

CLIMATOLOGICAL TABLE—Summary of the Records of Temperature, Rainfall, and Sunshine for January 1968—continued

Station	Height of Station Above M.S.L.	Air Temperatures in Degrees (Fahrenheit)								Rainfall in Inches				Bright Sunshine	
		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.
Lake Hawea .. ..	1,147	69.8	51.3	60.6	-1.9	86.7	10	40.4	18	1.62	12	-1.6	0.40	2	..
Naseby Forest .. ..	2,000	69.7	43.9	56.8	+0.7	86.0	11, 26	31.0	7	2.80	8	-0.4	1.25	29	..
Herbert Forest .. ..	200	69.6	46.4	58.0	..	80.0	11, 12	40.0	19	1.97	11	..	0.48	17	..
Cherry Farm, Waikouaiti ..	21	67.5	47.8	57.6	+0.7	83.5	12	37.0	7	1.82	13	..	0.99	17	..
Taiari .. ..	80	68.7	47.9	58.3	+0.1	85.6	11	38.5	30	1.24	14	-1.6	0.27	17	..
Berwick Forest .. ..	60	67.5	46.8	57.2	-1.1	83.2	11	35.5	19	2.21	15	-0.7	0.53	2	..
Dunedin Airport .. ..	4	68.0	46.6	57.3	-1.4	84.6	11	33.9	19	2.27	14	-0.2	0.53	2	210
Oamaru .. ..	99	69.1	51.2	60.2	..	84.5	12	43.0	3	1.49	5	..	0.64	29	207
Musselburgh, Dunedin ..	5	64.9	50.8	57.8	-1.0	84.0	12	42.5	19	1.35	16	-1.4	0.28	17	199
West Arm, Lake Manapouri ..	590	63.1	47.8	55.5	-1.6	76.7	10, 25	39.3	19	13.28	20	-0.7	2.77	16	..
Queenstown .. ..	1,080	70.6	48.7	59.6	-0.4	85.0	10	40.9	18	1.88	14	-1.3	0.56	2	255
Mid Dome .. ..	1,252	68.2	46.7	57.4	-0.4	86.7	26	31.3	19	1.98	15	-1.8	0.65	27	..
Cromwell .. ..	698	73.9	49.7	61.8	-1.4	90.6	25	40.4	18	1.23	10	-0.7	0.26	29	..
Ophir .. ..	1,000	71.7	47.6	59.6	-0.4	89.0	25	34.3	7	1.74	6	-0.3	0.55	29	..
Moa Creek .. ..	1,400	70.5	44.2	57.4	0.0	87.4	25	30.0	7	1.65	9	0.0	0.63	27	..
Earnsclough .. ..	500	73.8	45.8	59.8	-0.5	92.0	26	34.0	4, 7	0.89	9	-0.8	0.22	27	..
Alexandra .. ..	461	72.4	50.4	61.4	..	90.5	26	40.5	7	0.93	9	-0.9	0.35	27	253
Roxburgh Hydro .. ..	350	71.6	48.8	60.2	-0.5	92.0	11	36.5	19	0.73	7	-1.5	0.23	26	..
Moa Flat, West Otago .. ..	1,345	65.1	45.0	55.2	+0.2	84.1	11	32.8	19	1.88	18	-1.1	0.29	17	..
Lake Mahinerangi .. ..	1,300	63.7	43.7	53.7	..	83.1	26	31.8	19	2.07	16	-1.6	0.50	21	..
Tapanui .. ..	740	67.4	46.8	57.1	-0.4	87.0	26	36.0	19	1.32	18	-2.1	0.20	22	..
Rankleburn Forest .. ..	835	65.8	45.8	55.8	-0.9	84.6	11	36.0	19	2.22	19	..	0.40	29	..
Taiari Mouth .. ..	50	63.9	47.3	55.6	..	81.0	12	38.4	19	2.18	15	..	0.46	2	..
Otautau .. ..	180	65.3	46.5	55.8	-1.2	82.0	11	35.0	30	3.42	18	-0.2	0.53	14	192
Gore .. ..	225	67.1	48.4	57.8	-0.9	88.0	11	32.3	19	1.37	16	-1.8	0.21	16	187
Winton .. ..	145	65.7	47.1	56.4	..	85.0	26	37.1	19	2.68	19	..	0.77	2	191
Pebbley Hills .. ..	150	66.0	47.3	56.6	-1.5	87.0	26	35.0	19	2.45	18	..	0.36	2	..
Invercargill Airport .. ..	1	63.3	47.2	55.2	-0.9	81.1	11	35.9	30	3.47	20	-0.1	0.66	14	161
Milton .. ..	60	67.6	47.3	57.4	..	88.5	11	33.5	19	1.94	16	-0.6	0.44	2	..
Balclutha .. ..	20	66.6	48.4	57.5	..	89.0	11	35.2	19	1.27	17	..	0.40	2	196
Rarotonga .. ..	15	84.9	73.5	79.2	+1.0	88.2	30	67.3	21	0.93	11	-9.5	0.23	8	239
Raoul Island .. ..	126	76.3	67.2	71.8	+1.0	79.0	30	63.4	15	0.87	11	-2.8	0.24	18	240
Chatham Islands .. ..	157	63.9	53.0	58.4	+0.8	68.6	18, 30	46.0	17	2.38	17	-0.4	0.46	19	183
Campbell Island .. ..	49	52.7	43.0	47.9	..	61.3	1	32.7	18	6.52	30	..	1.52	25	82
Scott Base, Antarctica ..	45	..	..	23.5	..	36.7	..	7.2	..	..	..	..	..	..	..
LATE RETURNS															
Otutira, Dec 1967 .. ..	1,900	66.8	50.9	58.8	..	75.6	18	39.4	11	5.87	15	..	1.27	14	Hrs. ..

## LATE RETURNS

Otutira, Dec 1967	..	Ft. 1,900	°F. 66.8	°F. 50.9	°F. 58.8	..	°F. 75.6	18	°F. 39.4	11	In. 5.87	15	..	In. 1.27	14	Hrs. ..
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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 JANUARY 1968

**General**—January was a dry month over the greater part of the country. It was a good month for harvesting, and in many districts pasture growth was also satisfactory. However, it was too dry in parts of Northland and Bay of Plenty, causing a fall in the production of milk.

**Rainfall**—Rainfall was mainly half the average value in the North Island and three-quarters in the South Island. It was less than a quarter of the average over nearly the whole of Northland and most of Nelson. The only areas with rainfall somewhat above normal were the Canterbury coast together with Banks Peninsula and parts of the plains; the Wellington district; and the Southland coast with Stewart Island. In many districts about half the rain fell during the three days 17-19 January.

**Temperatures**—Temperatures were mainly close to average. However, they were 1-2 degrees cooler than normal in Fiordland and most of Southland, and about a degree warmer than average over the Canterbury plains and coast from Christchurch to Ashburton. In most districts the warmest days were from the 10th to the 13th; and in parts of Canterbury the temperatures reached 90°-93°F on the 12th.

**Sunshine**—Sunshine was also mainly close to average; but eastern districts from the East Coast to Wairarapa received up to 35 hours less than average.

**Weather Sequence**—Westerly conditions prevailed during the first four days of the month, with deep depressions passing far to the south and troughs of low pressure crossing New Zealand. The weather was unsettled on the West Coast and the Southland coast with frequent rain. Some rain was also reported in the Canterbury high country and in Nelson, Manawatu, Taranaki, and Bay of Plenty. A trough which crossed the country on the 5th brought a southerly change with showers on the Canterbury coast but with a clearance on the West Coast.

From the 6th to the 11th an anticyclone moved slowly across New Zealand and to the east. The weather was fine apart from some rain in Bay of Plenty on the 8th.

The 12th to the 16th was another period of predominantly westerly conditions, apart from generally fine weather on the 13th under the influence of a ridge of high pressure. Three troughs of low pressure crossed the country, all bringing rain to the West

Coast and the Southland coast. The first, on the 12th, also affected the remainder of Southland and parts of Otago. The second, on the 14th and 15th, also brought rain to western Southland and to parts of the coast from Banks Peninsula to Kaikoura. The 12th was a very warm day, especially in eastern districts; and the 11th had also been very warm.

A trough of low pressure which had moved on to the South Island on the 16th soon became slow-moving, with a depression forming east of the North Island. The 17th and 18th were the wettest days of the month; and the rain was very welcome, since many parts of the country had had very little rain during the first half of the month. Considerable falls were recorded in western districts of both Islands and in Nelson, Marlborough and north Canterbury. Conditions improved in most districts on the 19th as the depression moved away to the south-east, but rain was still reported in Northland, Gisborne, and Hawke's Bay. On the following day there was a further improvement with an anticyclone centred west of the North Island and a ridge of high pressure extending southward from it. However, a few showers were reported.

A depression soon passed to the south, and the associated trough of low pressure became slow-moving over the South Island. From the 21st to the 23rd scattered light rain was reported in some coastal districts of the South Island and also in Wellington and southern Manawatu. On the 24th a belt of high pressure covered New Zealand and extended eastward past the Chatham Islands. The weather was fine. During the next two days pressures remained high to the east and south-east, with mainly fair or fine weather over New Zealand. However, rain was reported in Bay of Plenty, Gisborne and Hawke's Bay, and Southland.

A trough of low pressure moving eastward over the country from the 27th to the 29th became slow-moving with the development of a depression to the east. Some rain was reported in most districts except Nelson and Northland. During the last two days an anticyclone was centred over the eastern Tasman Sea while a depression passed far to the south. The associated trough of low pressure brought rain to the West Coast, Southland, and the Otago coast.

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