Climatological Table-Summary of the Records of Temperature, Rainfall, and Sunshine for December 1974-continued

| Station | HeightofStationAboveM.S.L. | Air Temperatures in Degrees (Celsius) |  |  |  |  |  |  |  | Rainfall in Millimetres |  |  |  |  | Bright Sunshine |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Means of |  | $\begin{gathered} \text { Mean } \\ \text { of } \\ \text { and } \\ \mathbf{B} \end{gathered}$ | Difference From Normal | Absolute Maximum and Minimum |  |  |  | $\begin{aligned} & \text { Total } \\ & \text { Fall } \end{aligned}$ | No.ofRainDays | $\begin{aligned} & \text { Differ- } \\ & \text { ence } \\ & \text { From } \\ & \text { Normal } \end{aligned}$ | $\begin{aligned} & \text { Maximum } \\ & \text { Fall } \end{aligned}$ |  |  |
|  |  | $\xrightarrow[\text { Max. }]{\text { A }}$ | $\stackrel{\text { B }}{\text { Min. }}$ |  |  | Maximam | Date | Minimum | Date |  |  |  | Amount | Date |  |
|  | Metres | ${ }^{\circ} \mathrm{C}$ | ${ }^{\circ} \mathrm{C}$ | ${ }^{\circ} \mathrm{C}$ | ${ }^{\circ} \mathrm{C}$ | ${ }^{\circ} \mathrm{C}$ |  | ${ }^{\circ} \mathrm{C}$ |  | mm |  | mm | mm |  | Hrs |
| Ohakune Junction, November 1974 | 329 | 18.5 | 7.5 | 13.0 |  | 23.7 | 27 | 1.8 | 2 | 86 | 12 |  | 29 | 9 | $\cdots$ |
| Karioi, November 1974 . . | 648 | 19.2 | 7.2 | 13.2 | $+2.0$ | 24.9 | 27 | 1.0 | 1 | 61 | 8 | -41 | 23 | 9 |  |
| Kahui, Taihape, November 1974 | 518 | 19.8 | 8.6 | 14.2 | . . | 26.6 | 27 | 2.6 | 1 | 32 | 5 | . | 12 | 9 | . |
| Brightlands Bay, November 1974 | 15 | 18.9 | 12.4 | 15.7 | $\ldots$ | 22.9 | 26 | 7.6 | 1 | 52 | 7 | $-70$ | 15 | 10 | $\cdots$ |
| Black Birch Range, November 1974 | 1,396 | 11.3 | 3.9 | 7.6 | $+0.5$ | 17.8 | 28 | -0.9 | 22 | 42 | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ |
| Hanmer Forest, October 1974 | 387 | 15.9 | $\cdots$ | $\cdots$ | $\cdots$ | 24.4 | 17 | . | . | 148 | 14 | $+51$ | 36 | 8 | 166 |
| Hanmer Forest, November 1974 | 387 | 20.5 | 6.2 | 13.4 | +1.3 | 28.8 | 28 | -4.2 | 1 | 15 | 11 | -74 | 5 | 10 | 231 |
| Godley Peaks, Tekapo, November 1974 | 762 | $\cdots$ | 4.3 | $\cdots$ | $\cdots$ |  | $\cdots$ | $\cdots$ | $\cdots$ | 30 | 7 | -41 | 12 | 14 | $\cdots$ |
| Mount John, November 1974 | 1,027 | 17.1 | 6.9 | 12.0 | +1.7 | 23.1 | 28 | 3.1 | 14 | 31 | 6 | -17 | 14 | 14 | 293 |
| Ski August 1974 Baigieburn, | 1,554 | 0.8 | -6.7 | -3.0 | $-1.7$ | 8.6 | 31 | -14.5 | 8 | . . | . . | . . |  | . . | . . |
| Ski Basin, Craigieburn, September 1974 | 1,554 | 2.8 | $-1.7$ | 0.6 | +0.1 | 6.3 | 6 | -6.9 | 30 | . | $\cdots$ | . | . | . | $\cdots$ |
| Ski Basin, Craigieburn, <br> November 1974 | 1,554 | 11.1 | 3.4 | 7.3 | +2.4 | 17.5 | 24 | -1.3 | 22 | $\ldots$ | $\cdots$ | . | . | $\cdots$ | $\cdots$ |
| Ashley Forest, November 1974 | 107 | 18.0 | 8.5 | 13.3 | $+0.3$ | 25.0 | 29 | 2.1 | 1 | 4 | 4 | $-62$ | 2 | 15 | 230 |
| Lincoln, November 1974 . | 11 | 19.6 | 8.0 | 13.8 | $+1.0$ | 29.4 | 29 | -1.9 | 1 | 9 | 3 | -44 | 7 | 15 | 227 |
| Lake Pukaki No. 2, November 1974 | 556 | 20.3 | 7.7 | 14.0 | . | 26.6 | 28 | 4.2 | 1 | 28 | 7 | . | 8 | 9 | . . |
| Invermay, Taieri, November 1974 | 24 | 18.6 | 7.0 | 12.8 | +0.6 | 29.6 | 28 | 1.8 | 1 | 31 | 7 | -33 | 12 | 15 | $\cdots$ |
| Borland Burn, November 1974 | 183 | 19.7 | 6.2 | 13.0 | . | 28.4 | 28 | 1.4 | 1 | 34 | 7 | . | 8 | 15 | $\cdots$ |
| Clyde, October 1974 | 183 | 16.9 | 5.5 | 11.2 | $\cdots$ | 23.5 | 18 | 0.5 | 9 | 116 | 9 | $\cdots$ | 39 | 8 |  |
| Clyde, November 1974 1974 | 183 | 23.1 | 8.4 | 15.8 |  | 30.5 | 28 | 3.5 | 1 | 8 | 2 |  | 5 | 15 |  |
| Moa Creek, November 1974 Otautau, November 1974 . | 427 | 18.4 | 6.9 | 12.7 | $+1.2$ | 28.1 | 28 | 1.4 | 1 | 17 32 | 10 | -21 -59 | 7 13 | 29 15 | 208 |

The "normal" refers to the present site of the instruments. Standard periods for normals are: Temperature 1931-60, Rainfall 1941-70, Sunshine 1935-60. 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 1974

General-There was an unusually high frequency of northeasterly winds and this was a warm month besides being one of the sunniest Decembers on record. For some areas, especially Canterbury, it was the second successive month with very low rainfall. In Manawatu, Wellington, and Wairarapa, and in eastern districts of the South Island, farmers were finding conditions too dry.
At Oakura, west of New Plymouth, a small local tornado caused some damage on the 8 th.

Rainfall-Rainfall was below normal over nearly the whole of the South Island and also as far north as Palmerston North and in Wanganui and Taranaki, Northland, and eastern areas of Hawke's Bay. It was less than half the normal value in most of Canterbury and Marlborough. In parts of Bay of Plenty and Taupo rainfall was more than double the normal value.
Thunderstorms were unusually frequent. They were comparatively widespread over both Islands on the 1st, 2nd, 4th, 6th, 8th, 9 th, 17 th , and 31 st .

A severe hailstorm caused serious damage to crops in the Dar-field-Hororata area of the Canterbury Plains on the 6th. Another one with some hailstones the size of marbles was reported at Moeraki, North Otago, on the 8th.

Temperatures-Mean temperatures were above normal, mainly by $2^{\circ} \mathrm{C}$. Highest departures of $3^{\circ} \mathrm{C}$ were recorded in the King Country and in the east of Central Otago.
Sunshine-Sunshine was mainly above normal, by up to 100 hours. Southern areas of the North Island were especially favoured. Highest December totals in 35-40 years of observation were recorded at New Plymouth with 305 hours, Masterton with 278 hours, Wallaceville, Upper Hutt, with 306 hours, and Blenheim with 321 hours.

Weather Sequence-At the beginning of December a trough was advancing on to the North Island from the west, associated with a small depression off the Southland coast, while pressures were high to the east. In the northerlies showers were reported in northern districts of the North Island and on the West Coast. During the next 3 days the trough remained almost stationary over the North Island, where considerable rain was reported, especially in northern and north-eastern districts. Flooding occurred around Ruatoria. Some rain also persisted on the West Coast. This trough moved away to the east, and on the 5th and 6th another trough associated with a depression near Campbell Island crossed the country from west to east. The distribution of rain remained rather similar but some light rain extended also to western districts in the southern half of the North Island and to eastern districts of the South Island.

From the 7th to the 9th a deep depression, initially over the South Tasman Sea, passed far to the southwest, and the associated troughs of low pressure crossed the country. Rain was fairly general, with some considerable falls in western and central districts of the North Island. On the 8th temperatures became cooler. During the next 3 days an anticyclone was centred far to the south, with a ridge of high pressure extending on to New Zealand. Showers were reported in the southerlies in eastern districts at first, but later the weather was generally fine.
On the 13th pressures remained high to the east and south-east of New Zealand, while depressions were centred over the North Tasman Sea and far to the south-west. A trough of low pressure brought rain to the West Coast besides Southland and parts of Otago. From the 14th to the 16th a depression was centred to the north-west of Northland with the associated trough of low pressure slowly crossing the North Island, while an anticyclone over the Tasman Sea extended across the South Island and to the east. Rain was reported in districts exposed to the north-east, especially

