VITAL STATISTICS.

Births.

THE total number of births in each state, and the rate per thousand of the population during the year 1901 are shown in the following table :—

State.	Births.			Birth-rate.
	Males.	Females.	Total.	
New South Wales.....	19,149	18,726	37,875	27·60
Victoria	15,876	15,132	31,008	25·77
Queensland	7,231	7,022	14,303	28·36
South Australia.....	4,687	4,424	9,111	29·09
Western Australia	2,946	2,772	5,718	30·49
Tasmania	2,570	2,360	4,930	28·39
Commonwealth	52,509	50,436	102,945	27 06
New Zealand	10,471	10,020	20,491	26·30
Australasia.....	62,980	60,456	123,436	26·93

The variation in the birth-rates disclosed in these figures is not very considerable, and may be set down as due for the most part to the larger proportion of married women found in some states than in others. Taking the general average for the last five years (27·31) the birth-rate of Australia will be found lower than that of most European countries, and very much below the former experience of these states, as the following statement shows.

The number of births in each state and in the whole of Australasia, in quinquennial periods from 1861 to 1900, was as follows :—

State.	1861-65.	1866-70.	1871-75.	1876-80.	1881-85.	1886-90.	1891-95.	1896-1900.
New South Wales	79,958	92,643	106,543	127,572	158,965	188,300	197,566	183,582
Victoria.....	123,353	131,052	136,363	132,347	140,258	172,307	180,852	155,437
Queensland	11,761	22,622	29,279	37,535	48,979	70,150	72,863	70,963
South Australia ..	30,472	35,067	36,398	46,310	56,618	53,200	53,093	47,179
Western Australia	3,352	3,724	4,033	4,611	5,446	7,696	10,242	22,399
Tasmania	15,454	14,679	15,313	17,165	21,425	23,710	24,794	23,404
Commonwealth	264,350	299,787	327,929	365,540	431,691	515,363	539,410	502,964
New Zealand	26,611	46,770	59,891	88,205	96,482	94,071	91,410	94,685
Australasia ..	290,961	346,557	387,820	453,745	528,173	609,434	630,820	597,649

The average birth-rates per thousand of population for each state during the same periods were as follow :—

State.	1861-65.	1866-70.	1871-75.	1876-80.	1881-85.	1886-90.	1891-95.	1896-1900.
New South Wales	42·71	40·70	39·05	38·53	37·65	36·36	32·93	27·98
Victoria	43·30	39·27	35·69	31·43	30·76	32·72	30·93	26·22
Queensland	43·07	43·91	40·81	36·72	36·37	38·81	35·15	30·49
South Australia ..	44·14	40·60	37·24	38·28	38·52	34·48	31·54	26·59
Western Australia	39·07	33·86	31·30	32·97	34·57	36·88	30·77	28·73
Tasmania	33·80	29·65	29·72	31·54	35·02	34·59	32·84	28·28
Commonwealth	42·29	39·46	36·85	35·09	34·92	35·02	32·32	27·62
New Zealand	38·22	42·28	40·02	41·32	36·50	31·22	27·66	25·74
Australasia ..	41·92	39·84	37·34	36·38	35·21	34·43	31·55	27·31

It is a matter of common knowledge that for some years past the birth-rate in Australasia has been declining, and so important is the subject—not only as regards the growth of the population, but also as affecting general progress—that in 1899 the author made a special investigation into the question of childbirth in Australia, but more particularly with reference to New South Wales. The conclusions arrived at with respect to that state, however, may be held to obtain for all the others, seeing that the conditions of living do not differ

materially in any of them. During the course of the investigation it was found, first, that for all women the proportion of fecund marriages is decreasing; second, that amongst fecund women the birth-rate is much reduced as compared with what it was twenty years ago, and third, that Australian-born women do not bear so many children as the European women who have emigrated to these states. Further investigation amply bears out the first and second conclusions, but the inferior fecundity amongst Australian women is open to doubt, more extended observation rather supporting the opposite view. It was also found that the decline had been persistent and regular since 1881, and this restriction of births in a young country like Australia, where immigration is discouraged, is a matter which must have far-reaching results although its economic effects are only beginning to be seen, and should claim the serious consideration of all thoughtful people.

Particulars relating to illegitimate births will be found in the chapter headed "Social Condition."

DEATHS.

The following table shows the total number of deaths and the rate per thousand of the population during the year 1901 :—

State.	Deaths.			Death-rate.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	9,327	6,694	16,021	12·94	10·28	11·68
Victoria	9,035	6,869	15,904	14·83	11·56	13·22
Queensland	3,838	2,169	6,007	13·65	9·72	11·91
South Australia	2,289	1,776	4,065	15·68	9·97	11·20
Western Australia	1,653	866	2,519	14·03	12·42	13·43
Tasmania	994	811	1,805	11·04	9·71	10·40
Commonwealth	27,136	19,185	46,321	13·54	10·66	12·18
New Zealand	4,418	3,216	7,634	10·78	8·71	9·89
Australasia	31,554	22,401	53,955	13·07	10·33	11·77

The death-rate of Australia is much below that of any of the European states, and is steadily declining. Every year sees an advance in the sanitary condition of the people in the large centres of population, and to this cause may be ascribed the greater part of the improvement in the death-rate shown in the following tables, but there are other causes. The decline in the birth-rate elsewhere alluded to has an immediate effect on the death-rates. In ordinary years about 30 per cent. of the deaths are of children under one year, and the decline in the birth-rate from 35 to 27 per thousand, which has happened during the last ten years, means a reduction of 1 per thousand in the death-rate.

Comparing the death-rate of males and females separately, New Zealand shows the lowest rates amongst both sexes, followed by Tasmania. South Australia has the third position in regard to general rate, but the highest rate for males.

The number of deaths in each state and in the whole of Australasia, in quinquennial periods from 1861 to 1900, is shown in the following table :—

State.	1861-65.	1866-70.	1871-75.	1876-80.	1881-85.	1886-90.	1891-95.	1896-1900.
New South Wales	31,561	36,466	40,909	53,256	66,103	71,457	76,802	77,783
Victoria.....	49,452	55,136	59,759	62,811	66,811	84,648	82,056	81,328
Queensland	5,751	9,312	12,869	17,284	25,731	28,040	26,581	29,202
South Australia ..	10,840	12,963	15,475	18,026	21,616	19,361	20,535	21,174
Western Australia	1,399	1,711	2,068	2,003	2,709	3,332	5,430	11,913
Tasmania	6,953	6,962	8,060	8,994	9,790	10,389	10,123	10,313
Commomwealth	105,956	122,550	139,140	162,374	192,760	217,227	221,527	231,743
New Zealand	10,001	13,328	19,354	25,254	29,074	29,746	33,525	35,151
Australasia ..	115,957	135,878	158,494	187,628	221,834	246,973	255,052	266,894

The average death-rates of each state for the periods shown in the above table are given below, but the statement does not afford a just comparison between them as no account is taken of the ages of the people :—

State.	1861-65.	1866-70.	1871-75.	1876-80.	1881-85.	1886-90.	1891-95.	1896-1900.
New South Wales	16·86	16·05	14·99	16·09	15·66	13·80	12·80	11·85
Victoria.....	17·36	16·52	15·64	14·92	14·65	16·07	14·04	13·72
Queensland	21·06	18·07	17·94	16·90	19·10	15·52	12·82	12·51
South Australia ..	15·70	15·01	15·83	14·99	14·71	12·55	12·20	11·93
Western Australia	16·31	15·55	16·03	14·32	17·19	15·97	16·31	15·32
Tasmania	15·20	14·06	15·64	16·52	16·00	15·16	13·41	12·46
Commonwealth	16·98	16·01	15·58	15·54	15·36	14·51	13 27	12·73
New Zealand	14·36	12·05	12·93	11·83	11·00	9·87	10·14	9·56
Australasia ..	16·75	15·62	15·26	15·04	14·79	13·95	12·76	12·20

If this table be compared with that showing the birth-rates, it will be observed that the experience of Australasia corresponds with that of

other countries, viz., that a low birth-rate and a low death-rate accompany each other, so that although the birth-rate has been declining it has had an effect in reducing the death-rate, as indicated on the preceding page, and the balance in favour of births has not been reduced so much as it might have been. From the next table, which shows the mean natural increase in various countries during the decennial period 1890–1899, it will be seen that the case of Australasia is much better than that of any of the countries of the United Kingdom or Europe, for notwithstanding that the birth-rate of these countries in some cases is higher, the death rate is so much higher as to more than outweigh any advantage in that respect.

Country.	Birth-rate.	Death-rate.	Excess of Births per 1,000 Inhabitants.
New South Wales	31·11	12·49	18·62
Victoria	29·33	14·20	15·13
Queensland	33·55	12·93	20·62
South Australia	32·37	12·23	20·14
Western Australia	29·28	15·96	13·32
Tasmania	30·99	13·29	17·70
Commonwealth	30·86	13·25	17·61
New Zealand	27·02	9·86	17·16
Australasia	30·21	12·68	17·53
England and Wales	30·09	18·36	11·73
Scotland	30·67	18·80	11·87
Ireland	23·01	18·13	4·88
United Kingdom	29·32	18·38	10·94
Denmark	30·45	17·77	12·68
Norway	30·36	16·45	13·91
Sweden	27·22	16·38	10·84
Austria	37·24	27·06	10·18
Hungary	40·50	30·28	10·22
Switzerland	27·70	18·98	8·72
German Empire	36·15	22·47	13·68
Prussia	36·82	22·08	14·74
The Netherlands	32·66	18·62	14·04
Belgium	28·84	19·19	9·65
France	22·18	21·59	0·59
Italy	35·59	24·65	10·94

In regard to the above table it must be stated that, had the figures of any of the last four years been taken as the basis of comparison, the gain by natural increase in Australasia would have been below that of some European countries, where the decline in the birth-rate, although distinctly evident, has not been so great as in Australasia.

Index of Mortality.

So far consideration has only been given to the actual death-rates as they are obtained by taking the proportion which the number of deaths bears to the number of inhabitants. It is well known, however, that the death-rate of a country is affected by more than the salubrity of its climate, the degree of perfection to which the sanitary condition of its cities and towns and villages has been brought, and the nature of the industrial pursuits of its people. It is known that the ages of the people considerably affect the death-rate of a country; that, for instance, one which has a large proportion of young people will, other things being equal, have a lower death-rate than another which has a comparatively large proportion of old persons; and it is this fact that statistical science now seeks to take into account in establishing the rates of mortality of the various countries of the world. In order to have a comparison of the mortality of the principal countries on a uniform basis, the International Statistical Institute, in its 1895 session, held at Berne, decided to recommend the population of Sweden, in five age-groups, as ascertained at the census of 1890, as the standard population, by which the index of mortality should be calculated. Applying the co-efficient of mortality in each age-group in the Commonwealth and New Zealand to the age constitution of the standard population, the "index of mortality," as distinguished from the actual "death-rate," is found as given below for each of the two years 1899–1900. How greatly the ages of the people of a country affect its mortality will be evident from the fact that whereas in 1900 the death-rates in Australasia ranged from 9·43 in New Zealand to 12·76 in Western Australia, a difference of 3·33 per thousand, the range of the indexes of mortality was 4·16 per thousand, namely, from 11·61 in New Zealand to 15·77 in Western Australia.

State.	1899.	1900.
New South Wales	15·34	14·57
Victoria	16·13	14·82
Queensland	15·23	14·25
South Australia	15.05	12·98
Western Australia	19·37	15·77
Tasmania	16 64	14·56
New Zealand	12·42	11·61
Australasia	15·20	14·01

Ages at Death.

A detailed statement of the ages at death of the males who died during the year 1900 in the various states is given below. The figures for South Australia in this and subsequent detailed tables refer to the province proper exclusive of the Northern Territory.

Ages at Death.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Commonwealth.	New Zealand.	Australasia.
Under 1 year.....	2,094	1,645	834	471	398	223	5,665	819	6,484
1 and under 2 years..	325	319	106	79	82	26	937	110	1,047
2 ,, 3 ,, ..	89	85	40	22	14	10	260	46	306
3 ,, 4 ,, ..	72	53	27	19	7	7	185	34	219
4 ,, 5 ,, ..	48	56	24	7	3	4	142	33	175
5 ,, 10 ,, ..	186	205	71	62	16	22	562	96	658
10 ,, 15 ,, ..	160	138	63	39	13	21	434	70	504
15 ,, 20 ,, ..	240	168	140	45	24	34	651	112	763
20 ,, 25 ,, ..	322	268	223	62	77	33	985	147	1,132
25 ,, 30 ,, ..	299	271	193	72	98	35	968	147	1,115
30 ,, 35 ,, ..	295	331	206	57	100	19	1,008	132	1,140
35 ,, 40 ,, ..	371	354	208	75	122	36	1,166	156	1,322
40 ,, 45 ,, ..	460	341	218	95	103	37	1,254	156	1,410
45 ,, 50 ,, ..	465	310	185	85	68	46	1,159	168	1,327
50 ,, 55 ,, ..	364	306	173	94	64	38	1,039	187	1,226
55 ,, 60 ,, ..	475	402	215	95	64	31	1,282	248	1,530
60 ,, 65 ,, ..	575	590	193	117	57	54	1,586	301	1,887
65 ,, 70 ,, ..	620	821	208	131	66	56	1,902	419	2,321
70 ,, 75 ,, ..	535	794	152	126	41	86	1,734	311	2,045
75 years and upwards	948	1,158	181	240	66	253	2,846	461	3,307
Unspecified.....	8	12	18	1	4	....	43	....	43
Total	8,951	8,627	3,678	1,994	1,487	1,071	25,808	4,153	29,961

Similar information respecting the deaths of females in 1900 is given in the following table :—

Ages at Death.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Commonwealth.	New Zealand.	Australasia.
Under 1 year	1,742	1,291	622	440	290	166	4,551	650	5,201
1 and under 2 years..	303	271	128	68	59	30	859	95	954
2 ,, 3 ,, ..	96	84	47	24	13	10	274	47	321
3 ,, 4 ,, ..	64	67	37	15	7	12	202	30	232
4 ,, 5 ,, ..	42	53	25	9	6	9	144	25	169
5 ,, 10 ,, ..	147	191	62	43	9	29	481	77	558
10 ,, 15 ,, ..	126	117	47	37	9	20	356	90	446
15 ,, 20 ,, ..	158	180	57	81	16	34	526	117	643
20 ,, 25 ,, ..	239	231	80	78	44	32	704	139	843
25 ,, 30 ,, ..	252	297	99	61	46	26	781	129	910
30 ,, 35 ,, ..	285	317	96	70	51	29	848	131	979
35 ,, 40 ,, ..	279	337	102	88	47	39	892	130	1,022
40 ,, 45 ,, ..	249	285	90	79	39	41	783	97	880
45 ,, 50 ,, ..	215	204	73	56	13	28	589	123	712
50 ,, 55 ,, ..	214	227	64	55	22	24	606	124	730
55 ,, 60 ,, ..	245	283	75	67	15	33	718	161	879
60 ,, 65 ,, ..	289	405	84	76	17	35	906	167	1,073
65 ,, 70 ,, ..	306	480	85	93	13	54	1,036	228	1,264
70 ,, 75 ,, ..	272	461	73	110	10	59	985	160	1,145
75 and upwards	643	806	121	224	24	122	1,940	327	2,267
Unspecified	1	1	2	1	3	....	8	....	8
Total	6,167	6,588	2,069	1,780	753	832	18,189	3,047	21,236

The next table shows the ages of all the persons who died during 1900 :—

Ages at Death.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Commonwealth.	New Zealand.	Australasia.
Under 1 year	3,836	2,936	1,456	911	688	389	10,216	1,469	11,685
1 and under 2 years..	628	590	234	147	141	56	1,796	205	2,001
2 ,, 3 ,, ..	185	169	87	46	27	20	534	93	627
3 ,, 4 ,, ..	136	150	64	34	14	19	387	64	451
4 ,, 5 ,, ..	90	109	49	16	9	13	286	58	344
5 ,, 10 ,, ..	333	396	133	105	25	51	1,043	173	1,216
10 ,, 15 ,, ..	286	255	110	76	22	41	790	160	950
15 ,, 20 ,, ..	398	348	197	126	40	68	1,177	229	1,406
20 ,, 25 ,, .	561	499	303	140	121	65	1,689	286	1,975
25 ,, 30 ,, ..	551	568	292	133	144	61	1,749	276	2,025
30 ,, 35 ,, ..	580	648	302	127	151	48	1,856	263	2,119
35 ,, 40 ,, ..	650	691	310	163	169	75	2,058	286	2,344
40 ,, 45 ,, ..	709	626	308	174	142	78	2,037	253	2,290
45 ,, 50 ,, ..	680	514	258	141	81	74	1,748	291	2,039
50 ,, 55 ,, ..	578	533	237	149	86	62	1,645	311	1,956
55 ,, 60 ,, ..	720	685	290	162	79	64	2,000	409	2,409
60 ,, 65 ,, ..	864	995	277	193	74	89	2,492	468	2,960
65 ,, 70 ,, ..	926	1,301	293	229	79	110	2,938	647	3,585
70 ,, 75 ,, ..	807	1,255	225	236	51	145	2,719	471	3,190
75 and upwards.....	1,591	1,964	302	464	90	375	4,786	788	5,574
Unspecified.....	9	13	20	2	7	....	51	....	51
Total.....	15,118	15,215	5,747	3,774	2,240	1,903	43,997	7,200	51,197

The ages of the people were ascertained at the census of March, 1901, and a comparison of the foregoing figures with the numbers living at each age can now be made. Using the same age groups as for the index of mortality given on page 506, the following rates are obtained. For age 0 (under 1 year) the number of births during the year has been used in place of figures deduced from the census results :—

Age Groups.	Deaths in each Age Group per 1,000 living.								
	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Commonwealth.	New Zealand.	Australasia.
Under 1 year	103·27	95·39	98·37	99·27	126 15	79·98	99·94	75·16	95·96
1 and under 20.....	3·47	4·02	4·11	3·46	4·81	3·45	3·77	3·08	3·65
20 ,, 40.....	5·37	6·17	7·46	5·10	7·33	4·63	5·97	4·42	5·71
40 ,, 59.....	12·55	12·92	14·03	10·59	14·45	10·82	12·67	10·38	12·28
60 and over.....	56·79	58·01	47·14	49·18	51·32	68·52	55·97	46·01	54·15

The superiority of New Zealand is manifested at every age group ; for ages up to 40, Tasmania ranks second, but for all ages taken together South Australia stands before the island State. For children of 1 year Victoria shows a more favourable mortality than any State, except New Zealand and Tasmania ; at other ages, Victoria is behind New South Wales. The mortality of infants under 1 year of age may be

measured accurately by comparing the deaths with the number of births; this is a most sensitive and reliable test of the healthiness and sanitary condition of a country, since at this early age children are most susceptible to the attacks of disease. The following table shows for each State the number of deaths of children under 1 year of age, and the rate per 1,000 births, since 1870, arranged in five-year periods:—

State.	1871-75.	1876-80.	1881-85.	1886-90.	1891-95.	1896-1900.	1901.
Deaths under 1 Year.							
New South Wales	11,036	14,626	19,709	21,586	21,930	20,819	3,929
Victoria	16,981	15,865	17,043	22,582	20,221	17,299	3,192
Queensland	3,596	5,068	6,732	8,339	7,496	7,337	1,458
South Australia	5,758	6,516	7,594	5,593	5,227	5,266	911
Western Australia	.....	.....	.....	939	1,332	3,488	737
Tasmania	1,560	1,830	2,331	2,437	2,337	2,284	439
Commonwealth	38,931	43,905	53,409	61,476	58,543	56,493	10,666
New Zealand	6,390	8,432	8,733	7,924	8,005	7,578	1,463
Australasia	45,321	52,337	62,142	69,400	66,548	64,071	12,129
Rate per 1,000 Births.							
New South Wales	103·58	114·65	123·98	114·64	111·00	113·40	103·74
Victoria	124·53	119·87	121·51	131·06	111·81	111·29	102·94
Queensland	122·82	135·02	137·45	118·87	102·88	103·39	101·94
South Australia	158·20	140·70	134·13	105·13	98·67	111·62	99·99
Western Australia	.....	.....	.....	109·15	130·05	155·72	128·89
Tasmania	101·87	106·61	108·75	102·78	94·26	97·59	89·05
Commonwealth	119·47	120·55	123·48	117·51	107·96	112·32	103·61
New Zealand	106·69	95·60	90·51	84·23	87·57	80 03	71·40
Australasia	118·09	116·53	118·88	113·71	105·51	107·21	98 26

In spite of all the sanitary improvements that have been effected in recent years, the rate, as judged from the last quinquennial period, does not seem to have decreased very appreciably in any of the states except South Australia and New Zealand. In South Australia the rate was very high in the earlier years, the reason given being that the deaths of several children 1 year old were wrongly included by the registering officers with those under 1 year. In every state except New Zealand, where the mortality has declined more or less regularly over the whole period, and Victoria, where it was stationary during the last two periods, the death-rates of infants have risen during the last period; in Western Australia the increase has been very serious, to the extent of nearly one-fifth in five years.

Causes of Death.

The system of classifying the causes of death adopted in Australasia is that arranged by Dr. William Ogle on the basis of the older system of Dr. William Farr, his predecessor as Superintendent of the Statistical Department of the Registrar-General's Office, England. Under this classification deaths are divided into eight classes, namely, deaths from specific febrile or zymotic diseases, from parasitic diseases, from dietetic diseases, from constitutional diseases, from developmental diseases, from local diseases, from violence, and from ill-defined or unspecified causes. The following were the assigned causes of death of the 51,197 persons who died in Australasia during 1900 :—

Classification	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.	Australasia.
Specific febrile or zymotic diseases—								
Miasmatic diseases	803	753	427	174	195	105	421	2,968
Diarrhœal diseases	568	403	335	212	117	42	199	1,876
Malarial diseases	7	2	31	1	20	1	....	62
Zoogenous diseases	2	....	....	....	....	....	....	2
Venereal diseases	57	59	25	10	2	5	24	182
Septic diseases	150	126	51	26	29	15	61	458
Total	1,677	1,343	869	423	363	168	705	5,548
Parasitic diseases	60	41	19	14	11	4	23	172
Dietetic diseases	159	93	169	18	47	4	71	561
Constitutional diseases	2,332	2,829	904	662	246	278	1,356	8,607
Developmental diseases	1,708	1,493	404	413	176	329	699	5,222
Local diseases—								
Diseases of nervous system	1,535	1,460	533	386	168	223	760	5,065
Diseases of organs of special sense	12	15	9	1	....	2	10	49
Diseases of circulatory system	1,262	1,704	510	433	141	243	848	5,141
Diseases of respiratory system	1,613	1,782	563	401	227	177	802	5,565
Diseases of digestive system	1,848	1,855	734	359	345	128	647	5,916
Diseases of lymphatic system and ductless glands	26	20	8	7	1	2	24	88
Diseases of urinary system	626	702	232	139	70	68	287	2,124
Diseases of organs of generation	48	47	13	12	9	3	25	157
Diseases of parturition	191	105	62	35	23	24	51	491
Diseases of organs of locomotion	32	38	13	17	7	5	16	128
Diseases of integumentary system	41	43	21	6	5	3	14	133
Total	7,234	7,771	2,698	1,796	996	878	3,484	24,857
Violence—								
Accident or negligence	992	854	491	205	216	104	496	3,358
Homicide	50	34	15	1	11	1	11	123
Suicide	145	101	91	33	37	16	68	491
Execution	1	1	....	1	....	....	....	3
Violent deaths not classified	38	....	....	....	....	....	....	38
Total	1,226	990	597	240	264	121	575	4,013
Ill-defined and not specified causes	722	655	87	208	137	121	287	2,217
Grand Total	15,118	15,215	5,747	3,774	2,240	1,903	7,200	51,197

Comparing the figures of the total deaths in each class and order with the population the following results are obtained. The figures represent the number of deaths per 100,000 living based on the experience of the last three years.

Classification.	Number of deaths per 100,000 living.		
	Males.	Females.	Total population.
Specific, febrile, or zymotic diseases—			
Miasmatic diseases	109·08	106·09	107·67
Diarrhœal diseases	53·65	47·32	50·68
Venereal diseases	5·17	3·21	4·25
Septic diseases	5·77	17·05	11·07
Other specific, febrile, or zymotic diseases	2·33	0·33	1·39
Total	176·00	174·00	175·06
Parasitic diseases	4·58	4·17	4·38
Dietetic diseases	18·15	8·62	13·67
Constitutional diseases	209·85	184·69	198·03
Developmental diseases	130·63	104·80	118·49
Local diseases—			
Diseases of nervous system	127·06	106·09	117·21
Diseaser of circulatory system	125·58	96·75	112·04
Diseases of respiratory system	164·26	121·89	144·36
Diseases of digestive system	139·87	136·07	138·09
Diseases of urinary system	59·46	32·14	46·63
Diseases of organs of generation	0·34	7·33	3·62
Diseases of parturition	.....	23·47	11·02
Diseases of organs of locomotion	3·65	2·68	3·19
Diseases of integumentary system	3·77	3·02	3·42
Other local diseases	3·31	4·07	3·67
Total	627·30	533·51	583·25
Violence—			
Accident or negligence	108·83	37·02	75·11
Homicide	2·76	2·11	2·45
Suicide	17·90	4·45	11·58
Other deaths from violence	0·63	0·14	0·41
Total	130·12	43·72	89·55
Ill-defined or not specified causes	57·25	52·25	54·91
Grand total	1,353·88	1,105·76	1,237·34

Specific Febrile or Zymotic Diseases.

The deaths from specific febrile or zymotic diseases were not so numerous in 1900 as in the years preceding, representing only 12·30 deaths per 10,000 of the population, as against 21·70 in 1898, accounted for by the comparative immunity from measles, scarlet fever, whooping cough, and diphtheria during last year. Under this class are included the highly infectious diseases—measles, scarlet fever, whooping-cough, and diphtheria—which are especially fatal to children; diarrhœal diseases, chiefly fatal to persons at the extremes of life; and typhoid (enteric) fever, whose ravages are very severe.

It would be interesting to compare the fatality of these diseases in the various States in proportion to the number of cases occurring, but unfortunately the necessary information is lacking. In some of the States legal enactments provide for the notification of infectious diseases, but they are not rigidly enforced, and doubtless many cases escape notice.

In New South Wales, since the beginning of 1898, under the provisions of the Public Health Act of 1896, notification of the three diseases scarlet fever, diphtheria, and typhoid has been compulsory, and careful record has been kept of the number of cases and deaths, the averages for the three years 1898 to 1900 being shown below:—

Disease.	Number of cases notified.	Number of Deaths.	Fatality per cent.
Scarlet Fever	2,875	39	1·4
Diphtheria	987	97	9·8
Typhoid	3,176	377	11·9

The experience of London during the nine years 1891-99 is also given.

Disease.	Number of cases notified.	Number of Deaths.	Fatality per cent.
Scarlet Fever	21,973	872	4·0
Diphtheria	11,646	2,259	19·4
Typhoid	3,432	599	17·4

Measles.

Measles, which is mainly a children's disease, was the cause in 1900 of the deaths of 140 persons, equal to a rate of 0·31 per 10,000 living. The following tables show the number of deaths in each State from this disease, and the death-rate per 10,000 living, in five-year periods since 1870 :—

State.	1871-75.	1876-80.	1881-85.	1886-90.	1891-95.	1896-1900.
Number of Deaths.						
New South Wales	.....	311	200	293	885	734
Victoria	1,809	271	336	148	696	827
Queensland	179	36	102	4	302	261
South Australia	356	18	240	8	291	83
Western Australia	.....	1	129	nil	27	41
Tasmania	132	3	66	1	49	59
New Zealand	*359	10	246	85	526	204
Australasia	.....	650	1,369	539	2,776	2,209
Death-rate per 10,000 living.						
New South Wales	.....	0·94	0·47	0·57	1·48	1·12
Victoria	4·73	0·66	0·81	0·28	1·19	1·39
Queensland	2·50	0·35	0·76	0·02	1·46	1·12
South Australia	3·64	0·15	1·63	0·05	1·73	0·47
Western Australia	.....	0·07	8·19	0·00	0·81	0·53
Tasmania	2·56	0·06	1·08	0·01	0·65	0·71
New Zealand	*2·90	0·05	0·93	0·28	1·59	0·55
Australasia	.....	0·52	0·91	0·30	1·38	1·01

* Four years, 1872-75.

With regard to the diseases which are almost solely confined to children, the true rates are somewhat obscured by stating the proportion of deaths to the whole population, since the prevalence of the diseases will vary in each State according to the proportional number of young children in each. It has, however, been necessary to state them as above, because there is no means of making an accurate estimate of the numbers living at the ages most affected. Comparing the rates as they appear, it will be seen that measles has been more prevalent since 1891 than during the preceding fifteen years, and it seems to be most common in the first three States shown in the table. Although the disease is in evidence every year, it usually occurs as an epidemic, and, according to the records, the outbreaks occur with more or less regularity and severity about every five years. Measles was epidemic in nearly all the States in 1875 (when the attack was very severe), in 1880, in 1884 (when Western Australia suffered heavily) in 1889, in 1893, in 1898, and in 1899.

Scarlet Fever.

The deaths resulting from scarlet fever during 1900 numbered only 60, or at the rate of 0·13 per 10,000. In the table below are shown the number of deaths and the death rates in each State arranged quinquennially since 1870:—

State.	1871-75.	1876-80.	1881-85.	1886-90.	1891-95.	1896-1900.
Number of Deaths.						
New South Wales	.....	1,295	476	404	460	244
Victoria	1,455	2,646	282	148	172	230
Queensland	77	37	19	73	31	157
South Australia	626	520	141	27	56	47
Western Australia	.....	.....	.....	nil.	1	4
Tasmania	72	304	49	9	8	38
New Zealand	*58	383	312	96	40	18
Australasia	.....	5,185	1,279	757	768	738
Death-rate per 10,000 living.						
New South Wales	.....	3·91	1·13	0·78	0·77	0·37
Victoria	3·81	6·44	0·59	0·28	0·29	0·39
Queensland	1·07	0·36	0·14	0·40	0·15	0·67
South Australia	6·40	4·30	0·96	0·17	0·33	0·26
Western Australia	.....	.....	.....	0·00	0·03	0·05
Tasmania	1·40	5·59	0·80	0·13	0·11	0·46
New Zealand	*0·47	1·79	1·18	0·32	0·12	0·05
Australasia	.....	4·20	0·86	0·43	0·38	0·34

* Four years, 1872-75.

The rate of mortality from scarlet fever for the first ten years shown in the table was much higher than that recorded for measles, but, in spite of the highly infectious nature and difficulty of isolation of the former disease, the death-rate has since been consistently lower than that of the latter. From 1871 to 1880 the rate of mortality from scarlet fever was high, but during the next five years a great decrease was manifested, and later there was a further decline, while during the last fifteen years the rate has been practically constant, but with a tendency to rise in Victoria, Queensland, and Tasmania. In Victoria the extremely high rate for 1876–80 was caused by a very virulent outbreak of the disease in 1876, and in Tasmania an outbreak in 1877 largely increased the rate; in fact, during the three years 1875, 1876, and 1877 all the States were more or less affected by an epidemic of scarlet fever. In Queensland the disease has never been very prevalent, and in Western Australia it is virtually unknown.

Whooping-cough.

A curious fact in connection with whooping-cough, the third of the diseases of infancy and childhood, is that the mortality resulting from it is higher in the case of girls than of boys. During 1900 whooping-cough was responsible for 401 deaths (182 males and 219 females), equal to 0·89 deaths per 10,000 of the population, the male rate being 0·74 and the female 1·03. The table below shows the number of deaths and the death rates in each State since 1870 :—

State.	1871-75.	1876-80.	1881-85.	1886-90.	1891-95.	1896-1900.
Number of Deaths.						
New South Wales	.....	676	632	979	1,157	947
Victoria	1,053	921	701	691	851	498
Queensland	117	198	184	306	381	454
South Australia	181	211	341	263	279	264
Western Australia	.....	nil.	19	65	57	80
Tasmania	99	84	59	89	79	88
New Zealand	*465	589	592	443	752	245
Australasia	... ..	2,679	2,528	2,836	3,556	2,576
Death-rate per 10,000 living.						
New South Wales	.....	2·04	1·50	1·89	1·93	1·44
Victoria	2·76	2·24	1·47	1·31	1·46	0·84
Queensland	1·63	1·94	1·37	1·69	1·84	1·94
South Australia	1·85	1·74	2·32	1·70	1·66	1·49
Western Australia	.....	0·00	1·21	3·12	1·71	1·03
Tasmania	1·92	1·54	0·96	1·30	1·05	1·06
New Zealand	*3·75	2·76	2·24	1·47	2·28	0·67
Australasia	.....	2·15	1·69	1·60	1·78	1·18

* Four years, 1872-75.

The death-rate from whooping-cough, which has never been remarkably high, declined after the second quinquennium (1876–80), and thenceforward remained fairly constant during the next fifteen years. For the last five years, however, the returns show a further gratifying decrease, in spite of the fact that the disease was mildly epidemic during 1898 and 1899. Generally speaking, whooping-cough seems to have been most prevalent in New South Wales, South Australia, and New Zealand; but it is gradually decreasing in these States, and, in fact, throughout Australasia, with the single exception of Queensland, where the tendency during the last twenty years has been towards an increase. On the whole, the rates up to the last period are very even amongst themselves in all the States. In Western Australia the rate rose regularly to a maximum during 1886–90—a very severe epidemic being experienced in 1886—and then declined.

Diphtheria.

Diphtheria, the last of the febrile diseases mentioned which mainly affect children, caused, in 1900, a total of 374 deaths, at the rate of 1·07 per 10,000 persons living. In the following table are shown the number of deaths, and the death rates in each State since 1870 :—

State.	1871-75.	1876-80.	1881-85.	1886-90.	1891-95.	1896-1900.
Number of Deaths.						
New South Wales	.....	1,109	1,005	1,325	1,753	584
Victoria	1,609	1,431	681	1,885	994	892
Queensland	246	170	224	530	551	273
South Australia	379	329	387	570	513	153
Western Australia	.....	11	28	19	38	79
Tasmania	124	329	96	182	208	65
New Zealand	*535	316	525	542	577	289
Australasia	.....	3,695	2,946	5,053	4,634	2,335
Death-rate per 10,000 living.						
New South Wales	.....	3·35	2·39	2·56	2·92	0·89
Victoria	4·21	3·48	1·43	3·58	1·70	1·50
Queensland	3·43	1·66	1·66	2·93	2·66	1·17
South Australia	3·88	2·72	2·63	3·69	3·05	0·86
Western Australia	.....	0·79	1·78	0·91	1·14	1·01
Tasmania	2·41	6·05	1·57	2·66	2·76	0·79
New Zealand	*4·32	1·48	1·99	1·80	1·75	0·79
Australasia	.....	2·96	1·96	2·85	2·32	1·07

* Four years, 1872-75.

The present rates for diphtheria, as compared with those of twenty or twenty-five years ago, show a decrease. The decline, however, has been by no means regular, owing to the fact that this disease, in common with the others affecting children, sometimes occurs as an epidemic. Thus the increase in the rates during 1886–90 over those prevailing in the previous five years was due to an epidemic in nearly all the provinces in 1890.

The decreased mortality during the last twenty years, from the four diseases just mentioned, together with croup, represents a gain of about 6 children to the population in every 10,000 persons living. This improvement is very gratifying, since it may be taken that cases of these diseases, which are particularly liable to be attended with dangerous after-effects in the shape of lung and other local troubles, are not so numerous, and that in consequence the general health of the people is better. Tasmania seems to have suffered most from diphtheria, until the last ten years, during which the death-rate was the lowest in Australasia, having declined from 2·76 to 0·79.

Croup.

Croup, although classed as a disease of the respiratory system, was formerly classified with the zymotic diseases, and is included here on account of its similarity to diphtheria, and the confusion which often arises between them, and of the deaths set down to a combination of both. It is a disease that may be said to affect children only, and in 1900 caused the death of 92, or 0·20 per 10,000 of the population. In the subsequent table are shown the number of deaths and the death-rate in each State since 1870 :—

State.	1871-75.	1876-80.	1881-85.	1886-90.	1891-95.	1896-1900.
Number of Deaths.						
New South Wales	.....	968	971	951	683	278
Victoria	647	1,250	795	1,209	458	199
Queensland	273	324	483	382	239	103
South Australia	258	330	443	192	145	45
Western Australia	.....	24	31	45	64	26
Tasmania	80	76	113	112	101	29
New Zealand	*281	277	334	340	304	186
Australasia	.....	3,249	3,170	3,231	1,994	866
Death-rate per 10,000 living.						
New South Wales	.....	2·92	2·31	1·84	1·14	0·42
Victoria	1·69	3·04	1·66	2·30	0·78	0·34
Queensland	3·81	3·17	3·59	2·11	1·15	0·44
South Australia	2·64	2·74	3·01	1·24	0 86	0·25
Western Australia	.....	1·72	1·97	2·16	1·92	0·33
Tasmania	1·55	1·40	1·85	1·63	1·34	0·35
New Zealand	*2·27	1·30	1·26	1·13	0·92	0·51
Australasia	.....	2·61	2·11	1·83	1·00	0·40

* Four years, 1872-75.

Generally speaking, deaths from this disease show a steady and consistent fall from the earliest period, although in some of the States, especially Victoria and South Australia, the rates fluctuate slightly. The greatest decline has taken place in New South Wales, Victoria, Queensland, and South Australia, until at the present time croup is about equally prevalent throughout Australasia. If croup and diphtheria be taken together, as they usually are, the rates generally have declined to the extent of over 4 per 1,000 during the last twenty years.

Diarrhœal Diseases.

Diarrhœal diseases, comprising cholera, diarrhœa, and dysentery, carry off mostly young children and old persons. In 1900 these diseases were fatal to 1,876 persons, equal to a death-rate of 4·16 per 10,000 living. The number of deaths and the death-rates in each State in quinquennial periods since 1870, are shown below.

State.	1871-75.	1876-80.	1881-85.	1886-90.	1891-95.	1896-1900.
Number of Deaths.						
New South Wales	.....	3,913	4,775	4,323	3,794	3,622
Victoria	6,030	5,006	4,886	5,489	3,290	2,679
Queensland	1,618	2,469	3,833	2,865	2,125	1,779
South Australia	1,628	1,620	2,105	1,388	1,079	1,205
Western Australia	.....	140	106	251	323	794
Tasmania	437	512	474	605	354	309
New Zealand	*1,528	2,375	1,879	1,789	1,280	1,363
Australasia	.....	16,035	18,058	16,710	12,245	11,751
Death-rates per 10,000 living.						
New South Wales	.....	11·82	11·34	8·34	6·32	5·52
Victoria	15·78	12·18	10·23	10·42	5·63	4·52
Queensland	22·56	24·15	28·46	15·85	10·25	7·62
South Australia	16·65	13·39	14·32	8·99	6·41	6·79
Western Australia	.....	10·01	6·73	12·03	9·70	10·18
Tasmania	8·48	9·41	7·75	8·83	4·69	3·73
New Zealand	*12·33	11·13	7·11	5·94	3·87	3·71
Australasia	.....	12·86	12·04	9·44	6·02	5·37

* Four years, 1872-75.

The high death-rates of earlier years are not surprising, and may be ascribed to the hard fare and exposure incidental to the development of the pastoral and mining industries. This will be evident from a comparison of the present rates in Queensland, South Australia, and New South Wales with those of former periods. In all the States there has been a marked improvement during the last twenty years, with the exception of Western Australia, where the rough conditions of life prevailing on the goldfields exert an adverse influence on the rates. The most noticeable improvement has occurred in Queensland, where the rate has declined from 24·15 to 7·62 during the last twenty years. That temperature and climate have an effect on the death-rates from these diseases is proved from the fact that they are much more prevalent and more fatal in summer than in any other season of the year, and that in Tasmania and New Zealand, where the climate is mild and

genial, the rates are much lower than in Queensland and Western Australia, where the climate is very warm, and in some parts tropical, while the other States, whose climates are fairly temperate, show rates between the two extremes.

The decline in the number of deaths from diarrhœa may be in part due to the fact that of late years more skilful diagnosis in some cases makes possible the ascription of death to ailments of which diarrhœa may be only a symptom.

Typhoid (Enteric) Fever.

Seeing that typhoid is entirely a filth disease, the poison of which is propagated by sewage, and that it yields readily to sanitary precautions, it is a matter of very great regret that the annual mortality, although steadily declining, should still be so heavy. In 1900 typhoid was responsible for 1,054 deaths in Australasia, or at the rate of 2·33 per 10,000 living, as against the English rate of 1·99 for 1899, which was the highest recorded there for six years. The table below shows the number of deaths from this disease, and the death rate in each State, arranged in five-year periods since 1870 :—

State.	1871-75.	1876-80.	1881-85.	1886-90.	1891-95.	1896-1900.
Number of Deaths.						
New South Wales	.....	1,722	2,132	2,307	1,533	1,968
Victoria	1,799	2,174	2,364	3,209	1,571	1,722
Queensland	424	525	1,303	990	513	747
South Australia	372	446	632	566	369	512
Western Australia	.....	.....	.....	59	500	1,379
Tasmania	156	184	213	401	230	251
New Zealand	*632	739	626	674	561	511
Australasia	.....	5,790	7,270	8,206	5,277	7,090
Death-rate per 10,000 living.						
New South Wales	.....	5·20	5·06	4·46	2·56	3·00
Victoria	4·71	5·29	5·18	6·09	2·69	2·90
Queensland	5·91	5·14	9·67	5·48	2·48	2·20
South Australia	3·80	3·69	4·30	3·67	2·19	2·89
Western Australia	.....	.....	.....	2·83	15·02	17·69
Tasmania	3·03	3·38	3·48	5·85	3·05	3·03
New Zealand	*5·10	3·46	2·37	2·24	1·70	1·39
Australasia	.....	4·69	4·90	4·64	2·64	3·24

* Four years, 1872-75.

It will be observed that the rates over the whole period covered by the table show a decline, and although the last quinquennial period

shows an apparent increase it was almost entirely confined to Western Australia. The disease is of an epidemic nature, but still the rates do not fluctuate greatly, and during the last five years the rates in all the States, excluding Western Australia, were fairly uniform, ranging from 1·39 in New Zealand to 3·03 in Tasmania. An epidemic occurred in the year 1889 in New South Wales, Victoria, Queensland, and Tasmania, and the disease seems to have since been more prevalent in the last-mentioned State than in any other. In Western Australia typhoid was almost unknown prior to the gold rush in 1894, when the disease may be said to have commenced. The maximum was soon reached, for in 1895 the death-rate was 35·46 per 10,000. With improved sanitation the rate is steadily declining, and although the table shows an apparent increase in the last quinquennial period, it must be remembered that, as previously stated, the disease was comparatively unknown prior to 1894, and this accounts for the lower rate of the period 1891–1895. The rapid decline of the death-rate may be seen when it is stated that in 1895 it was 35·46 per 10,000, for the period 1896–8 only 25·38, while in 1900 it had fallen to 7·29.

In England and Wales since the measures which have been taken to improve the drainage and water supply the rate has steadily fallen from 3·74 in 1871–75 to 1·76 in 1896–99.

Parasitic Diseases.

The deaths from parasitic diseases in Australasia during 1900 numbered 172, equal to a death-rate of 0·38 per 10,000 living. The chief disease of this group is hydatids, which was responsible for 91 deaths, or 0·21 per 10,000 of the population, and was most common in New South Wales, where the rate was 0·30.

Dietetic Diseases.

Dietetic diseases in 1900 carried off 561 persons, or at the rate of 1·24 per 10,000 living, the chief contributing causes being privation and intemperance.

Constitutional Diseases.

The next class of diseases is the constitutional, which caused in 1900 8,607 deaths, giving an average of 19·08 per 10,000 living. Of these diseases, phthisis and cancer stand out most prominently, and deserve special consideration.

Phthisis.

Phthisis claims more victims in Australasia than any other disease, but notwithstanding this fact the death-rates are lower than in the other countries of the world. This is all the more gratifying when it is considered that the Australian climate is undoubtedly favourable to people suffering from pulmonary complaints, and that thereby many

persons afflicted with the disease, or predisposed to it, are attracted to this country in the hope of obtaining relief. It is estimated that of the total persons who die of phthisis in Australasia, 7 per cent. do so after less than five years' residence. In 1900 phthisis caused 4,011 deaths in Australasia, equal to a rate of 8·89 per 10,000 living. The following table shows the number of deaths and the death-rates in each State since 1870, arranged in five-year periods :—

State.	1871-75.	1876-80.	1881-85.	1886-90.	1891-95.	1896-1900.
			NUMBER of Deaths.			
New South Wales	2,532	3,363	4,805	5,127	5,198	5,225
Victoria	4,594	5,397	6,428	7,662	7,751	7,049
Queensland	784	1,330	2,332	2,412	2,266	2,117
South Australia	872	1,244	1,558	1,640	1,667	1,544
Western Australia	*89	120	135	194	250	534
Tasmania	522	536	658	671	658	578
New Zealand	*1,080	1,805	2,418	2,529	2,693	2,886
Australasia	.....	13,795	18,334	20,235	20,483	19,933
			DEATH-RATE per 10,000 living.			
New South Wales	9·28	10·16	11·41	9·90	8·66	7·96
Victoria	12·02	13·13	14·10	14·55	13·26	11·89
Queensland	10·93	13·01	17·31	13·35	10·93	9·07
South Australia	8·92	10·28	10·60	10·63	9·90	8·98
Western Australia	*8·58	8·58	8·57	9·30	7·51	6·85
Tasmania	10·13	9·85	10·76	9·79	8·72	6·98
New Zealand	*8·72	8·46	9·15	8·39	8·15	7·85
Australasia	10·09	11·06	12·22	11·43	10·24	9·11

* Four years, 1872-75.

For the first half of the period covered by the table, phthisis seems to have been on the increase; but since 1885 it has steadily decreased, and the mortality rate is now lower than that of England—where the rate is over 13 per 10,000 living—or of any European country. The decline is general, and is evidence of the more skilful treatment of the disease and the effectiveness of the preventive measures taken against it. Phthisis has always been most prevalent in Victoria, but the rate is fairly uniform throughout the rest of Australasia. In Queensland the rate is adversely affected by the peculiar liability of the Pacific Island labourers to contract the disease, while the Maori population of New Zealand is also extremely susceptible to its ravages. Western Australia has, on the whole, had the lowest rate, but there is little difference between it and several of the other States.

Cancer.

Next to phthisis, cancer is the most deadly of the constitutional diseases, and in 1900 was the cause of the death of 2,596 persons, or at the rate of 5·76 per 10,000 living. In the table below are shown the number of deaths and the death-rates in each State since 1870 :—

State.	1871-75.	1876-80.	1881-85.	1886-90.	1891-95.	1896-1900.
Number of Deaths.						
New South Wales	772	934	1,146	1,876	2,587	3,548
Victoria	1,245	1,712	2,065	2,799	3,621	4,086
Queensland	125	225	336	508	731	1,071
South Australia	199	352	475	592	803	968
Western Australia	*16	23	52	85	102	248
Tasmania	249	255	308	341	371	459
New Zealand	*262	526	806	1,270	1,725	2,153
Australasia	.....	4,027	5,188	7,471	9,940	12,533
Death-rate per 10,000 living.						
New South Wales	2·83	2·82	2·72	3·62	4·31	5·41
Victoria	3·26	4·16	4·53	5·32	6·19	6·89
Queensland	1·74	2·20	2·49	2·81	3·53	4·59
South Australia	2·04	2·91	3·23	3·84	4·77	5·45
Western Australia	*1·54	1·64	3·30	4·07	3·06	3·18
Tasmania	4·83	4·69	5·04	4·98	4·91	5·55
New Zealand	*2·11	2·46	3·95	4·22	5·22	5·85
Australasia	2·76	3·23	3·46	4·22	4·97	5·73

* Four years, 1872-75.

It will be observed that with some slight irregularity the death-rate from cancer has steadily risen in Australasia over the whole period covered by the table, the largest increases being shown by Victoria and New Zealand. For the first half of the period Tasmania had the highest rate, but so rapid has been the progress of the disease in Victoria and New Zealand that the rates in both are now higher than that of Tasmania. With the exception of the period from 1881 to 1890, Western Australia has always shown the lowest rates.

Although part of the increase may arise from the fact that more skilful diagnosis in recent years enables cancer to be ascribed as the cause of death in obscure malignant diseases more often than was formerly the case, yet after making due allowance on this score, the conclusion must inevitably be arrived at that the spread of the disease is a dread reality.

Developmental Diseases.

The deaths from developmental diseases in 1900 were 5,222 or 11·57 per 10,000 persons living, and of these deaths, 2,557, or 5·67 per 10,000

living, were ascribed to the vague cause, old age. Premature birth was set down as the cause of death of 1,716 infants, a mortality equal to 14·09 per thousand children born alive, or 1 in every 70.

Local Diseases.

Local diseases in 1900 were the cause of 24,857 deaths, and averaged 55·11 per 10,000 living. This group comprises diseases of the various systems and special organs of the body, the principal being diseases of the nervous system and of the circulatory system, which are further considered below. Under this heading also are classified diseases of the respiratory system, which caused 5,565 deaths, equal to 12·34 per 10,000; of the digestive system, responsible for 5,916 deaths, or 13·12 per 10,000; and of the urinary system, the deaths from which numbered 2,124, equal to a rate of 4·71 per 10,000.

Diseases of the Nervous System.

It has been asserted that coincident with the advance of civilisation there has been an increase in diseases of the nerves and brain, but from the figures in the following table showing for each State the number of deaths, and the death-rates, since 1870, it will be seen that such has not been the case. Moreover, it has been ascertained that deaths from apoplexy and convulsions in proportion to population are now less frequent than formerly. In 1900 the total deaths from diseases of the nerves and brain numbered 5,223, or at the rate of 11·58 per 10,000 living.

State.	1871-75.	1876-80.	1881-85.	1886-90.	1891-95.	1896-1900.
			Number of Deaths.			
New South Wales	5,881	6,844	8,522	8,432	8,256	7,938
Victoria	6,503	7,029	7,414	8,585	7,852	7,382
Queensland	1,656	2,190	2,684	3,005	2,778	2,790
South Australia	2,068	2,249	2,645	2,177	2,127	2,086
Western Australia	*230	309	296	379	510	802
Tasmania	1,133	1,238	1,577	1,388	1,210	1,142
New Zealand	*1,850	2,614	3,244	3,320	3,528	3,842
Australasia	.....	22,473	26,382	27,286	26,261	25,982
			Death-rate per 10,000 living.			
New South Wales	21·56	20·67	20·23	16·28	13·76	12·10
Victoria	17·02	17·10	16·26	16·30	13·43	12·45
Queensland	23·09	21·42	19·93	16·63	13·40	11·95
South Australia	21·15	18·59	17·99	14·11	12·64	11·76
Western Australia	*22·17	22·09	18·79	18·16	15·32	10·29
Tasmania	21·99	22·75	25·78	20·25	16·03	13·80
New Zealand	*14·93	12·25	12·27	11·02	10·67	10·45
Australasia	18·61	18·02	17·59	15·42	13·13	11·87

* Four years, 1872-75.

A study of the table shows that the death-rate for diseases of the nervous system in Australasia has decreased by considerably more than one-third during the last twenty-five years, representing a gain of nearly 7 persons to the population in every 10,000 living. Amongst the various States the rates are now fairly even, only ranging from 10·29 in Western Australia to 13·80 in Tasmania. Until the last period the rate had been consistently lower in New Zealand than in any other State, while, since 1875, Tasmania has always had the highest rate.

Diseases of the Circulatory System.

Diseases of the heart, which now command more attention than previously on account of their more frequent occurrence, and also on account of the better knowledge of the organ which now exists, were responsible in 1900 for 5,141 deaths, or 11·40 per 10,000 living. The following table shows the number of deaths and the death-rates in each State since 1870 :—

State.	1871-75.	1876-80.	1881-85.	1886-90.	1891-95.	1896-1900.
			Number of Deaths.			
New South Wales	2,197	2,755	3,262	4,289	4,826	5,724
Victoria	3,138	3,666	4,453	6,198	7,365	8,056
Queensland	444	586	991	1,406	1,575	2,353
South Australia	649	934	1,180	1,359	1,605	1,995
Western Australia	*102	147	201	239	408	748
Tasmania	499	578	700	799	875	1,089
New Zealand	*795	1,422	1,762	2,284	2,767	3,824
Australasia	.....	10,088	12,549	16,574	19,421	23,789
			Death-rate per 10,000 living.			
New South Wales	8·05	8·32	7·74	8·28	8·04	8·72
Victoria	8·21	8·92	9·77	11·77	12·60	13·59
Queensland	6·19	5·73	7·36	7·78	7·60	10·08
South Australia	6·64	7·72	8·03	8·81	9·53	11·24
Western Australia	*9·83	10·51	12·76	11·45	12·26	9·59
Tasmania	9·69	10·62	11·44	11·66	11·60	13·16
New Zealand	*6·42	6·66	6·67	7·58	8·37	10·40
Australasia	7·53	8·09	8·37	9·36	9·71	10·87

* Four years, 1872-75.

It will be seen that deaths from the diseases of the organs of circulation have steadily and rapidly increased during the last twenty-five years. It is questionable whether the increase shown is not partly due

to more skilful diagnosis, as many deaths formerly attributed to old age are now assigned to some more definite cause. The highest death-rates prevail in Victoria and Tasmania, and there is a wide range between the rates of these States and that of New South Wales, which is only 8·72 per 10,000 living.

Deaths in Childbirth.

Included under the heading of local diseases are diseases of parturition, which, together with puerperal fever, a septic disease of the zymotic group, comprise the causes of death of women in childbed. In 1900, deaths from these diseases averaged 1 in every 190 births, which differs slightly from the ratio to confinements, as some births are multiple. The table below gives the number of deaths from these diseases in each State since 1872, and the deaths per 1,000 births, the usual method of stating the rate :—

State.	1873-77.	1878-82.	1883-87.	1888-92.	1893-97.	1898-1900.
Number of Deaths.						
New South Wales	*448	555	833	824	1,336	798
Victoria	997	899	895	916	943	419
Queensland	189	244	311	368	317	188
South Australia	208	255	241	217	263	145
Western Australia	32	27	31	25	58	92
Tasmania	123	74	88	88	106	75
New Zealand	367	435	582	464	459	252
Australasia	.....	2,489	2,981	2,902	3,482	1,969
Death-rate per 1,000 Births.						
New South Wales	*6·43	3·99	4·79	4·24	6·96	7·26
Victoria	7·42	6·74	5·96	4·96	5·61	4·56
Queensland	5·75	6·07	5·33	5·00	4·43	4·41
South Australia	5·32	5·00	4·22	4·06	5·13	5·28
Western Australia	7·48	5·54	4·86	3·01	4·32	5·90
Tasmania	7·88	3·94	3·85	3·62	4·39	5·31
New Zealand	5·13	4·68	5·99	5·06	4·96	4·40
Australasia	.....	5·18	5·27	4·60	5·68	5·49

* 1875-77.

The rate showed a tendency to decline up till 1893, since when it has risen. The statistics presented above, however, are not absolutely to be relied upon, for the reason that medical attendants do not take sufficient care when furnishing the certificate required of them by law to state the real cause of death; for instance, it is believed that the word *puerperal* is omitted in many cases, especially of pyæmia and

septicæmia where death occurred in childbirth. It is absurd to suppose, as the rates indicate, that there is a greater degree of risk attached to childbirth in New South Wales than in the other states, the only assurance that can be given being that since 1890 the figures for New South Wales are absolutely correct.

Deaths from Violence.

Deaths by violence in 1900 numbered 4,013, or at the rate of 8·90 per 10,000 living. Of these, more than 83 per cent. were the results of accidents or negligence, and more than 12 per cent. were due to suicide, the latter being more fully dealt with in the chapter "Social Condition."

Accidents.

The total number of persons who died in 1900 from accidents was 3,358, or 7·45 per 10,000 living. The following table shows the number of deaths in each State from this cause, and the death-rates since 1870 :—

State.	1871-75.	1876-80.	1881-85.	1886-90.	1891-95.	1896-1900.
Number of Deaths.						
New South Wales	2,982	3,569	4,174	4,542	4,520	4,852
Victoria	3,908	3,539	3,662	4,612	4,262	4,016
Queensland	1,134	1,389	1,874	2,639	2,349	2,681
South Australia	610	877	919	1,038	912	1,141
Western Australia	*106	184	184	277	400	1,000
Tasmania	492	497	441	551	500	583
New Zealand	*1,259	2,200	2,216	2,369	2,494	2,415
Australasia	.....	12,255	13,470	16,028	15,437	16,688
Death-rate per 10,000 living.						
New South Wales	10·93	10·78	9·91	8·77	7·53	7·39
Victoria	10·23	8·61	8·03	8·76	7·29	6·77
Queensland	15·81	13·59	13·91	14·60	11·33	11·49
South Australia	6·24	7·25	6·25	6·73	5·42	6·43
Western Australia	*10·22	13·16	11·68	13·28	12·02	12·83
Tasmania	9·55	9·13	7·21	8·04	6·62	7·04
New Zealand	*10·16	10·31	8·38	7·86	7·55	6·57
Australasia	10·10	9·83	8·98	9·06	7·72	7·63

* Four years, 1872-75.

The death-rates from accidents have fallen considerably, as the table shows, but they are still by no means low, and none of the States

exhibits so small a rate as that of England and Wales, viz., 5·9 per 10,000 living. Western Australia and Queensland, which have the most scattered populations, show the largest rates, while South Australia, where accidents seem always to have been less frequent than in the other States, shows the lowest rate. The most common accidents appear to be fractures, contusions, and drowning, the last mentioned causing a large number of deaths in Queensland every year, the high rate during 1886–90 in that State being due to the great number of people (340) who were drowned in 1890.

Marriages.

The number of marriages and the marriage-rate per thousand of the population for each State during the year 1900 are shown below :—

State.	Marriages.	Marriage-rate.
New South Wales	10,538	7·68
Victoria	8,406	6·99
Queensland	3,341	6·62
South Australia	2,309	6·36
Western Australia	1,821	9·71
Tasmania	1,338	7·71
Commonwealth	27,753	7·30
New Zealand	6,095	7·82
Australasia	33,848	7·39

During 1900 the marriage-rate of Australasia increased from 7·06 to 7·39 per thousand, while in each of the States it was higher than the average for the preceding ten years, and this may be looked upon as a sure sign of returning prosperity.

The number of marriages in each state and in the whole of Australasia, in quinquennial periods from 1861 to 1900, was as follows :—

State.	1861–65.	1866–70.	1871–75.	1876–80.	1881–85.	1886–90.	1891–95.	1896–1900.
New South Wales	16,920	18,271	21,210	25,904	35,737	38,671	39,924	45,909
Victoria	22,237	22,902	24,368	25,416	33,589	42,832	37,717	39,245
Queensland	3,689	4,648	6,276	7,466	11,632	15,271	13,526	15,479
South Australia	6,226	6,435	7,472	10,682	12,379	10,334	10,686	10,942
Western Australia	765	828	835	978	1,112	1,495	2,332	7,902
Tasmania	3,340	3,143	3,290	4,087	5,005	4,796	4,524	5,598
Commonwealth	53,177	56,227	63,451	74,533	99,454	113,399	108,709	125,075
New Zealand	7,240	9,955	12,050	16,220	18,102	18,097	20,210	26,418
Australasia	60,417	66,182	75,501	90,753	117,556	131,496	128,919	151,493

The average marriage-rates for each State during the same periods are given below. The table shows the ratio of marriages to population; to ascertain the ratio of persons married it is necessary to double the figures:—

State.	1861–65.	1866–70.	1871–75.	1876–80.	1881–85.	1886–90.	1891–95.	1896–1900.
New South Wales ..	9·04	8·04	7·77	7·82	8·46	7·47	6·64	7·00
Victoria	7·81	6·86	6·38	6·02	7·37	8·13	6·48	6·62
Queensland	13·51	9·02	8·75	7·30	8·64	8·45	6·53	6·63
South Australia	9·02	7·45	7·64	8·83	8·42	6·70	6·29	6·17
Western Australia ..	8·92	7·53	6·48	6·99	7·06	7·16	7·01	10·13
Tasmania	7·30	6·35	6·39	7·51	8·18	7·00	5·87	6·76
Commonwealth ..	8·54	7·36	7·12	7·21	8·02	7·66	6·50	6·87
New Zealand	10·39	9·00	8·05	7·60	6·85	6·00	6·11	7·18
Australasia	8·73	7·61	7·27	7·28	7·84	7·43	6·44	6·92

During the five years ended 1895 the marriage-rate fell considerably in Australasia. With the exception of New Zealand it was lower in every State than during the preceding quinquennial period, and lower everywhere than during the five years 1881–85, while during the last five years the rate rose again in every State except South Australia. This is another proof of the truth of the oft-repeated statement that commercial depression always exerts an adverse influence on the marriage-rate. The abnormal rise in the case of Western Australia is what might be expected from the large number of men whom the industrial activity in that State has placed in a position to take upon their shoulders the responsibility of a household.

As marriage is the great institution by which the birth-rate is controlled, and through which the population is regulated, it will not be out of place to consider the fertility of marriages in Australasia. The two chief elements influencing this are the age at marriage of the parents, especially of the mother, and the duration of married life. The mean age at marriage of bridegrooms in Australasia is a little over 29 years, and of brides about 24·5 years, and it is known that these ages have been increasing for some years past. As regards the duration of married life, it is not possible to speak with certainty; all that is known is that the length of lifetime of married persons surpasses that of the unmarried—both male and female. The fertility of marriages is reckoned by the number of children to each marriage; and as the difference between the mean age of mothers and the mean age of brides in Australia is between 5 and 6 years, the average number of children to a marriage has been computed for the following

table by dividing the number of legitimate births during each quinquennium by the number of marriages during the preceding five years :—

NUMBER of Children to a Marriage.

State.	1871-75.	1876-80.	1881-85.	1886-90.	1891-95.	1896-1900.
New South Wales	5·59	5·76	5·87	5·01	4 80	4·28
Victoria	5·77	5·20	5·26	4·88	3·99	3·89
Queensland	6·12	5·75	6·29	5·76	4·54	4·93
South Australia	5·53	6·06	5·19	4·19	4·97	4·25
Western Australia	4·72	5·32	5·35	6·62	.....	.....
Tasmania	4·68	5·01	5·01	4·56	4·93	4·88
Commonwealth.....	5·63	5·53	5·55	4·95	4·48	4·25
New Zealand.....	5·94	7·15	5·77	5·03	4·86	4·48
Australasia	5·68	5·79	5·59	4·96	4·53	4·29

Western Australia has been excluded from the table during the latter years, as the sudden influx of population since the discovery of the gold-fields has unduly increased the number of births to be divided by the number of marriages of the preceding five years, and would have the effect of making the marriages of that State appear more fertile than they really are. Of course, the above means of determining the fecundity of marriages is only to be used in the absence of more direct methods; still the results cannot be very far from the truth, as is proved by the case of New South Wales, where accurate computations have shown the number of children to be expected from the present marriages to be only 4·04. The table shows that, on the whole, the fertility of marriages has been steadily declining since 1885, which bears out what has been before remarked in dealing with this question.

Particulars relative to divorce in Australasia will be found in the chapter headed "Social Condition."