

CLIMATOLOGICAL TABLE—Summary of the Records of Temperature, Rainfall, and Sunshine for November 1971—continued

Station	Height of Station Above M.S.L.	Air Temperatures in Degrees (Celsius)								Rainfall in Millimetres					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	
Metres	°C	°C	°C	°C	°C	°C	°C	°C	mm		mm		Hrs.		
Musselburgh, Dunedin ..	2	16.8	8.9	12.9	+0.4	21.0	12	5.9	16	116	14	+45	59	15	154
Oamaru ..	30	16.9	8.1	12.5	-0.3	25.0	29	4.5	4	42	7	+4	25	15	163
West Arm, Lake Manapouri	180	15.3	6.7	11.0	+0.1	22.0	9	2.3	25	410	15	+87	81	12	..
Borland Saddle ..	991	..	..	..	..	..	..	..	..	238	16	..	63	1	..
Queenstown ..	329	18.6	7.3	13.0	+0.6	23.9	21	3.3	25	57	10	-7	25	29	211
Queenstown Aerodrome ..	352	17.8	6.2	12.0	..	23.0	10	1.9	19	45	11	..	18	29	..
Mid Dome ..	387	17.3	5.9	11.6	-0.1	22.6	10	0.9	21	67	12	-9	16	17	..
Cromwell ..	213	19.7	6.9	13.3	-0.6	26.3	6	3.3	25	34	11	+4	13	15	..
Moa Creek ..	427	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Earnsclough ..	152	20.5	6.6	13.6	+0.8	26.0	10	-0.3	19	17	6	-11	9	15	..
Alexandra ..	141	19.9	7.8	13.9	+0.1	25.6	12	2.6	19	19	8	-9	8	15	191
Roxburgh (Power Station)	110	19.8	8.2	14.0	+0.7	24.5	7	4.5	21	31	11	-17	7	3,15	..
Moa Flat ..	410	16.3	6.0	11.2	+0.8	22.3	7	0.6	21	54	15	-22	12	13	..
Mahinerangi Dam ..	396	14.8	5.4	10.1	0.0	20.6	7	1.7	16	96	16	+15	25	15	..
Tapanui ..	226	17.0	7.1	12.1	+0.2	23.0	7	2.5	21	72	15	-9	20	15	..
Rankleburn Forest ..	255	15.8	6.5	11.2	-0.2	21.5	10	1.6	21	61	14	-5	12	15	..
Taieri Mouth ..	15	14.4	7.1	10.8	..	20.8	29	3.3	3	122	12	+56	63	15	..
Otautau ..	55	16.4	5.5	11.0	-0.5	21.0	7	-0.9	21	70	11	-19	19	1	144
Winton ..	44	16.5	6.8	11.7	-0.2	21.6	6	2.4	21	62	13	..	21	1	166
Gore, DSIR ..	124	16.4	..	..	..	21.8	5	..	..	55	19	..	16	1	151
Hokonui Forest ..	46	17.1	6.8	12.0	-0.2	22.3	7	2.0	3	70	12	-19	23	1	..
Woodlands ..	47	16.4	6.1	11.3	..	21.4	7	2.2	25	90	20	..	20	26	..
Invercargill Aerodrome ..	0	15.8	6.3	11.1	-0.1	20.6	7	0.5	26	71	18	-20	21	26	167
Tiwai Point, Bluff ..	5	15.8	8.4	12.1	..	24.0	6	5.2	22	78	17	..	22	29	..
Milton ..	18	17.0	7.3	12.2	+0.4	23.0	10	2.0	3	129	14	+71	60	15	..
Finegand, Balclutha ..	6	16.3	7.1	11.7	+0.2	21.8	7	2.0	25	71	15	..	26	15	172
Nugget Point ..	131	14.2	8.0	11.1	..	18.6	29	4.9	16	89	21	..	24	15	..
Rarotonga Airport, Cook Is.	5	27.3	22.3	24.8	+0.9	29.2	11	17.3	..	38	10	-122	12	10	224
Raoul Island, Kermadec Is.	38	21.6	16.6	19.1	+0.3	23.8	21	12.5	12	309	14	+238	96	8	154
Waitangi, Chatham Islands	48	15.2	9.4	12.3	+0.8	21.6	26	5.2	21	63	15	+7	22	26	158
Campbell Island ..	15	10.2	4.8	7.5	+0.4	13.7	25	-1.9	21	99	21	..	20	4	97
Scott Base, Antarctica ..	18	-6.8	-16.2	-11.5	+0.4	0.5	26	-27.2	2	..	..	..	..	..	..
Lake Vanda, Antarctica ..	104	-0.7	-10.2	-5.5	..	9.5	24	-21.8	1	..	..	..	..	..	..

## LATE RETURNS

Te Paki Station Te Hapua	58	17.2	9.1	13.2	-0.9	19.5	3	4.0	7	106	..	..	16	19	148
October 1971 ..	12	18.4	10.7	14.6	..	21.0	16	6.0	15	266	20	..	161	22	..
Te Aroha, October 1971 ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pureora Forest September	549	12.5	4.5	8.5	+0.6	14.8	27	0.3	15	295	22	+138	39	28	..
1971 ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pureora Forest October 1971	549	14.6	6.5	10.6	+0.8	17.5	16	1.6	1	240	22	+60	32	22	..
Ruatoria October 1971 ..	..	20.1	9.7	14.9	+2.0	22.6	17	3.2	1	140	18	+3	52	22	..
Makaretu October 1971 ..	..	17.0	6.9	12.0	..	22.0	4	-6.0	1	178	24	..	38	20	..
Whitemans Valley October	..	14.0	6.4	10.2	..	17.0	31	-1.0	13	214	17	..	54	4	..
1971 ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

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 1971

**General**—November was a sunny month marked by an unusually high frequency of north-easterly winds. Farmers found it a good month except that in parts of the North Island, especially eastern districts, it was too wet for the lambs.

Strong gales from a westerly quarter buffeted most of the North Island on the 26th, causing some damage.

**Rainfall**—Rainfall was above normal over most of the North Island besides most of Otago, Stewart Island, and parts of Fiordland, Nelson, and Marlborough. It was more than double the normal value in eastern Bay of Plenty and around Dunedin.

It was 25 percent drier than normal in North and Central Canterbury and in parts of Buller; also in northern Southland.

Daily falls of up to 160 mm on the 15th caused flooding on the Taieri Plain.

**Temperatures**—Temperatures were above normal by up to 1°C over the North Island. In the South Island they were a little above normal on the coast and a little below normal inland.

An unusually late fall of snow was reported on the hills in parts of Central Otago and South Canterbury on the 15th, affecting transport over the "Pig Route".

In some areas this was the eighteenth successive month with temperatures warmer than normal; and 1971 is likely to be one of the warmest years on record for New Zealand.

**Sunshine**—Sunshine was close to or above normal. Departures of 40-80 hours were reported in Westland and also in Wellington and parts of Manawatu. Haast had its highest November sunshine since 1949.

The period from the 2nd to the 12th was particularly sunny and dry in the South Island besides southern and eastern districts of the North Island, under the influence of an anticyclone centred near the Chatham Islands.

**Weather Sequence**—At the beginning of November a weak cold front crossed the South Island while a shallow depression was off the South Westland coast. Rain was reported in Southland, Fiordland, South Westland, and part of Otago.

On the 2nd a belt of high pressure covered most of New Zealand and it soon moved away eastward, remaining almost stationary near the Chatham Islands up to the 12th. This 11-day period was generally warm; and it was dry over the South Island as well as southern and eastern districts of the North Island. Most of the rain which fell in other parts of the North Island was due to the north-easterlies freshening at times as depressions passed well to the north. The main periods of rain in these districts were from the 4th to the 8th and on the 11th and 12th.

From the 13th to the 15th a depression off the coast of New South Wales moved across the Tasman Sea and deepened, while a trough of low pressure moved north-eastward over the country. Rain started in the south and spread northward, with cooler