

CLIMATOLOGICAL TABLE—Summary of the Records of Temperature, Rainfall, and Sunshine for November 1969—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.
Invercargill Airport ..	1	63.2	44.5	53.8	+1.6	74.8	20	30.7	1	1.45	6	-2.1	0.43	21	192
Milton ..	60	67.9	45.0	56.4	..	81.3	9	30.7	2	0.54	6	-1.8	0.22	21	..
Balclutha ..	20	66.6	45.6	56.1	..	81.0	6	33.3	3	1.03	7	..	0.45	21	215
Rarotonga ..	15	79.8	69.7	74.8	-0.3	85.1	28	61.1	23	5.31	14	-1.0	1.76	2	179
Raoul Island ..	126	68.9	60.0	64.4	-1.5	73.5	27	51.2	4	1.77	14	-1.0	0.76	25	187
Chatham Islands ..	157	56.6	46.3	51.4	-1.4	61.9	22	36.7	2	0.91	8	-1.3	0.21	1, 11	161
Campbell Island ..	49	50.2	41.9	46.0	..	55.6	30	36.2	23	2.99	22	..	0.55	26	62
Scott Base, Antarctica ..	45	..	..	11.3	-0.2	27.5	30	-12.8	17	..	..	..	..	..	..
Lake Vanda, Antarctica ..	51	28.2	11.7	19.9	..	2.3	19	-0.2	4	..	..	..	..	..	..
LATE RETURNS															
Whatawhata Sept. 1969 ..	340	61.8	46.1	54.0	+2.2	66.1	8	35.5	15	4.81	18	-0.2	0.92	10	135
Whatawhata Oct. 1969 ..	340	59.7	46.2	53.0	-2.3	64.1	7	32.7	12	3.22	18	-2.6	1.15	22	153
Taurewa Oct. 1969 ..	2,545	54.1	35.1	44.6	..	62.4	13, 14	23.9	11	4.42	14	..	1.18	27	..
Gore Oct. 1969 ..	235	59.6	40.5	50.0	-1.4	71.0	14	31.5	12	3.67	20	+1.0	0.80	26	170

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.

*The sunshine recorder is not located at the station but is in the near vicinity.

NOTES ON THE WEATHER FOR NOVEMBER 1969

General—Barometric pressures were exceptionally high over New Zealand in November, and it was a warm month with an absence of the usual strong winds. For the greater part of the country there was little or no rain for the 24 days 28 October-20 November. The rains of the last 10 days of the month were reasonably adequate to freshen up pastures in many North Island districts. They were quite inadequate for the drought-stricken coastal areas of South Canterbury and North Otago, where pastures were bare and crop growth severely retarded. Many thousands of sheep have been taken off these areas and sent to better pastures; and some are being fed on wheat or potatoes. There is little prospect of any hay in these drought-stricken areas.

Rainfall—Rainfall was less than half the average value over most of the South Island and in western districts of the North Island. It was less than a quarter over the Alps and in parts of Buller; in an area extending from Makarora through Kingston and Roxburgh to Milton; in parts of Banks Peninsula; and near the coast in Waitomo, Westport, Reefton, and the Hermitage all had their driest November for at least 40 years, the previous driest being in 1934.

Rainfall was above average in Northland, Bay of Plenty, Gisborne, Hawke's Bay, and Marlborough apart from the Sounds. It was more than double the average around Kaitaia and in some inland areas of Gisborne and Hawke's Bay.

The total rainfall to date for 1969 was unusually low in coastal districts of Canterbury and North Otago. For Waimate it was 9.85 in., only 43 percent of the long-period average for January-November; for Timaru it was 9.79 in. and 48 percent; for Christchurch, 13.17 in. and 55 percent; and for Oamaru, 9.69 in. and 56 percent. It was the driest period January-November on record in 60 years of observations at Timaru and Waimate; but in Oamaru this period was drier in 1964, and in Christchurch it was drier in 1878.

Temperatures—Temperatures were mainly 1-4 degrees above average in the North Island and 2-5 degrees above in the South Island. The Alps and the South Island high country were particularly favoured. For the Hermitage it was the warmest November in 40 years of record, the previous warmest being 1934.

Sunshine—Sunshine was 20-70 hours above average in western districts of both Islands, but in eastern and northern districts it was close to or somewhat below average.

Weather Sequence—During the first 18 days of November pressures were high over New Zealand, with an anticyclone covering the country.

From the 1st to the 6th an intense anticyclone which had developed over the South Island at the end of October moved slowly northward towards Auckland. Showers were reported in Gisborne and Hawke's Bay on the 1st and 2nd, in southern Fiordland on the 3rd and 4th, and throughout Fiordland and South Westland on the 5th; otherwise the weather was fine. A centre of high pressure developed to the east, and on the 7th a trough of low pressure affected Southland, with some rain. However, the 8th was once again generally fine. By now the anticyclone was centred to the north-east of the Chatham Islands, and from the 9th to the 12th a weak trough of low pressure crossed the South Island. Considerable rain was reported on the West Coast and in the Alps. Showers also occurred in South Otago, on the Wairarapa coast, and in Northland.

From the 13th to the 16th New Zealand was in the middle of an extensive belt of high pressure with centres to the east and west. Nevertheless some showers were reported in northern, central, and eastern districts of the North Island, with thunderstorms on the 13th. The weather was generally fine again on the 17th and 18th. During the 19th and 20th the main centres of high pressure were situated near the Chatham Islands and close to North Cape, but pressures commenced to fall with the approach of a complex trough of low pressure from the south-west. Rain affected Southland, Fiordland, and South Westland.

As the trough of low pressure moved slowly north-eastward over the country on the 21st and 22nd all districts received some rain, which was very welcome after the dry weather, although the falls were mainly quite light. During the next 3 days this trough became stationary and a depression formed over the North Island, while an anticyclone moved on to the South Island. Rain affected mainly the North Island, with some heavy falls in Bay of Plenty, Nelson, Marlborough, and North Canterbury also benefited. The depression then moved slowly eastward, losing intensity, and on the 26th and 27th some further light rain was reported, mainly in northern and eastern districts of the North Island besides Nelson, Marlborough, and North Canterbury.

A weak ridge of high pressure brought mainly fine weather on the 28th and 29th. On the last day of the month the approach of a depression over the Tasman Sea caused some freshening of northerly winds, with rain in western and northern districts of both Islands and also in Southland.

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