

CLIMATOLOGICAL TABLE—Summary of the Records of Temperature, Rainfall, and Sunshine for July 1966—continued

Station	Height of Station Above M.S.L.	Air Temperatures in Degrees (Fahrenheit)								Rainfall in Inches					Bright Sun- shine
		Means of		Mean of A and B	Difference From Normal	Absolute Maximum and Minimum				Total Fall	No. of Rain Days	Difference From Normal	Maximum Fall		
		A Max.	B Min.			Maximum	Date	Minimum	Date				Amount	Date	
	Ft.	°F.	°F.	°F.		°F.		°F.		In.			In.		Hrs.
Oamaru .. .. .		49.9	35.3	42.6	..	67.2	1	26.0	26	1.48	8	..	0.61	17	116
West Arm, Lake Manapouri ..	590	42.5	33.9	38.2	+0.4	52.0	26	24.1	23	2.77	14	..	0.75	9	..
Queenstown .. .. .	1,080	47.2	30.7	39.0	+0.7	56.8	1	23.3	21	0.27	8	-1.9	0.09	17	73
Mid Dome .. .. .	1,252	46.7	29.6	38.2	+0.5	59.5	1	19.6	24	0.72	10	-1.7	0.25	17	..
Cromwell .. .. .	720	44.0	28.9	36.4	-0.3	55.3	5	15.8	24	0.24	10	-0.7	0.11	17	..
Ophir .. .. .	1,000	43.1	25.1	34.1	-0.1	52.6	5	11.9	24	0.49	3	-0.3	0.27	17	..
Moa Creek .. .. .	1,400														
Earnsclough .. .. .	500	44.9	25.5	35.2	-0.8	56.5	27	11.0	24	0.23	4	-0.5	0.15	2	..
Alexandra .. .. .	461	44.4	28.5	36.4	+0.1	55.0	5	15.5	24	0.04	3	-0.7	0.02	2	95
Roxburgh Hydro .. .. .	350	45.9	32.2	39.0	-0.5	55.7	27	19.5	23	0.13	5	-1.0	0.07	2	..
Moa Flat, West Otago .. .. .	1,345	44.0	30.6	37.3	0.0	55.0	1	22.2	23	0.45	7	-1.5	0.14	2	..
Lake Mahinerangi .. .. .	1,300	44.8	29.4	37.1	..	58.0	1	16.0	24, 25	1.39	10	..	0.32	29	..
Tapanui .. .. .	740	47.0	32.8	39.9	-0.3	59.1	1	24.0	22, 23	0.90	10	-1.7	0.25	11	..
Rankleburn Forest .. .. .	835	44.9	31.6	38.2	-0.6	61.0	1	20.6	16	1.11	13	..	0.39	2	..
Otautau .. .. .	180	46.4	31.9	39.2	-0.6	57.0	5	20.3	23	1.83	9	-0.9	0.54	10	86
Gore .. .. .	230	47.0	33.2	40.1	+0.1	58.0	2	21.0	23	0.83	9	-1.3	0.26	2	96
Winton .. .. .	150	47.6	32.9	40.2	..	55.9	25	21.0	22	1.06	8	..	0.36	10	87
Pebbly Hills .. .. .	138	48.3	32.0	40.2	+0.1	57.5	5, 6	21.0	22	1.26	9	-1.2	0.29	2, 10	..
Invercargill Airport .. .. .	1	47.6	32.6	40.1	-0.3	55.3	29	22.2	23	2.42	11	-0.4	0.95	10	92
Milton .. .. .	60	47.4	32.8	40.1	..	58.0	1	19.5	27	0.94	13	-1.1	0.25	2	..
Balclutha .. .. .	20	46.8	32.6	39.7	..	58.5	1	23.2	25	0.85	13	..	0.30	2	89
Rarotonga .. .. .	15	76.1	65.2	70.6	-0.4	80.0	25	56.4	16	2.29	12	-2.1	1.17	26	164
Raoul Island .. .. .	126	65.5	56.0	60.8	-0.1	70.0	8	51.1	17	3.30	21	-3.4	0.83	19	174
Chatham Islands .. .. .	157	49.9	41.2	45.6	0.0	57.4	9	35.2	21	2.46	24	-1.1	0.53	8	84
Campbell Island .. .. .	49	43.7	36.2	39.9	..	49.2	26	27.9	12	2.26	28	..	0.37	9	40
Scott Base, Antarctica .. .. .	45	..	..	-19.3	..	+17.8	..	-41.8	..	..	..	..	..	..	..

## LATE RETURNS

## ERRATUM

Karioi, June 1966 ..	2,125	..	..	..	..	..	..	..	..	..	..	..	1.05	23	..
Hermitage, June 1966 ..	2,500	..	..	..	..	..	..	..	..	..	..	..	4.36	2	..

The "normal" refers to the present site of the instruments. The standard periods for normals are: for temperature 1931-60, for rainfall 1921-50, and for sunshine 1935-60. No normals are available for stations with only short records.

\*Sunshine recorder is not located at the station but is in the near vicinity.

## NOTES ON THE WEATHER FOR JULY 1966

**General:** July was somewhat wetter than usual over the North Island, but drier than usual over the South Island. In parts of the North Island the ground was rather too wet. Generally, however, it was a good month for stock, and lambing commenced under favourable conditions. A deep depression crossed the North Island during the 18th and 19th, bringing the most inclement weather to date this year. Strong gales caused considerable damage, especially in South Auckland, where trees were blown down, disrupting power supplies. Snow was reported well down on the hills in the southern half of the North Island, and also in parts of the South Island high country.

**Rainfall:** Rainfall was above average by about 50 per cent over most of the North Island, also in Marlborough and South Canterbury. Over the remainder of the South Island it was below average, mainly by 25 per cent. It was a dry month in Central Otago and Fiordland, with less than half an inch at some stations. Alexandra's rainfall was only .04 in., the lowest in July for 34 years; and Milford Sound's 3.32 in. was the lowest in July in 37 years of record.

**Temperatures:** Temperatures were mainly close to average. The period from the 21st to the 26th was particularly frosty in the South Island, and several stations reported as much as 30 degrees of ground frost. Molesworth, in the Marlborough high country, had 35 degrees of ground frost on the 24th.

**Sunshine:** Northland and most eastern districts received 10-35 hours less sunshine than average. Parts of Manawatu received a similar amount above average.

**Weather Sequence:** The month started with a day of settled weather, as an anticyclone was centred west of the North Island. However, on the 2nd and 3rd a weak trough brought some rain to Southland and Otago.

A deep depression soon passed far to the south-west, and the associated trough of low pressure crossed the South Island, with rain mainly on the West Coast, on the 4th and 5th. A depression developed on the trough over the North Tasman Sea and crossed

the North Island, bringing rain there and over the northern half of the South Island from the 6th to the 8th. The rain was heavy in Taranaki and Bay of Plenty and about Cook Strait. An anticyclone was centred west of Tasmania, and as the depression moved away to the east, south-westerlies set in. From the 9th to the 11th rain affected many districts, especially Southland, the West Coast, and most of the North Island. By the 12th the anticyclone had moved into the North Tasman Sea, but showers still persisted in Southland, Waikato, Auckland, and Northland.

From the 13th to the 15th a large anticyclone covered the country, with centres west of the North Island and south of the South Island; and fair weather prevailed.

There was a general deterioration during the 16th and 17th, with rain as a depression crossed the South Island. An anticyclone was centred to the south of Tasmania. A second depression which had formed near Noumea crossed the North Island during the 18th and 19th with very inclement weather there—strong gales, especially in South Auckland and Bay of Plenty; cold temperatures, with snow well down on the hills; and considerable rain, extending also to eastern districts of the South Island. For the next three days an anticyclone was centred to the south-west of the South Island, while pressures remained low to the east and north. Cold southerlies continued, with showers in eastern districts from Christchurch to East Cape and also in eastern Northland. In most of these areas the showers gradually died out. However, as the anticyclone moved across the South Island and to the east from the 23rd to the 25th pressures remained low to the north of the country; and there was light rain at times in eastern Northland, Coromandel, and Gisborne.

The 26th and 27th were marked by the passage of a depression far to the south-west, while the associated trough brought rain to western and northern districts of both islands. During the last three days of the month a complex depression from the North Tasman Sea crossed the North Island causing general rain, heavy in Bay of Plenty and South Canterbury.

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(N.Z. Met. S. Misc. Pub. 107).