CLIMATOLOGICAL TABLE—Summary of the Records of Temperature, Rainfall, and Sunshine for December 1975—continued LATE RETURNS AND CORRECTIONS—continued

Height of Station Above M.S.L.	Air Temperatures in Degrees (Celsius)								Rainfall in Millimetres					
	Means of		Mean of A	Differ-	Absolute Maximum and Minimum				Total	No.	Differ-	Maximum Fall		Bright Sun- shine
	A Max.	B Min.	and B	From Normal	Maxi- mum	Date	Mini- mum	Date	Fall	Rain Days	From Normal	Amount	Date	1 10 10
Metres	°C	°C	°C	°C	°C		°C		mm		mm	mm	12.75 cm	Hrs
158	16.5	5.0	10.8	-0.2	24.2	22	-1.5	10	87	13	+13	46	18	1
158	18.1	5.1	11.6	-1.6	28.2	26	-1.0	24	65	16	-9	14	26	13.9
30	10.9	0.6	5.8	-0.1	17.6	5	-5.9	30	119	11	+63	52	15	145
30	10.7	-0.6	5.1		17.4	5	-7.2	30	124	11		55	15	
61	17.1	3.6	10.4	-1.1	27.8	26	1.0	23	75	13	-12	27	6	
183	16.1	3.7	9.9		21.0	15	-3.5	22	45	19		9	29	
183 396	19.4 14.0	6.0 4.1	12.7 9.1	-i.o	26.5 24.0	25 25	$-1.0 \\ -0.9$	22 22	23 77	4 14	− i ż	17	18 13	
47 15	14.6 9.5	4.2 4.0	9.4 6.8	$ \begin{array}{c c} -0.8 \\ -0.4 \end{array} $	21.9 13.6	12 25	$\begin{bmatrix} -1.0 \\ -0.5 \end{bmatrix}$	5 21	65 127	23 30	+20	12 18	26 19	95
	Metres 158 158 30 61 183 183 396 47	Metres 158 16.5 158 18.1 30 10.9 30 10.7 61 17.1 183 19.4 396 14.0 47 14.6	Means of Above M.S.L. A B Min.	Means of Above Means of Above Max. Mean of A and B	Means of Above Miss.L. Means of Above Miss.L. A	Means of Above M.S.L. Means of Above M.S.L. A Max. B Min. Mean of A and B Min. Means of A and B Mormal Maximum	Metres C 16.5 5.0 10.8 -0.2 24.2 22	Means of Above Minimum Means of Above Minimum Means of Amax B Min. Mean of A and B Minimum Means of Amax Means	Metres C 16.5 5.0 10.8 -0.2 24.2 22 -1.5 10	Means of Above Min. Means of Above Min. Means of Above Min. Max. Min. Mean of Above Min. Max. Min. Mean of Above Min. Max. Max. Min. Max. Max. Max. Max. Max. Max. Max. Max. Max. Date Min. Date Min.	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Metres C C 10.8 C 10.8 C 10.9 C 10.6 C 10.6 C 10.6 C 10.7 C 10.8 C 10.7 C 10.8 C 10.7 C 10.8 C 10.	$ \frac{\text{Abcurs of Above M.S.L.}}{\text{A Max.}} = \frac{\text{Means of Amax.}}{\text{A Max.}} = \frac{\text{Mean of Amax.}}{\text{Nin.}} = \frac{\text{Different and B minimum}}{\text{Normal}} = \frac{\text{Maximum}}{\text{Normal}} = \frac{\text{Minimum}}{\text{Normal}} = \frac{\text{Minimum}}{\text{Normal}} = \frac{\text{No. Different Amount}}{\text{Normal}} = \frac{\text{No. Different Normal}}{\text{Normal}} = \text{No. Diff$

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.

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

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.

NOTES ON THE WEATHER FOR DECEMBER 1975

General—December was a cool month and dry over the greater part of the country. During the first 3 weeks westerly conditions prevailed, with little or no rain in most districts apart from the West Coast. The holiday week from Christmas to the end of the month was marred by cold southerly to easterly winds with cloudy wet weather in the east. Many farmers found the first 3 weeks too dry, and dairy production fell in some areas.

Rainfall—Rainfall was mainly only half to three-quarters of the normal value. Central Marlborough received less than a quarter of the normal.

However, rainfall was above normal over nearly the whole area east of the ranges in the North Island, and also in most of Southland and parts of Otago. Considerable areas of Gisborne and Hawke's Bay received more than double the normal value, but nearly all this rain fell during the last 3 days, during which up to 307 mm were recorded, of which up to 160 mm fell on the 31st.

Hail fell in many parts of the North Island on the 25th and 26th, and some of it was comparatively large.

Temperatures—Temperatures were mainly below normal, with departures averaging 1°c over the South Island and somewhat less over the North Island. Some very warm days were reported in eastern districts during the first 3 weeks. On the 13th the maximum temperature at Christchurch was 35.0°c, the highest ever recorded there in December. By contrast, snow was reported to comparatively low levels in both Islands on the 25th and 26th. Light falls were even reported at an altitude of about 300 m in Southern and Central Hawke's Bay.

Sunshine—Over most of the country sunshine was close to average. However, it was above normal by up to 65 hours in Canterbury and the Nelson-Motueka area and by up to 85 hours in Central Otago.

Weather Sequence—The first 24 days of December continued the pattern of the last week of November and were predominantly westerly with a large number of days with high-wind gusts in exposed areas. Over the last 7 days of the month the airflow was between south and east with very low temperatures for the time of year.

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The month began with a frontal zone lying east-west near Northland and an anticyclone over most of New Zealand. There was several millimetres of rain over the north of the North Island on the 1st and this was the only significant rain in the North Island until the 10th and 11th. Over the South Island troughs in the westerlies brought rain on the 1st, 2nd, 3rd, 4th, and 5th but from

On the 9th, 10th, and 11th a major trough of low pressure crossed the whole country bringing some rain to most areas and especially western areas. The flow continued westerly behind this trough and during the 12th to 15th a further trough crossed the country but the rain accompanying it was scattered and light except on the West Coast.

On the morning of the 12th Mr Dalglish a rainfall observer of Le Bons Bay (Banks Peninsula) reported seeing more than 20 waterspouts 1 to 8 kilometres to the east.

During the 5 days from the 16th to the 21st a series of quite active frontal zones moved over New Zealand bringing some rain to all parts of the country though once again the heaviest falls were in the west.

The period from the 21st to 24th experienced a similar weather pattern to that of the first 5 days of the month with a series of shallow troughs in the westerlies bringing some rain to the south and west of the South Island each day. There was little or no rain

elsewhere.
On the 25th a depression developed on a cold front over central New Zealand and it deepened rapidly as it moved south-eastwards to a position south of the Chatham Islands. A very cold moist southerly flow with large areas of low cloud became established over the country on the 26th. This flow persisted for several days but on the 29th an anticyclone moved onto the South Island and the flow over the North Island turned easterly. On the 30th and 31st the anticyclone continued to cover the South Island and the flow

remained easterly over the North Island.

During the period 25th to 31st areas in the east from Kaikoura to East Cape experienced cold overcast conditions with large areas of drizzle, and some regions of heavy rain. Over much of the country temperatures 3°c to 6°c below normal were experienced during these 7 days.

J. F. DE LISLE, Director.

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