

Government Meteorological Observatory.

METEOROLOGICAL Observations, Wellington, for the month of July, 1919. Observations taken 9 a.m.

Altitude of Observatory, 8 ft.

Date.	Barometer reduced and corrected in inches to Lat. 46°.	From Self-registering Instruments, for Twenty-four Hours previously.						Amount of Cloud, 0 to 10.	Direction of Wind.	Rainfall, in Points (100 to 1 Inch).
		Max. Temp. in Shade.	Min. Temp. in Shade.	Mean Temp. in Shade.	Solar Radiation.	Terrestrial Radiation.	Veloc. Wind, in Miles.			
1	29.416	55.8	50.2	53.0	102.0	44.5	384	6	N.	14
2	28.998	57.0	49.0	53.0	107.0	42.9	340	3	N.W.	Trace
3	29.086	54.3	40.2	47.2	106.0	29.9	216	7	Calm	30
4	29.338	54.7	37.8	46.2	104.0	29.8	132	10	S.	17
5	29.730	50.3	37.0	43.6	92.0	24.1	210	0	Calm	..
6	29.913	54.0	33.2	43.6	100.0	22.9	12	10	Calm	..
7	30.328	48.2	40.3	44.2	82.0	29.0	193	1	S.	..
8	30.459	52.9	32.0	42.4	99.0	20.7	46	0	N.E.	..
9	30.569	53.0	34.6	43.8	104.0	24.5	88	0	Calm	..
10	30.667	57.0	38.2	47.6	101.0	26.8	7	10	N.E.	..
11	30.540	54.0	42.2	48.1	105.0	41.7	221	3	N.E.	3
12	30.132	54.6	49.1	51.8	98.0	44.8	316	10	N.	11
13	30.089	57.7	51.2	54.5	94.0	49.7	519	7	N.W.	9
14	30.060	56.1	53.2	54.6	99.0	51.3	512	10	N.W.	18
15	29.970	56.7	49.6	53.1	82.0	43.5	361	8	N.W.	29
16	29.890	55.2	41.1	48.1	69.0	39.7	402	10	S.	2
17	29.912	50.5	34.3	42.4	83.0	21.8	196	0	N.W.	2
18	30.178	54.8	34.8	44.8	103.0	25.2	85	10	S.	Trace
19	30.227	53.1	35.3	44.2	103.0	23.5	153	6	N.W.	..
20	30.228	53.1	49.5	51.3	103.0	42.0	387	10	N.W.	Trace
21	30.001	55.2	51.8	53.8	90.0	50.0	376	9	NNW	27
22	29.721	56.2	53.7	54.9	95.0	51.0	589	10	WNW	48
23	30.098	54.4	45.0	49.7	68.0	40.2	338	9	S.	..
24	30.178	50.2	33.3	41.7	100.0	21.6	176	7	S.	9
25	30.425	51.1	45.0	48.0	105.0	41.7	434	9	SSE	Trace
26	30.460	49.6	32.3	40.9	104.0	21.7	159	1	Calm	..
27	30.357	55.2	36.9	46.0	101.0	25.0	125	9	SSE	29
28	30.316	50.2	42.3	46.2	67.0	40.3	574	10	SSE	41
29	30.370	48.3	43.2	45.7	63.0	42.9	572	9	S.E.	2
30	30.204	49.5	45.4	47.4	101.0	41.5	393	10	SSE	9
31	29.772	53.6	49.1	51.3	78.0	46.3	291	10	ESE	5
*	30.052	53.4	42.3	47.8	93.8	35.5	284	6.9	..	305
†	29.906	52.9	42.1	47.5	86.5	34.9	198	595

* Means, &c. † Means previous years.

DIRECTION OF WIND.

N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.
3	3	1	1	10	..	1	7	5

NOTE.—A mild winter month, with moderate to strong S. and N.W. winds prevailing. Barometric pressure, temperatures, and sunshine were above the average, while the rainfall was 49 per cent. below the mean of previous years. Total bright sunshine, 105 hours 13 minutes; and three sunless days. Frost was recorded on the grass on fourteen mornings. Mean earth-temperature at 1 ft. was 47.1°, and 50.4° at 3 ft. Mean dew-point, 42.2°; mean elastic force of vapour, 0.269 in.; and mean relative humidity, 81 per cent. of saturation.

CLIMATOLOGICAL TABLE. MEANS AND TOTALS FROM THE CHIEF STATIONS. July, 1919.

Altitude above Sea-level.	Name of Station and Observer.	Absolute Mean Temp. Air in Shade.	Extremes.		Total Rainfall (100 Points to the Inch).	Days with Rain (4 Point or more)
			Mean Max. Temp.	Mean Min. Temp.		
Ft.	NORTH ISLAND.	Deg.	Deg.	Deg.	Points.	Dys.
125	AUCKLAND .. F. A. F. Burnett	51.5	56.9	46.1	415	17
46	TE AROHA .. G. F. McGirr	47.6	58.1	37.2	745	15
925	ROTORUA .. J. R. Cummins
340	WAIHI .. P. A. Clifford	47.8	56.5	39.2	565	20
..	TAURANGA .. C. J. Butcher	48.6	57.3	39.9	307	14
160	NEW PLYMOUTH .. W. W. Smith	49.5	57.2	41.8	500	20
250	MOUMAHAKI* .. T. W. Lonsdale	45.5	54.6	36.5	401	17
2080	TAIHAPE .. A. R. Fannin	42.4	48.2	36.6	221	18
100	PALMERSTON NORTH .. J. A. Colquhoun	46.2	53.9	38.6	277	14
119	CENTRAL DEVELOPMENT FARM, WERAROA .. J. Beverley	46.3	53.6	39.1	392	18
186	GREYTOWN .. W. C. Davies	46.2	54.6	37.8	286	21
377	MASTERTON .. Wm. Hood	46.2	55.7	36.8	267	20
70	GREENMEADOWS, NAPIER .. T. B. McBreen	49.4	56.6	42.3	257	9
..	TRENTHAM MILITARY CAMP .. Lieut.-Col. Leahy	45.9	53.4	38.5	515	16
10	WELLINGTON ..	47.8	53.4	42.3	305	18
..	SOUTH ISLAND.					
..	BRIGHTWATER .. Ven. Archdeacon Kempthorne	44.4	54.5	34.4	223	10
34	NELSON .. J. R. Dart	42.8	52.7	32.9	222	10
1220	HANMER SPA .. G. J. O'Brien	41.5	50.8	32.2	456	18
25	CHRISTCHURCH .. H. F. Skey	44.9	52.3	44.9	267	12
42	LINCOLN .. L. J. Wild	45.0	53.8	36.3	246	11
1220	KISSELTON .. A. R. Blackwood	41.4	50.0	32.9	388	12
..	RAKAIA .. Miss A. Hardy	44.7	54.4	35.0	295	12
130	TIMARU .. Caretaker of Domain	43.7	52.6	34.9	179	8
200	WAIMATE .. F. Akhurst	43.0	51.6	34.4	209	10
300	DUNEDIN .. D. Tannock	44.9	51.2	38.6	268	6
245	GORE .. H. Dolamore	39.9	48.1	31.7	309	13
12	HOKITIKA .. W. H. Fleming	43.9	51.3	36.6	985	16
12	INVERCARGILL .. L. Lennie	41.4	49.6	33.2	409	19
..	*MOUMAHAKI, April ..	53.8	66.2	41.5	103	13
..	" May ..	48.9	59.2	38.7	483	13
..	" June ..	47.4	55.9	38.9	251	13

SUMMARY FOR THE MONTH OF JULY, 1919.

July, meteorologically the mid-winter month in New Zealand, was this year favoured with milder conditions than usual, though some severe frosts were experienced in parts.

The total rainfall was generally much lower than the normal over the North Island, and slightly so at most places in the northern and east coast districts of the South Island, but in Westland and Otago it was in excess.

Several intense atmospheric disturbances were in evidence, and may be briefly described: A westerly storm ruled during the first few days, and a secondary centre which developed remained off the east coast of the South Island on the 2nd and 3rd, finally passing south-east of the Chatham Islands on the night of the 4th. During this period the weather was unsettled and at times stormy, and some heavy rain fell in various parts of the Dominion. A rapid increase in pressure took place after the 4th, and between the 7th and 10th an anticyclone held sway, fair weather prevailing generally, with cold, frosty nights.

Between the 12th and the 24th comparatively high pressure prevailed in the North, but several westerly "lows" passed in the southern districts. These were chiefly effective between the 12th and 15th, on the 17th, and between the 20th and 24th. The latter accounted for strong southerly winds on the 22nd, heavy rain in parts, and snow on some of the high country in the South Island.

From the 24th to the close of the month high atmospheric pressure persisted south of New Zealand, and strong easterly winds and cold, showery conditions were experienced in the East Coast districts, while fine, clear weather prevailed in the West Coast. On the last two days a cyclone passing in the North was responsible for very stormy weather and heavy rain along the east coast of the North Island, floods occurring in many of the rivers in Hawke's Bay.

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