CLIMATOLOGICAL TABLE—Summary of the Records of Temperature, Rainfall, and Sunshine for November 1979—continued LATE RETURNS AND CORRECTIONS—continued

Station	Height of Station Above M.S.L.	Air Temperatures in Degrees (Celsius)								Rainfall in Millimetres					
		Means of		Mean of A	Differ- ence	Absolute Maximum and Minimum				Total	No.	Differ- ence	Maximum Fail		Bright Sun- shine
		A Max.	B Min.	and B	From Normal	Maxi- mum	Date	Mini- mum	Date	Fall	Rain Days	From Normal	Amount	Date	snine
Makaretu, October 1979 Kairanga, Palmerston North October 1979	Metres 335 15	°C 16.3 16.7	°C 7.3 8.5	°C 11.8 12.6	°C +0.3 +0.2	°C 21.5 20.9	29 30	°C 0.4 1.9	6 25	mm 107 106	16	mm 	mm 53 20	2 14	Hrs
Grasslands, Palmerston North, October 1979 Foxton, October 1979 Cape Egmont, October 1979 Waiouru, October 1979 Waiouru Military Camp, October 1979	34 3 8 823 823	16.3 16.0 12.7 12.2	9.0 10.4 4.5 4.3	12.7 13.2 8.6 8.3	+0.2 +0.1 +0.4 +0.3	20.4 18.6 17.4 17.6	30  18 29 29	3.4 3.2 -2.6 -2.4	6 23 23 6	96 101 170 120 124	16 16 21 19 18	+7 +25 +40 +13 +15	19 19 74 22 21	14 30 14 2	106 134 
Kahui, Taihape, October 1979 Arapito, October 1979 Springs Junction, October	518 20 421	14.9 15.9 14.6	6.6 7.9 5.2	10.8 11.9 9.9	-0.1 	19.3 19.5 21.0	18 14 21	1.6 1.7 -1.1	23 23 5	68 244 277	18 19	+69	58 54	 12 29	113
1979 Puysegur Point, October 1979 Bromley, Christchurch October 1979	43 9	15.7	7.3 7.7	1i.7	+0.0	25.0	<b>ż</b>	3.7 3.5	7 6	115 111	21	-70 +68	27	20	
Lincoln, September 1979 Lincoln, October 1979 Adair, October 1979 Mahinerangi Dam, October 1979	11 11 85 396	14.9 15.6 14.6 12.8	4.5 6.0 6.5 3.8	9.7 10.8 10.6 8.3	$ \begin{array}{c c} +0.8 \\ -0.4 \\ -0.3 \\ -0.1 \end{array} $	21.2 24.3 24.6 20.4	28 29 27 27	$ \begin{array}{c} 0.2 \\ -0.8 \\ 3.0 \\ -0.6 \end{array} $	20 4 22 8	21 111 100 55	11 13 13 12	-25 +63 +52 -16	7 31 34 10	15 14 29 28	112 155
Campbell Island, August 1979	15	7.2	3.2	5.2	+0.2	11.0	31	-2.6	7	108	26	-1	17	2	24
Campbell Island, September 1979	15	7.8	2.9	5.4	-0.1	10.8	12	-3.3	17	150	28	+48	28	13	55
Campbell Island, October 1979	15	9.3	4.0	6.7	+0.5	11.0	9	-1.6	25	76	27	-41	11	11	109
Nandi Airport, Fiji, October 1979	15	30.9	20.6	25.8	+0.5	33.9	7	16.4	1	19	7	••	14	29	255
Totokoitu, Rarotonga, October 1979	9	• •	21.0			••	••	18.7	18	57	17	••	25	10	• •
Scott Base, Antarctica, August 1979	16	-26.7	-42.8	-34.8	-3.6	-14.0	30	-51.6	27	•••	•••	• •	••	••	••

The "normal" refers to the present site of the instruments. Standard period for normals is 1941-70. No normals are available for stations with only short records.

A rain day is a day with rainfall equal to or greater than 0.1 mm.

Where the extremes of temperature and rainfall have occurred more than once during the month, the date of the first occurrence is given.

## WEATHER NOTES FOR NOVEMBER 1979

General—Pressures were higher than normal over the whole of New Zealand during November, and were exceptionally high to the east of the country near the Chatham Islands. Winds were mainly north-westerly and there was a lower frequency than usual of strong winds. Most areas were warmer and drier than normal, but some areas of Bay of Plenty were rather cloudy. Although some districts had high monthly rainfall totals, these could be attributed to isolated storms in these areas.

Grass growth was reported to be good in most areas, especially towards the end of the month. Some farmers had started hay-making, although excessive growth had made this difficult in some districts. Stock was in good to excellent condition, but some lambs had been affected by wet conditions at the beginning of the month.

Rainfall—The only areas with rainfall appreciably above normal were parts of Northland, Bay of Plenty, Buller and coastal Canterbury. At Invercargill the lowest rainfall for November (22 mm) since the station began in 1940 was recorded. Some parts of Hawke's Bay and Southland had less than 25 percent of their normal November total, and in Poverty Bay, Manawatu, South Canterbury, Otago, and Fiordland less than 50 percent of normal fell.

Between 9 a.m. on the 10th and 9 a.m. on the 11th nearly 83 mm of rain were recorded in a heavy downpour at Whangarei, making this the highest one day fall in November since the station began in 1967.

On the 20th at Albert Park, Auckland, 21 mm were recorded between 4 a.m. and 5 a.m. During the same afternoon and evening a severe thunderstorm passed over the Christchurch area. Between 2 p.m. and 7 p.m. 45 mm of rain fell, and at 4 p.m. when the storm

was at its peak more than 22 mm of rain were measured in one hour. This storm contributed nearly half the total rainfall for the month, making this November with more than 100 percent above normal, the wettest at Christchurch since 1967.

Temperatures—Temperatures were above normal throughout most of New Zealand during the month by  $\frac{1}{2}$ °C to 1°C. In parts of Bay of Plenty, Taranaki and inland Canterbury they were above average by more than  $1\frac{1}{2}$ °C. In most districts both night and day-time temperatures were greater than usual. During a warm spell from 20th until the end of the month, afternoon maximum temperatures were above normal by between 5°C and 8°C in areas along the east coast of both Islands. On the 27th Hawke's Bay had departures of 7°C to 9°C above the usual maximum.

Sunshine—The only areas with sunshine hours below normal were Bay of Plenty and Nelson with 30 to 50 hours less than usual. Taranaki and Wellington were above average by more than 30 hours.

## WEATHER SEQUENCE

The ridge of high pressure that extended onto New Zealand at the end of October weakened as a trough of low pressure moved onto the country from the south. Most areas in both the North and South Islands recorded some light rain as the trough moved northwards on the 2nd and 3rd. By the morning of the 4th an anticyclone had become established over the country, and this persisted until late on the 6th bringing fine weather to most districts. There were some heavy showers in the central North Island areas and Poverty Bay. Temperatures were slightly cooler than usual during the first week of the month.

A cold front, associated with a depression passing to the south of the country, moved onto the South Island during the evening of the 6th, and this brought moderate rain to Fiordland and West-

<sup>\*</sup>Indicates that the sunshine recorder is not located at the station but is in the near vicinity.