Climatological Table-Summary of the Records of Temperature, Rainfall, and Sunshine for March 1959—continued

| Station |  |  | Air Temperatures in Degrees (Fahrenheit) |  |  |  |  |  |  |  | Rainfall in Inches |  |  |  |  | $\underset{\text { Sright }}{\text { Bun- }}$ shine |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Means of |  | Mean and B | ence Normal | Absolute Maximum and Minimum |  |  |  | $\begin{gathered} \text { Total } \\ \text { Faall } \end{gathered}$ | $\begin{gathered} \text { No. } \\ \text { of } \\ \text { Rain } \\ \text { Days } \end{gathered}$ | Difference NormalNorman | $\underset{\text { Fall }}{\text { Maximum }}$ |  |  |
|  |  |  | $\underset{\text { Max. }}{\text { A }}$ | $\underset{\text { Min. }}{\text { Min. }}$ |  |  | Maximum | Date | $\begin{aligned} & \text { Mini- } \\ & \text { mum } \end{aligned}$ | Date |  |  |  | Amount | Date |  |
|  |  | Ft. | ${ }^{\text {F }}$. | ${ }^{\circ} \mathrm{F}$. | ${ }^{\mathrm{F}}$. |  | ${ }^{\circ} \mathrm{F}$. |  | ${ }^{\circ} \mathrm{F}$. |  | In. |  |  | In. |  | Hrs. |
| Hokitika South |  | 15 | $66 \cdot 7$ | 51.2 | $59 \cdot 0$ | $+2 \cdot 7^{*}$ | $75 \cdot 2$ | 14 | 41.0 | 26, 31 | 9.32 | 16 | +0.38* | $2 \cdot 13$ | 17 | 204 |
| Balmoral |  | 650 | $68 \cdot 6$ | $46 \cdot 7$ | $57 \cdot 6$ | $-0 \cdot 4 *$ | $83 \cdot 0$ | , | 31.0 | 26, 31 | $2 \cdot 31$ | 11 | +0.59 | 0.87 | 17 |  |
| Lake Coleridge |  | 1,195 | $66 \cdot 7$ | $47 \cdot 4$ | $57 \cdot 0$ | $+0 \cdot 6$ | $79 \cdot 0$ | 9 | $35 \cdot 0$ | 31 | $2 \cdot 52$ | 7 | $+0.59$ | 0.97 | 12 |  |
| Eyrewell |  | 520 | $66 \cdot 5$ | $46 \cdot 7$ | $56 \cdot 6$ |  | $84 \cdot 4$ | 9 | $32 \cdot 0$ | 31 | $5 \cdot 68$ | 13 | +2.92* | $3 \cdot 15$ | 12 |  |
| Franz Josef |  | 450 | $67 \cdot 5$ | $50 \cdot 0$ | $58 \cdot 8$ |  | $81 \cdot 0$ | 14 | $42 \cdot 2$ | 19 | 11.28 | 14 |  | $4 \cdot 11$ | 9 |  |
| Ashley Forest |  | 350 | $65 \cdot 7$ | $50 \cdot 5$ | $58 \cdot 1$ | +0.7* | $84 \cdot 6$ | 9 | 41.0 | 27 | $4 \cdot 38$ | 9 | +2.24* | $2 \cdot 26$ | 12 |  |
| Darfield |  | 640 | $67 \cdot 0$ | $47 \cdot 8$ | $57 \cdot 4$ | $+0 \cdot 3$ | $85 \cdot 2$ | 9 | $32 \cdot 8$ | 19 | $7 \cdot 51$ | 13 | +5.47 | $4 \cdot 59$ | 12 |  |
| Christchurch Airport |  | 94 | $66 \cdot 5$ | $50 \cdot 4$ | $58 \cdot 4$ |  | 88.3 | 9 | $36 \cdot 8$ | 28 | $3 \cdot 24$ | 12 |  | 1.76 | 12 | 154 |
| Christchurch |  | 22 | $67 \cdot 3$ | 51.1 | $59 \cdot 2$ | $+1 \cdot 1$ | $90 \cdot 4$ | 9 | $39 \cdot 3$ | 2 | $2 \cdot 35$ | 8 | +0.41 | 0.97 | 12 |  |
| Wigram |  | 74 | $67 \cdot 0$ | 51.6 | $59 \cdot 3$ | $+1 \cdot 2^{*}$ | $88 \cdot 0$ | 9 | $36 \cdot 6$ | 27 | $2 \cdot 65$ | 10 | $+0.83 *$ | 1.06 | 12 |  |
| Akaroa |  | 150 | $68 \cdot 7$ | $52 \cdot 8$ | $60 \cdot 8$ | $+1.2$ | $88 \cdot 0$ | 9 | $41 \cdot 8$ | 31 | $2 \cdot 60$ | 12 | $-0.05 *$ | 1.07 | 17 | 167 |
| Lincoln |  | 36 | $67 \cdot 0$ | $50 \cdot 0$ | $58 \cdot 5$ | $+1 \cdot 5$ | $87 \cdot 9$ | 10 | $35 \cdot 6$ | 27 | $5 \cdot 51$ | 10 | $+3.43$ | $3 \cdot 61$ | 12 | 165 |
| Highbank |  | 1,102 | $64 \cdot 7$ | $49 \cdot 2$ | $57 \cdot 0$ |  | $80 \cdot 0$ | 10 | $39 \cdot 6$ | 27 | 6.05 | 14 |  | 2.32 | 12 | 160 |
| The Hermitage |  | 2,510 | $63 \cdot 6$ | $44 \cdot 7$ | $54 \cdot 2$ | $+0 \cdot 1$ | $73 \cdot 0$ | 22 | $34 \cdot 0$ | 19, 31 | $10 \cdot 81$ | 11 | -4.88 | $5 \cdot 76$ | 9 | 136 |
| Winchmore |  | 626 | $64 \cdot 6$ | $47 \cdot 9$ | $56 \cdot 2$ | $-0 \cdot 2^{*}$ | $81 \cdot 8$ | 9 | $35 \cdot 7$ | 27 | $6 \cdot 22$ | 12 | -4.00 | $3 \cdot 32$ | 12 |  |
| Haast |  | 15 | $65 \cdot 8$ | $51 \cdot 9$ | $58 \cdot 8$ | $+1 \cdot 9 *$ | 78.0 | 14 | $41 \cdot 2$ | 19 | $8 \cdot 62$ | 13 | $-7 \cdot 37$ | $3 \cdot 24$ | 9 | 183 |
| Ashburton |  | 323 | $68 \cdot 4$ | $48 \cdot 3$ | $58 \cdot 4$ | +0.6 | $87 \cdot 8$ | 9 | $32 \cdot 0$ | 27 | $6 \cdot 11$ | 13 | +3.91 | $3 \cdot 12$ | 12 | 146 |
| Fairlie . |  | 1,004 | $65 \cdot 4$ | $45 \cdot 0$ | $55 \cdot 2$ | $-0 \cdot 1$ | $87 \cdot 0$ | 9 | $32 \cdot 0$ | 28 | $3 \cdot 15$ | 12 | $+0.76$ | $1 \cdot 10$ | 17 |  |
| Timaru |  | 56 | $67 \cdot 0$ | $48 \cdot 8$ | $57 \cdot 9$ | +0.5 | 91.6 | 9 | $37 \cdot 2$ | 31 | 2.98 | 15 | $+0.85$ | $0 \cdot 87$ | 17 | 153 |
| Adair |  | 200 | $64 \cdot 2$ | $49 \cdot 2$ | $56 \cdot 7$ | $+0 \cdot 4^{*}$ | 87.9 | 9 | $40 \cdot 2$ | 1 | $2 \cdot 82$ | 11 | $+0.58 *$ | 0.80 | 17 |  |
| Tara Hills, Omarama |  | 1,600 | $68 \cdot 0$ | $43 \cdot 1$ | $55 \cdot 6$ | $-0 \cdot 6$ * | $81 \cdot 1$ | 9 | $29 \cdot 5$ | 31 | $0 \cdot 72$ | 6 | $-1 \cdot 10^{*}$ | 0.33 | 12 | 190 |
| Benmore, Otematata | $\ldots$ | 920 | $68 \cdot 7$ | $46 \cdot 6$ | $57 \cdot 6$ |  | $84 \cdot 5$ | 15 | $35 \cdot 5$ | 19, 30 | 0.74 |  |  | 0.32 | 12 |  |
| Milford Sound |  | 20 | $65 \cdot 3$ | $49 \cdot 6$ | 57.4 | $+2.4$ | $74 \cdot 0$ | 14, 15 | $42 \cdot 4$ | 31 | $15 \cdot 87$ | 12 | $-6 \cdot 21$ | $8 \cdot 16$ | 9 |  |
| Waimate |  | 200 | $66 \cdot 7$ | $48 \cdot 4$ | $57 \cdot 6$ | $+0 \cdot 1$ | $88 \cdot 8$ | 9 | $39 \cdot 0$ | 31 | $2 \cdot 65$ | 10 | $+0.41$ | 0.92 | 12 | 136 |
| Naseby |  | 2,300 | $65 \cdot 7$ | $40 \cdot 5$ | $53 \cdot 1$ |  | $80 \cdot 7$ | 9 | $25 \cdot 1$ | 2 | 1.99 | 11 |  | 0.92 | 12 |  |
| Queenstown |  | 1,100 | $68 \cdot 1$ | 47-1 | $57 \cdot 6$ | $+1 \cdot 3$ | $77 \cdot 5$ | 24 | $36 \cdot 0$ | 26 | 0.73 | 5 | $-2 \cdot 12$ | 0.31 | 9 | 190 |
| Cromwell |  | 720 | $71 \cdot 3$ | 47.2 | $59 \cdot 2$ | $+1.6$ | $81 \cdot 9$ | 15, 9 | $29 \cdot 5$ | 26 | 0.50 | 8 | $-0.93 *$ | 0. 20 | 11 |  |
| Ophir |  | 1,000 | $69 \cdot 5$ | $41 \cdot 3$ | 55.4 | $-0.3$ | $79 \cdot 0$ | 15, 22 | $28 \cdot 0$ | 2, 31 | $0 \cdot 62$ | 9 | -0.84 | 0. 25 | 11 |  |
| Moa Creek |  | 1,400 | $67 \cdot 3$ | $39 \cdot 0$ | $53 \cdot 2$ |  | $77 \cdot 1$ | 14 | $22 \cdot 1$ | 31 | 0.30 | 7 |  | 0.14 | 11 |  |
| Earnscleugh |  | 500 | $70 \cdot 7$ | $43 \cdot 2$ | $57 \cdot 0$ | $+0 \cdot 1$ * | $84 \cdot 4$ | 9 | $27 \cdot 8$ | 2 | $0 \cdot 28$ | 4 | $-0.93$ | $0 \cdot 13$ | 9 |  |
| Waipiata | . | 1,550 | $65 \cdot 9$ | $43 \cdot 6$ | $54 \cdot 8$ | $+0.2$ | 81.4 | 9 | $30 \cdot 6$ | 26 | $1 \cdot 13$ | 8 | -0.44* | 0.38 | 17 | 186 |
| Alexandra |  | 520 | $70 \cdot 4$ | $46 \cdot 5$ | $58 \cdot 4$ | $+0.8$ | $83 \cdot 7$ | 9 | $32 \cdot 6$ | 2 | $0 \cdot 46$ |  | -0.89 | $0 \cdot 10$ | 9 | 197 |
| Garston |  | 1,009 | $67 \cdot 1$ | 41.4 | $54 \cdot 2$ | .. | $78 \cdot 0$ | 9, 14 | 27.9 | 2 | 1. 51 | 11 |  | 0.39 | 9 |  |
| Roxburgh Hydro | . | 350 | $70 \cdot 4$ | $44 \cdot 7$ | $57 \cdot 6$ |  | $82 \cdot 8$ | 9 | $32 \cdot 1$ | 2 | $0 \cdot 74$ | 10 | -0.78* | $0 \cdot 16$ | 28 |  |
| Mid Dome |  | 1,252 | $66 \cdot 0$ | $42 \cdot 1$ | $54 \cdot 0$ |  | $80 \cdot 4$ | 9, 11 | $30 \cdot 0$ | 2 | $2 \cdot 19$ | 13 |  | $0 \cdot 47$ | 9 |  |
| Moa Flat, West Otago | . | 1,345 | $63 \cdot 1$ | $44 \cdot 1$ | $53 \cdot 6$ |  | $76 \cdot 0$ | 24 | $31 \cdot 8$ | 2 | 1.64 | 11 | $-0.82 *$ | $0 \cdot 46$ | 24 |  |
| Taieri .. .. |  | 80 | $67 \cdot 0$ | $44 \cdot 5$ | $55 \cdot 8$ | +0.6* | $89 \cdot 1$ | 9 | $31 \cdot 8$ | 31 | $1 \cdot 34$ | 12 | -0.73* | $0 \cdot 26$ | 11 | 177 |
| Musselburgh, Dunedin |  | 5 | $64 \cdot 6$ | $49 \cdot 6$ | $57 \cdot 1$ | $+0.7 *$ | $84 \cdot 2$ | 24 | $37 \cdot 9$ | 26 | 1.54 | 12 | $-1 \cdot 02$ | $0 \cdot 39$ | 24 | 177 |
| Tapanui | . | 550 | $65 \cdot 5$ | $45 \cdot 2$ | $55 \cdot 4$ |  | $80 \cdot 6$ | 7 | $34 \cdot 0$ | 2 | 1.71 | 12 |  | 0.51 | 24 |  |
| East Gore |  | 245 | $66 \cdot 5$ | $44 \cdot 7$ | $55 \cdot 6$ | +0.5 | $80 \cdot 0$ | 7,9 | $32 \cdot 0$ | 2, 26 | $2 \cdot 11$ | 12 | $-1.00$ | $0 \cdot 79$ | 24 |  |
| Gore ${ }^{\text {Otautau }}$ |  | 240 | $67 \cdot 1$ | $44 \cdot 4$ | $55 \cdot 8$ | +0.4* | $81 \cdot 0$ | 7,9 | $32 \cdot 0$ | 2, 3 | $2 \cdot 07$ | 10 | -1.04* | $0 \cdot 81$ | 24 | 175 |
| Otautau |  | 180 | $64 \cdot 7$ | $46 \cdot 7$ | $55 \cdot 7$ | $+1.0$ | $78 \cdot 8$ |  | $34 \cdot 0$ | 13 | 1.64 | 14 | -1.88 | $0 \cdot 42$ | 28 | 178 |
| Pebbly Hills | . | 150 | $66 \cdot 1$ | $44 \cdot 6$ | $55 \cdot 4$ |  | $80 \cdot 0$ | 7 | $30 \cdot 0$ | 2 | 1.71 | 12 | -1.91* | $0 \cdot 47$ | 24 |  |
| Invercargill |  | 8 | $64 \cdot 5$ | $46 \cdot 9$ | $55 \cdot 7$ | $+0.7$ | $81 \cdot 8$ | 7 | $33 \cdot 4$ | 2 | 1.36 | 17 | $-2 \cdot 76 *$ | 0.28 | 9 |  |
| Invercargill Airfield | .. | 0 | $63 \cdot 4$ | $43 \cdot 9$ | $53 \cdot 6$ | -0.2* | $77 \cdot 9$ | 9 | $27 \cdot 6$ | 2 | $1 \cdot 44$ | 16 | -2.59* | $0 \cdot 30$ | 9 | 169 |

## LATE RETURNS

| Kaingaroa, Feb, 1958 | .. 1,800 | $72 \cdot 0$ | $48 \cdot 8$ | $60 \cdot 4$ | $+1.2$ | $79 \cdot 8$ | 6 | $38 \cdot 0$ | 24 | $4 \cdot 71$ | 11 | -0.76 | $1 \cdot 52$ | 10 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Queenstown, Feb, 1958 | .. 1,100 | $72 \cdot 8$ | $49 \cdot 7$ | $61 \cdot 2$ | $+1 \cdot 6$ | $79 \cdot 6$ | 8 | $36 \cdot 0$ | 23 | $1 \cdot 10$ | 8 | $-1 \cdot 31$ | $0 \cdot 31$ | 3 | 212 |

Note-At stations where departures from normal have an asterisk, the temperature record has been maintained for less than 10 years, the rainfall record for less than 20 years. Rainfall normals have been revised and now refer to the standard period 1921-50. Where observations are not available for the whole period, or where the site of the rain gauge has been changed, the normals are partly interpolated.

## Notes on the Weather for March 1959

General: March was a warm month. Good rains in the middle of the month provided some relief for the dried-up pastures of Marlborough and Nelson, but more rain would still be very welcome in these areas. Elsewhere, stock were mainly in good condition, except for lambs which were still being adversely affected by the moist conditions in the North Island.
A tropical cyclone which passed close to North Cape on the evening of the 14th caused widespread damage over the northern half of Northland. At Cape Reinga lighthouse the barometer fell to 963 millibars-the lowest ever recorded in the North Island. Winds from the north-east reached hurricane force, and a gust of 110 m.p.h. was recorded at Kaitaia Aerodrome. Many buildings, including five churches and three halls, were destroyed by the wind and power and telephone services were completely disrupted over a wide area. In the Kerikeri district much of the tree-tomato and citrus crop was destroyed.

Rainfall: Rainfall was close to average over the greater part of the country. However, over most of Northland and Coromande and in the Christchurch-Ashburton area it was double the usual value. On the other hand, Otago and Southland received only half the normal rainfall.

From Whangarei northward three-quarters of the total rain fell from the 12 th to the 17 th.

Temperatures: In the North Island and in northern and western districts of the South Island temperatures were warmer than usual by 1-3 degrees. Over the remainder of the South Island temperatures were close to normal.

Sunshine: Over the greater part of the country sunshine was below average by about 30 hours. However, western and southern districts of the South Island were favoured with more sun than usual by a similar amount; and in western districts of the Wellington Province sunshine was close to normal.

Weather Sequence: On the 1st there was scattered light rain, mainly in eastern districts from Kaikoura to Coromandel, associated with the passage of a weak trough. On the following day an anticyclone brought fine weather. Conditions deteriorated again in eastern districts with some light rain as another trough moved northwards over the country on the 3rd and 4th. This trough became slow-moving over the Auckland Province for the next three days, with considerable rain.

From the 8th to the 12th a deep depression moved past western Southland to the vicinity of Macquarie Island and later travelled south-eastward. This was a period of unsettled weather for the West Coast with frequent rain. On the 8th and 9th the Bay of Plenty and Nelson also received some rain in the northerly airstream, and on the 11th and 12th the unsettled weather became general with the passage of a trough over the country.
From the 13 th to the 18 th the weather north of Christchurch was dominated by an intense tropical cyclone. This cyclone was centred near New Caledonia on the 13 th, and it moved rapidly southeastward to a position north of Cape Reinga. It recurved towards the south-west on the afternoon of the 14th and passed close to northern Northland, which was devastated by north-easterly winds of hurricane force. The cyclone soon became merged in another deep depression over the North Tasman Sea, and north-easterly winds continued for several days, with rain especially in the Auckland Province, north Taranaki, and northern and western districts of the South Island. On the 17th and 18th the depression crossed the North Island, and in the resulting south-westerly change Canterbury and Otago also received some rain.
From the 19th to the 22nd the weather was mainly fair or fine, under the influence of an anticyclone at first over the Tasman Sea and later over New Zealand. A few showers were reported in the west and south of the South Island on the 19th and in Northland on the 22 nd.

