,154	14,898	6,667	4,881	2,932	1,999	17	4	51,552

2. *Marriage Rates, 1914 to 1920.*—The number of marriages registered per thousand of mean population is shewn in the following table for the same period:—

CRUDE MARRIAGE RATE (a), COMMONWEALTH, 1914 TO 1920.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Federal Terr.	Common- wealth.
1914 ..	9.37	8.31	8.73	9.11	8.22	7.78	4.53	0.38	8.80
1915 ..	9.68	9.00	8.93	9.01	8.01	8.03	2.73	1.62	9.14
1916 ..	8.74	8.05	7.69	8.32	7.51	7.23	3.92	1.53	8.21
1917 ..	7.09	6.76	7.16	7.52	5.25	5.72	6.86	0.80	6.87
1918 ..	6.90	6.46	6.99	7.25	5.18	5.55	7.81	1.65	6.65
1919 ..	8.04	7.98	7.62	8.46	6.78	7.16	5.20	3.89	7.88
1920 ..	9.93	9.90	9.08	10.33	8.78	9.18	3.88	1.84	9.73

(a) Number of marriages (not persons married) per 1,000 of mean annual population.

As in some international tabulations the marriage rates are calculated per 1,000 of the unmarried population of 15 years and over, the corresponding rates have been worked out for 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 is the case in the preceding table.

3. *Marriage Rates in Various Countries.*—A comparison of the Australian marriage rate with that of European countries shews that until 1915 it was once or twice surpassed by the rate for Ontario, and equalled by the rate of some of the countries of the East of Europe, and that it was higher than the rate of the countries of Central and Western Europe, and especially than the rate of countries of the North of Europe. Although England and Wales experienced a marriage rate of 10.1 during 1920, the Commonwealth with a rate of 9.7 occupied a very favourable position in the list of countries for which recent information is available.

CRUDE MARRIAGE RATES, VARIOUS COUNTRIES.

Country.	Year.	Crude Marriage Rate.	Country.	Year.	Crude Marriage Rate.
Serbia	1911	10.3	Spain	1919	8.1
South Australia ..	1920	10.3	Belgium	1912	8.0
England and Wales ..	1920	10.1	Prussia	1912	8.0
New South Wales ..	1920	9.9	Russia (European) ..	1909	7.9
Victoria	1920	9.9	Japan	1916	7.8
United Kingdom ..	1919	9.9	Germany	1913	7.7
Australia	1920	9.7	Norway	1918	7.5
Scotland	1920	9.6	Quebec (Canada) ..	1917	7.5
Bulgaria	1911	9.4	France	1913	7.5
Ontario (Canada) ..	1919	9.3	Austria	1912	7.4
Tasmania	1920	9.2	Sweden	1918	6.7
Queensland	1920	9.1	Switzerland	1918	6.7
Western Australia ..	1919	8.8	Ireland	1919	6.1
Hungary	1912	8.6	Finland	1917	6.0
Rumania	1914	8.5	Chile	1914	5.2
Netherlands	1919	8.5	Ceylon	1919	4.3
New Zealand	1919	8.4	Jamaica	1917	3.3
Denmark	1919	8.3	Italy	1917	2.7
South Africa, Union of	1918	8.2			

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 1,818 males who were less than twenty-one years of age were married during 1920. The corresponding number of females was 9,040. At the other extreme there were 30 men of sixty-five years and upwards, who described themselves as bachelors, and 9 spinsters of corresponding age.

AGES AND CONJUGAL CONDITION OF PERSONS MARRIED,
COMMONWEALTH, 1920.

Age at Marriage.	Bridegrooms.				Brides.			
	Bachelors.	Widowers.	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
14 years .. ..	..	..	..	..	10	..	..	10
15 " .. ..	..	..	..	..	59	..	..	59
16 "	3	..	..	3	298	..	..	298
17 "	43	..	..	43	874	..	..	874
18 "	208	..	..	208	1,854	3	..	1,857
19 "	543	..	1	544	2,773	1	..	2,774
20 "	1,019	1	..	1,020	3,155	11	2	3,168
21 "	2,623	2	1	2,626	5,274	18	1	5,293
22 "	3,028	1	3	3,032	4,490	32	2	4,524
23 "	3,449	10	4	3,463	4,251	53	14	4,318
24 "	3,916	21	4	3,941	4,219	67	14	4,300
25 "	4,208	17	6	4,231	3,659	92	18	3,769
26 "	4,056	32	11	4,099	3,202	89	25	3,316
27 "	3,694	34	12	3,740	2,703	121	27	2,851
28 "	3,558	50	26	3,634	2,291	137	27	2,455

AGES AND CONJUGAL CONDITION OF PERSONS MARRIED,
COMMONWEALTH, 1920—*continued*.

Age at Marriage.	Bridegrooms.				Brides.			
	Bachelors.	Widowers.	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
29 years ..	2,956	65	20	3,041	1,735	141	29	1,905
30 " ..	2,443	88	17	2,548	1,375	138	32	1,545
31 " ..	1,977	93	21	2,091	997	105	26	1,128
32 " ..	1,785	92	19	1,896	847	127	31	1,005
33 " ..	1,382	120	21	1,523	662	113	29	804
34 " ..	1,096	104	25	1,225	613	105	38	756
35 " ..	979	109	23	1,111	450	122	18	590
36 " ..	800	116	19	935	396	110	23	529
37 " ..	589	85	22	696	304	94	13	411
38 " ..	608	128	37	773	265	100	15	380
39 " ..	507	102	16	625	220	108	19	347
40 " ..	416	109	27	552	214	91	22	327
41 " ..	282	70	13	365	130	63	13	206
42 " ..	303	91	13	407	115	76	8	199
43 " ..	193	65	18	276	115	72	6	193
44 " ..	197	68	12	277	88	66	15	169
45 " ..	187	85	10	282	69	92	3	164
46 " ..	144	84	6	234	53	59	10	122
47 " ..	117	79	6	202	60	47	6	113
48 " ..	126	82	7	215	41	57	4	102
49 " ..	101	55	12	168	48	60	4	112
50 " ..	82	93	7	182	28	41	4	73
51 " ..	58	46	3	107	10	29	1	40
52 " ..	45	73	7	125	19	32	4	55
53 " ..	46	63	4	113	11	29	2	42
54 " ..	45	65	3	113	21	27	2	50
55 " ..	36	71	6	113	5	32	1	38
56 " ..	31	57	3	91	9	22	1	32
57 " ..	20	49	2	71	8	22	2	32
58 " ..	19	65	2	86	7	26	1	34
59 " ..	20	34	2	56	10	14	1	25
60 " ..	16	41	..	57	4	22	1	27
61 " ..	8	32	1	41	2	11	..	13
62 " ..	5	48	..	53	3	13	..	16
63 " ..	6	37	..	43	4	11	..	15
64 " ..	5	34	..	39	2	13	..	15
65 " ..	8	26	1	35	2	9	1	12
66 " ..	3	24	..	27	1	13	..	14
67 " ..	3	20	..	23	1	5	..	6
68 " ..	2	18	2	22	2	11	..	13
69 " ..	3	18	..	21	1	3	..	4
70 " ..	4	23	..	27	..	3	..	3
71 " ..	..	6	..	6	..	..	..	..
72 " ..	3	16	..	19	..	2	1	3
73 " ..	..	13	..	13	..	..	..	..
74 " ..	..	5	..	5	..	2	..	2
75 " ..	1	9	..	10	..	3	..	3
76 " ..	..	4	1	5	..	2	..	2
77 " ..	..	3	..	3	1	..	..	1
78 " ..	..	..	..	..	..	1	..	1
79 " ..	1	4	..	5	1	..	..	1
80 " ..	..	5	..	5	..	..	..	..
81 " ..	..	3	..	3	..	..	..	..
82 " ..	1	..	..	1	..	..	..	..
83 " ..	..	2	..	2	..	..	..	..
87 " ..	1	..	..	1	..	..	..	..
Not stated	3	..	..	3	5	1	1	7
Total	48,011	3,065	476	51,552	48,066	2,969	517	51,552

(b) The relative ages of bridegrooms and brides are shewn for single years in "Bulletin of Population and Vital Statistics, No. 38"; a condensation into age-groups of five years is here given :—

RELATIVE AGES OF PERSONS MARRIED, COMMONWEALTH, 1920.

Ages.		Total Bride- grooms.	Ages of Brides.								
			Under 15.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 and upwards.	Not stated.
Ages of Bridegrooms.	Under 20 ..	798	3	534	243	16	1	1	..	..	..
	20 to 24 ..	14,082	2	3,222	8,774	1,844	189	41	9	1	..
	25 to 29 ..	18,745	5	1,561	8,771	6,978	1,182	197	36	13	2
	30 to 34 ..	9,283	..	391	2,752	3,558	1,966	480	108	26	2
	35 to 39 ..	4,140	..	110	715	1,272	1,095	697	184	67	..
	40 to 44 ..	1,877	..	31	226	420	466	367	259	107	1
	45 to 49 ..	1,101	..	8	87	128	199	270	194	215	..
	50 to 54 ..	640	..	2	19	46	89	101	165	218	..
	55 to 59 ..	417	..	2	12	22	38	70	71	202	..
	60 to 64 ..	233	..	..	3	6	7	20	39	158	..
	65 and upwards ..	233	..	..	1	6	6	13	29	178	..
	Not stated ..	3	..	1	..	..	..	..	..	..	2
Total Brides ..		51,552	10	5,862	21,603	14,296	5,238	2,257	1,094	1,185	7

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 1920, was shewn. In the following table the relative conjugal condition of the contracting parties is given :—

RELATIVE CONJUGAL CONDITION OF PERSONS MARRIED, COMMONWEALTH, 1920.

Conjugal Condition.		Total Bridegrooms.	Brides.		
			Spinsters.	Widows.	Divorced.
Bridegrooms	{ Bachelors ..	48,011	45,617	1,999	395
	{ Widowers ..	3,065	2,075	903	87
	{ Divorced ..	476	374	67	35
Total Brides ..		51,552	48,066	2,969	517

6. Birthplaces of Persons Married.—Information as to the birthplaces of persons who were married in 1920 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. 38, Commonwealth Demography," the relative birth-places of bridegrooms and brides will be found tabulated.

BIRTHPLACES OF PERSONS MARRIED, COMMONWEALTH (a), 1920.

Birthplaces.	Bridegrooms.	Brides.	Birthplaces.	Bridegrooms.	Brides.
AUSTRALASIA—			ASIA—continued.		
New South Wales ..	15,665	17,062	China	29	6
Victoria	13,689	13,895	Japan	7	2
Queensland	5,148	5,687	Philippine Islands ..	2	..
South Australia ..	4,530	4,507	Syria	16	10
Western Australia ..	158	206	Other Asiatic Countries ..	6	..
Tasmania	2,256	2,290			
Northern Territory ..	6	12	AFRICA—		
Federal Territory ..	3	4	Union of South Africa	53	48
New Zealand	442	269	Mauritius	5	..
			Egypt	2	1
EUROPE—			Other African Countries ..	2	..
England	4,109	3,065	AMERICA—		
Wales	119	51	Canada	47	21
Scotland	944	795	Newfoundland ..	1	..
Ireland	511	311	Other American British Possessions ..	2	..
Isle of Man	10	3	Argentine Republic ..	2	..
Other European			Brazil	1	..
British Possessions	35	19	Chile	2	2
Austria-Hungary ..	15	6	Mexico .. ..	..	1
Belgium	7	7	United States ..	116	41
Denmark	61	12	Other American Countries ..	6	5
France	22	39			
Germany	108	49	POLYNESIA—		
Greece	63	15	Fiji	13	7
Italy	71	24	Papua	1	1
Netherlands	26	5	New Caledonia ..	13	18
Norway	37	3	New Hebrides ..	..	2
Portugal	1	..	Samoa	1	..
Russia	83	27	Other Polynesian Islands ..	1	1
Spain	11	7	South Sea Islands (so described) ..	5	..
Sweden	45	3			
Switzerland	14	6	At sea	12	18
Other European Countries ..	25	6	Not stated	8	17
ASIA—					
British India	49	30			
Ceylon	3	..			
Hong Kong .. ..	..	1			
Straits Settlements ..	..	1			
Other Asiatic British Possessions .. ..	..	1			
Arabia	1	..			
			Total ..	48,620	48,620

(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 1914 to 1920. In "Bulletin No. 38" the 1920 tabulation is shewn for orders of occupations; here it is repeated for classes only, with a subdivision of the Industrial class and of the class of Primary Producers. The average ages of the persons falling under those twelve subdivisions were determined, and it appears that, apart from the Indefinite class, which consists chiefly of persons who have retired from business and who are living on their own means, and where a high average age may naturally be expected, the average age ranges from 28.33 in the Manufacturing class to 32.19 years in the Pastoral class. The results obtained are shewn in the following table:—

OCCUPATIONS AND AGES OF BRIDEGROOMS, COMMONWEALTH, 1920.

Ages at Marriage.	Professional.	Domestic.	Mercantile.	Transport and Communication.	Industrial.				Primary Producers.			
					Manufacturing.	Building and Construction.	Indefinite Industrial Workers.	Agricultural.	Pastoral.	Mines and Quarries.	Other Primary Producers.	Indefinite.
16 years	1	..	1	..	11	..	2	..	..	..	..	..
17 "	5	6	34	35	33	8	16	14	4	3	..	1
18 "	18	6	76	84	112	17	169	30	9	15	8	..
19 "	40	11	121	128	209	47	303	97	16	31	10	7
20 "	100	59	333	348	530	152	709	241	41	84	18	11
21 "	149	57	496	357	600	181	709	328	57	64	29	5
22 "	196	44	557	388	653	241	732	481	67	71	22	11
23 "	213	74	713	419	718	265	862	464	87	90	27	9
24 "	290	64	803	473	679	246	821	614	117	89	23	12
25 "	253	57	782	451	656	235	798	617	116	95	34	5
26 "	266	62	722	425	569	213	719	541	123	64	29	7
27 "	259	66	661	361	528	189	738	629	118	59	20	6
28 "	221	56	573	308	434	152	592	501	132	51	16	5
29 "	180	48	493	249	333	133	456	471	104	55	21	5
30 "	152	32	425	213	294	102	362	380	81	31	16	3
31 "	143	36	345	198	249	109	340	335	78	40	18	5
32 "	112	26	284	153	208	76	236	271	74	17	10	1
33 "	81	27	229	120	152	84	219	217	57	27	12	..
34 "	324	90	701	384	489	221	811	771	194	108	43	4
35 to 39 years ..	143	43	331	159	193	87	359	355	123	63	13	8
40 " 44 " ..	97	34	195	83	134	47	195	178	62	47	12	17
45 " 49 " ..	114	52	255	120	164	100	267	253	88	54	7	49
50 years and upwards	..	..	1	..	1	..	..	1	..	..	..	..
Not stated .. ..	..	..	..	..	..	..	..	..	..	..	..	..
Total	3,357	950	9,131	5,466	7,950	2,905	10,526	7,794	1,749	1,163	390	171
Average age—year 1920 ..	30.59	31.01	29.72	28.73	28.33	29.38	28.91	30.58	32.19	30.45	29.60	38.08

The age at marriage of brides has remained fairly stationary during the period at an average of about 26 years. The figures for the seven years are:—1914, 25.78 years; 1915, 25.75 years; 1916, 26.07 years; 1917, 26.22 years; 1918, 26.11 years; 1919, 25.77 years; and 26.11 years in 1920. For the five years 1907–11 the average age was 25.70 years, compared with 25.92 years for the five years 1912–16, and 26.11 years for 1920. As the average age of all bridegrooms during 1920 was 29.55 years, it follows that brides are generally speaking rather less than three years and one-half younger than bridegrooms.

8. Fertility of Marriages.—The quotient obtained by division of the nuptial births registered, say during the five years 1916 to 1920, by the number of marriages registered during the five years 1911 to 1915, 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 3.05, or in other words, the number of children to be expected from every marriage in the Commonwealth is about three. 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. For the period 1907–11 the result was 3.43; for the year 1914, 3.87; for the year 1915, 3.50; for the year 1916, 3.17; for the year 1917, 2.93; for the year 1918, 3.02; for the year 1919, 2.86; and for the year 1920, 3.05.

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 great majority of marriages in every State are celebrated by ministers of religion. The proportions so celebrated in 1920 were: New South Wales, 95.34 per cent.; Victoria, 96.99 per cent.; Queensland, 97.34 per cent.; South Australia, 95.90 per cent.; Western Australia, 87.04 per cent.; and Tasmania, 97.85 per cent., the percentage for the Commonwealth being 95.74. The registered ministers in 1920 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 1920 are shewn in the following table:—

MARRIAGES IN EACH DENOMINATION, COMMONWEALTH, 1920.

Denomination.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N. Ter.	Fed. Ter.	Com'-wealth.
Church of England ..	9,056	4,421	2,030	1,329	1,176	840	4	3	18,859
Roman Catholic Church..	3,818	2,596	1,433	563	442	284	4	1	9,141
Presbyterian Church of Australia ..	2,618	2,872	906	251	276	172	2	..	7,097
Methodist Church ..	2,471	2,064	1,091	1,416	420	330	4	..	7,796
Congregational Church ..	453	1,179	246	252	107	71	..	..	2,308
Baptist Church ..	326	689	218	343	61	107	..	..	1,744
Church of Christ ..	149	326	48	259	21	36	..	..	839
Lutheran Church ..	19	39	138	189	1	..	..	..	386
Greek Orthodox Church..	13	9	..	..	8	..	..	..	30
Unitarian Church ..	18	1	..	2	..	..	..	..	21
Salvation Army ..	128	64	37	43	20	10	..	..	302
Seventh-Day Adventists..	28	8	7	5	9	3	..	..	60
Other Christians ..	51	143	305	26	2	101	..	..	628
Hebrew ..	53	38	7	3	9	1	..	..	111
Registrar's Office ..	939	449	184	200	380	43	3	..	2,198
Unspecified ..	14	..	17	..	..	1	..	..	32
Total ..	20,154	14,898	6,667	4,881	2,932	1,999	17	4	51,552

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, 1914 to 1920.* The percentage of mark signatures by males and females during the last seven years have been very even, with a slight preponderance in the case of males :—

PERCENTAGE OF MARK SIGNATURES AT MARRIAGE, COMMONWEALTH, 1914 TO 1920.

Year.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
Male ..	0.41	0.27	0.37	0.37	0.33	0.27	0.18
Female ..	0.38	0.27	0.32	0.31	0.29	0.27	0.14

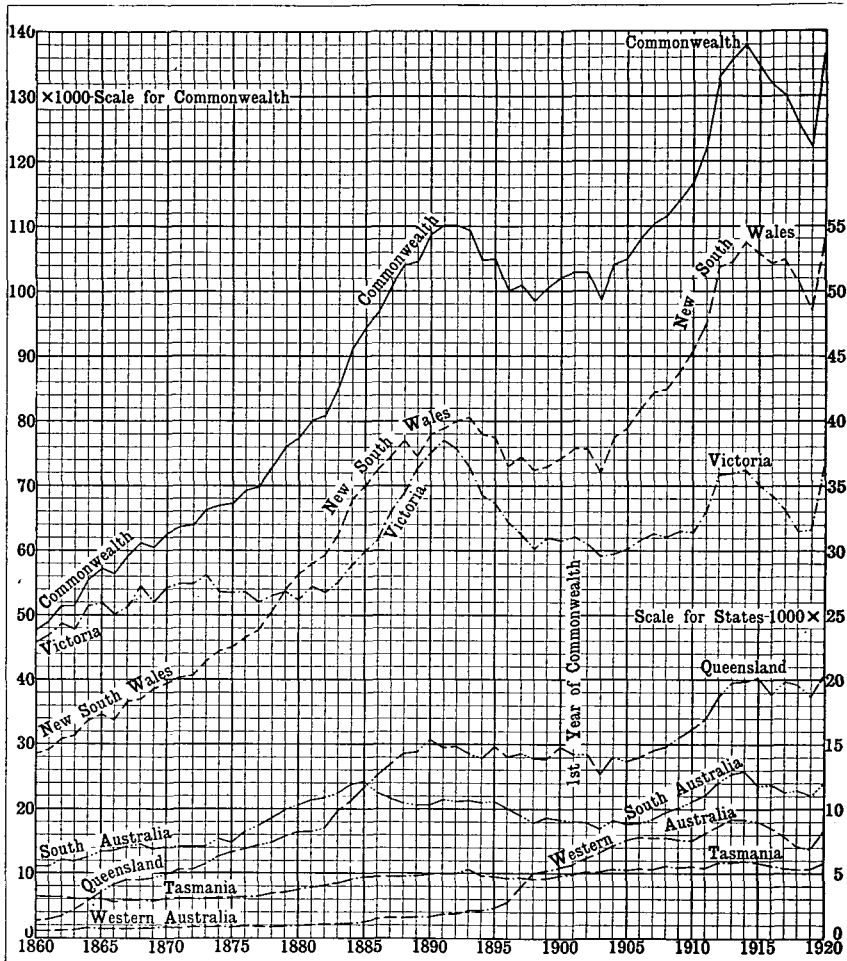
(ii) *Mark Signatures in Commonwealth States, 1914 to 1920.* The following table shews that there has been a marked decrease in every State over the whole period :—

PERCENTAGE OF MARK SIGNATURES AT MARRIAGE, COMMONWEALTH, 1914 TO 1920.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Federal Terr.	C'wealth.
1914 ..	0.36	0.19	0.59	0.45	0.53	1.00	1.47	..	0.39
1915 ..	0.25	0.11	0.26	0.32	0.43	1.47	..	..	0.27
1916 ..	0.41	0.18	0.32	0.35	0.32	0.98	10.53	..	0.35
1917 ..	0.41	0.16	0.32	0.25	0.49	1.14	7.35	..	0.34
1918 ..	0.37	0.13	0.12	0.34	0.43	1.41	5.13	..	0.31
1919 ..	0.29	0.18	0.17	0.25	0.32	0.89	16.00	..	0.27
1920 ..	0.17	0.09	0.04	0.11	0.31	0.90	5.88	..	0.16

A complete disappearance of mark signatures is hardly to be expected, for the available information tends to shew that about 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.

GRAPHS SHEWING TOTAL ANNUAL BIRTHS IN THE COMMONWEALTH AND STATES OF AUSTRALIA, 1860-1920.



(See Table page 82.)

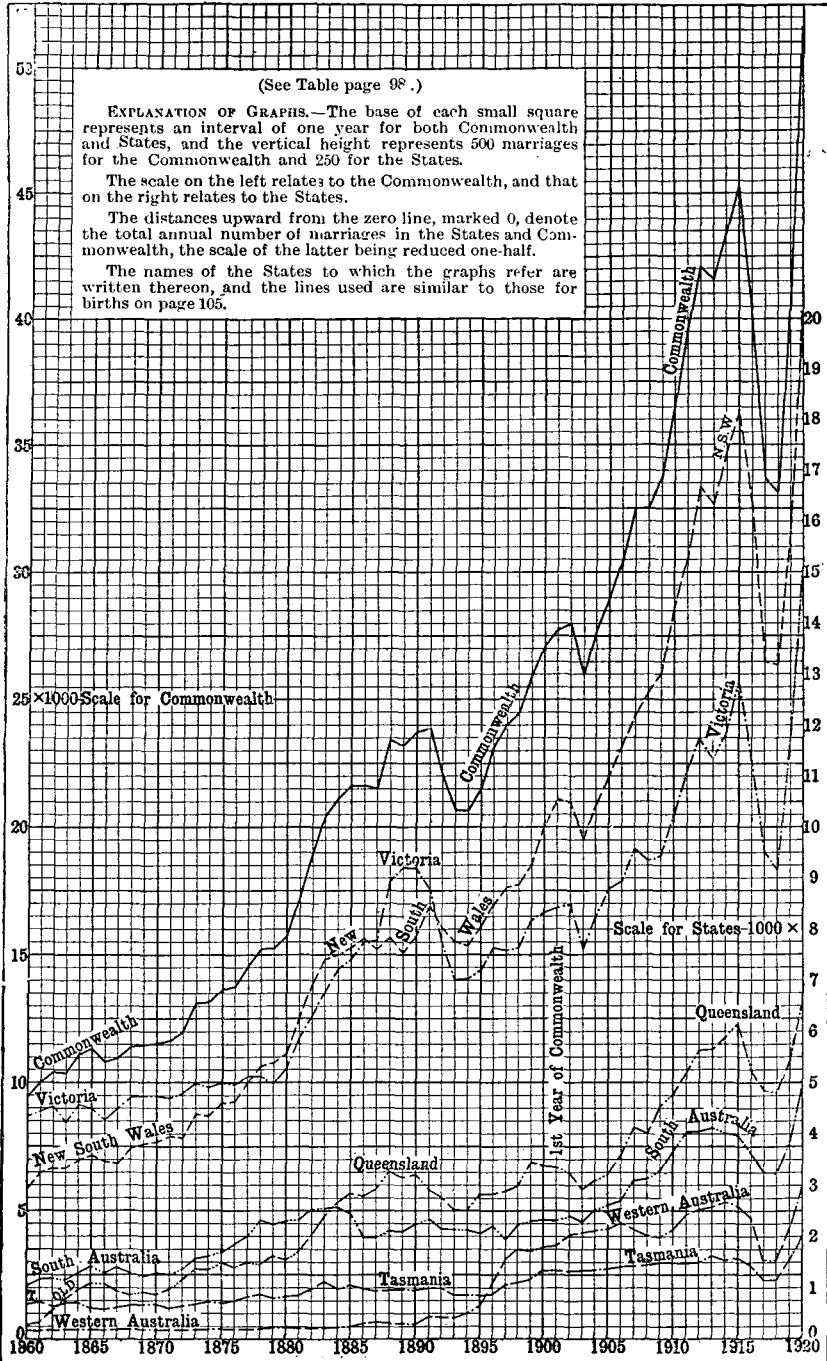
EXPLANATION OF GRAPHS.—The base of each small square represents an interval of one year for both Commonwealth and States, and the vertical height represents 2,000 persons for the Commonwealth and 1,000 for the States.

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

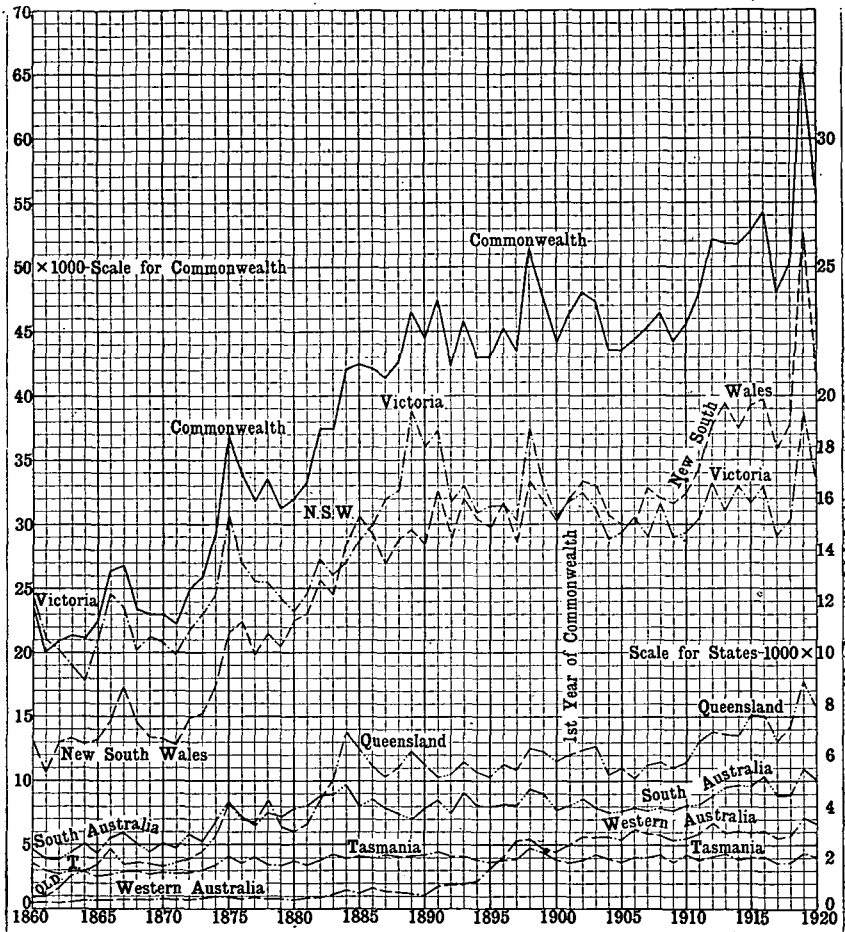
The distances upward from the common zero lines of the States and Commonwealth, marked 0, denote the total annual number of births in the States and Commonwealth, the scale of the latter being reduced one-half.

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, 1860-1920.



GRAPHS SHEWING TOTAL ANNUAL DEATHS IN THE COMMONWEALTH AND STATES OF AUSTRALIA, 1860-1920.



(See table on page 114.)

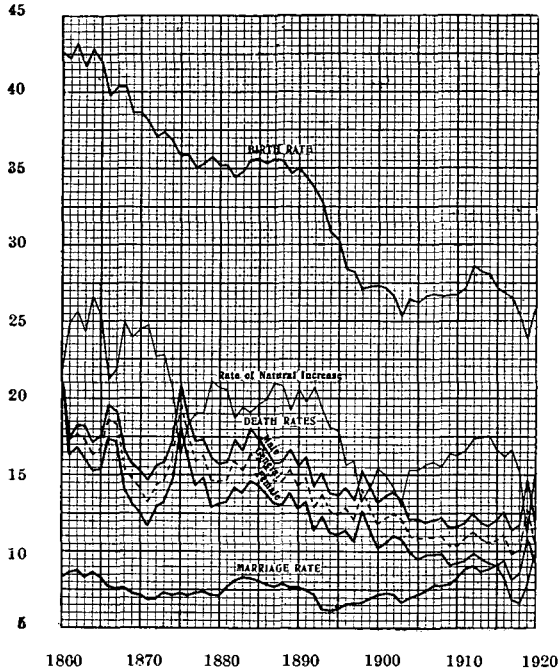
EXPLANATION OF GRAPHS.—The base of each small square represents an interval of one year for both Commonwealth and States, and the vertical height represents 1,000 persons for the Commonwealth and 500 for the States.

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 105.

GRAPHS SHEWING GENERAL BIRTH, NATURAL INCREASE, DEATH (MALE, GENERAL, AND FEMALE) AND MARRIAGE RATES IN THE COMMONWEALTH OF AUSTRALIA, 1860-1920.



(See pages 83, 98, and 114.)

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.

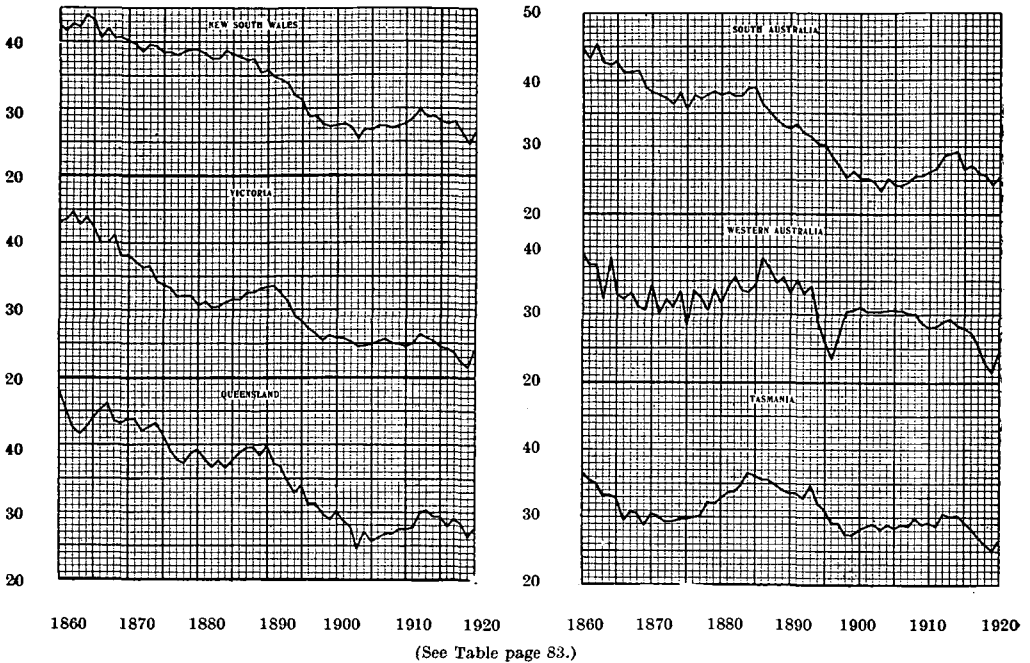
BIRTH RATE GRAPHS. (See next page.)

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.

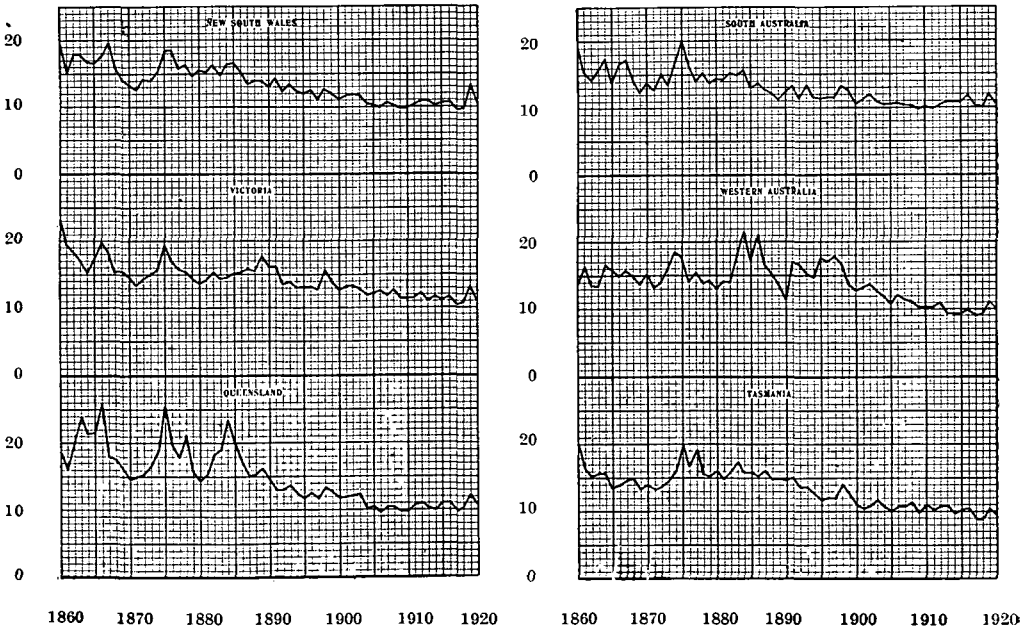
DEATH RATE GRAPHS. (See next page.)

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 shown by a thickened line.

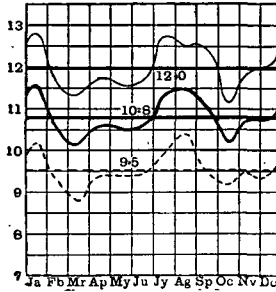
GRAPHS SHEWING BIRTH RATES IN THE STATES OF NEW SOUTH WALES, VICTORIA, QUEENSLAND, SOUTH AUSTRALIA, WESTERN AUSTRALIA, AND TASMANIA, 1860-1920.



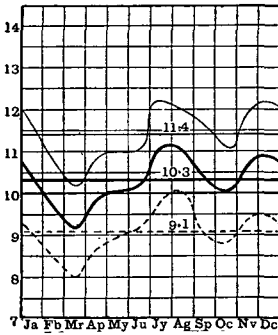
GRAPHS SHEWING DEATH RATES IN THE STATES OF NEW SOUTH WALES, VICTORIA, QUEENSLAND, SOUTH AUSTRALIA, WESTERN AUSTRALIA, AND TASMANIA, 1860-1920.



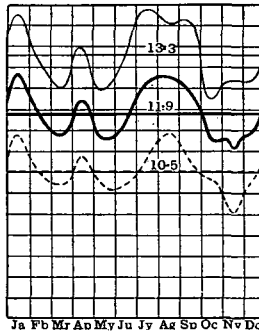
GRAPHS SHEWING GENERAL MONTHLY DEATH RATES 1907-1912.



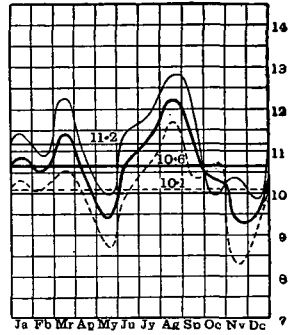
COMMONWEALTH.



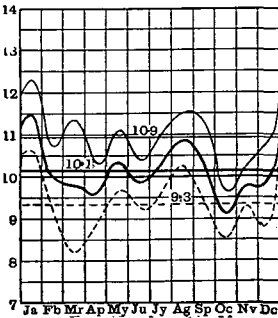
NEW SOUTH WALES.



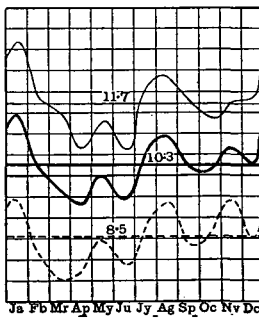
VICTORIA.



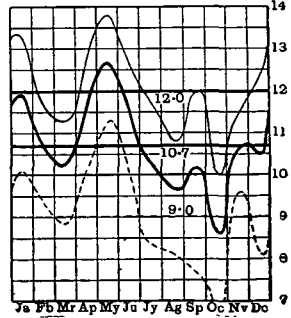
TASMANIA.



SOUTH AUSTRALIA.



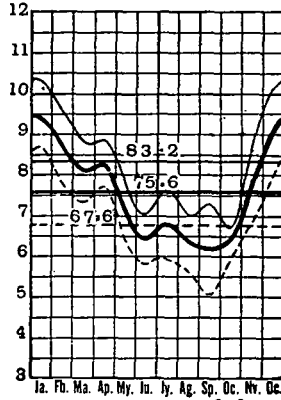
QUEENSLAND.



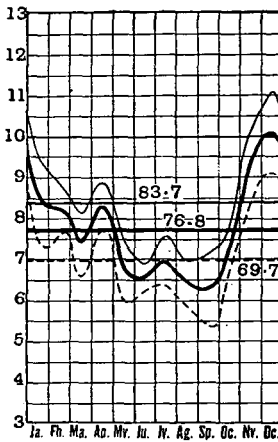
WESTERN AUSTRALIA.

Male Death Rates shewn : _____
 Female " " _____
 General " " _____

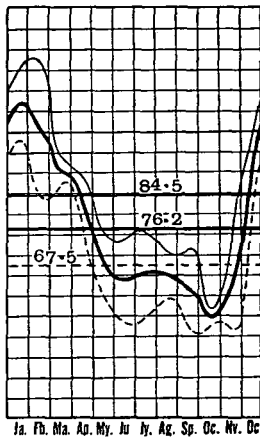
GRAPHS SHÉWING INFANTILE MONTHLY DEATH RATES, 1907-1912.



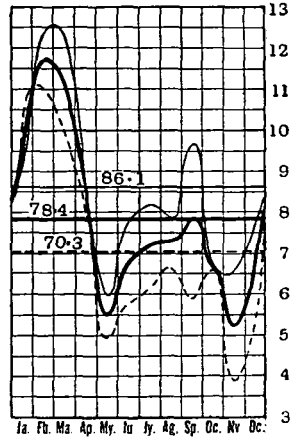
COMMONWEALTH.



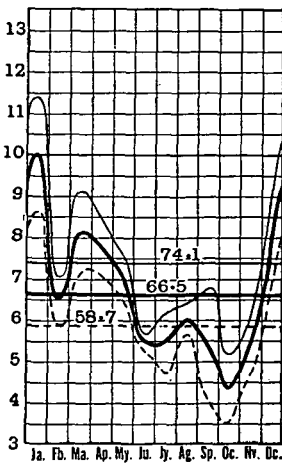
NEW SOUTH WALES.



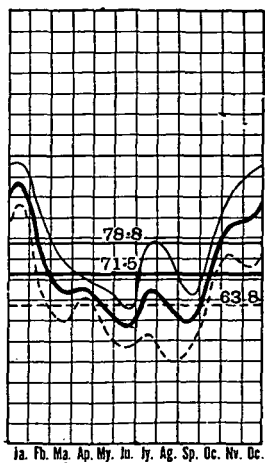
VICTORIA.



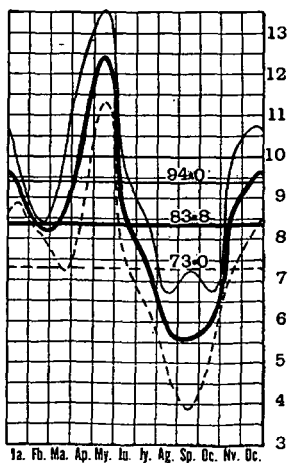
TASMANIA.



SOUTH AUSTRALIA.



QUEENSLAND.

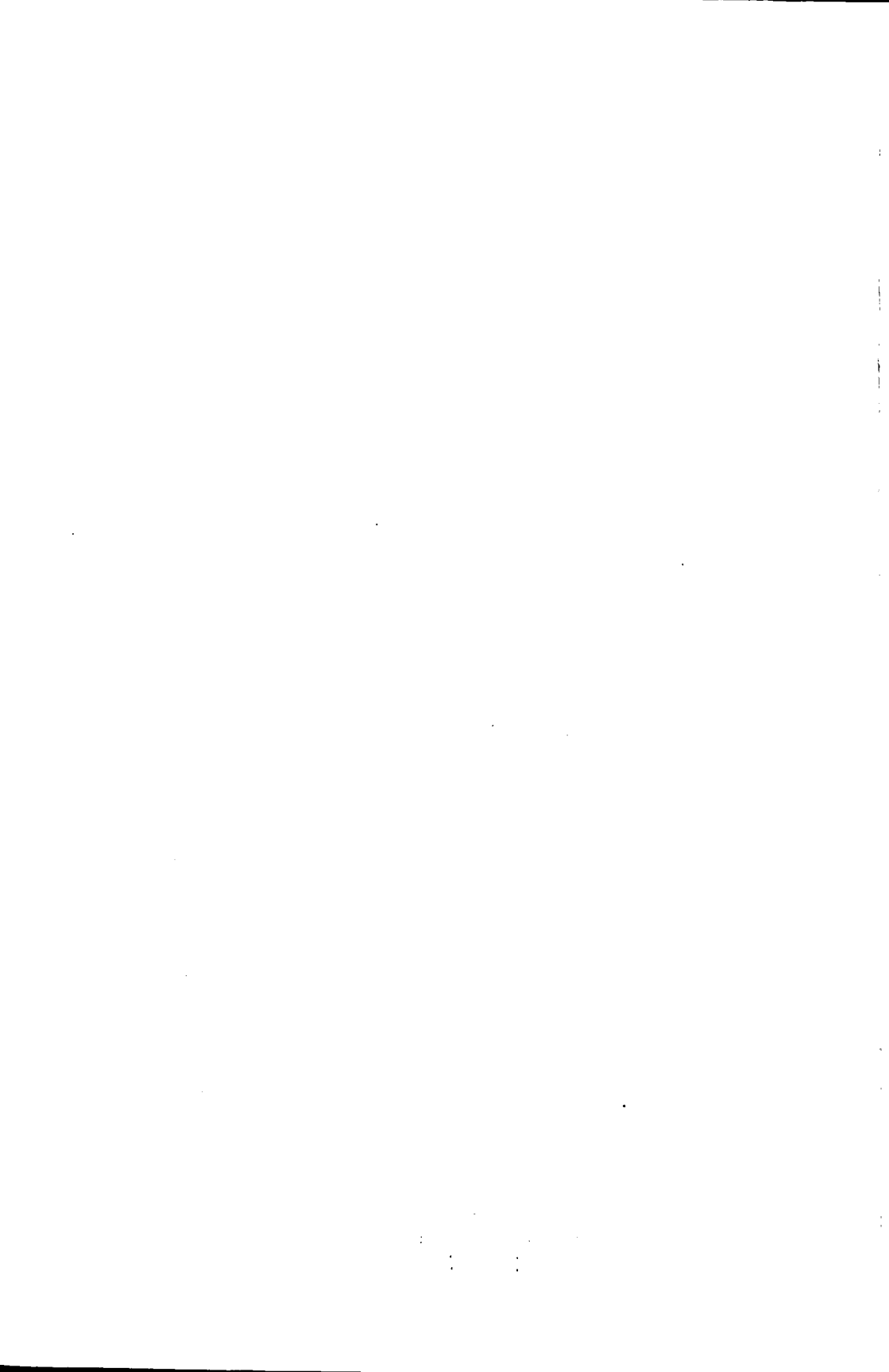


WESTERN AUSTRALIA.

Male Death Rates shewn : _____

Female " " _____

General " " _____



§ 3. Deaths.

1. **Male and Female Deaths, 1914 to 1920.**—The total number of deaths registered in the Commonwealth from 1914 to 1920 inclusive, gives an annual average of 31,055 males and 23,116 females, the details being as follow:—

MALE DEATHS, COMMONWEALTH, 1914 TO 1920.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Federal Terr.	C'wealth.
1914 ..	10,984	9,017	4,132	2,621	1,942	1,063	69	7	29,835
1915 ..	11,439	8,860	4,695	2,587	1,887	1,083	89	14	30,654
1916 ..	11,500	8,901	4,653	2,721	1,981	1,148	108	6	31,018
1917 ..	10,445	7,952	4,027	2,398	1,802	926	52	7	27,609
1918 ..	10,914	8,079	4,359	2,430	1,774	959	66	4	28,585
1919 ..	15,256	10,508	5,337	2,927	2,340	1,175	82	7	37,632
1920 ..	12,088	9,059	4,824	2,814	2,161	1,055	48	4	32,053
Rate (a), 1920	11.81	12.15	12.58	12.40	12.12	9.34	14.47	3.33	11.89

(a) Number of deaths per 1,000 of mean population.

FEMALE DEATHS, COMMONWEALTH, 1914 TO 1920.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Federal Terr.	C'wealth.
1914 ..	7,736	7,486	2,599	2,092	1,101	855	12	4	21,885
1915 ..	8,146	6,963	2,864	2,107	1,105	932	8	3	22,128
1916 ..	8,346	7,588	2,861	2,356	1,104	908	14	2	23,179
1917 ..	7,496	6,603	2,528	1,967	967	842	11	6	20,420
1918 ..	7,902	7,098	2,792	1,960	1,059	843	8	2	21,664
1919 ..	11,088	8,862	3,519	2,548	1,250	1,017	3	11	28,298
1920 ..	8,846	7,773	3,123	2,269	1,227	981	15	2	24,236
Rate (a), 1920	8.80	10.24	8.90	9.23	7.88	9.37	14.08	2.01	9.24

(a) Number of deaths per 1,000 of mean population.

2. **Male and Female Death Rates, 1920.**—The crude male and female death rates for 1920 only are given in the last line of the preceding tables. Queensland has the highest rate for males, and Victoria for females, while Tasmania has the lowest male, and Western Australia the lowest female death rate. The rates for the two Territories are based on very small numbers, and comparisons with the States would be misleading.

Owing to differences in the age constitution of the six States, the crude rates are not, however, strictly comparable, but for the purpose of calculating the "Index of Mortality" (see page 125) a distribution into five age-groups has been made, and the death rates are shown 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 120.

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 crude 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.
Tasmania	1920	9.4	South Africa, Union of		
New Zealand ..	1919	9.5	(Whites)	1918	17.2
Western Australia ..	1920	10.1	Finland	1917	17.6
New South Wales ..	1920	10.3	France	1913	17.7
Australia	1920	10.6	Sweden	1918	17.9
South Australia ..	1920	10.8	United States (Regis-		
Queensland	1920	10.8	tration area) ..	1918	18.2
Victoria	1920	11.2	Italy	1917	18.7
Ontario (Canada) ..	1919	11.9	Switzerland ..	1918	19.0
England and Wales ..	1920	12.4	Austria	1912	20.5
United Kingdom ..	1920	12.8	Serbia	1912	21.1
Denmark	1919	13.1	Bulgaria	1911	21.5
Netherlands	1919	13.2	Japan	1916	21.6
Scotland	1920	14.0	Spain	1919	23.3
Belgium	1912	14.8	Hungary	1912	23.3
Prussia	1913	14.9	Rumania	1914	23.8
Ireland	1920	14.9	Jamaica	1917	26.9
Germany	1913	15.0	Chile	1914	27.8
Norway	1918	16.4	Russia, European ..	1909	28.9
Quebec (Canada) ..	1917	16.8	Ceylon	1919	35.6

(a) Number of deaths per 1,000 of mean population.

4. Total Deaths, 1914 to 1920.—The total number of deaths in each of the Commonwealth States during the seven years 1914 to 1920 is shewn below :—

TOTAL DEATHS, COMMONWEALTH, 1914 TO 1920.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North Terr.	Federal Terr.	C'wealth.
1914	18,720	16,503	6,731	4,713	3,043	1,918	81	11	51,720
1915	19,585	15,823	7,559	4,694	2,992	2,015	97	17	52,782
1916	19,846	16,489	7,514	5,077	3,085	2,056	122	8	54,197
1917	17,941	14,555	6,555	4,365	2,769	1,768	63	13	48,029
1918	18,816	15,177	7,151	4,390	2,833	1,802	74	6	50,249
1919	26,344	19,370	8,856	5,475	3,590	2,192	85	18	65,930
1920	20,934	16,832	7,947	5,083	3,388	2,036	63	6	56,289

5. Crude Death Rates, 1914 to 1920.—The death rate for the Commonwealth during the period under review reached its maximum in 1919 owing to the outbreak of influenza.

CRUDE DEATH RATE (a), COMMONWEALTH, 1914 TO 1920.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North Terr.	Federal Terr.	C'wealth.
1914 ..	10.11	11.59	9.97	10.71	9.41	9.67	21.59	4.16	10.51
1915 ..	10.48	11.09	11.00	10.68	9.28	10.11	22.03	6.89	10.66
1916 ..	10.63	11.70	11.09	11.73	9.80	10.38	25.16	3.06	11.04
1917 ..	9.56	10.36	9.73	10.10	8.97	8.89	12.71	5.21	9.80
1918 ..	9.84	10.70	10.39	9.97	9.11	8.84	14.82	2.47	10.09
1919 ..	13.40	13.21	12.42	12.01	11.10	10.37	17.68	7.79	12.82
1920 ..	10.32	11.19	10.82	10.76	10.14	9.35	14.37	2.76	10.62

(a) Number of deaths per 1,000 of mean population for year.

6. Male and Female Death Rates, 1914 to 1920.—The large death rate in 1919 was due, as already stated, to an exceptional cause. The rates in the period 1914–20, excluding 1919, were remarkably steady, averaging about 12 per 1,000 for males, and 9 per 1,000 for females.

MALE AND FEMALE DEATH RATES (a), COMMONWEALTH, 1914 TO 1920.

Year.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
Male rate ..	11.67	12.08	12.65	11.47	11.70	14.66	11.98
Female rate ..	9.27	9.16	9.44	8.18	8.54	10.98	9.24
Crude total rate ..	10.51	10.66	11.04	9.80	10.09	12.82	10.62

(a) Number of deaths per 1,000 of mean population.

7. *Infantile Death Rate.*—(i) *Deaths and Death Rates of Male and Female Infants, 1914 to 1920.* Steady improvement in the infantile death rate was shewn during the period under review until 1919 and 1920, when the rate suddenly rose to a figure almost as great as in 1914. In the following table, which shews both the total number of deaths of children under one year and the rate per thousand births since 1914, 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 confirmed by the fact that out of 471,686 male infants born from 1914 to 1920, 34,493 died during their first year of life, while of 446,994 female infants the number who died was only 26,243 :—

NUMBER OF INFANTILE DEATHS AND RATES OF INFANTILE MORTALITY, COMMONWEALTH, 1914 TO 1920.

Year.	Registered Deaths under one year.			Rate of Infantile Mortality (a).		
	Males.	Females.	Total.	Males.	Females.	Total.
1914 ..	5,582	4,279	9,861	79.06	63.51	71.47
1915 ..	5,127	3,980	9,107	74.25	60.47	67.52
1916 ..	5,186	4,057	9,243	76.82	63.47	70.33
1917 ..	4,232	3,034	7,266	63.27	48.10	55.91
1918 ..	4,178	3,186	7,364	64.82	51.99	58.57
1919 ..	4,802	3,662	8,464	76.31	61.69	69.21
1920 ..	5,386	4,045	9,431	76.66	61.15	69.14

(a) Number of deaths under 1 year per 1,000 births registered.

(ii) *Infantile Mortality, 1914 to 1920.* Divided among the States and Territories the rates of infantile mortality during the last seven years were as follows :—

RATES (a) OF INFANTILE MORTALITY, COMMONWEALTH, 1914 TO 1920.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Federal Territory.	Com'- wealth.
1914 ..	69.29	78.27	63.93	75.79	68.12	71.46	51.72	22.73	71.47
1915 ..	67.67	68.78	64.33	67.04	66.54	72.37	65.57	42.55	67.52
1916 ..	67.15	74.63	70.27	73.21	66.22	74.97	40.54	15.87	70.33
1917 ..	56.93	56.82	53.87	53.06	57.09	52.27	43.48	45.45	55.91
1918 ..	59.02	61.75	56.66	51.25	57.13	60.80	28.57	20.41	58.57
1919 ..	71.83	67.90	71.88	64.01	61.12	64.97	66.04	111.11	69.21
1920 ..	69.41	73.70	63.24	67.34	66.02	65.51	190.48	66.67	69.14

(a) Number of deaths under 1 year per 1,000 births registered.

The movement has been irregular. In 1917 a rate of 55.91 was recorded, but since that year it has not been so favourable. The rate for 1920 is only slightly less than that for 1914.

A considerable decrease is shown by every State during 1917, and the rates for that year are the lowest on record in every State and in the Commonwealth as a whole, whilst only a very slight increase was registered in 1918. In 1919 and 1920 increases occurred in every State, especially in New South Wales.

The total number of births, and of deaths of children under one year of age, and the average rate of infantile mortality for the seven years 1914 to 1920 are shown in the following table for each of the fifty-nine districts for which the vital statistics of the Commonwealth have been tabulated during that period. To afford a better idea of the geographical position of the districts, the name of a town situated in a fairly central part of each district has been added. The figures for the Federal Territory and for Lord Howe Island are included for the sake of completeness, but are too small to be used in comparison with others.

INFANTILE MORTALITY FOR THE SEVEN YEARS 1914 TO 1920.

States and Territories.	Districts.	Towns.	Total Births, 1914-20.	Total Deaths of Children under one year, 1914-20.	Average Infantile Mortality per 1,000 Births, 1914-20.
New South Wales ..	Metropolitan ..	Sydney ..	146,608	10,121	69.03
" ..	North Coast ..	Grafton ..	29,372	1,454	49.50
" ..	Lower Hunter ..	Newcastle ..	38,301	2,720	71.01
" ..	Cumberland ..	Parramatta ..	18,918	1,146	60.58
" ..	South Coast ..	Nowra ..	14,704	854	58.08
" ..	Northern Tableland ..	Armidale ..	19,284	1,173	61.09
" ..	Central Tableland ..	Bathurst ..	24,252	1,759	72.53
" ..	Southern Tableland ..	Goulburn ..	19,099	1,179	61.73
" ..	North-Western Slope ..	Moree ..	7,863	515	65.50
" ..	Central-Western Slope ..	Dubbo ..	13,200	874	66.17
" ..	South-Western Slope ..	Temora ..	14,240	725	50.91
" ..	Riverina ..	Hay ..	8,061	445	55.20
" ..	Plains East of Darling ..	Cobar ..	2,871	226	78.72
" ..	Trans-Darling Plains ..	Broken Hill ..	7,500	809	107.87
" ..	Lord Howe Island ..	— ..	7	—	—
Victoria ..	Metropolitan ..	Melbourne ..	122,655	9,640	78.59
" ..	Central ..	Geelong ..	22,265	1,402	62.97
" ..	North-Central ..	Kyneton ..	9,634	551	57.19
" ..	Western ..	Hamilton ..	24,985	1,494	59.80
" ..	Wimmera ..	Horsham ..	9,969	569	57.08
" ..	Mallee ..	Ultima ..	7,105	439	61.65
" ..	Northern ..	Rochester ..	22,790	1,414	62.05
" ..	North-Eastern ..	Beechworth ..	7,314	370	50.59
" ..	Gippsland ..	Sale ..	11,211	564	50.31
Queensland ..	Metropolitan ..	Brisbane ..	39,815	2,940	73.84
" ..	Moreton ..	Ipswich ..	16,807	876	52.12
" ..	Wide Bay ..	Maryborough ..	16,802	909	54.10
" ..	Port Curtis ..	Rockhampton ..	11,115	775	69.72
" ..	Edgecumbe ..	Townsville ..	13,790	792	57.43
" ..	Rockingham ..	Cairns ..	6,972	354	50.77
" ..	York Peninsula ..	Cooktown ..	1,111	79	71.11
" ..	Carpentaria ..	Croydon ..	2,542	215	84.58
" ..	Central-Western ..	Winton ..	745	74	99.33
" ..	South-Western ..	Charleville ..	1,900	151	83.89
" ..	Central ..	Blackall ..	4,188	269	64.23
" ..	Maranoa ..	Roma ..	2,696	172	63.80
" ..	Downs ..	Toowoomba ..	18,852	1,089	57.77
South Australia ..	Metropolitan ..	Adelaide ..	40,789	2,919	71.56
" ..	Central ..	Gawler ..	16,948	846	49.92
" ..	Lower North ..	Redruth ..	12,963	976	75.29
" ..	Upper North ..	Port Augusta ..	4,012	263	65.55
" ..	South-Eastern ..	Mount Gambler ..	4,348	204	46.92
" ..	Western ..	Port Lincoln ..	3,270	130	39.76
Western Australia ..	Metropolitan ..	Perth ..	27,153	1,919	70.67
" ..	Northern Agricultural ..	Geraldton ..	8,108	464	57.23
" ..	South-Western ..	Katanning ..	12,935	597	46.15
" ..	Eastern Goldfields ..	Kalgoorlie ..	6,816	498	73.06
" ..	Northern Goldfields ..	Pilbara ..	1,373	102	74.29
" ..	North-Western ..	Roebourne ..	266	12	45.11
" ..	Northern ..	Broome ..	207	20	96.62
Tasmania ..	Hobart ..	Hobart ..	9,777	700	80.80
" ..	Launceston ..	Launceston ..	6,022	449	74.56
" ..	North-Eastern ..	Scottsdale ..	4,256	237	55.69
" ..	North-Western ..	Stanley ..	9,790	574	58.63
" ..	Midland ..	Zeehan ..	4,354	262	60.18
" ..	South-Eastern ..	Sorell ..	3,911	215	54.97
" ..	South-Western ..	Franklin ..	1,100	72	65.45
Northern Territory ..	..	Darwin ..	538	35	65.29
Federal Territory ..	..	Canberra ..	300	10	33.33

(iii) *Infantile Mortality in Various Countries and Cities.* Compared with European and American countries, the cities and States of the Commonwealth occupy a very favourable position. It may be pointed out also in connexion with the rates hereunder 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 ..	1919	45	21.5	United States (Registration area)	1918	101	24.4
Netherlands ..	1919	50	24.2	Scotland ..	1919	102	21.7
Norway ..	1917	54	24.4	Belgium ..	1912	120	22.6
Queensland ..	1920	63	27.6	Finland ..	1917	134	24.3
Tasmania ..	1920	66	26.4	Quebec (Canada)	1917	136	35.7
Western Australia	1920	66	24.4	Italy ..	1917	140	19.0
South Australia	1920	67	25.5	Prussia ..	1912	146	28.9
New South Wales	1920	69	26.6	Serbia ..	1911	146	36.2
Australia ..	1920	69	25.7	Germany ..	1913	151	27.5
Victoria ..	1920	74	24.1	Bulgaria ..	1911	156	40.2
Sweden ..	1915	76	20.3	Japan ..	1916	168	32.9
France ..	1912	78	19.0	Austria ..	1912	180	31.3
South Africa, Union of (Whites)	1919	80	29.0	Jamaica ..	1917	185	34.1
Ireland ..	1919	87	20.0	Hungary ..	1912	186	36.3
Switzerland ..	1918	88	18.4	Rumania ..	1914	187	42.5
England and Wales	1919	89	18.5	Spain ..	1919	192	28.3
United Kingdom	1919	90	19.0	Ceylon ..	1919	223	34.2
Denmark ..	1915	95	24.2	Russia, European	1909	248	44.0
Ontario (Canada)	1919	96	22.1	Chile ..	1914	286	37.0

(a) Number of deaths under 1 year per 1,000 births registered. (b) Number of births per 1,000 of mean population.

RATE (a) OF INFANTILE MORTALITY IN VARIOUS CITIES.

City.	Year.	Rate of Infantile Mortality. (a)	City.	Year.	Rate of Infantile Mortality. (a).
Amsterdam ..	1920	47	Glasgow ..	1920	107
Stockholm ..	1920	48	Antwerp ..	1920	109
Christiania ..	1920	55	Monte Video	1916	111
Zürich ..	1916	55	Liverpool ..	1920	111
Rome ..	1915	56	Lyons ..	1916	115
Auckland ..	1918	58	Aberdeen ..	1920	121
Brisbane ..	1920	70	Milan ..	1916	124
Wellington ..	1918	71	Genoa ..	1916	126
Geneva ..	1916	73	Belfast ..	1920	132
Sydney ..	1920	74	Leipzig ..	1920	133
Adelaide ..	1920	75	Budapest ..	1912	141
Hobart ..	1920	75	Dublin ..	1920	143
London ..	1920	75	Chicago ..	1916	145
Perth ..	1920	76	Marseilles ..	1916	157
Birmingham ..	1920	83	Berlin ..	1920	161
Melbourne ..	1920	84	Vienna ..	1920	161
New York ..	1920	86	Brussels ..	1912	166
Copenhagen ..	1920	88	Rio de Janeiro	1912	174
Edinburgh ..	1920	89	Madrid ..	1915	177
Toronto ..	1917	92	Bucharest ..	1912	185
Buenos Aires ..	1916	94	Florence ..	1916	192
Manchester ..	1920	94	Montreal ..	1911	242
Paris ..	1920	98	Petrograd ..	1912	249
Hamburg ..	1910	105	Moscow ..	1915	317
Washington ..	1916	106	Bombay ..	1920	556

(a) Number of deaths under 1 year per 1,000 births registered.

8. Deaths in Age-Groups, 1914 to 1920.—A distribution into age-groups has been made of the 379,196 deaths which occurred in the Commonwealth from 1914 to 1920, and the results have been 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, 1914 TO 1920.

Ages.	Males.	Females.	Total.	Percentage of Total Males.	Percentage of Total Females.	Percentage of Total.
Under 1 year ..	34,493	26,243	60,736	15.87	16.22	16.02
1 year and under 5 ..	12,365	10,761	23,126	5.69	6.65	6.10
5 years and under 20 ..	11,241	9,314	20,555	5.17	5.76	5.42
20 years and under 40	29,460	25,822	55,282	13.55	15.96	14.58
40 years and under 60	48,492	29,379	77,871	22.31	18.15	20.53
60 years and under 65	15,691	9,011	24,702	7.22	5.57	6.51
65 years and over ..	65,260	51,213	116,473	30.02	31.65	30.72
Age not stated ..	384	67	451	0.17	0.04	0.12
Total ..	217,386	161,810	379,196	100.00	100.00	100.00

9. Deaths at Single Ages and in Age-Groups, 1920.—The 56,289 deaths which were registered in the Commonwealth in the year 1920 will be found tabulated under single years, and in groups of five years for each State and Territory, in "Bulletin No. 38, Commonwealth Demography, 1920." 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 that a great number of children died 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, COMMONWEALTH, 1920.

Ages.	Males.	Females.	Total.	Ages.	Males.	Females.	Total.
Under 1 week ..	1,866	1,287	3,153	16 months and under 17 ..	90	76	166
1 week and under 2 ..	328	232	560	17 " " " " 18 ..	64	55	119
2 weeks " " 3 ..	209	158	367	18 " " " " 19 ..	94	73	167
3 " " " 4 ..	145	116	261	19 " " " " 20 ..	63	48	111
Total under 1 month ..	2,548	1,793	4,341	20 " " " " 21 ..	50	41	91
1 month and under 2 ..	447	346	793	21 " " " " 22 ..	62	59	121
2 months " " 3 ..	393	289	682	22 " " " " 23 ..	46	47	93
3 " " " 4 ..	321	282	603	23 " " " " 24 ..	40	38	78
4 " " " 5 ..	299	244	543	Total under 2 years ..	6,505	5,014	11,519
5 " " " 6 ..	248	202	450	2 years ..	464	396	860
6 " " " 7 ..	250	185	435	3 " " " ..	329	267	596
7 " " " 8 ..	178	164	342	4 " " " ..	210	202	412
8 " " " 9 ..	196	124	320	Total under 5 years ..	7,508	5,879	13,387
9 " " " 10 ..	157	145	302	5 years ..	182	160	342
10 " " " 11 ..	172	155	327	6 " " " ..	173	134	307
11 " " " 12 ..	177	116	293	7 " " " ..	128	126	254
Total under 1 year ..	5,386	4,045	9,431	8 " " " ..	97	97	194
12 months and under 13 ..	291	258	549	9 " " " ..	98	87	185
13 " " " 14 ..	103	87	190	Total 5 years and under 10	678	604	1,282
14 " " " 15 ..	119	103	222				
15 " " " 16 ..	97	84	181				

DEATHS AT SINGLE AGES AND IN AGE-GROUPS, 1920—continued.

Ages.	Males.	Females.	Total.	Ages.	Males.	Females.	Total.
10 years	83	70	153	60 years	614	295	909
11 "	61	62	123	61 "	366	244	610
12 "	77	64	141	62 "	506	295	801
13 "	86	72	158	63 "	503	316	819
14 "	99	63	162	64 "	588	315	903
Total 10 years and under 15	406	331	737	Total 60 years and under 65	2,577	1,465	4,042
15 years	103	77	180	65 years	621	329	950
16 "	110	69	179	66 "	446	287	733
17 "	109	82	191	67 "	456	248	704
18 "	116	100	216	68 "	444	320	764
19 "	127	117	244	69 "	427	270	697
Total 15 years and under 20	565	445	1,010	Total 65 years and under 70	2,394	1,454	3,848
20 years	147	100	247	70 years	533	311	844
21 "	136	125	261	71 "	408	271	679
22 "	134	123	257	72 "	444	362	806
23 "	141	141	282	73 "	393	325	718
24 "	148	145	293	74 "	447	369	816
Total 20 years and under 25	706	634	1,340	Total 70 years and under 75	2,225	1,638	3,863
25 years	159	155	314	75 years	489	424	913
26 "	186	180	366	76 "	511	419	930
27 "	173	191	364	77 "	393	341	734
28 "	186	198	384	78 "	474	383	857
29 "	171	176	347	79 "	370	347	717
Total 25 years and under 30	875	900	1,775	Total 75 years and under 80	2,237	1,914	4,151
30 years	211	175	386	80 years	446	383	829
31 "	176	178	354	81 "	311	247	558
32 "	222	201	423	82 "	336	314	650
33 "	180	193	373	83 "	292	283	575
34 "	179	146	325	84 "	302	274	576
Total 30 years and under 35	968	893	1,861	Total 80 years and under 85	1,687	1,501	3,188
35 years	224	168	392	85 years	258	278	536
36 "	200	190	390	86 "	237	220	457
37 "	194	154	348	87 "	214	188	402
38 "	227	212	439	88 "	166	177	343
39 "	207	210	417	89 "	127	133	260
Total 35 years and under 40	1,052	934	1,986	Total 85 years and under 90	1,002	996	1,998
40 years	261	203	464	90 years	136	126	262
41 "	175	144	319	91 "	75	66	141
42 "	260	171	431	92 "	69	56	125
43 "	209	197	406	93 "	42	52	94
44 "	243	188	431	94 "	31	48	79
Total 40 years and under 45	1,148	903	2,051	Total 90 years and under 95	353	348	701
45 years	298	195	493	95 years	19	25	44
46 "	254	164	418	96 "	20	22	42
47 "	282	157	439	97 "	8	15	23
48 "	297	210	507	98 "	8	15	23
49 "	317	197	514	99 "	5	7	12
Total 45 years and under 50	1,428	923	2,351	Total 95 yrs. and under 100	60	84	144
50 years	360	233	593	100 years	6	6	12
51 "	293	140	433	101 "	6	2	8
52 "	363	233	596	102 "	1	2	3
53 "	374	199	573	103 "	2	..	2
54 "	426	275	701	104 "	1	2	3
Total 50 years and under 55	1,816	1,080	2,896	105 "	3	..	3
55 years	435	230	665	106 " .. ..	..	1	1
56 "	466	253	719	107 " .. ..	..	1	1
57 "	435	227	662	Total 100 years and over	19	14	33
58 "	506	290	796	Age not stated ..	65	16	81
59 "	442	280	722	Total all ages ..	32,053	24,236	56,289
Total 55 years and under 60	2,284	1,280	3,564				

The following tables shew the death rate per 1,000 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 1,000 LIVING IN VARIOUS AGE-GROUPS, 1910 TO 1912.

Age Group.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.
MALES.							
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	28.39	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 „	14.38	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

AVERAGE ANNUAL DEATH RATES PER 1,000 LIVING, IN VARIOUS AGE-GROUPS, 1910 TO 1912—continued.

Age-Group.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.
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	26.48	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 1,000 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, 1920.—Particulars as to the thirty-three persons who died in 1920, 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. No attempt has been made by the Commonwealth Bureau of Census and Statistics to verify the truth of the statements made. The fact must not be disregarded in connexion 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, COMMONWEALTH, 1920.

Age.	Locality where Death occurred.	State.	Cause of Death.	Occupation.	Birthplace.	Length of Residence in Commonwealth.	Conjugal Condition.
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MALES.

Yrs.	Young ..	N.S.W. ..	Senility ..	Farmer ..	Tasmania	Native ..	Married
105	Hamilton ..	Victoria ..	Cerebral hæmorrhage	Labourer ..	Ireland ..	Unspecified	Single
105	Geraldton ..	W. Australia	Senility ..	Farm labourer	Unspecified	Unspecified	Unspecified
104	Grafton ..	N.S.W. ..	„ ..	Farmer ..	England ..	55 years ..	Married
103	Nhill ..	Victoria ..	„ ..	Labourer ..	Ireland ..	80 „ ..	Single
103	Perth ..	W. Australia	„ ..	Unspecified	„ ..	56 „ ..	Unspecified
102	Waubra ..	Victoria ..	„ ..	Labourer ..	„ ..	60 „ ..	Married
101	Ballina ..	N.S.W. ..	Cystitis	Farmer ..	N.S.W.	Native ..	„
101	Wellington ..	„ ..	Senility ..	Labourer ..	Unspecified	Unspecified	„
101	Maryborough	Queensland	Apoplexy ..	Unspecified	Ireland ..	80 years ..	Single

DEATHS OF CENTENARIANS, COMMONWEALTH, 1920—*continued.*

Age.	Locality where Death occurred.	State.	Cause of Death.	Occupation.	Birthplace.	Length of Residence in Commonwealth.	Conjugal Condition.
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MALES—*continued.*

Yrs.	Adelaide ..	S. Australia	Pulmonary oedema	Dealer ..	England ..	68 years ..	Married
101	Kapunda ..	"	Pneumonia	Farmer ..	" ..	70 " ..	"
101	Dubbo ..	N.S.W. ..	Senility ..	Labourer..	" ..	79 " ..	"
100	Parramatta ..	" ..	" ..	Farmer ..	" ..	75 " ..	"
100	Parramatta ..	" ..	Epithelioma of back	Contractor	N.S.W. ..	Native ..	"
100	Taree ..	" ..	Broncho-pneumonia	Farmer ..	England ..	70 years ..	"
100	Hopetoun ..	Victoria ..	Senility ..	" ..	Germany..	64 " ..	"
100	Brisbane ..	Queensland	" ..	Miner ..	Ireland ..	73 " ..	"
100	Smithfield..	S. Australia	" ..	Farmer ..	Germany..	74 " ..	"

FEMALES.

Yrs.	Norwood ..	S. Australia	Acute bronchitis	..	England ..	81 years ..	Married
106	White Cliffs	N.S.W. ..	Senility ..	..	Unspecified	Unspecified	Unspecified
104	Bourke ..	" ..	Valvular disease of heart	..	Tasmania	Native ..	Married
104	Longford ..	Tasmania	Senility ..	..	Ireland ..	Unspecified	"
102	Kempsey ..	N.S.W. ..	" ..	..	" ..	64 years ..	"
102	Auburn ..	" ..	" ..	..	" ..	72 " ..	"
101	St. Kilda ..	Victoria ..	" ..	..	Scotland ..	60 " ..	"
101	Wandiligong	" ..	" ..	..	Ireland ..	80 " ..	"
100	Albury ..	N.S.W. ..	" ..	..	England ..	68 " ..	"
100	Chatswood ..	" ..	" ..	..	" ..	65 " ..	"
100	St. Leonards	" ..	" ..	..	Ireland ..	Unspecified	Single
100	Golden Square	Victoria ..	" ..	..	England ..	69 years ..	Married
100	Preston ..	" ..	" ..	..	" ..	78 " ..	"
100	Westbury ..	Tasmania	" ..	..	Ireland ..	86 " ..	"

11. Length of Residence in the Commonwealth of Persons who Died in 1920.—The length of residence in the Commonwealth of all persons whose deaths were registered in the year 1920 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 1920.

Length of Residence.	Male Deaths.	Female Deaths.	Total Deaths.	Length of Residence.	Male Deaths.	Female Deaths.	Total Deaths.
Born in the C'wealth ..	19,632	16,188	35,820	Resident 25 to 29 years	378	159	537
Resident under 1 year ..	149	81	230	" 30 to 34 "	986	543	1,529
" 1 year ..	77	46	123	" 35 to 39 "	1,101	630	1,731
" 2 years ..	26	10	36	" 40 to 44 "	1,060	564	1,624
" 3 " ..	30	18	48	" 45 to 49 "	615	396	1,011
" 4 " ..	27	18	45	" 50 to 54 "	857	688	1,545
" 5 " ..	45	38	83	" 55 to 59 "	914	716	1,630
" 6 " ..	81	69	150	" 60 to 64 "	1,206	1,095	2,301
" 7 " ..	147	122	269	" 65 yrs. and over	1,521	1,699	3,220
" 8 " ..	181	111	292	Length of residence not stated ..	2,053	604	2,657
" 9 " ..	130	66	196				
" 10 to 14 years ..	333	176	509				
" 15 to 19 " ..	168	81	249				
" 20 to 24 " ..	336	118	454				
				Total ..	32,053	24,236	56,289

12. Birthplaces of Persons who Died in 1920.—In the following table are shewn the birthplaces of persons whose deaths were registered in 1920 :—

BIRTHPLACES OF PERSONS WHO DIED IN 1920, COMMONWEALTH.

Birthplace.	Males.	Females.	Total.	Birthplace.	Males.	Females.	Total.
AUSTRALASIA—				ASIA—continued.			
Commonwealth of Australia—				Philippine Islands ..	8	..	8
New South Wales ..	7,398	6,115	13,513	Syria ..	10	5	15
Victoria ..	6,212	5,021	11,233	Other Asiatic Countries ..	37	2	39
Queensland ..	2,164	1,836	4,000				
South Australia ..	2,059	1,651	3,710				
Western Australia ..	710	534	1,244				
Tasmania ..	1,078	1,020	2,098	AFRICA—			
Northern Territory ..	10	10	20	Union of Sth. Africa ..	8	7	15
Federal Territory ..	1	1	2	Mauritius ..	18	12	30
New Zealand ..	158	97	255	Other African Brit. Possessions ..	3	2	5
				Egypt ..	3	2	5
				Other African Countries ..	4	2	6
EUROPE—							
England ..	5,257	3,631	8,888	AMERICA—			
Wales ..	193	134	327	Barbadoes ..	1	..	1
Scotland ..	1,525	1,040	2,565	Canada ..	52	14	66
Ireland ..	2,387	2,298	4,685	Jamaica ..	7	1	8
Isle of Man ..	8	10	18	Newfoundland ..	3	1	4
Other European Brit. Possessions ..	38	20	58	Other American Brit. Possessions ..	4	..	4
Austria-Hungary ..	33	6	39	Brazil ..	1	1	2
Belgium ..	10	5	15	Chile ..	2	1	3
Denmark ..	119	32	151	Peru ..	1	..	1
France ..	60	21	81	United States of America ..	92	28	120
Germany ..	488	297	785	Other American Countries ..	28	10	38
Greece ..	28	2	30				
Italy ..	86	18	104	POLYNESIA—			
Netherlands ..	15	..	15	Fiji ..	4	3	7
Norway ..	61	7	68	Friendly Islands ..	1	1	2
Portugal ..	7	..	7	Papua ..	17	1	18
Russia ..	107	17	124	Other Polynesian Brit. Possessions ..	6	..	6
Spain ..	8	4	12	New Caledonia ..	6	1	7
Sweden ..	138	10	148	New Hebrides ..	1	2	3
Switzerland ..	38	8	46	Samoa ..	..	1	1
Other European Countries ..	7	..	7	Other Polynesian Islands ..	..	3	3
				South Sea Islands (so described) ..	32	1	33
ASIA—				At Sea ..	87	63	150
British India ..	77	24	101	Not stated ..	761	194	955
Ceylon ..	13	1	14				
Hong Kong ..	2	..	2	Total Deaths ..	32,053	24,236	56,289
Straits Settlements ..	10	2	12				
Other Asiatic Brit. Possessions ..	1	1	2				
Afghanistan ..	1	..	1				
Arabia ..	1	..	1				
China ..	288	3	291				
Japan ..	51	2	53				
Java ..	9	..	9				

13. Occupations of Male Persons who Died in 1920.—Information as to the occupations of the 32,053 males who died in the Commonwealth in 1920 is contained in the following statement :—

OCCUPATIONS OF MALES WHO DIED IN 1920, COMMONWEALTH.

Occupation.	No. of Deaths.	Occupation.	No. of Deaths.
CLASS I.—PROFESSIONAL.		CLASS III.—COMMERCIAL—<i>cont.</i>	
General Government	146	Animal food	297
Local Government	25	Vegetable food	83
Defence	211	Groceries and stimulants	163
Law and order	209	Living animals	36
Religion	90	Leather, raw material	4
Charity	3	Wool and tallow	10
Health	197	Hay, corn, &c.	16
Literature	58	Other vegetable matter	14
Science	10	Wood and coal	32
Civil and mechanical engineering, architecture and surveying	94	Stone, clay, glass	6
Education	144	Gold, silver and precious stones	2
Fine arts	39	Ironmongery	26
Music	43	Merchants	93
Amusements	122	Shopkeepers and assistants	230
Total Professional	1,391	Dealers and hawkers	104
CLASS II.—DOMESTIC.		Agents and brokers	124
Hotelkeepers and assistants	437	Clerks, bookkeepers, &c.	683
Others engaged in providing board and lodging	28	Commercial travellers and salesmen	224
Coachmen and grooms	42	Others engaged in commercial pursuits	188
Hairdressers	81	Speculators on chance events	14
Laundrymen	14	Storage	1
Others engaged in domestic occupations	137	Total Commercial	2,814
Total Domestic	739	CLASS IV.—TRANSPORT AND COMMUNICATION.	
CLASS III.—COMMERCIAL.		Railway traffic	475
Banking and finance	96	Tramway traffic	65
Insurance and valuation	84	Road traffic	614
Land and household property	49	Sea and river traffic	625
Property rights, n.e.i.	1	Postal service	84
Books, publications and advertising	52	Telegraph and telephone service	33
Musical instruments	1	Messengers, &c.	14
Sports and games	2	Total Transport and Communication	1,910
Arms and ammunition	1	CLASS V.—INDUSTRIAL.	
Machines, tools and implements	5	Books and publications	123
Carriages and vehicles	3	Musical instruments	16
Harness and saddlery	5	Prints, pictures and art materials	4
Ships and boats	1	Ornaments and small wares	21
Building materials	11	Sports and games	1
Furniture	5	Designs, medals, type and dies	3
Paper and stationery	15	Watches and clocks	38
Textile fabrics	102	Surgical instruments	2
Dress	29	Arms and ammunition	6
Fibrous materials	2	Engines, machines, tools, &c.	155
		Carriages and vehicles	144
		Harness, saddlery and leatherware	118

OCCUPATIONS OF MALES WHO DIED IN 1920, COMMONWEALTH—*continued.*

Occupation.	No. of Deaths.	Occupation.	No. of Deaths.
CLASS V.—INDUSTRIAL—<i>continued.</i>		CLASS VI.—AGRICULTURAL, PASTORAL, MINING PURSUITS, ETC.	
Ships, boats and equipments ..	55	Agricultural	3,219
Furniture	122	Pastoral	851
Building materials	112	Dairy farming	54
Chemicals and by-products ..	4	Bees, fisheries and wild animals ..	123
Textile fabrics	42	Forestry	89
Dress	418	Water conservation and supply ..	23
Fibrous materials	8	Mines and quarries	1,427
Animal food	22		
Vegetable food	194	Total Primary Producers ..	5,786
Groceries and stimulants ..	71		
Animal matter	62		
Workers in wood not elsewhere classed	24		
Paper	4		
Stone, clay, glass	90		
Jewellery and precious stones ..	43		
Metals, other than gold and silver	408		
Gas, electric lighting, &c. ..	82		
		CLASS VII.—INDEFINITE.	
Buildings—		Independent means, having no specific occupation	501
Builders	110	Occupation unspecified	1,094
Stonemasons	87		
Bricklayers	108	Total Indefinite	1,595
Slaters	5		
Carpenters	518		
Plasterers	61		
Painters and glaziers	207		
Plumbers	94		
Signwriters	7		
Others	5	CLASS VIII.—DEPENDENTS.	
Roads, railways and earthworks	56	Dependent relatives (including persons under 20 years of age with no specified occupation) ..	8,880
Disposal of the dead	9	Supported by voluntary and State contributions	89
Disposal of refuse	22		
Other industrial workers—		Total Dependents	8,969
Manufacturers	53		
Engineers, firemen	504		
Contractors	205		
Labourers, undefined	4,376		
Others	30		
Total Industrial	8,849	Total Male Deaths	32,053

14. *Index of Mortality.*—The death rates, those for age-groups on page 120 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 contains 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 1920 is shewn below for each of the States and Territories and for the Commonwealth, the distribution of the mean population of 1920 into age-groups being in accordance with the distribution as found at the Census of 1911 :—

INDEX OF MORTALITY, STATES AND COMMONWEALTH, 1920.

Age-Group.	Mean Population, 1920, distributed according to Results of Census of 1911.	Number of Deaths, 1920.	No. of Deaths per 1,000 of Mean Population, 1920, in each Age-Group.	Age Distribution per 1,000 of Standard Population.	Index of Mortality.
NEW SOUTH WALES.					
Under 1 year	55,784	3,751	67.24	25.5	1.71
1 year and under 20	798,860	2,616	3.27	398.0	1.30
20 years " 40	679,672	2,590	3.81	269.6	1.03
40 " " 60	366,959	3,975	10.83	192.3	2.08
60 " and upwards	127,378	8,002	62.82	114.6	7.20
Total	2,028,653	20,934	10.32	1,000.0	13.32
VICTORIA.					
Under 1 year	35,595	2,670	75.01	25.5	1.91
1 year and under 20	579,109	1,936	3.34	398.0	1.33
20 years " 40	476,234	1,918	4.03	269.6	1.09
40 " " 60	303,211	3,230	10.65	192.3	2.04
60 " and upwards	110,348	7,078	64.14	114.6	7.35
Total	1,504,497	16,832	11.19	1,000.0	13.72
QUEENSLAND.					
Under 1 year	19,858	1,234	64.65	25.5	1.65
1 year and under 20	300,844	1,168	3.88	398.0	1.54
20 years " 40	240,612	1,073	4.46	269.6	1.20
40 " " 60	130,457	1,583	12.13	192.3	2.33
60 " and upwards	42,608	2,839	66.03	114.6	7.64
Total	734,379	7,947	10.82	1,000.0	14.36
SOUTH AUSTRALIA.					
Under 1 year	12,170	811	66.64	25.5	1.70
1 year and under 20	185,061	649	3.51	398.0	1.40
20 years " 40	155,717	654	4.20	269.6	1.13
40 " " 60	86,397	798	9.24	192.3	1.78
60 " and upwards	33,249	2,171	65.30	114.6	7.48
Total	472,594	5,083	10.76	1,000.0	13.49
WESTERN AUSTRALIA.					
Under 1 year	8,930	539	60.36	25.5	1.54
1 year and under 20	122,335	399	3.26	398.0	1.30
20 years " 40	122,656	454	3.70	269.6	1.00
40 " " 60	66,712	932	13.97	192.3	2.69
60 " and upwards	13,400	1,064	79.40	114.6	9.10
Total	334,033	3,388	10.14	1,000.0	15.63
TASMANIA.					
Under 1 year	6,118	376	61.46	25.5	1.57
1 year and under 20	92,675	223	2.41	398.0	0.96
20 years " 40	66,575	272	4.09	269.6	1.10
40 " " 60	38,689	336	8.68	192.3	1.67
60 " and upwards	13,603	829	60.94	114.6	6.98
Total	217,660	2,036	9.35	1,000.0	12.28
NORTHERN TERRITORY.					
Under 1 year	39	12	307.69	25.5	7.85
1 year and under 20	806	4	4.96	398.0	1.97
20 years " 40	1,169	9	7.70	269.6	2.08
40 " " 60	1,970	24	12.18	192.3	2.34
60 " and upwards	399	14	35.09	114.6	4.03
Total	4,383	63	14.37	1,000.0	18.27

INDEX OF MORTALITY, STATES AND COMMONWEALTH, 1920—continued.

Age-Group.	Mean Population, 1920, distributed according to Results of Census of 1911.	Number of Deaths, 1920.	No. of Deaths per 1,000 of Mean Population, 1920, in each Age-Group.	Age Distribution per 1,000 of Standard Population.	Index of Mortality.
FEDERAL TERRITORY.					
Under 1 year	50	1	20.00	25.5	0.51
1 year and under 20	892	1	1.12	398.0	0.45
20 years .. 40	668	2	2.99	269.6	0.81
40 " .. 60	405	..	..	192.3	..
60 " and upwards	180	2	12.50	114.6	1.43
Total	2,175	6	2.76	1,000.0	3.20
COMMONWEALTH.					
Under 1 year	138,544	9,444	68.17	25.5	1.74
1 year and under 20	2,080,582	6,996	3.36	308.0	1.34
20 years .. 40	1,743,303	6,972	3.99	269.6	1.08
40 " .. 60	994,800	10,878	10.93	192.3	2.10
60 " and upwards	341,145	21,999	64.49	114.6	7.39
Total	5,268,374	56,289	10.62	1,000.0	13.65

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 persons who died in 1920, and whose ages were not stated in the certificates of death.

It will be seen that among the States in 1920 Western Australia had the highest index and Victoria the highest crude rate, while Tasmania had the lowest index and crude rate. The range of the indexes was above that of the crude rates, the latter varying from 9.35 per thousand in Tasmania to 11.19 per thousand in Victoria, a range of 1.84 per thousand, while the index varied from 12.23 per thousand in Tasmania to 15.63 per thousand in Western Australia, a range of 3.35 per thousand.

For purposes of comparison with previous years the index of mortality is shewn in the following table for each of the seven years 1914-1920 :—

INDEX OF MORTALITY, STATES AND TERRITORIES, 1914-1920.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Territory.	C'wealth.
1914 ..	12.72	14.11	12.70	13.03	12.56	12.11	20.35	5.17	13.18
1915 ..	13.24	13.54	14.30	13.09	12.79	13.04	21.62	7.15	13.47
1916 ..	13.48	14.28	14.37	14.45	14.15	13.43	22.63	3.63	13.99
1917 ..	12.45	12.81	12.64	12.65	12.93	11.78	13.42	6.70	12.63
1918 ..	12.86	13.23	13.94	12.53	13.69	11.70	15.40	2.37	13.07
1919 ..	16.48	15.51	15.97	14.59	15.50	13.29	17.42	8.76	15.75
1920 ..	13.32	13.72	14.36	13.49	15.63	12.28	18.27	3.20	13.65

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 110 of this issue, distinguishing the rates for males, females, and persons. The curves shewing the male and female rates 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 Rate.* A similar series of diagrams, shewing the monthly variations in the infantile death rates, appears on page 111. 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. 6, 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:—

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

(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 all the State offices in the preparation of their monthly and quarterly bulletins of vital statistics.

(iii) *Classification of Causes of Death, 1914 to 1920, 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 showing the causes of death according to the abridged classification, so that the results may be compared with those of countries which use the abridged index.

The compilations for the years 1914 to 1920 will be found in full in "Bulletins Nos. 32 to 38 of Population and Vital Statistics"; here it will suffice to give the abridged classification under thirty-eight headings for the year 1920.

CAUSES OF DEATH, COMMONWEALTH, 1920.

MALES.

Cause.	N.S.W.	Vic.	Q'land.	S. Aus.	W. Aus.	Tas.	Nor. Ter.	Fed. Ter.	C'with.
1 Typhoid Fever ..	75	34	40	10	18	5	...	...	182
2 Typhus ..	..	..	..	..	..	..	..	..	..
3 Malaria ..	1	1	10	..	3	..	..	..	15
4 Small-pox ..	..	..	..	..	..	..	..	..	..
5 Measles ..	89	112	21	8	8	11	..	..	249
6 Scarlet Fever ..	12	12	1	12	2	..	..	..	39
7 Whooping Cough ..	128	70	22	19	..	3	2	..	244
8 Diphtheria and Croup ..	131	134	67	51	27	13	..	..	423
9 Influenza ..	55	12	36	6	2	5	..	..	116
9A Pneumonic Influenza ..	45	20	44	9	13	1	..	..	132
10 Asiatic Cholera ..	..	..	..	..	..	..	..	..	..
11 Cholera Nostras ..	..	..	..	1	..	..	..	..	1
12 Other Epidemic Diseases ..	31	15	14	5	6	..	1	..	72
13 Tuberculosis of the Lungs ..	688	531	216	174	193	58	13	..	1,873
14 Tuberculosis of the Meninges ..	42	48	3	12	7	11	..	..	123
15 Other forms of Tuberculosis ..	52	66	15	15	9	6	..	..	163
16 Cancer and other Malignant Tumours ..	891	678	312	223	156	78	3	1	2,342
17 Simple Meningitis ..	134	100	61	39	21	9	..	..	364
18 Congestion, Hæmorrhage and Softening of Brain ..	508	354	174	160	59	42	..	1	1,298
19 Organic Diseases of the Heart ..	1,095	890	490	290	184	124	4	..	3,077
20 Acute Bronchitis ..	112	45	23	18	9	4	..	..	211
21 Chronic Bronchitis ..	187	183	92	44	17	8	1	..	532
22 Pneumonia ..	502	373	154	98	62	60	1	..	1,250
23 Other Diseases of the Respiratory System (Tuberculosis exceptd.) ..	500	517	204	101	88	45	..	..	1,455
24 Diseases of the Stomach (Cancer excepted) ..	71	75	51	17	9	8	..	..	231
25 Diarrhoea and Enteritis (children under 2 years only) ..	689	379	300	166	138	48	..	..	1,720
26 Appendicitis & Typhlitis ..	103	61	45	22	10	10	..	..	251
27 Hernia, Intestinal Obstructions ..	111	87	55	22	30	6	..	..	311
28 Cirrhosis of the Liver ..	97	49	44	20	22	1	1	..	234
29 Nephritis and Bright's Disease ..	496	375	240	125	71	48	..	..	1,355
30 Non-cancerous Tumours and other Diseases of Female Genital Organs ..	..	..	..	..	..	..	..	..	..
31 Puerperal Septicæmia (Puerperal Fever, Puerperal Peritonitis, Puerperal Phlebitis) ..	..	..	..	..	..	..	..	..	..
32 Other Puerperal Accidents of Pregnancy and Confinement ..	..	..	..	..	..	..	..	..	..
33 Congenital Debility and Malformations ..	924	692	308	211	137	78	3	1	2,354
34 Senile Debility ..	963	715	333	226	183	84	1	..	2,505
35 Violence ..	787	552	378	185	186	63	7	1	2,159
36 Suicide ..	202	116	113	25	41	15	4	..	516
37 Other Diseases ..	2,185	1,622	905	442	385	196	5	..	5,740
38 Unspecified or Ill-defined Diseases ..	182	141	53	58	65	15	2	..	516
Total—Males ..	12,088	9,059	4,824	2,914	2,161	1,055	48	4	32,053

CAUSES OF DEATH, COMMONWEALTH, 1920.

FEMALES.

Cause.	N.S.W.	Vic.	Q'land.	S. Aus.	W. Aus.	Tas.	Nor. Ter.	Fed. Ter.	C'wlth.
1 Typhoid Fever ...	51	19	32	7	10	11	..	..	130
2 Typhus .. ..	..	..	..	..	..	..	..	..	..
3 Malaria	1	..	2	..	..	..	1	..	4
4 Small-pox .. ..	..	..	..	..	..	..	..	..	..
5 Measles	82	100	33	6	8	4	..	..	233
6 Scarlet Fever ..	8	25	5	11	2	..	..	..	51
7 Whooping Cough ..	165	104	25	20	..	3	..	..	317
8 Diphtheria and Croup	119	147	61	36	23	20	..	..	406
9 Influenza	59	13	26	2	8	6	..	..	114
9a Pneumonic Influenza..	38	25	14	2	5	2	..	..	86
10 Asiatic Cholera ..	..	..	..	..	..	..	..	..	..
11 Cholera Nostras ..	..	..	..	..	..	..	..	..	..
12 Other Epidemic Diseases	17	10	15	6	4	..	..	..	52
13 Tuberculosis of the Lungs	407	432	127	147	63	48	1	..	1,225
14 Tuberculosis of the Men- inges	32	32	7	13	1	6	..	..	91
15 Other forms of Tubercu- losis	54	48	5	12	7	6	..	..	132
16 Cancer and other Malignant Tumours	795	690	276	217	113	76	2	..	2,169
17 Simple Meningitis ..	79	71	29	28	17	8	..	..	232
18 Congestion, Hæmorrhage and Softening of Brain	399	440	129	118	59	52	..	..	1,197
19 Organic Diseases of the Heart	777	747	306	264	87	110	2	..	2,293
20 Acute Bronchitis ..	105	35	23	14	3	6	1	..	187
21 Chronic Bronchitis ..	168	156	53	32	6	15	..	..	430
22 Pneumonia	311	281	104	75	33	45	..	..	849
23 Other Diseases of the Respiratory System (Tuberculosis exceptd.)	447	351	105	80	47	42	..	..	1,072
24 Diseases of the Stomach (Cancer excepted) ..	65	78	40	11	10	7	..	1	212
25 Diarrhœa and Enteritis (children under 2 yrs. only)	564	307	197	128	112	39	..	..	1,347
26 Appendicitis & Typhlitis	56	31	17	12	9	6	..	..	131
27 Hernia, Intestinal Ob- structions	76	84	31	13	16	10	..	..	230
28 Cirrhosis of the Liver	40	37	16	4	8	1	..	..	106
29 Nephritis and Bright's Disease	292	339	163	67	45	25	..	..	931
30 Non-cancerous Tumours and other Diseases of the Female Genital Organs	65	41	19	15	9	5	..	..	154
31 Puerperal Septicæmia (Puerperal Fever, Puer- peral Peritonitis, Puer- peral Phlebitis) ..	101	85	28	19	14	3	..	..	250
32 Other Puerperal Acci- dents of Pregnancy and Confinement ..	161	114	57	39	37	25	..	..	433
33 Congenital Debility and Malformations ..	642	494	226	163	82	82	3	..	1,692
34 Senile Debility	705	807	195	244	80	100	..	..	2,131
35 Violence	237	164	92	64	51	24	..	..	632
36 Suicide	53	26	25	4	6	5	1	..	120
37 Other Diseases	1,585	1,353	613	350	230	174	2	1	4,308
38 Unspecified or Ill-defined Diseases	90	87	27	46	22	15	2	..	289
Total—Females ..	8,846	7,773	3,123	2,269	1,227	981	15	2	24,236

CAUSES OF DEATH, COMMONWEALTH, 1920.

TOTAL—MALES AND FEMALES.

Cause.	N.S.W.	Vic.	Q'land.	S. Aus.	W. Aus.	Tas.	Nor. Ter.	Fed. Ter.	C'with.
1 Typhoid Fever ..	126	53	72	17	28	16	..	..	312
2 Typhus ..	..	..	..	..	..	..	..	..	..
3 Malaria ..	2	1	12	..	3	..	1	..	19
4 Small-pox ..	..	..	..	..	..	..	..	..	..
5 Measles ..	171	212	54	14	16	15	..	..	482
6 Scarlet Fever ..	20	37	6	23	4	..	..	..	90
7 Whooping Cough ..	293	174	47	39	..	6	2	..	561
8 Diphtheria and Croup ..	250	281	128	87	50	33	..	..	829
9 Influenza ..	114	25	62	8	10	11	..	..	230
9A Pneumonic Influenza ..	83	45	58	11	18	3	..	..	218
10 Asiatic Cholera ..	..	..	..	..	..	..	..	..	..
11 Cholera Nostras ..	..	..	..	1	..	..	..	..	1
12 Other Epidemic Diseases ..	48	25	29	11	10	..	1	..	124
13 Tuberculosis of the Lungs ..	1,095	963	343	321	256	106	14	..	3,098
14 Tuberculosis of the Men- inges ..	74	80	10	25	8	17	..	..	214
15 Other forms of Tuber- culosis ..	106	114	20	27	16	12	..	..	295
16 Cancer and other Malig- nant Tumours ..	1,686	1,368	588	440	269	154	5	1	4,511
17 Simple Meningitis ..	213	171	90	67	38	17	..	..	596
18 Congestion, Hæmorrhage and Softening of the Brain ..	907	794	303	278	118	94	..	1	2,495
19 Organic Diseases of Heart ..	1,872	1,637	796	554	271	234	6	..	5,370
20 Acute Bronchitis ..	217	80	46	32	12	10	1	..	398
21 Chronic Bronchitis ..	355	339	145	76	23	23	1	..	962
22 Pneumonia ..	813	654	258	173	95	105	1	..	2,099
23 Other Diseases of the Respiratory System (Phthisis excepted) ..	947	868	309	181	135	87	..	..	2,527
24 Diseases of the Stomach (Cancer excepted) ..	136	153	91	28	19	15	..	1	443
25 Diarrhœa and Enteritis (children under 2 years only) ..	1,253	686	497	294	250	87	..	..	3,067
26 Appendicitis & Typhlitis ..	159	92	62	34	19	16	..	..	382
27 Hernia, Intestinal Ob- structions ..	187	171	86	35	46	16	..	..	541
28 Cirrhosis of the Liver ..	137	86	60	24	30	2	1	..	340
29 Nephritis and Bright's Disease ..	788	714	403	192	116	73	..	..	2,286
30 Non-cancerous Tumours and other Diseases of the Female Genital Organs ..	65	41	19	15	9	5	..	..	154
31 Puerperal Septicæmia (Puerperal Fever, Puer- peral Peritonitis, Puer- peral Phlebitis) ..	101	85	28	19	14	3	..	..	250
32 Other Puerperal Acci- dents of Pregnancy and Confinement ..	161	114	57	39	37	25	..	..	433
33 Congenital Debility and Malformations ..	1,566	1,186	534	374	219	160	6	1	4,046
34 Senile Debility ..	1,668	1,522	528	470	263	184	1	..	4,636
35 Violence ..	1,024	716	470	249	237	87	7	1	2,791
36 Suicide ..	255	142	138	29	47	20	5	..	636
37 Other Diseases ..	3,770	2,975	1,518	792	615	370	7	1	10,048
38 Unspecified or Ill-defined Diseases ..	272	228	80	104	87	30	4	..	805
Total—Males and Females	20,934	16,832	7,947	5,083	3,388	2,036	63	6	56,289

The classification for the years 1914 to 1920 is shown for the Commonwealth in the following table, and for purposes of comparison the figures for the year 1920 have been repeated from the preceding table. Male and female deaths for 1914 are shown on pages 188 and 189 of the ninth issue, for 1915 on pages 198 and 199 of the tenth issue, for 1917 on pages 204 and 205 of the eleventh issue, for 1918 on pages 197 and 198 of the twelfth issue, and for 1919 on pages 188 and 189 of the thirteenth issue of this book.

CAUSES OF DEATH, COMMONWEALTH, 1914 TO 1920.

MALES AND FEMALES.

Cause.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
1 Typhoid Fever	604	561	529	284	251	272	312
2 Typhus	22	30	50	49	41	34	19
3 Malaria	3	1	1	..	..	..	..
4 Small-pox	155	439	211	72	82	51	482
5 Measles	29	104	134	64	81	69	90
6 Scarlet Fever	320	185	426	282	234	211	561
7 Whooping Cough	716	703	893	646	645	581	829
8 Diphtheria and Croup	331	389	278	168	848	11,552	230
9 Influenza .. .. .	..	..	..	..	..	..	218
9a Pneumonic Influenza .. .. .	..	..	..	..	..	..	..
10 Asiatic Cholera	2	2	4	1	2	1	1
11 Cholera Nostras	176	205	249	144	174	157	124
12 Other Epidemic Diseases	3,111	3,064	3,198	2,883	3,035	3,479	3,003
13 Tuberculosis of the Lungs	207	213	215	206	208	188	214
14 Tuberculosis of the Meninges	256	278	310	275	292	281	295
15 Other forms of Tuberculosis	3,675	3,702	3,979	4,022	4,246	4,421	4,511
16 Cancer and other Mal. Tumours	812	1,209	1,201	690	583	481	596
17 Simple Meningitis	2,204	2,118	2,230	2,214	2,297	2,467	2,495
18 Congestion, Hamorrhage and Softening of the Brain	4,836	4,370	4,509	3,852	3,976	5,864	5,370
19 Organic Diseases of the Heart	389	489	512	321	399	420	398
20 Acute Bronchitis	859	913	1,057	829	1,121	1,047	962
21 Chronic Bronchitis	1,992	2,225	2,220	1,896	2,141	2,656	2,099
22 Pneumonia	1,866	2,212	2,243	1,941	2,199	2,413	2,527
23 Other Diseases of the Respiratory System (Tuberculosis excepted)	368	351	263	394	409	478	443
24 Diseases of the Stomach (Cancer excepted)	3,506	2,815	3,018	1,719	1,732	2,520	3,067
25 Diarrhoea and Enteritis (Children under two years only)	374	356	321	321	371	352	382
26 Appendicitis and Typhilitis	460	488	501	449	543	530	541
27 Hernia, Intestinal Obstructions	380	376	309	335	297	315	340
28 Cirrhosis of the Liver	2,127	2,274	2,329	2,203	2,144	2,221	2,286
29 Nephritis and Bright's Disease	138	139	153	148	159	132	154
30 Non-cancerous Tumours and other Diseases of the Female Genital Organs	215	182	282	250	183	166	250
31 Puerperal Septicæmia (Puerperal Fever, Peritonitis, Phlebitis)	419	394	411	482	409	404	433
32 Other Puerperal Accidents of Pregnancy and Confinement	3,860	3,993	3,826	3,423	3,454	3,885	4,046
33 Congenital Debility, &c.	4,130	4,686	4,980	4,770	4,664	4,840	4,136
34 Senile Debility	3,121	2,851	2,712	2,656	2,641	2,709	2,791
35 Violence	643	658	577	502	498	546	635
36 Suicide	8,670	9,090	9,433	8,871	9,226	9,390	10,048
37 Other Diseases	644	717	633	667	664	707	805
38 Unspecified or ill-defined Diseases	51,720	52,782	54,197	48,029	50,249	65,930	56,289
Total							

17. Certification of Deaths.—Information was obtained in 1920 as to the persons by whom the 56,289 deaths which occurred in the Commonwealth were certified. The result of the enquiry shows that approximately 90.3 per cent. (in 1914, 88.8 per cent.; in 1915, 89.3 per cent.; in 1916, 89.5 per cent.; in 1917, 89.3 per cent.; in 1918, 89.9 per cent.; and in 1919, 91.5 per cent.) were certified by medical practitioners, and 9.4 per cent. (in 1914, 10.7 per cent.; in 1915, 10.2 per cent.; in 1916, 9.9 per cent.; in 1917, 10.3 per cent.; in 1918, 9.8 per cent.; and in 1919, 8.2 per cent.) by coroners after inquests or magisterial enquiries, while in 0.3 per cent. (in 1914, 0.5 per cent.; in 1915, 0.5 per cent.; in 1916, 0.6 per cent.; in 1917, 0.4 per cent.; in 1918, 0.3 per cent.; and in 1919, 0.3 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. 38; a short summary will therefore suffice here :—

CERTIFICATION OF DEATHS, COMMONWEALTH, 1920.

Death Certified by—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Ter.	C'with.
Medical practitioner	18,912	14,863	7,537	4,557	3,037	1,882	33	5	50,826
Coroner ..	2,008	1,967	277	526	324	147	30	1	5,280
Not certified or not stated ..	14	2	133	..	27	7	..	..	183
Total Deaths	20,934	16,832	7,947	5,083	3,388	2,036	63	6	56,289

Of the cases certified by coroners, violent deaths numbered 2,540, senile decay 353, organic heart disease 463, ill-defined causes 358, congenital debility 157, cerebral hæmorrhage and apoplexy 102, pneumonia 92, Bright's disease 84, diarrhoea and enteritis 131, pulmonary tuberculosis 76, diseases of arteries, aneurisms, &c., 40, broncho-pneumonia 94, acute and chronic alcoholism 34, puerperal diseases 51, and infantile convulsions 24; a total of 4,599 out of 5,280.

Of uncertified causes of death, violent deaths numbered 31, congenital debility 16, senile debility 33, ill-defined causes 25, influenza 18, and heart disease 9; a total of 132 out of 183.

18. Deaths from Special Causes.—The table on p. 132 furnishes comparisons for the last seven years only, and comparisons will, therefore, generally be restricted to that period.

(i) *Typhoid Fever*. Of the 312 deaths recorded in 1920, 126 occurred in New South Wales, 53 in Victoria, 72 in Queensland, 17 in South Australia, 28 in Western Australia, and 16 in Tasmania. There has been a marked diminution since 1916.

(ii) *Typhus*. No deaths from typhus have been registered from 1914 to 1920.

(iii) *Malaria*. Deaths from malarial diseases are practically confined to the tropical districts of Northern Queensland and Western Australia, and to the Northern Territory, 12 out of 19 deaths registered in 1920 having occurred in Queensland and 3 in Western Australia.

(iv) *Small-pox*. The number of deaths from small-pox in Australia is very small, five deaths only resulting in the seven years under review.

(v) *Measles*. No serious epidemic of measles has occurred for several years; the deaths in 1914 totalling 155. The number increased to 439 in 1915 but in 1919 was only 51. In 1920, 482 deaths were ascribed to measles, of which 171 were in New South Wales, 212 in Victoria, and 54 in Queensland.

(vi) *Scarlet Fever*. The mortality from this source is very light, the average of deaths from 1914 to 1920 being less than 90 per annum.

(vii) *Whooping Cough*. In 1920 the number of deaths was 561, the highest number registered in the period 1914 to 1920. Of these deaths, 293 occurred in New South Wales, 174 in Victoria, 47 in Queensland, 39 in South Australia, 2 in Northern Territory, and 6 in Tasmania.

(viii) *Diphtheria and Croup*. Deaths from this cause reached a figure of 716 in 1914 and 703 in 1915, but increased to 893 in 1916, and fell to 581 in 1919. The number for 1920 was 829, of which 250 were registered in New South Wales, 281 in Victoria, 128 in Queensland, 87 in South Australia, 50 in Western Australia, and 33 in Tasmania. Diphtheria was the cause of death in 805 cases and croup in 24 cases.

(ix) *Influenza*. In 1914, 331 deaths were registered from this cause; in 1915, 389; in 1916, 278; and in 1917, 168. In 1918 there was rather a serious outbreak, the deaths rising to 848. In 1919 Australia experienced the full effect of the world-wide epidemic, the number of deaths reaching the unprecedented figure of 11,552, of which almost exactly one-half occurred in New South Wales. The deaths in States were as follows :—Ordinary influenza—New South Wales, 568; Victoria, 345; Queensland, 247;

South Australia, 47; Western Australia, 42; Tasmania, 29; and Northern Territory, 11; total, 1,289. Pneumonic influenza—New South Wales, 5,215; Victoria, 3,110; Queensland, 799; South Australia, 471; Western Australia, 470; Tasmania, 196; Northern Territory, 1; and Federal Territory, 1; total, 10,263.

A special feature of the epidemic was that the deaths occurred principally at the younger and middle ages, and not at the older ages as in ordinary influenza. This is illustrated in the following table:—

DEATHS FROM INFLUENZA, COMMONWEALTH, 1919.

Age Groups.	Ordinary Influenza.		Pneumonic Influenza.	
	Number.	Percentage on Total Deaths.	Number.	Percentage on Total Deaths.
Deaths under 5 years	144	11.17	348	3.39
" 5-19	102	7.91	665	6.48
" 20-39	411	31.89	5,535	53.93
" 40-59	350	27.15	2,889	28.15
" 60 years and above ..	282	21.88	826	8.05
Total	1,289	100.00	10,263	100.00

During 1920, 230 deaths were due to ordinary influenza and 218 to pneumonic influenza.

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

(xi) *Cholera Nostras*. Isolated cases only of cholericiform diarrhoea occurred in each of the seven years. One death from this cause was registered during 1917, and 2 in 1918.

(xii) *Other Epidemic Diseases*. The number of deaths registered under this heading was 176 in 1914, 205 in 1915, 249 in 1916, 144 in 1917, 174 in 1918, 157 in 1919, and 124 in 1920. The list in 1920 includes the following diseases:—Dysentery 65, erysipelas 52, leprosy 3, other epidemic diseases 4. There have been no deaths from plague in the Commonwealth since 1912.

(xiii) *Tuberculosis of the Lungs and Acute Miliary Tuberculosis*. The deaths in 1920 numbered 3,098, viz., 1,873 males and 1,225 females. The figures for the years 1914 to 1919 were 3,111, 3,064, 3,198, 2,883, 3,035, and 3,365 respectively. Of the deaths in 1920, 1,095 occurred in New South Wales, 963 in Victoria, 343 in Queensland, 321 in South Australia, 256 in Western Australia, 106 in Tasmania, and 14 in the Northern Territory.

(xiiiia) *Tuberculosis of the Respiratory System*. Of the various forms of tuberculosis prevalent in the Commonwealth, that which has 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, &c. The results given depended upon intercensal estimates of population, and these having 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.

(xiv) *Tuberculosis of the Meninges*. The number of deaths ascribed to this cause has varied very slightly during the last seven years. The greatest number of deaths, viz., 215, occurred in 1916, and the least number, viz., 188, in 1919. In 1920, 214 deaths occurred.

(xv) *Other Forms of Tuberculosis.* The deaths in 1920 include the following forms of tuberculosis :—Abdominal tuberculosis, 127; Pott's disease, 47; white swellings, 26; tuberculosis of other organs, 53; and disseminated tuberculosis, 42.

(xva) *All Forms of Tuberculosis.* A complete tabulation of all the different tubercular diseases from which deaths occurred in 1920 will be found in Bulletin No. 38 of Population and Vital Statistics. Here it will suffice to shew a few of the features of the tabulation mentioned. The total number of deaths due to tubercular diseases was 3,607, viz., 2,159 males and 1,448 females. The following table shews the ages of these 3,607 persons :—

**AGES OF PERSONS WHO DIED FROM TUBERCULAR DISEASES,
COMMONWEALTH, 1920.**

Ages.	Male.	Female.	Total.	Ages.	Male.	Female.	Total.
Under 5 years ..	110	70	180	55 years and under 60	173	62	235
5 years and under 10	46	32	78	60 " " 65	133	49	182
10 " " 15	32	35	67	65 " " 70	53	24	77
15 " " 20	68	102	170	70 " " 75	21	15	36
20 " " 25	148	197	345	75 " " 80	16	4	20
25 " " 30	228	220	448	80 " over ..	10	1	11
30 " " 35	242	180	422	Unspecified ..	4	1	5
35 " " 40	234	160	394				
40 " " 45	221	128	349				
45 " " 50	224	92	316				
50 " " 55	196	76	272	Total Deaths ..	2,159	1,448	3,607

A tabulation has been made of the occupations of males dying from tubercular diseases during 1920. A summary is here given :—

**OCCUPATIONS OF MALES WHO DIED FROM TUBERCULAR DISEASES,
COMMONWEALTH, 1920.**

Occupation.	No. of Deaths.	Occupation.	No. of Deaths.
Professional class	136	Agricultural class	136
Domestic class	78	Pastoral class	38
Mercantile class	350	Working in mines and quarries ..	191
Engaged in transport and communication	182	Other primary producers	12
Manufacturing class	239	Independent means	8
Engaged in building and construction	100	Dependents	231
Other industrial workers ..	400	Occupation not stated	58
		Total Male Deaths	2,159

The length of residence in the Commonwealth of persons who died from tubercular diseases has been tabulated for the year 1920 for all the Commonwealth States, with the following results :—

**LENGTH OF RESIDENCE IN COMMONWEALTH OF PERSONS WHO DIED FROM
TUBERCULAR DISEASES, 1920.**

Length of Residence in Commonwealth.	Male.	Fem.	Total.	Length of Residence in Commonwealth.	Male.	Fem.	Total.
Born in Commonwealth ..	1,530	1,241	2,771	Resident 10 years & under 15	56	16	72
Resident under 1 year ..	16	10	26	" 15 " " 20	22	10	32
" 1 year	14	8	22	" 20 " " over ..	289	84	373
" 2 years	6	3	9	Length of residence not stated	125	24	149
" 3 " "	2	2	4				
" 4 " "	6	5	11				
" 5 " and under 10	93	45	138	Total Deaths	2,159	1,448	3,607

From the preceding table and the table on page 122, it will be seen that, among persons who had lived less than 5 years in Australia, 482 deaths occurred, and of these 72, or 14.9 per cent., were due to tubercular diseases.

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

DEATH RATES(a) FROM TUBERCULOSIS AND PERCENTAGE ON TOTAL DEATHS, COMMONWEALTH, 1920.

State.	Death Rates (a) from Tuberculosis.			Percentage on Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	0.76	0.49	0.63	6.47	5.57	6.09
Victoria	0.87	0.67	0.77	7.12	6.59	6.87
Queensland	0.61	0.40	0.51	4.85	4.45	4.69
South Australia	0.89	0.70	0.79	7.14	7.58	7.34
Western Australia	1.17	0.46	0.84	9.67	5.79	8.26
Tasmania	0.66	0.57	0.62	7.11	6.12	6.63
Northern Territory	3.92	0.94	3.20	27.08	6.67	22.22
Federal Territory .. ..	..	..	..	..	..	..
Commonwealth	0.81	0.55	0.68	6.74	5.97	6.41

(a) Number of deaths from tuberculosis per 1,000 of mean population.

The following table, which gives for a number of countries the death rates from pulmonary and miliary tuberculosis per 1,000 persons living, shews that the Commonwealth occupies a very enviable position when compared with most European countries:—

PULMONARY AND MILIARY TUBERCULOSIS—DEATHS PER 1,000 PERSONS LIVING.

Country.	Year.	Death Rate.	Country.	Year.	Death Rate.
Rumania	1914	0.40	United States (Registration Area)	1915	1.28
Denmark	1914	0.44	Prussia	1913	1.37
South Africa, Union of (Whites)	1917	0.44	Spain	1919	1.43
New Zealand	1919	0.53	Switzerland	1918	1.46
Australia	1920	0.58	Jamaica	1915	1.47
Ontario (Canada)	1919	0.69	Japan	1916	1.56
Ceylon	1919	0.75	Norway	1917	1.64
Scotland	1919	0.88	Sweden	1915	1.66
Belgium	1912	0.93	France	1911	1.80
England and Wales	1919	0.97	Ireland	1919	1.92
United Kingdom	1919	1.06	Chile	1914	2.55
Netherlands	1915	1.10	Finland	1914	2.57
Italy	1917	1.18	Austria	1912	2.83
Quebec (Canada)	1917	1.20	Serbia	1911	3.24
Germany	1913	1.24	Hungary	1912	3.49

(xvi) *Cancer and other Malignant Tumours.* The number of deaths from cancer has increased continuously to 4,511 in 1920. Of the deaths registered in 1920, 2,342 were those of males, viz., 891 in New South Wales, 678 in Victoria, 312 in Queensland, 223 in South Australia, 156 in Western Australia, 78 in Tasmania, 3 in the Northern Territory, and 1 in the Federal Territory; while 2,169 were those of females, viz., 795 in New South Wales, 690 in Victoria, 276 in Queensland,

217 in South Australia, 113 in Western Australia, 76 in Tasmania, and two in the Northern Territory. Bulletin No. 38 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, 1920.

Seat of Disease.	Male.	Female.	Total.
Cancer, &c., of the buccal cavity	322	24	346
" " the stomach and liver	947	608	1,555
" " the peritoneum, the intestines, and the rectum ..	319	309	628
" " the female genital organs .. .. .	..	448	448
" " the breast .. .. .	..	310	310
" " the skin	94	72	166
" " other organs	660	398	1,058
Total Deaths	2,342	2,169	4,511

Of these deaths, 1,012 were described as cancer, 2,344 as carcinoma, 197 as epithelioma, 533 as "malignant disease," 32 as "malignant tumour," 34 as neoplasm, 58 as "rodent ulcer," 285 as sarcoma, and 16 as scirrhus.

The ages of the 4,511 persons who died from cancer in 1920 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 60 to 65:—

AGES OF PERSONS WHO DIED FROM CANCER, COMMONWEALTH, 1920.

Ages.	Male.	Female.	Total.	Ages.	Male.	Female.	Total.
Under 15 years ..	25	19	44	55 years and under 60	344	292	636
15 years and under 20	6	8	14	60 " " 65	425	295	720
20 " " 25	6	8	14	65 " " 70	355	270	625
25 " " 30	14	15	29	70 " " 75	280	208	488
30 " " 35	23	48	71	75 " " 80	206	192	398
35 " " 40	45	82	127	80 " " 85	95	93	188
40 " " 45	68	132	200	85 years and over..	63	66	129
45 " " 50	141	198	339	Unspecified ..	-2	1	3
50 " " 55	244	242	486	Total Deaths ..	2,342	2,169	4,511

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

OCCUPATIONS OF MALES WHO DIED FROM CANCER, COMMONWEALTH, 1920.

Occupation.	No. of Deaths.	Occupation.	No. of Deaths.
Professional class	116	Agricultural class	377
Domestic class	64	Pastoral class	101
Mercantile class	303	Working in mines and quarries	113
Engaged in transport and communication	182	Other primary producers ..	16
Manufacturing class	259	Independent means	45
Engaged in building and construction	133	Dependents	37
Other industrial workers ..	509	Occupation not stated ..	87
		Total Male Deaths	2,342

As the following tables shew, the total death rates from cancer are below those for tubercular diseases in Western Australia only. The male death rates from cancer were, in 1920, in excess of those from tuberculosis in all the States except Western Australia, while the female death rates were in excess in all the States. 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. In 1914, while the death rate from tuberculosis decreased from 0.79 to 0.73 per thousand, the rate for cancer remained stationary, the result being that the rate for cancer exceeded that for tuberculosis by 0.02 per thousand. In 1915 the death rate from cancer was 0.03 per thousand; in 1916, 0.06 per thousand; in 1917, 0.13 per thousand; in 1918, 0.14 per thousand; in 1919, 0.09 per thousand, and in 1920, 0.17 per thousand in excess of that of tuberculosis.

**DEATH RATES(a) FROM CANCER AND PERCENTAGE ON TOTAL DEATHS,
COMMONWEALTH, 1920.**

State.	Death Rates (a) from Cancer.			Percentage on Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	0.87	0.79	0.83	7.37	8.99	8.05
Victoria	0.91	0.91	0.91	7.48	8.88	8.13
Queensland	0.81	0.80	0.80	6.47	8.84	7.40
South Australia	0.98	0.88	0.93	7.92	9.56	8.66
Western Australia	0.87	0.73	0.81	7.22	9.21	7.94
Tasmania	0.69	0.73	0.71	7.39	7.75	7.56
Northern Territory	0.90	1.88	1.14	6.25	13.33	7.94
Federal Territory	0.83	..	0.46	25.00	..	16.67
Commonwealth	0.88	0.83	0.85	7.31	8.95	8.01

(a) Number of deaths from Cancer per 1,000 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.
Ceylon	1919	0.11	France	1911	0.80
Rumania	1914	0.13	Austria	1912	0.81
Serbia	1911	0.14	Prussia	1913	0.83
Jamaica	1915	0.17	Australia	1920	0.85
Chile	1914	0.36	New Zealand	1919	0.91
Hungary	1912	0.47	Germany	1913	0.91
Quebec (Canada)	1917	0.52	United States (Regis- tration Area)	1915	0.91
South Africa Union (Whites)	1917	0.54	Norway	1917	0.96
Denmark	1914	0.58	England and Wales	1919	0.96
Spain	1919	0.60	Sweden	1915	1.06
Italy	1917	0.64	Netherlands	1915	1.09
Japan	1916	0.69	United Kingdom	1919	1.10
Belgium	1912	0.71	Scotland	1919	1.16
Ontario (Canada)	1919	0.77	Switzerland	1918	1.24
Ireland	1919	0.79			

The fifth issue of this Year Book contains, on pages 230, *et seq.*, 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.* Deaths from this cause increased seriously in 1915 and 1916, since when they have steadily declined. Sporadic cases of cerebro-spinal meningitis, which occurred to the end of 1914, are included in the figures, but from 1915 onward they were tabulated separately, the deaths during 1920 from cerebro-spinal meningitis being 84, and those from all other forms of meningitis, 512. Of the former, 29 occurred in New South Wales, 15 in Victoria, 30 in Queensland, 8 in South Australia, and 2 in Western Australia.

(xviii) *Apoplexy, Hæmorrhage and Softening of the Brain.* The deaths registered under this heading have been remarkably steady during the period under review. The figures for 1920 are made up as follows:—Cerebral hæmorrhage and apoplexy, 1,250 males and 1,164 females; softening of the brain, 48 males and 33 females.

(xix) *Organic Diseases of the Heart.* The number of deaths registered in 1920 was 5,370, viz., 3,077 males and 2,293 females. Of these deaths, New South Wales was responsible for 1,095 males and 777 females; Victoria for 890 males and 747 females; Queensland for 490 males and 306 females; South Australia for 290 males and 264 females; Western Australia for 184 males and 87 females; Tasmania for 124 males and 110 females; and the Northern Territory for 4 males and 2 females. To the figures for 1920 correspond the following death rates and percentages to total deaths:—

DEATH RATES (a) FROM ORGANIC HEART DISEASE AND PERCENTAGE ON TOTAL DEATHS, COMMONWEALTH, 1920.

State.	Death Rates (a) from Organic Heart Disease.			Percentage on Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	1.07	0.77	0.92	9.06	8.78	8.94
Victoria ..	1.19	0.98	1.09	9.82	9.61	9.72
Queensland ..	1.28	0.87	1.08	10.16	9.80	10.02
South Australia	1.28	1.07	1.17	10.31	11.64	10.90
Western Australia	1.03	0.56	0.81	8.51	7.09	7.97
Tasmania ..	1.10	1.05	1.08	11.75	11.21	11.49
Northern Territory	1.21	1.88	1.37	8.33	13.33	9.52
Federal Territory	..	..	..	..	..	..
Commonwealth	1.15	0.87	1.01	9.60	9.46	9.54

(a) Number of deaths from Organic Heart Disease per 1,000 of mean population.

(xx) *Acute Bronchitis.* The classification of causes of death 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 1914-1920, with the result that acute bronchitis is credited with 389 deaths in 1914, 489 in 1915, 512 in 1916, 321 in 1917, 399 in 1918, 420 in 1919, and 398 deaths in 1920 viz., 211 males and 187 females.

(xxi) *Chronic Bronchitis.* The adjustment mentioned in the preceding paragraph gives a total of 962 deaths in 1920.

(xxii) *Pneumonia.* The 1920 figures were 1,250 males and 849 females, a total of 2,099 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 1914, 1,866; in 1915, 2,212; in 1916, 2,243; in 1917, 1,941; in 1918, 2,199; in 1919, 2,413; and in 1920, 2,527. The total for 1920 is made up as follows, viz.:—Diseases of the nasal fossae, 2 deaths; diseases of the larynx, 101 deaths; diseases of the thyroid body, 38 deaths; broncho-pneumonia, 1,366 deaths; pleurisy, 176 deaths; pulmonary congestion and apoplexy, 253 deaths; gangrene of the lung, 23 deaths; asthma, 199 deaths; pulmonary emphysema, 26 deaths; fibroid phthisis (miners' complaint), 256 deaths; other diseases of the respiratory system (tuberculosis excepted), 87 deaths.

(xxiv) *Diseases of the Stomach (Cancer excepted).* In 1920 this heading includes ulcer of the stomach, 70 males, 62 females; and other diseases of the stomach (cancer excepted), 161 males, 150 females; a total of 443 deaths for this class.

(xxv) *Diarrhoea and Enteritis (Children under two years only).* The number of deaths due to these causes is always a large one, varying from 1,719 in 1917 to a maximum of 3,506 in 1914. The total for 1920 was 3,067, distributed amongst the six States as follows:—New South Wales, 689 males, 564 females, total 1,253; Victoria, 379 males, 307 females, total 686; Queensland, 300 males, 197 females, total 497; South Australia, 166 males, 128 females, total 294; Western Australia, 138 males, 112 females, total 250; and Tasmania, 48 males, 39 females, total 87.

The following are the death rates and percentages on total deaths due to infantile diarrhoea and enteritis in the States and Territories for the year 1920:—

DEATH RATES (a) FROM INFANTILE DIARRHOEA AND ENTERITIS, AND PERCENTAGE ON TOTAL DEATHS, COMMONWEALTH, 1920.

State.	Death Rates (a) from Infantile Diarrhoea and Enteritis.			Percentage on Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	0.67	0.56	0.62	5.70	6.38	5.99
Victoria ..	0.51	0.40	0.46	4.18	3.95	4.08
Queensland ..	0.78	0.56	0.68	6.22	6.31	6.25
South Australia	0.73	0.52	0.62	5.90	5.64	5.78
Western Australia	0.77	0.72	0.75	6.39	9.13	7.38
Tasmania ..	0.42	0.37	0.40	4.55	3.98	4.27
Federal Territory	..	..	..	..	..	..
Commonwealth	0.64	0.51	0.58	5.37	5.56	5.45

(a) Number of deaths from these diseases per 1,000 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. In 1913 all the States, with the exception of New South Wales and South Australia, experienced lower rates than in 1912, and in 1914 the rate fell in New South Wales and Western Australia, while it rose in Victoria, South Australia and Tasmania, and remained stationary in Queensland. The rates for 1915 were considerably lower than those for 1914 in every State with the exception of Queensland and South Australia, while in 1916 Victoria, South Australia and Tasmania had higher rates than in 1915. In 1917, every State experienced a large fall, the rates in Victoria, South Australia and Tasmania being less than half those of 1916. In 1918 the deaths from this cause were hardly more numerous than those for 1917, but 1919 and 1920 shewed a large advance. The age distribution of children dying from diarrhoea and enteritis during their first year of life will be found on page 149.

(xxvi) *Appendicitis and Typhlitis.* Prior to 1910, deaths from these causes were included in *Other Diseases*, (paragraph xxxvii.). Deaths numbered 374 in 1914, 356 in 1915, 321 in 1916, 321 in 1917, 371 in 1918, 352 in 1919, and 382 in 1920, viz., 251 males and 131 females.

(xxvii) *Hernia, Intestinal Obstructions.* The number of deaths has not varied greatly from year to year, the number registered in 1920 being 541, viz., 311 males and 230 females.

(xxviii) *Cirrhosis of the Liver.* There is little variation in the number of deaths from 1914 to 1920. 340 deaths were registered in 1920, viz., 234 males and 106 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 1915, there were 2,274, 1,413 males and 861 females; in 1916, 2,329, 1,416 males and 913 females; in 1917, 2,203, 1,343 males and 860 females; in 1918, 2,144; in 1919, 2,221, and in 1920, 2,286, viz., 1,355 males and 931 females. Of the deaths registered in 1920, those of 89 males and 93 females were ascribed to acute nephritis, and those of 1,266 males and 838 females to Bright's Disease. New South Wales was responsible for 788 deaths; Victoria for 714; Queensland for 403; South Australia for 192; Western Australia for 116; and Tasmania for 73; making the total of 2,286.

(xxx) *Non-cancerous Tumours and other Diseases of the Female Genital Organs.* Deaths in 1914 numbered 138; in 1915, 139; in 1916, 153; in 1917, 148; in 1918, 159; in 1919, 133; and in 1920, 154. Included in the 154 deaths registered in 1920 were the following:—Non-puerperal uterine hæmorrhage, 2; non-cancerous uterine tumours, 36; other diseases of the uterus, 34; cysts and ovarian tumours, 28; salpingitis and other diseases of the female genital organs, 54.

(xxxi) *Puerperal Septicæmia (Puerperal Fever, Puerperal Peritonitis, Puerperal Phlebitis).* The number of deaths is fairly constant, varying from a maximum of 282 in 1916 to a minimum of 166 in 1919. In 1920, there were 250 deaths.

(xxxii) *Other Puerperal Accidents of Pregnancy and Confinement.* The deaths in 1914 numbered 419; in 1915, 394; in 1916, 411; in 1917, 482; in 1918, 409; in 1919, 404; and in 1920, 433. Included in the 433 deaths registered in 1920 were the following:—Accidents of pregnancy, 100; puerperal hæmorrhage, 96; other accidents of childbirth, 64; puerperal albuminuria and convulsions, 117; puerperal phlegmasia alba dolens, embolus, sudden death, 49; and death following childbirth 7.

(xxxiii) *All Puerperal Causes.* The 683 deaths registered in 1920 under the two preceding headings will be found tabulated in "Bulletin No. 38; Commonwealth Demography," under various aspects. It will suffice to repeat here that the 683 mothers who died from puerperal causes included 624 married women and 59 single.

The ages of the mothers who died varied from 14 to 47 years, and are shewn in the following table:—

AGES OF MOTHERS WHO DIED FROM PUERPERAL CAUSES, COMMONWEALTH, 1920.

Age at Death.	Married Women.	Single Women.	Total.	Age at Death.	Married Women.	Single Women.	Total.
14 years ..	..	1	1	34 years ..	23	..	23
15 " ..	..	1	1	35 " ..	26	1	27
16 " ..	2	..	2	36 " ..	27	1	28
17 " ..	..	3	3	37 " ..	14	1	15
18 " ..	5	4	9	38 " ..	32	1	33
19 " ..	13	4	17	39 " ..	24	2	26
20 " ..	8	9	17	40 " ..	15	1	16
21 " ..	10	..	10	41 " ..	9	..	9
22 " ..	18	6	24	42 " ..	15	..	15
23 " ..	21	4	25	43 " ..	9	..	9
24 " ..	26	6	32	44 " ..	7	..	7
25 " ..	31	1	32	45 " ..	2	..	2
26 " ..	34	3	37	46 " ..	4	..	4
27 " ..	33	1	34	47 " ..	2	..	2
28 " ..	32	2	34	Unspecified	1	..	1
29 " ..	39	1	40				
30 " ..	29	2	31				
31 " ..	30	1	31				
32 " ..	45	3	48				
33 " ..	38	..	38	Total deaths	624	59	683

The total number of children left by the married mothers shewn in the above table was 1,782, an average of 2.9 children per mother.

Forty-two of the mothers who died had been married less than one year, 100 between one and two years, 38 between two and three years, the duration of marriage ranging up to 29 years, apart from 16 cases in which the date of marriage could not be stated. This tabulation will be found in detail, distinguishing the ages at marriage, in "Bulletin No. 38; Commonwealth Demography," as will a further tabulation shewing in combination the duration of marriage and previous issue.

(xxxiii) *Congenital Debility and Malformations.* The total deaths registered under these heads in 1920 were 4,046, of whom 3,938 were children under one year of age. The figures include:—Malformations, 349 males, 306 females, total 655; premature birth, 1,289 males, 887 females, total 2,176; and congenital debility, icterus, and sclerema of children under one year of age, 716 males and 499 females, total 1,215; or a grand total of 4,046. Of these deaths, 1,566 were registered in New South Wales, viz., 924 males and 642 females; 1,186 in Victoria, viz., 692 males and 494 females; 534 in Queensland, viz., 308 males and 226 females; 374 in South Australia, viz., 211 males and 163 females; 219 in Western Australia, viz., 137 males and 82 females; 160 in Tasmania, viz., 78 males and 82 females; 3 males and 3 females in the Northern Territory, and 1 male in Federal Territory.

(xxxiv) *Senile Debility.* The deaths ascribed to "old age" form a large group, and are in excess of those due to infantile debility. In 1920, 4,636 deaths were attributed to this cause, and were distributed among the States as follows: 1,668 occurred in New South Wales, viz., 963 males and 705 females; 1,522 in Victoria, viz., 715 males and 807 females; 528 in Queensland, viz., 333 males and 195 females; 470 in South Australia, viz., 226 males and 244 females; 263 in Western Australia, viz., 183 males and 80 females; 184 in Tasmania, viz., 84 males and 100 females; and 1 male in the Northern Territory.

Of the males whose deaths were described as due to senility, seven were aged between 55 and 59, and the deaths ranged up to twelve over the age of 100. Of the females, three were aged between 55 and 60, and 12 were of the age of 100 or over.

(xxxv) *Violence.* A very large number of deaths is due every year to external violence, and, as may 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 1914, 3,121, viz., 2,458 males and 663 females; in 1915, 2,851, viz., 2,251 males and 600 females; in 1916, 2,712, viz., 2,134 males and 578 females; in 1917, 2,656, viz., 2,069 males and 587 females; in 1918, 2,641, viz., 2,039 males and 602 females; in 1919, 2,799, viz., 2,161 males and 638 females; and in 1920, 2,791, viz., 2,159 males and 632 females. Of the deaths registered in 1920, those of 787 males and 237 females occurred in New South Wales; those of 552 males and 164 females in Victoria; those of 378 males and 92 females in Queensland; those of 185 males and 64 females in South Australia; those of 186 males and 51 females in Western Australia; those of 63 males and 24 females in Tasmania; those of 7 males in the Northern Territory; and that of 1 male in the Federal Territory.

The following table shews the various kinds of violent deaths which occurred in 1920, distinguishing males and females:—

DEATHS FROM EXTERNAL VIOLENCE, COMMONWEALTH, 1920.

Cause of Death.	Males.	Females.	Total.
Poisoning by food	21	18	39
Venomous bites and stings	18	5	23
Other acute poisonings	34	17	51
Conflagration	3	3	6
Burns (conflagration excepted)	122	146	268
Absorption of deleterious gases (conflagration excepted)	39	19	58
Accidental drowning	418	82	500
Traumatism by firearms	120	15	135
Traumatism by cutting or piercing instruments	1	..	1
Traumatism by fall	267	54	321
Traumatism in mines or quarries	65	..	65

DEATHS FROM EXTERNAL VIOLENCE, COMMONWEALTH, 1920—*continued.*

Cause of Death.	Males.	Females.	Total.
Traumatism by machines	19	..	19
Traumatism by other crushing (vehicles, railways, &c.)	571	107	678
Injuries by animals	26	1	27
Starvation, thirst, fatigue	40	6	46
Effects of heat	48	34	82
Lightning	5	..	5
Electricity (lightning excepted)	12	2	14
Homicide by firearms	21	12	33
Homicide by cutting or piercing instruments	8	6	14
Homicide by other means	42	24	66
Fractures (cause not specified)	113	55	168
Other external violence	146	26	172
Total Deaths	2,159	632	2,791

In every kind of violent death there was, therefore, an excess of males, with the exception of burning accidents.

(xxxvi) *Suicide.* It may be said that suicides have remained fairly stationary during recent years, the number in 1914 having been 643, viz., 534 males and 109 females; in 1915, 658, viz., 536 males and 122 females; in 1916, 577, viz., 466 males and 111 females; in 1917, 502, viz., 408 males and 94 females; in 1918, 498, viz., 408 males and 90 females; in 1919, 546, viz., 440 males and 106 females; and in 1920, 636, viz., 516 males and 120 females. Of the suicides in 1920, those of 202 males and 53 females occurred in New South Wales; those of 116 males and 26 females in Victoria: those of 113 males and 25 females in Queensland; those of 25 males and 4 females in South Australia; those of 41 males and 6 females in Western Australia; those of 15 males and 5 females in Tasmania; and those of 4 males and 1 female in the Northern Territory.

The modes adopted by persons who committed suicide in the years 1914 to 1920 were as follows:—

MALE AND FEMALE SUICIDES (MODES ADOPTED), COMMONWEALTH, 1914 TO 1920.

Mode of Death	Males.		Females.		Total.	
	Total of 6 years 1914-19.	1920.	Total of 6 years 1914-19.	1920.	Total of 6 years 1914-19.	1920.
Poisoning	653	93	376	55	1,029	148
Asphyxia	11	4	9	..	20	4
Hanging or Strangulation	470	64	110	25	580	89
Drowning	230	26	124	16	354	42
Firearms	1,181	191	51	7	1,232	198
Cutting instruments	590	110	39	9	629	119
Precipitation from a height	33	4	25	4	58	8
Crushing	48	12	12	2	60	14
Other modes	92	12	17	2	109	14
Total	3,308	516	763	120	4,071	636

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

**DEATH RATES (a) FROM SUICIDE AND PERCENTAGE ON TOTAL DEATHS,
COMMONWEALTH, 1920.**

State.	Death Rates (a) from Suicide.			Percentage on Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	0.20	0.05	0.13	1.67	0.60	1.22
Victoria	0.16	0.03	0.09	1.28	0.33	0.84
Queensland	0.29	0.07	0.19	2.34	0.81	1.74
South Australia	0.11	0.02	0.06	0.89	0.18	0.57
Western Australia	0.23	0.04	0.14	1.90	0.49	1.39
Tasmania	0.13	0.05	0.09	1.42	0.51	0.98
Northern Territory	1.21	0.94	1.14	8.33	6.67	7.94
Commonwealth	0.19	0.05	0.12	1.61	0.50	1.13

(a) Number of deaths from suicide per 1,000 of mean population.

From the following table, which shews the ages of the persons who committed suicide in 1920, it will be seen that both extreme youth and extreme old age are represented :—

AGES OF PERSONS WHO COMMITTED SUICIDE, COMMONWEALTH, 1920.

Ages.	M.	F.	Total.	Ages.	M.	F.	Total.
15 years and under 20	9	4	13	70 years and under 75	17	2	19
20 " " 25	27	10	37	75 " " 80	9	1	10
25 " " 30	44	16	60	80 " " 85	8	..	8
30 " " 35	46	13	59	85 " " 90	3	..	3
35 " " 40	60	20	80	90 " " 94	2	..	2
40 " " 45	61	16	77	Not stated	6	..	6
45 " " 50	54	12	66				
50 " " 55	65	10	75				
55 " " 60	46	7	53				
60 " " 65	31	7	38				
65 " " 70	28	2	30				
				Total Deaths ..	516	120	636

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

**OCCUPATIONS OF MALE PERSONS WHO COMMITTED SUICIDE,
COMMONWEALTH, 1920.**

Occupation.	Deaths.	Occupation.	Deaths.
Professional class	35	Pastoral class	30
Domestic class	22	Working in mines and quarries	14
Mercantile class	85	Other primary producers ..	7
Engaged in transport and communication	34	Independent means	5
Manufacturing class	51	Dependents	1
Engaged in building and construction	20	Occupation not stated	27
Indefinite industrial workers ..	131		
Agricultural class	54	Total Deaths	516

It has been said that suicide has become more frequent during recent years, but an examination of the figures from the year 1871 onwards shews that the assertion needs qualification. 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 five years 1911-15, shew, however, a regrettable increase, not only absolutely, but also in proportion to the population. The last five years shew lower figures and percentages than the average of 1911-15, and in 1918 particularly the figures in proportion to population decreased almost to the level of the period 1871-85. No particulars are available for Western Australia prior to 1886, and from 1886 to 1895 the sexes are not distinguished. The figures for the first five periods are, therefore, exclusive of Western Australia :—

SUICIDES, COMMONWEALTH, 1871-75 TO 1920.

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	(a) 1,686	179.20	43.97	(c) 116.92	20.95	24.54
1891-95 ..	1,574	337	(b) 1,911	181.34	44.09	(d) 117.07	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
1911-15 ..	2,546	577	3,123	206.15	50.36	131.17	22.66	24.43
1916 ..	466	111	577	190.06	45.21	117.58	23.82	23.78
1917 ..	408	94	502	169.55	37.66	102.40	23.04	22.21
1918 ..	408	90	498	166.97	35.48	99.99	22.06	21.25
1919 ..	440	106	546	171.40	41.15	106.16	24.09	24.01
1920 ..	516	120	636	192.90	45.74	120.04	23.26	23.71

(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, *et seq.*), the result of a series of investigations into the periodicity of suicide was published. The paper was partly reprinted in the following year (pp. 241, *et seq.*), 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 shown in the detailed classification, and deaths were recorded under every one of these with the exception of the following:—Glanders, rabies, pellagra, occupational poisonings other than lead poisoning, intestinal parasites, and amputations. The total number of deaths under "other diseases" in 1914 was 8,670, viz., 5,081 males and 3,589 females; in 1915, 9,090, viz., 5,259 males and 3,831 females; in 1916, 9,433, viz., 5,489 males and 3,944 females; in 1917, 8,871, viz., 5,147 males and 3,724 females; in 1918, 9,226, viz., 5,290 males and 3,936 females; and in 1919, 9,390, viz., 5,316 males and 4,070 females; and in 1920, 10,048, viz., 5,740 males and 4,308 females. In accordance with the revised edition of the classification, the following changes were 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 are now shewn under a new head (xxiii), and appendicitis and typhlitis under head (xxvi). Some of the diseases included here account for very considerable numbers of deaths. Particulars of the deaths included in 1920 are shewn in the following table:—

CAUSES OF DEATHS INCLUDED UNDER "OTHER DISEASES," COMMONWEALTH,
1920.

Causes.	M.	F.	Total.	Causes.	M.	F.	Total.
Purulent Infection and Septicæmia	72	70	142	Diseases of the Lymphatic System	14	10	24
Anthrax	3	..	3	Hæmorrhages, Other Diseases of Circulatory System ..	44	64	108
Tetanus	85	37	122	Diseases of the Mouth and Its Associated Organs ..	10	6	16
Mycoses	7	..	7	Diseases of the Pharynx ..	53	50	103
Beri-beri	25	..	25	Diseases of the Oesophagus ..	14	9	23
Rickets	3	2	5	Diarrhœa and Enteritis of Children over two years of age and Adults ..	565	575	1,140
Syphilis	105	49	154	Ankylostomiasis .. .. .	..	1	1
Gonococcus Infection ..	3	1	4	Other Diseases of the Intestines	45	52	97
Other Tumours (Tumours of the female genital organs excepted)	23	18	41	Acute Yellow Atrophy of the Liver	5	14	19
Acute Articular Rheumatism ..	80	81	161	Hydatid Tumours of the Liver	26	15	41
Chronic Rheumatism and Gout	72	93	165	Biliary Calculi	41	87	128
Scurvy	3	1	4	Other Diseases of the Liver ..	99	94	193
Diabetes	298	319	617	Diseases of the Spleen ..	5	2	7
Exophthalmic Goitre	3	71	74	Simple Peritonitis (non-puerperal)	67	94	161
Addison's Disease	14	40	54	Other Diseases of the Digestive System	28	15	43
Leucæmia	79	40	119	Other Diseases of the Kidneys and their Adnexa ..	126	60	186
Anæmia, Chlorosis	161	192	353	Calculi of Urinary Passages ..	24	8	32
Other General Diseases ..	45	53	98	Diseases of the Bladder ..	153	34	187
Acute and Chronic Alcoholism ..	111	29	140	Other Diseases of the Urethra, Urinary Abscess, &c. ..	42	..	42
Chronic Lead Poisoning ..	10	3	13	Diseases of the Prostate ..	252	..	252
Other Chronic Poisonings ..	67	49	116	Non-venereal Diseases of the Male Genital Organs ..	4	..	4
Encephalitis	74	12	86	Non-puerperal Diseases of the Breast (Cancer excepted) ..	..	4	4
Progressive Locomotor Ataxia ..	183	131	314	Gangrene	68	54	122
Other Diseases of the Spinal Cord	172	142	314	Furuncle	20	16	36
Paralysis without indicated cause	117	22	139	Acute Abscess	71	51	122
General Paralysis of the Insane ..	63	59	122	Other Diseases of the Skin and Adnexa	25	30	55
Other Forms of Mental Alienation	127	98	225	Non-tuberculous Diseases of the Bones	36	21	57
Epilepsy	5	21	26	Other Diseases of the Joints (Tuberculosis and Rheumatism excepted) ..	12	5	17
Convulsions (non-puerperal) ..	156	130	286	Other Diseases of the Organs of Locomotion ..	3	..	3
Convulsions of Children under five years of age	6	5	11	Other Diseases peculiar to Infancy	395	279	674
Chorea	16	15	31	Want of Care (Infants) ..	5	10	15
Neuritis and Neuritis ..	128	111	239	Total Deaths	5,740	4,308	10,048
Other Diseases of the Nervous System	27	23	50				
Diseases of the Eye	45	31	76				
Diseases of the Ear	264	197	461				
Pericarditis	113	39	152				
Acute Endocarditis	552	263	815				
Angina Pectoris	161	202	363				
Diseases of the Arteries, Atheroma, Aneurism ..	6	18	24				
Embolism and Thrombosis ..							
Diseases of the Veins (Varices, Varicose Ulcers, Hæmorrhoids)							

(xxxviii) *Unspecified or Ill-defined Diseases.* The number of cases which has to be included here is a considerable one from year to year, comprising 644 in 1914, 717 in 1915, 633 in 1916, 667 in 1917, 664 in 1918, 707 in 1919, and 805 in 1920. The detailed classification distinguishes these ill-defined diseases under three headings:—Ill-defined organic diseases, including such definitions as dropsy, anasarca, ascites, general cedema, &c. sudden death, including syncope; and unspecified or ill-defined causes, of which the following are specimens:—Asthenia, coma, dentition, exhaustion, heart failure, &c. In 1920 the number of cases of death which would have to be classed under the first of these categories was 27; those belonging to the second, 45; and those belonging to the third, 733. 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, *et seq.*, some observations were published dealing with the incidence of scarlet fever, measles, whooping cough, diphtheria and croup, typhoid, diarrhoea, enteritis, and dysentery.

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 compilers 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, COMMONWEALTH, 1920.

Class.	Total Deaths.			Death Rates. (a)			Percentage on Total Deaths.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1. General diseases	7,179	6,088	13,267	2.68	2.32	2.50	22.40	25.12	23.57
2. Diseases of the Nervous System and of the Organs of Special Sense ..	2,804	2,249	5,053	1.05	0.86	0.95	8.75	9.23	8.98
3. Diseases of the Circulatory System ..	4,276	3,117	7,393	1.60	1.19	1.40	13.34	12.87	13.13
4. Diseases of the Respiratory System ..	3,448	2,538	5,986	1.28	0.96	1.13	10.76	10.47	10.63
5. Diseases of the Digestive Organs ..	3,705	3,040	6,745	1.39	1.16	1.27	11.56	12.54	11.98
6. Diseases of the Genito-Urinary System and Adnexa	1,956	1,191	3,147	0.73	0.45	0.59	6.10	4.92	5.59
7. Puerperal Condition .. ..	..	683	683	..	0.26	0.13	..	2.82	1.21
8. Diseases of the Skin and of the Cellular Tissue	184	151	335	0.07	0.06	0.06	0.57	0.62	0.60
9. Diseases of the Organs of Locomotion	51	26	77	0.02	0.01	0.02	0.16	0.11	0.14
10. Malformations	349	306	655	0.13	0.12	0.12	1.09	1.26	1.16
11. Infancy	2,405	1,675	4,080	0.90	0.64	0.77	7.50	6.91	7.25
12. Old Age	2,505	2,131	4,636	0.94	0.81	0.88	7.82	8.79	8.24
13. Violence	2,675	752	3,427	1.00	0.29	0.65	8.34	3.10	6.09
14. Ill-defined Diseases	516	289	805	0.19	0.11	0.15	1.61	1.19	1.43
Total	32,053	24,236	56,289	11.98	9.24	10.62	100.00	100.00	100.00

(a) Number of deaths per 1,000 of mean population.

20. Deaths of Children under one Year.—"Bulletin No. 38; Commonwealth Demography," contains tables shewing for twenty causes the age at death of children dying during the first year of life. 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 ONE YEAR, COMMONWEALTH, 1920.

Age at Death.			Whooping Cough.	Pulmonary Tuberculosis.	Acute Miliary Tuberculosis.	Tubercular Meningitis.	Abdominal Tuberculosis.	Disseminated Tuberculosis.	Syphilis.	Simple Meningitis.	Cerebro-Spinal Meningitis.	Convulsions.	Acute Bronchitis.
Under 1 week	..	1	..	..	..	..	..	..	4	7	..	72	3
1 week and under 2	..	2	..	1	..	..	..	..	1	4	..	32	12
2 weeks	..	3	..	..	..	..	..	..	7	4	..	8	11
3	..	8	1	..	..	..	..	..	3	2	..	7	10
1 month	..	2	47	1	..	3	..	..	18	9	1	19	33
2 months	..	3	55	..	..	1	1	..	11	16	2	7	29
3	..	4	44	1	..	1	1	1	8	12	..	6	16
4	..	5	35	..	..	2	2	..	4	13	2	10	8
5	..	6	26	1	1	2	..	..	7	12	1	9	14
6	..	7	22	2	1	3	..	..	4	8	1	5	14
7	..	8	22	2	..	3	..	..	2	16	..	3	8
8	..	9	14	..	..	6	..	..	2	19	1	5	8
9	..	10	9	1	1	2	..	..	..	12	2	4	2
10	..	11	17	1	..	1	..	..	..	16	..	8	8
11	..	12	28	1	2	1	..	1	..	11	..	2	9
Total under 1 year ..			337	11	6	25	4	2	71	161	10	197	185

Age at Death.			Broncho-Pneumonia.	Pneumonia.	Diarrhea and Enteritis.	Hernia and Intestinal Obstruction.	Malformations.	Premature Birth.	Congenital Debility, Icterus and Sclerema.	Other Diseases peculiar to Early Infancy.	Lack of Care.	Other Causes.	Total.
Under 1 week	..	7	9	16	8	263	1,654	432	554	15	108	3,153	
1 week and under 2	..	10	6	19	5	62	185	123	51	..	47	560	
2 weeks	..	3	15	8	26	..	28	112	64	29	..	48	367
3	..	12	4	25	..	21	68	49	8	..	43	261	
1 month	..	2	77	24	163	6	39	106	153	21	..	73	793
2 months	..	3	51	16	232	5	46	26	118	7	..	59	682
3	..	4	40	18	272	7	22	11	87	3	..	53	603
4	..	5	36	19	264	16	17	5	72	1	..	37	543
5	..	6	23	17	255	13	7	3	32	..	..	27	450
6	..	7	24	12	234	15	13	1	26	..	..	50	435
7	..	8	20	14	175	11	10	..	13	..	..	43	342
8	..	9	27	13	159	12	7	1	13	..	..	33	320
9	..	10	27	12	168	4	5	..	16	..	..	37	302
10	..	11	33	17	150	3	6	4	10	..	..	53	327
11	..	12	21	9	146	3	1	..	7	..	..	51	293
Total under 1 year ..			423	198	2,304	108	547	2,176	1,215	674	15	762	9,431

It will be seen that the maximum number of deaths from convulsions, pneumonia, malformations, acute bronchitis, premature birth, congenital debility, icterus and sclerema, other diseases peculiar to early infancy, and lack of care, 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 and fifth months than in any other, the numbers gradually decreasing toward the end of the year. Whooping cough reached its maximum during the second and third months of life.

21. **Ages at Death of Married Males and Females, and Issue.**—"Bulletin No. 38; 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 1920. A short summary of the tables mentioned is given hereunder. Deaths of married males in 1920 numbered 15,240, and of married females, 14,188. The tabulations mentioned in the sequel deal, however, with only 14,815 males and 13,886 females, the information in the remaining 727 cases being too incomplete to be utilised. The total number of children in the families of the 14,815 males was 75,119; and of the 13,886 females, 71,799. The average number of children is shewn for various age-groups in the following table :—

AGES AT DEATH OF MARRIED MALES AND FEMALES, AND AVERAGE ISSUE, COMMONWEALTH, 1920.

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 ..	...	0.77	70 to 74 years ..	6.19	6.48
20 to 24 years ..	1.04	1.15	75 " 79 " ..	6.59	6.50
25 " 29 " ..	1.39	1.80	80 " 84 " ..	6.74	6.56
30 " 34 " ..	1.98	2.57	85 " 89 " ..	6.78	6.50
35 " 39 " ..	2.57	3.34	90 " 94 " ..	6.86	6.58
40 " 44 " ..	2.94	3.74	95 " 99 " ..	7.37	5.97
45 " 49 " ..	3.68	3.81	100 years and upwards	5.85	6.64
50 " 54 " ..	4.02	4.22	Age not stated ..	6.47	3.64
55 " 59 " ..	4.32	4.82			
60 " 64 " ..	5.11	5.60			
65 " 69 " ..	5.67	6.16	All ages ..	5.07	5.17

The figures shewn in the preceding table include the issue both living and dead; and the proportion between them, taking the issue of deceased males and females together, was about as 1,000 to 301. The totals are shewn in the following table :—

ISSUE OF MARRIED MALES AND FEMALES, COMMONWEALTH, 1920.

Issue of Married Males.	Males.	Females.	Total.	Issue of Married Females.	Males.	Females.	Total.
Living ..	29,655	29,492	59,147	Living ..	26,817	26,934	53,751
Dead ..	9,062	6,910	15,972	Dead ..	9,988	8,060	18,048
Total ..	38,717	36,402	75,119	Total ..	36,805	34,994	71,799

These figures shew a masculinity in the births of 2.81, which agrees fairly well with the experience of the birth statistics.

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

**AGES AT MARRIAGE OF MALES AND FEMALES, AND AVERAGE ISSUE,
COMMONWEALTH, 1920.**

Age at Marriage.	Average Family of Males.	Average Family of Females.
Under 20 years	6.61	7.07
20 to 24 "	6.08	5.58
25 " 29 "	5.41	4.26
30 " 34 "	4.40	2.81
35 " 39 "	3.71	1.60
40 " 44 "	2.82	0.67
45 " 49 "	2.02	0.15
50 " 54 "	1.52	..
55 " 59 "	1.57	..
60 " 64 "	0.52	..
65 years and upwards	0.54	..
Age not stated	5.16	5.46
 All ages	 5.07	 5.17

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.

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. 38 of Commonwealth Demography," pages 214 to 219.

24. Birthplaces of Married Males and Females, and Issue.—The following table shews the birthplaces of married males and females whose deaths were registered in 1920, 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.

BIRTHPLACES AT MARRIAGE OF MALES AND FEMALES, AND AVERAGE ISSUE, COMMONWEALTH, 1920.

Birthplace.	Married Males.		Married Females.		Birthplace.	Married Males.		Married Females.	
	Deaths.	Average Family.	Deaths.	Average Family.		Deaths.	Average Family.	Deaths.	Average Family.
New South Wales ..	2,530	5.11	2,742	5.11	Java ..	1	1.00	..	..
Victoria ..	2,352	4.07	2,150	4.14	Philippine Islands ..	1	6.00	..	..
Queensland ..	424	3.99	561	3.70	Syria ..	2	3.50	4	5.75
South Australia ..	877	4.47	845	4.50	Other Asiatic C'tries	1	10.00	..	..
Western Australia ..	125	5.10	114	5.29	Mauritius ..	3	4.33	2	0.50
Tasmania ..	524	5.48	559	5.33	Union of Sth. Africa	9	6.44	10	4.20
Northern Territory ..	..	..	..	3.00	Other African British Possessions	1	6.00	1	6.00
New Zealand ..	82	3.21	77	4.10	Egypt ..	2	3.50	1	9.00
England ..	3,962	5.43	3,205	5.51	Other African C'tries	..	..	2	9.50
Wales ..	153	5.76	121	5.73	Barbadoes ..	1	4.00	..	..
Scotland ..	1,085	5.39	910	5.76	Canada ..	31	5.06	13	4.85
Ireland ..	1,548	6.02	1,980	6.04	Jamaica ..	3	1.33	1	2.00
Isle of Man ..	6	3.33	10	5.50	Newfoundland ..	1	1.00	1	1.00
Other European British Possessions ..	24	3.71	20	4.65	Other American British Possessions ..	3	4.33	2	10.50
Austria-Hungary ..	21	2.71	7	4.71	Brazil ..	..	..	1	7.00
Belgium ..	3	3.67	4	0.50	Chile ..	2	5.50	1	11.00
Denmark ..	77	4.31	27	5.00	Peru ..	1	5.00	..	..
France ..	40	4.53	11	5.09	United States ..	39	4.46	26	4.23
Germany ..	379	6.26	284	6.33	Other American Countries ..	12	4.17	7	4.14
Greece ..	17	4.06	2	8.50	Fiji ..	3	1.67	2	2.50
Italy ..	37	4.46	15	6.53	Friendly Islands ..	1	5.00	..	..
Netherlands ..	3	6.00	..	..	Other Polynesian British Possessions	2	4.50	..	..
Norway ..	28	3.61	7	5.00	New Caledonia ..	2	2.50	1	1.00
Portugal ..	6	3.00	..	..	New Hebrides ..	..	..	1	3.00
Russia ..	53	4.89	14	6.79	Samoa ..	..	..	1	..
Spain ..	3	3.67	4	5.50	Other Polynesian Is.	..	..	3	3.33
Sweden ..	74	3.73	10	3.50	S. Sea Islds. (so descd.)	8	2.13	1	1.00
Switzerland ..	27	5.33	7	3.86	At Sea ..	59	6.39	53	7.17
Other Europ. C'tries.	7	5.14	..	..	Not stated ..	67	3.87	42	5.29
British India ..	36	3.69	20	4.15					
Ceylon ..	7	5.57	1	6.00					
Hong Kong ..	1	4.00	..	..			
Afghanistan ..	1	2.00	..	..			
China ..	43	2.56	2	10.00					
Japan ..	5	1.00	..	..			
					Total ..	14,815	5.07	13,886	5.17

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, 1920.

Occupation.	Deaths of Married Males.	Average Family.	Occupation.	Deaths of Married Males.	Average Family.
Professional class ..	980	4.25	Agricultural class ..	2,459	6.38
Domestic class ..	448	3.85	Pastoral class ..	578	5.88
Mercantile class ..	2,010	4.21	Working in mines and quarries	864	5.24
Engaged in transport and communication ..	1,271	4.54	Other primary producers ..	110	5.10
Manufacturing class ..	1,723	4.01	Independent means ..	386	5.47
Engaged in building and construction ..	938	5.19	Dependents ..	29	4.31
Indefinite industrial workers ..	2,533	5.00	Occupation not stated ..	488	5.34
			Total ..	14,815	5.07

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. Legislation relating to Registration of Births, Deaths, and Marriages, and Legitimation of Children.

A review of the legislation relative to the above subject appeared in the thirteenth issue of this Year Book, pages 212-255.

§ 5. 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 105 and 106), shewing these fluctuations from 1860 to 1920, both for the States and the Commonwealth. The facts are very significant from the national point of view, and call for serious consideration. To appreciate the situation properly, it should be remembered that, normally, the increase of births and also of marriages will be similar to the increase of population. Although the marriage curve shews a falling off in marriages after 1891 (see page 106), it shews a recovery in 1894, and, with the exception of a small fall for 1903, it continually advanced until 1915. In 1916, 1917, and 1918 a heavy falling off was recorded, unquestionably owing to the European War. There was a rapid recovery in 1919 and 1920, the figures for the latter year being the highest ever recorded. The same characteristic is not seen in the curve of births, which, from 1904 onwards, rose continually to 1914, when there was a decline to 1919.

ACTUAL BIRTHS, DEATHS, AND MARRIAGES

EXPERIENCED IN THE COMMONWEALTH DURING THE YEARS 1890 TO 1920, COMPARED WITH THE NUMBER THAT WOULD HAVE OCCURRED IF THE RATES OF 1890 HAD REMAINED IN OPERATION.

Year.	BIRTHS.		DEATHS.		MARRIAGES.	
	Actual.	Number of Births that would have been experienced if the 1890 birth rate had been in operation.	Actual.	Number of Deaths that would have been experienced if the 1890 death rate had been in operation.	Actual.	Number of Marriages that would have been experienced if the 1890 marriage rate had been in operation.
1890 ..	108,683		44,449		23,725	
1891 ..	110,187	111,802	47,430	45,737	23,862	24,419
1892 ..	110,158	114,502	42,268	46,842	22,049	25,009
1893 ..	109,322	116,617	45,801	47,707	20,631	25,470
1894 ..	104,660	118,734	42,958	48,573	20,625	25,933
1895 ..	105,084	111,002	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	23,993	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	36,692	33,387
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
1914 ..	137,983	172,073	51,720	70,394	43,311	37,583
1915 ..	134,871	173,159	52,782	70,838	45,224	37,820
1916 ..	131,426	171,654	54,197	70,222	40,289	37,491
1917 ..	129,965	171,484	48,029	70,153	33,666	37,454
1918 ..	125,739	174,217	50,249	71,251	33,141	38,031
1919 ..	122,290	179,548	65,930	73,431	40,540	39,195
1920 ..	136,406	185,337	56,289	75,820	51,552	40,480

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

2. *Graphs of Annual Births, Commonwealth and States* (page 105).—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 to 1913.

It is of special interest to note the decline in births associated with the commercial crisis of 1891–3, also that 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. From 1904 to 1914 there was a gradual rise, followed by a decline which lasted till 1919. The number of births registered in 1920 in New South Wales was the highest on record.

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, and 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. A slight fall in 1910 was followed by a continuous rise to 1914, since which year a continuous decline till 1919 was experienced. There was a substantial increase in the number of registrations during 1920.

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 was recorded. The South Australian graph is crossed by that of Queensland at the year 1885. From 1890 onwards to 1908 the number of births fluctuated somewhat, but, 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 from 1906 to 1915. In 1916 there was a sudden fall, followed by a rapid rise in 1917, with another fall during 1918 and 1919. The number registered during 1920 has not been exceeded.

The South Australian graph shews a slow but practically continuous rise from 1860 to 1885. This rise is followed by a slow but fluctuating decline to 1903, and a slight recovery to 1914. In 1915, 1917 and 1919 there were declines and in 1916, 1918 and 1920 there were upward movements.

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 to 1906. A slight fall was apparent to 1910, followed by a rapid rise to 1913. From 1913 to 1919 there was a continuous decline, but this was followed by a recovery in 1920.

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 to 1914, a period of steady recovery. The years 1915 to 1918 were years of decline, but 1919 and 1920 were characterised by increase.

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 ..	1920	1891	1920	1914	1913	1914	1914

3. *Graphs of Annual Marriages, Commonwealth and States* (page 106).—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, and a still more rapid increase between 1879 and 1885. From 1885 to 1891 the numbers continued to increase, but with marked fluctuations in magnitude. 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 was 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 1915 was greater than in any preceding year. In 1916, 1917, and 1918, as already mentioned, there was a heavy falling off. In 1919 and 1920 a rapid recovery took place, with the result that the number recorded during the latter year was the highest on record.

4. *Graphs of Annual Deaths, Commonwealth and States* (page 107).—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, (g) 1902–3, (h) 1916, (i) 1919, and (j) 1920. 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, 1898, and 1902–3 all were affected. In 1916 all States except Queensland were affected, and in 1919 each State shewed a large increase owing to the prevalence of influenza. 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.

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, 1914. In 1917 there were marked declines in all the States, succeeded in 1918 by less marked increases, and in 1919 by large increases, for the reason already stated.

5. Graphs of Annual Birth, Death, and Marriage Rates and of Rate of Natural Increase—Commonwealth (page 108).—(i) General. These graphs represent the number of births, deaths, and marriages, and the excess of births over deaths (natural increase) per 1,000 of the population of the Commonwealth, for each of the years 1860 to 1920.

(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 23.78 per 1000 in 1919. 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 23.78 in 1919. The lowest point reached, until 1919, viz., 23.78, was attained in 1903, the year in which the Commonwealth suffered severely from the worst drought it has ever experienced. From 1903 to 1912 there was an advance in the rate, followed by a decline to 1919. A recovery to 25.74 took place in 1920. 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 preventive measures, are generally considered the most potent. The highest birth rate recorded was 43.27 in 1862.

(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 general death rate of the Commonwealth, a fall having taken place from 20.86 in 1860 to 10.66 in 1915. In 1916 there was a slight rise to 11.04, followed in 1917 by a fall to 9.80, the lowest rate yet recorded in the Commonwealth as a whole. In 1918 there was a slight rise to 10.09 followed by a rise to 12.82 in 1919. The rate for 1920 was 10.62. The graphical representation of the death rates brings into prominence six years in which the rates were exceptionally high when compared with those of adjacent years. These years are 1860, 1866, 1875, 1884, 1898, and 1919. 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 11.47 in 1917. For females the highest was 20.71 in 1860, and the lowest 8.18 in 1917. The difference between the male and female rate has, since 1869, been fairly constant, and has ranged between 1.97 and 3.68, 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 1920, 9.73, the highest ever recorded, 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 1915 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. In 1916, 1917, and 1918 the rate declined to 8.21, 6.87, and 6.65 respectively, but increased to 9.73 in 1920.

(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, 1898, and 1919 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 the 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 10.96 in 1919.

6. **Graphs of Annual Birth Rates—States** (page 109).—These graphs furnish for the several States information similar to that supplied in the graph on page 108 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 a very low rate accompanying the drought in 1903, the variations in any of the States since 1901 have not been very marked, and in most cases a slight tendency to increase is in evidence up to 1913. From 1914 onwards decreases have been experienced.

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 (1919), 24.68 ; Victoria (1919), 21.56 ; Queensland (1903), 24.53 ; South Australia (1903), 23.84 ; Western Australia (1919), 21.44 ; Tasmania (1919), 25.12.

7. **Graphs of Annual Death Rates—States** (page 109).—These graphs furnish for the several States similar information to that given for the Commonwealth as a whole in the diagram on page 108, 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 (1917), 9.56 ; Victoria (1917), 10.36 ; Queensland (1906), 9.50 ; South Australia (1909), 9.74 ; Western Australia (1917), 8.97 ; and Tasmania (1918), 8.84.

8. **Graphs shewing Variations in Annual Death Rates from Month to Month.**—The graphs on pages 110 and 111 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, also distinguishing males, females, and persons. Further particulars in regard to these graphs will be found on pages 127 and 128.