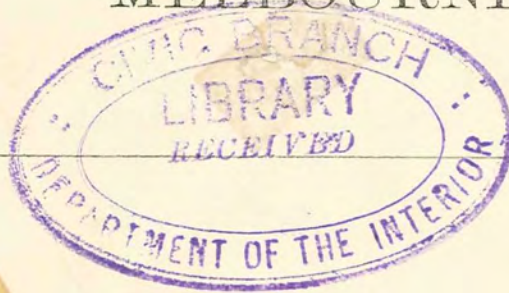




METEOROLOGY OF AUSTRALIA.

COMMONWEALTH BUREAU OF METEOROLOGY,
MELBOURNE.



ON THE CLIMATE OF THE YASS-CANBERRA
DISTRICT.

(ISSUED DECEMBER, 1910.)

Published with the Authority of the Minister of Home Affairs under the direction of

H. A. HUNT,

COMMONWEALTH METEOROLOGIST.

Printed and Published for the GOVERNMENT of the COMMONWEALTH of AUSTRALIA by J. KEMP,
Government Printer for the State of Victoria.

C.12506.

ON THE CLIMATE OF THE YASS-CANBERRA DISTRICT

(WITH CHART),

BY

H. A. HUNT,

COMMONWEALTH METEOROLOGIST.

The Rainfall and Temperature Map comprises the South-eastern area of New South Wales lying approximately to the South of latitude $34^{\circ} 30' S$ and East of the 148th meridian, E.

It was found necessary to discuss the figures of the whole of this area in order to gauge the variability and distribution of rainfall and temperature over the proposed Federal Capital Territory, since, with the exception of the town of Queanbeyan, meteorological observations have not been taken on the proposed Capital Site itself over a sufficient number of years to enable a proper appreciation of climatic elements to be arrived at.

The isotherms and isohyets are drawn from all available records. Those forming a basis for the rainfall contours are generally sufficiently reliable and numerous to give a correct estimate of the annual distribution, excepting, perhaps, the upper catchment area of the Cotter River.

The Temperature data are, however, very few, and insufficient for an approximately accurate outline of this element for the year, particularly in a region where the physiography is so widely variable. I have therefore had the isotherms computed on the formula that the temperature varies 1 deg. Fah. for each 300 feet elevation, and 1 deg. Fah. for each degree of latitude.

The average rainfall for the proposed Federal Territory is 25.5 inches, or about that of Melbourne or London.

The highest recorded average in the Territory is 32.92 inches at Uriarra; and the lowest, 18.73 inches at Duntroon. Neither of these records can, however, be accepted as accurate, for in the surrounding districts for the majority of the years over which observations have extended, the seasonal rains have been low or normal; these remarks particularly apply to the average of 18.73 at Duntroon, and, further, the figures cover a short period of only thirteen years of dry or moderate seasons.

No official records have been taken on the Cotter catchment area, but it is confidently estimated that the average rainfall there cannot be less than from 40 to 60 inches per annum, because Kiandra, which is only a few miles distant, has an average of 64 inches per annum, and is exposed to the same rain-bearing winds, and has the additional disadvantage of being some 500 to 1,500 feet lower than many of the peaks which serve as condensing or precipitating agents for the Cotter River.

It is reassuring to note, if the records of Kiandra can be accepted as a guide, that the precipitation on these higher levels does not suffer the extreme annual variations to which the lower levels are susceptible, so that the flow of water in the Cotter River may reasonably and justifiably be regarded as both fairly uniform and constant.

At Queanbeyan, which is only 8 miles distant from the Capital site, rain records have been taken from September, 1870, or about 40 years, and, since the elevation above sea level and the surroundings of both places are somewhat similar, the figures from Queanbeyan should be nearer the truth than those obtained at Duntroon. A comparison of the rainfall at both these places for the same set of years confirms this view, for the average only shows a difference of .9 of an inch in favour of Queanbeyan.

Again, Queanbeyan's rainfall for 39 years is 22.63 inches, its average from 1896 to 1908 equals but 19.56, so that if the difference—3.07—is added to the mean derived at Duntroon for the latter period, viz., 18.73 + 3.07, the average on the city site itself would be 21.80 inches per annum, or slightly above that of Adelaide.

As much as 41.29 inches was registered in the year 1887 at Queanbeyan, and as little as 10.42 in 1902, a range of 30 inches, so that, as in many other parts of our interior, a storage or equalizing provision must be definitely contemplated over the catchment in the lower areas of the Territory.

As before mentioned, the sparse temperature data so far obtained over the area leaves this phase of weather inconclusive, but taking Queanbeyan as representative for the same reasons as those stated in regard to rainfall, we may assume the mean annual temperatures to be 55° Fah., the summer mean 68° , and the winter 42° .

Observations of wind, evaporation and other climatic elements are not available, and any attempt at an estimation of normals other than those of rain and temperature would be the vaguest speculation.

With regard to prevailing winds, in addition to cyclonic and anticyclonic circulations, which largely control the winds in the southern areas of Australia, the influence of valley and mountain effects on air currents is a strong factor that will have to be reckoned with in future studies of the climate of the district, but from the extremes of elevation existing in the Territory, it is obvious that suitable climatic conditions obtain for nearly all economic and hygienic requirements.

The lower levels will be suitable for industries requiring a dry air, while those requiring moister surroundings will find abundant areas in the higher regions.

Sites for sanatoria will be found, approaching, if not equalling, the best in Australia, in the vicinity of the mountains—Bimberi, Tindery, Tidbinbilla, and Coree.

Tables showing particulars of rainfall and temperatures are appended, and a revised comparative statement of the various climatic elements of different cities of the world is also included.

It will be noted that the temperature variations of Canberra compare most favorably with cities of the world situated in similar latitudes, and being some distance from the sea can never be subject to the distressing, enervating, and, at times, deadly effects of a high wet bulb thermometer reading which occasionally afflict many of the world's big cities founded near the oceans.

With regard to rainfall also, it may be mentioned that the annual average of the city site equals or exceeds that recorded at the following places:—Berlin, Budapest, Christiana, Copenhagen, Madrid, Marseilles, Moscow, Naples, Paris, San Francisco, Stockholm, St. Petersburg, and Vladivostock.

TABLE SHEWING COMPARISON OF RAINFALLS AND TEMPERATURES OF CITIES OF THE WORLD WITH THOSE OF AUSTRALIA.

Place.	Height above M.S.L.	Annual Rainfall.			Temperature.					
		Average.	Highest.	Lowest.	Mean of 3 Hottest Months.	Mean of 3 Coldest Months.	Highest on Record.	Lowest on Record.	Average Hottest Month.	Average Coldest Month.
Amsterdam .. ..	..	26.40	..	..	62.9	37.1	93.9	5.8	63.6	35.0
Auckland .. ..	..	43.09	54.18	31.89	65.2	52.2	..	..	..	..
Athens .. ..	..	..	..	..	..	..	106.0	..	..	..
Bergen	146	89.10	102.80	73.50	56.8	34.5	88.5	4.8	57.9	33.6
Berlin	115	22.88	30.04	14.25	64.7	32.2	98.6	-13.0	66.0	30.0
Berne	1,880	46.00	..	..	..	..	97.2	-22.0	63.0	27.0
Bombay	37	73.99	..	..	83.0	75.2	98.5	55.9	84.6	74.5
Breslau	482	22.00	28.01	16.45	63.4	29.0	100.0	-23.4	..	..
Brussels .. ..	..	28.66	41.27	17.77	..	..	..	..	..	..
Budapest	512	24.80	35.27	12.91	..	..	..	..	..	..
Buenos Ayres	72	36.82	80.73	21.53	73.2	51.5	103.1	25.9	74.2	50.5
Calcutta	18	63.30	..	..	85.1	66.9	108.2	44.2	85.7	65.2
Cape Town	40	25.50	36.72	17.71	68.1	54.7	102.0	34.0	68.8	53.9
Caracas	3,420	30.03	47.36	23.70	68.3	65.3	87.8	48.2	69.2	63.7
Chicago	836	33.23	45.80	24.40	70.0	26.1	103.0	23.0	72.4	23.7
Christchurch .. ..	..	25.24	35.30	13.54	59.7	43.1	..	..	..	..
Christiana	82	22.51	..	..	61.0	24.5	93.0	-21.1	62.6	23.9
Colombo	42	88.27	..	..	81.4	79.2	100.0	64.0	82.1	79.0
Constantinople .. ..	..	28.75	42.74	14.78	74.0	43.5	103.6	13.0	75.7	42.0
Copenhagen	43	22.06	28.78	14.02	60.5	31.9	90.5	-9.7	61.9	31.4
Dresden	115	26.80	34.49	17.72	56.3	8.3	94.6	-8.7	..	..
Dublin	47	27.86	35.57	20.47	58.9	42.0	87.2	13.3	63.5	32.8
Durban	262	..	..	..	..	..	..	..	..	..
Edinburgh	230	26.50	38.94	17.60	59.0	38.4	88.0	0.0	58.0	37.0
Geneva	1,328	33.48	46.89	21.14	..	..	..	..	..	..
Genoa	157	51.29	108.22	28.21	..	..	..	..	..	..
Glasgow	184	38.49	56.18	29.05	52.7	41.0	84.9	6.6	..	..
Greenwich	159	24.12	35.54	16.38	61.3	39.3	97.1	4.0	62.7	38.6
Hong Kong	110	84.43	119.71	45.83	81.3	60.3	88.8	50.5	81.8	58.0
Johannesburg	5,925	30.64	43.39	21.66	65.0	51.5	94.0	23.3	66.8	40.6
Leipzig	117	24.69	31.37	17.10	55.4	40.3	96.4	-11.2	..	..
Lisbon	312	29.18	52.79	17.32	69.6	51.3	94.1	32.5	..	..
London	18	23.13	..	..	..	..	89.4	10.8	..	..
Madras	22	49.02	88.66	18.45	87.6	75.9	112.4	57.3	88.7	75.3
Madrid	2,149	16.23	27.48	9.13	73.0	41.2	107.1	10.5	75.7	39.7
Marseilles	246	21.15	43.04	10.56	70.4	45.4	100.4	11.5	72.2	44.3
Moscow	587	21.50	29.56	13.74	63.5	..	..	..	68.0	12.0
Naples	489	33.60	50.43	16.02	76.1	49.3	104.0	23.0	77.2	48.2
New York	146	44.63	37.60	24.30	71.4	31.8	97.0	-28.0	73.5	30.2
Ottawa	294	33.19	38.05	25.25	66.7	15.0	98.3	-31.6	68.7	12.6
Paris	165	21.92	29.56	16.44	63.5	37.1	101.1	-14.1	65.8	36.1
Pekin .. ..	..	24.40	..	..	..	..	..	..	79.2	23.6
Quebec	296	..	..	..	63.0	14.0	..	..	66.0	9.4
Rome	164	33.58	57.95	20.71	74.0	46.6	100.4	19.6	76.5	45.7
San Francisco	189	22.77	38.82	9.31	58.6	50.6	100.0	29.0	61.0	50.0
Shanghai .. ..	..	..	..	..	77.4	39.4	79.7	37.4	82.7	37.7
Singapore	12	92.70	123.24	65.56	..	..	93.0	..	..	..
Stockholm	144	17.92	25.46	11.78	59.6	37.1	91.8	-22.0	63.0	24.5
St. Petersburg	33	19.87	29.33	12.13	61.0	19.0	87.4	-30.3	64.0	17.1
Tokio	69	58.00	..	..	74.1	38.6	98.0	15.0	77.4	36.6
Trieste	85	42.94	63.14	26.57	..	..	..	..	..	..
Vienna	663	24.50	33.90	16.50	65.7	30.4	97.7	-8.0	67.1	28.0
Vladivostock	100	12.60	..	..	..	..	..	..	69.5	5.0
Washington	132	43.50	61.30	30.60	74.7	34.5	104.0	-15.0	77.0	33.0
Wellington (N.Z.) ..	..	49.88	60.40	34.93	60.7	48.3	..	..	..	..

ERRATA AND ADDENDA IN CONNEXION WITH TABLE SHOWING COMPARISON OF RAINFALLS
AND TEMPERATURES OF CITIES OF THE WORLD WITH THOSE OF AUSTRALIA.

Cities.	Height above Sea Level.	Rainfall.			Temperature.					
		Average.	Highest.	Lowest.	Mean Summer.	Mean Winter.	Highest on Record.	Lowest on Record.	Average Hottest Month.	Average Coldest Month.
	feet									
Amsterdam	6	27·29	40·59	17·60	63·2	36·8	90·0	4·1	64·4	35·4
Athens	351	15·48	33·32	4·55	69·7	59·5	106·5	19·6	90·4	42·0
Bombay .. ..	..	71·15	114·89	33·41	..	..	100·0	..	84·8	74·2
Brussels	328	28·35	41·18	17·73	62·6	36·0	95·5	-4·4	63·7	34·5
Budapest	500	25·20	35·28	16·79	68·6	30·2	98·6	-5·1	70·4	28·2
Calcutta	21	61·98	89·32	39·38	..	..	..	..	85·4	65·5
Chicago	823	33·54	..	24·52	..	26·3	..	-23·0	72·3	24·0
Christiania	82	22·52	31·73	16·26	54·5	29·5	95·0	..	..	..
Colombo	40	83·83	139·70	51·60	81·5	79·9	95·8	65·0	82·6	79·1
Edinburgh	441	25·21	32·05	16·44	55·9	38·8	85·3	16·6	57·2	38·3
Hong Kong	110	84·10	119·72	..	..	..	97·0	32·0	..	58·1
Johannesburg	5,750	31·63	50·00	21·66	65·4	54·4	..	..	68·2	48·9
Madras	22	49·06	88·41	..	..	..	113·0	57·5	87·6	75·3
Marseilles .. ..	..	21·88	..	12·28	70·3	45·3	..	..	83·1	56·3
Moscow	526	18·94	29·28	12·07	63·4	14·7	99·5	-44·5	66·1	11·9
New York	314	42·47	59·68	28·78	72·1	31·7	100·0	-6·0	74·5	30·3
San Francisco	155	22·83	..	..	59·0	51·0	101·0	..	..	..
Singapore	8	91·99	158·68	32·71	..	..	94·2	63·4	..	..
Stockholm	146	18·31	..	..	59·7	27·0	..	..	62·1	25·7
St. Petersburg	16	21·30	29·52	13·75	61·1	17·4	97·0	-38·2	63·7	15·2
Tokio	70	59·17	..	..	73·9	38·9	97·9	15·4	77·7	37·1
Vladivostock	55	19·54	33·60	9·39	63·9	11·0	95·7	-21·8	69·4	6·1
Washington	75	43·80	61·33	18·79	..	..	..	..	76·8	32·9

The above information has been obtained from the following sources :—

- From Climatological Tables, as supplied by Observatories *re circular*—Madras, Paris, Vienna, Breslau, Greenwich, Caracas, Glasgow, Bergen, Leipsig, Dresden, Stockholm.
- Year-book, Buenos Ayres.
- United States Department of Agriculture Publication (Nos. 829 and 766). Bulletins from Weather Bureau—Chicago, New York, San Francisco (Temperature), Washington.
- Koniglich Preubischen Meteorological Institute (Hellmann).
- Rainfalls for—Lisbon, Madrid, Paris, Edinburgh, Berlin, Geneva, Genoa, Rome, Naples, Trieste, Vienna, Copenhagen, St. Petersburg, Moscow.
- Marseilles (Bulletin Annual) 1907 annee.
- San Francisco Rainfall, U.S. Weather Bureau Monthly for April, 1903 (page 99).
- Reduction of Observations, Shang-Hai (No. 216).
- Quebec (Height), Canada Report.
- Dublin and London (Kew) 2nd Order Stations, 1906 (and 1905 as over).
- Madras (part), Bombay, Calcutta, and Colombo, from Indian Meteorological Memoirs, Average 30 years. Calcutta Rainfall (Gilbert's Change of Climate in India).
- Die Jährliche periode der Niederschläge in Ungarn—Brussels, Genoa, Mean Rainfall for 50 years, Highest and Lowest Rainfall.
- Hong Kong Observations, 1909, Average Rainfall. Temperature from 1903 Observations.
- Kew Meteorological Observations at Stations, 2nd Order, 1905, Average Rainfall, Highest and Lowest.
- Berlin Temperatures. "Nature," 22nd September, 1910.

TABLE SHEWING COMPARISON OF RAINFALLS AND TEMPERATURES OF CITIES OF THE WORLD WITH THOSE OF AUSTRALIA—*continued*.

Place.	Height above M.S.L.	Annual Rainfall.			Temperature.					
		Average.	Highest.	Lowest.	Mean of 3 Hottest Months.	Mean of 3 Coldest Months.	Highest on Record.	Lowest on Record.	Average Hottest Month.	Average Coldest Month.
FEDERAL CAPITAL SITE.										
Canberra (District) (Queanbeyan)	.. { 2,000 to 2,900 }	22·63	41·29	10·42	67·5	41·8	104·9	11·1	68·4	39·7
THE STATE CAPITALS.										
Perth	197	33·44	46·73	20·48	72·7	55·7	107·9	35·3	73·8	55·0
Adelaide	140	20·54	30·87	13·43	73·1	52·9	116·3	32·0	74·2	51·5
Brisbane	137	48·06	88·26	16·17	76·6	59·4	108·9	36·1	77·2	58·0
Sydney	146	47·97	82·81	23·01	70·9	53·8	108·5	35·9	71·6	52·2
Melbourne	91	25·42	36·42	15·61	66·4	49·9	111·2	27·0	67·4	48·5
Hobart	160	23·36	40·67	13·43	61·3	46·9	105·2	27·7	62·0	45·7

RAINFALLS OF STATIONS NEAR FEDERAL CAPITAL SITE, NEW SOUTH WALES.

Station.	No. of Years.	Average.	Greatest.	Year.	Lowest.	Year.
Adaminaby	21	Inches. 28·27	Inches. 42·95	1887	Inches. 15·46	1902
Adelong	24	30·03	41·73	1906	16·36	1902
Araluen	18	30·83	50·98	1898	17·48	1907
Argalong	9	39·54	60·45	1906	24·16	1902
Batlow	23	49·82	72·61	1906	26·72	1902
Bega	27	31·35	59·78	1891	15·79	1885
Bemboka	19	31·35	59·13	1893	16·12	1895
Berebangalo ..	18	21·72	34·08	1894	12·79	1895
Bevendale	16	20·78	40·49	1894	13·24	1902
Bobundarra ..	27	19·52	31·15	1887	10·49	1895
Bodalla	34	36·14	62·79	1879	19·50	1885
Boloco	22	23·92	38·04	1897	13·43	1895
Bombala	25	23·00	38·18	1891	11·88	1885
Bowning	18	27·63	46·90	1894	14·71	1902
Braidwood	21	24·23	37·98	1892	15·47	1895

RAINFALLS OF STATIONS NEAR FEDERAL CAPITAL SITE, NEW SOUTH WALES—*continued.*

Station.	No. of Years.	Average.	Greatest.	Year.	Lowest.	Year.
		Inches.	Inches.		Inches.	
Breadalbane	7	22·56	32·56	1900	19·37	1907
Bukalong	53	26·11	50·75	1870	12·25	1865
Bungendore	18	22·41	36·39	1894	11·95	1902
Bungonia	27	25·55	42·80	1891	15·73	1895
Burrowa	26	21·74	38·20	1887	11·60	1895
Candelo	22	28·62	56·43	1891	14·01	1904
Carlaminda	19	19·05	33·79	1891	10·59	1895
Carwoola	19	24·97	40·14	1891	14·76	1895
Cathcart	10	26·30	37·80	1900	19·47	1903
Cavan	27	25·85	50·69	1887	13·80	1902
Chatsbury	19	31·34	52·84	1900	20·43	1902
Collector	17	26·38	41·37	1894	16·79	1902
Coolamatong	24	22·23	35·34	1887	14·58	1904
Cooma	44	18·85	33·35	1891	11·19	1895
Cootamundra	21	23·02	32·28	1891	15·38	1894
Crookwell	26	31·81	46·81	1887	20·84	1897
Cunningham Plains	24	22·86	42·18	1887	12·26	1902
Curraooley	26	22·24	37·90	1887	12·38	1902
Dalgety	13	17·25	23·20	1900	13·12	1909
Dalton	11	22·09	32·11	1906	14·88	1902
Douglas	25	25·59	42·37	1887	13·81	1902
Dunroon	13	18·73	28·94	1900	11·09	1902
Eden	38	34·34	67·57	1870	16·63	1888
Fairlight (late Woodstock)	23	28·27	49·76	1887	15·56	1902
Fern Hill	17	33·92	50·88	1894	19·54	1902
Gidleigh	24	24·07	40·33	1891	12·54	1902
Gobarralong	22	22·94	32·19	1894	14·29	1895
Goulburn	46	25·07	49·71	1870	11·71	1865
Gudgenby	19	29·49	45·11	1891	15·71	1895
Gundagai	17	22·89	35·37	1894	16·09	1904
Gundaroo	32	24·06	39·91	1891	11·38	1907
Gunning	24	25·28	40·59	1894	14·19	1902
Harden	23	22·51	39·96	1887	11·50	1902
Hardwick	18	22·03	35·92	1894	13·64	1902
Jervis Bay	43	56·53	107·92	1895	17·53	1888
Jimenbuen	21	22·53	36·24	1891	15·13	1904-1905
Jindabyne West	18	25·82	37·06	1891	16·86	1885
Jugiong	11	19·63	28·55	1906	13·10	1902
Kiandra	35	64·04	90·06	1889	42·18	1908
Kimo	28	23·07	38·29	1887	13·99	1902
Kingswood	19	28·28	48·23	1891	16·36	1904
Kippilaw	24	22·83	38·40	1891	14·19	1895
Lake Bathurst	19	24·77	43·14	1891	12·33	1895
Lake George	25	27·00	42·11	1887	15·90	1908
Lambrigg	15	21·07	31·92	1900	13·41	1895
Landgrove	19	23·56	35·61	1894	14·25	1902
Lands End	23	25·52	45·94	1887	12·45	1902
Laurel Hill	20	53·65	83·85	1906	25·81	1902
Majura	24	24·51	41·93	1887	11·64	1902
Michelago	24	20·78	38·10	1887	8·69	1895
Milton	25	44·26	74·90	1880	28·00	1888
Moruya	33	35·27	63·79	1879	19·67	1885
Mount Campbell	18	24·19	36·60	1894	14·39	1902
Murrumbbla	22	21·69	36·77	1887	13·22	1895
Murrumburrah	25	23·71	37·88	1887	12·11	1902
Muttama	6	21·14	27·97	1906	12·48	1902
Mylora	15	26·36	42·05	1894	15·95	1902
Nimitybelle	15	24·73	32·14	1899	14·34	1895
Nowra	25	36·75	58·25	1890	19·51	1888
Panpong	8	24·03	30·37	1899	20·96	1904
Quoanbeyan	39	22·63	41·29	1887	10·42	1902
Red Hill Station	23	33·93	49·66	1887	18·24	1902
Rosedale	15	23·29	29·45	1887	14·80	1895
Rosemount	20	31·18	45·74	1894	18·49	1902
Samares	20	25·51	38·52	1891	11·69	1895
Snowball	13	33·32	46·50	1900	24·73	1901
Springvale	19	43·25	62·94	1894	21·84	1902
Sutton	22	24·23	43·62	1887	9·21	1902
Tarago	18	23·36	44·20	1887	15·19	1902
Tooma	25	30·36	43·33	1887	15·10	1902
Tumbarumba	25	29·66	55·05	1906	20·97	1902
Tumut	23	31·60	47·86	1887	16·82	1902
Uriarra	15	32·92	54·11	1887	20·00	1899
Woodhouselee	20	26·09	40·15	1879	16·79	1888
Wyndham	19	34·20	63·93	1891	20·20	1907
Yallowin	24	39·55	61·48	1906	18·52	1902
Yass	30	23·62	43·32	1887	13·39	1902

COMMONWEALTH METEOROLOGY.

ELEMENTS—TEMPERATURE, RAINFALL, EVAPORATION AT STATIONS NEAR FEDERAL CAPITAL SITE.

Year.	Janu-ary.	Feb-ruary.	March.	April.	May.	June.	July.	August.	Sep-tember.	Octo-ber.	No-ven-ber.	De-cember.	Year.
<i>Bombala.</i>													
Mean Maximum, 25 years	80.7	78.6	74.0	67.3	59.1	53.2	51.8	55.8	61.8	68.8	74.0	78.2	66.9
Mean Minimum ..	49.7	48.9	46.8	41.1	35.0	33.2	30.5	33.0	37.3	41.2	45.3	48.5	40.9
Mean Temperature ..	65.2	63.8	60.4	54.2	47.0	43.2	41.2	44.4	49.5	55.0	59.7	63.3	53.9
Absolute Maximum ..	104.1	99.7	98.7	91.1	76.1	66.6	70.7	76.1	82.5	96.8	101.6	101.7	104.1
Absolute Minimum ..	31.2	25.5	30.0	28.0	17.6	16.1	15.5	19.6	22.2	25.0	30.0	30.2	15.5
	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	inches
Mean Rainfall, 25 years ..	242	171	201	152	142	276	181	164	162	196	177	236	23.00
<i>Cavan.</i>													
Mean Maximum, 27 years	85.3	84.2	78.6	69.9	60.9	54.8	54.3	58.3	64.7	70.9	77.6	83.0	70.2
Mean Minimum ..	60.9	60.8	55.4	47.7	39.6	36.9	33.5	35.8	39.7	45.1	52.7	57.8	47.2
Mean Temperature ..	73.1	72.5	67.0	58.8	50.3	45.8	43.9	47.1	52.2	58.0	65.2	70.4	58.7
Absolute Maximum ..	105.1	107.9	100.1	89.2	81.1	76.1	70.1	82.1	84.1	98.1	98.1	107.1	107.9
Absolute Minimum ..	39.7	34.0	27.0	23.0	18.7	18.0	18.0	20.0	24.0	27.7	31.7	34.7	18.0
	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	inches
Mean Rainfall, 29 years ..	277	164	207	193	193	302	207	216	211	247	169	199	25.85
<i>Cooma.</i>													
Mean Maximum, 44 years	83.8	81.2	77.6	68.4	60.8	53.4	42.9	57.0	63.1	70.2	76.0	81.1	68.0
Mean Minimum ..	51.5	51.3	47.6	40.8	33.4	30.8	27.4	29.7	34.4	39.1	44.9	48.5	39.9
Mean Temperature ..	67.7	66.2	62.6	54.6	47.1	42.1	35.2	43.3	48.8	54.6	60.5	64.8	54.0
Absolute Maximum ..	112.0	107.0	104.6	92.7	77.7	69.2	72.9	75.7	86.9	95.7	102.1	110.0	112.0
Absolute Minimum ..	29.8	33.4	28.2	22.8	16.6	13.4	11.0	12.7	14.3	24.0	25.8	28.8	11.0
	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	inches
Mean Rainfall, 44 years ..	202	228	174	131	126	145	91	92	161	179	193	161	18.83
<i>Cootamundra.</i>													
Mean Maximum, 16 years	88.5	86.5	79.3	71.1	61.0	54.5	52.0	56.1	62.9	69.6	78.6	86.7	70.6
Mean Minimum ..	64.0	61.5	56.0	47.3	39.6	38.8	35.2	36.4	39.7	45.8	52.8	59.2	48.0
Mean Temperature ..	76.3	74.0	67.6	59.2	50.3	46.7	43.6	46.2	51.3	57.7	65.7	73.0	59.3
Absolute Maximum ..	111.0	107.5	98.5	87.4	76.0	72.0	70.5	71.0	85.4	96.5	99.0	112.0	112.0
Absolute Minimum ..	42.9	43.9	37.1	30.9	25.9	19.9	20.9	20.9	21.9	28.9	28.9	39.9	19.9
	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	inches
Mean Rainfall, 25 years ..	236	135	175	193	160	268	201	202	184	218	146	179	23.02
<i>Douglas, Lake George.</i>													
Mean Maximum, 19 years	83.3	81.9	77.2	68.9	61.2	54.9	54.4	57.3	64.0	70.1	76.6	82.0	69.3
Mean Minimum ..	59.0	57.6	53.6	46.7	39.1	36.7	34.4	36.6	40.9	46.3	52.8	58.0	46.8
Mean Temperature ..	71.2	69.7	65.4	57.8	50.2	45.8	44.4	46.9	52.5	58.2	64.7	70.0	58.1
Absolute Maximum ..	107.0	103.0	101.0	86.0	81.0	79.0	76.0	79.0	82.0	90.0	98.0	108.0	108.0
Absolute Minimum ..	41.8	39.8	36.8	32.8	23.8	18.8	21.8	23.8	26.8	29.8	34.8	41.8	18.8
	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	inches
Mean Rainfall, 24 years ..	289	174	188	184	179	278	189	226	207	235	192	218	25.59
Mean Evaporation, 8 years	3.305	2.603	2.571	1.776	1.184	1.038	0.899	1.011	1.328	1.582	2.261	2.486	22.044
<i>Goulburn.</i>													
Mean Maximum, 46 years	83.6	80.2	76.8	69.0	59.8	53.4	52.2	56.1	62.1	69.7	75.6	81.0	68.3
Mean Minimum ..	55.0	54.4	51.2	44.1	37.7	35.4	32.9	34.5	38.6	43.4	47.8	51.0	43.9
Mean Temperature ..	69.3	67.3	64.0	56.6	48.7	44.4	42.6	45.3	50.3	56.6	61.7	66.0	56.1
Absolute Maximum ..	109.0	111.0	101.0	93.0	78.0	72.5	75.1	77.0	84.0	97.5	100.5	107.5	111.0
Absolute Minimum ..	33.0	35.0	31.6	24.4	19.0	18.4	18.6	13.0	21.6	26.0	28.0	31.0	13.0
	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	inches
Mean Rainfall, 46 years ..	275	255	205	170	189	203	156	188	205	231	213	217	25.07
<i>Murrumburrah.</i>													
Mean Maximum, 24 years	90.2	88.4	83.3	74.8	66.4	59.1	58.6	61.1	66.5	74.3	81.9	87.6	74.4
Mean Minimum ..	60.7	59.7	54.8	47.1	38.8	37.1	35.3	36.0	39.3	45.0	51.5	57.5	46.9
Mean Temperature ..	75.5	74.0	69.1	60.9	52.6	48.1	47.0	48.5	52.9	59.7	66.7	72.5	60.6
Absolute Maximum ..	114.9	108.1	100.1	96.4	92.4	87.1	82.1	82.1	85.1	96.0	101.9	112.9	114.9
Absolute Minimum ..	38.4	38.0	33.0	30.0	24.0	19.0	21.0	20.0	21.0	28.0	28.0	34.0	19.0
	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	inches
Mean Rainfall, 25 years ..	234	137	207	221	164	269	209	220	204	196	151	179	23.91
<i>Queanbeyan.</i>													
Mean Maximum, 13 years	82.0	81.4	75.1	67.0	58.1	51.6	49.6	53.7	60.5	68.8	75.5	80.9	67.0
Mean Minimum ..	54.8	54.3	50.4	43.8	36.6	33.6	29.9	32.6	35.7	40.8	47.0	51.3	42.6
Mean Temperature ..	68.4	67.9	62.7	55.4	47.4	42.6	39.7	43.2	48.1	54.8	61.2	66.1	54.8
Absolute Maximum ..	104.0	102.0	90.0	85.0	69.7	64.0	61.5	67.0	79.9	87.0	92.0	101.0	104.0
Absolute Minimum ..	33.0	36.0	29.8	26.0	18.0	15.0	11.1	13.0	18.8	19.0	24.0	27.0	11.1
	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	pts.	inches
Mean Rainfall, 39 years ..	236	183	190	169	170	196	131	158	176	233	216	205	22.63

COMMONWEALTH METEOROLOGY—*continued.*

Year.	Janu- ary.	Feb- ruary.	March.	April.	May.	June.	July.	August.	Sep- tember.	Octo- ber.	No- vember.	De- cember.	Year.	
<i>Queanbeyan (Stevenson's Screen).</i>														
1909.	..	..	..	76.1	58.3	52.5	..	46.0	53.7	60.6	71.3	77.8	79.9	..
Mean Maximum	..	..	..	50.1	40.4	36.5	37.8	30.7	35.8	37.2	42.2	45.5	52.6	..
Mean Minimum	..	..	..	63.1	49.4	44.5	..	38.4	44.7	48.9	56.8	61.7	66.3	..
Mean Temperature	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<i>Yass.</i>														
Mean Maximum, 26 years	85.4	83.4	77.8	69.0	59.9	52.5	51.3	55.3	61.5	68.6	77.8	83.4	83.4	68.8
Mean Minimum	60.1	59.0	55.3	47.2	40.0	38.7	36.3	37.7	41.4	46.4	52.6	57.8	57.8	47.7
Mean Temperature	72.8	71.2	66.6	58.1	49.9	45.6	43.8	46.5	51.5	57.5	65.2	70.6	70.6	58.3
Absolute Maximum	107.5	105.0	98.0	90.5	74.5	66.5	63.0	75.0	82.5	93.0	103.0	108.5	108.5	108.5
Absolute Minimum	41.5	42.5	36.5	28.0	21.5	19.0	22.0	23.0	22.5	28.5	33.0	36.0	36.0	19.0
Mean Rainfall, 30 years	pts. 241	pts. 133	pts. 182	pts. 179	pts. 172	pts. 270	pts. 191	pts. 211	pts. 200	pts. 226	pts. 174	pts. 183	pts. 183	inches 23.62
<i>Laverstock, near Yass (Stevenson's Screen).</i>														
Mean Maximum, 6 years	85.8	83.8	77.8	71.7	62.7	54.9	52.4	55.0	58.8	66.9	75.5	82.4	82.4	69.0
Mean Minimum	60.1	57.7	52.2	47.6	41.2	34.0	35.4	35.3	38.7	43.9	49.4	54.1	54.1	45.8
Mean Temperature	73.0	70.7	65.0	59.7	51.9	44.5	43.9	45.1	48.8	55.4	62.4	68.3	68.3	57.4
Absolute Maximum	105.5	102.0	93.0	89.0	81.0	75.0	73.0	73.0	73.0	88.0	95.0	106.0	106.0	106.0
Absolute Minimum	41.0	42.0	39.0	34.0	26.0	22.0	24.0	26.0	26.0	31.0	33.0	40.0	40.0	22.0
<i>Yass (Stevenson's Screen)—Results of Observations for the Year 1909.</i>														
Mean Maximum	80.6	78.4	75.8	66.0	57.8	52.8	49.2	54.3	61.9	70.0	78.8	78.9	78.9	67.0
Mean Minimum	55.5	53.6	52.3	41.2	37.8	39.5	32.0	35.6	36.6	41.3	44.4	49.9	49.9	43.3
Mean Temperature	68.1	66.0	64.0	53.6	47.8	46.2	40.6	44.9	48.8	55.7	61.6	64.4	64.4	55.2
Maximum	105.0	96.0	84.5	82.5	67.5	59.0	58.0	65.0	70.0	83.0	93.0	100.0	100.0	105.0
Minimum	42.0	43.0	43.5	26.0	29.0	28.0	25.5	27.0	27.0	30.0	32.0	38.0	38.0	25.5
<i>Federal City (Stevenson's Screen).</i>														
1909	..	..	..	..	..	..	..	..	..	..	67.7	76.1	76.7	..
Mean Maximum	..	..	..	..	..	..	..	..	..	..	44.1	46.9	50.2	..
Mean Minimum	..	..	..	..	..	..	..	..	..	..	55.9	61.5	63.5	..
Mean Temperature	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1910.	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mean Maximum	77.5	83.6	72.5	68.9	60.1	..	..	..	..	..	..	..	..	..
Mean Minimum	55.8	53.2	53.7	43.8	37.4	..	..	..	..	..	..	..	..	..
Mean Temperature	66.6	68.4	63.1	56.4	48.7	..	..	..	..	..	..	..	..	..