Climatological Table-Summary of the Records of Temperature, Rainfall, and Sunshine for April 1967-continued

| Station | HeightofStationAboveM.S.L. | Air Temperatures in Degrees (Fahrenheit) |  |  |  |  |  |  |  | Rainfall in Inches |  |  |  |  | $\begin{aligned} & \text { Bright } \\ & \begin{array}{c} \text { Sun- } \\ \text { Shine } \end{array} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Means of |  | $\begin{aligned} & \text { Mean } \\ & \text { of A } \\ & \text { and } \\ & \text { B } \end{aligned}$ | Difference Normal Norma | Absolute Maximum andMinimum |  |  |  | $\begin{gathered} \text { Total } \\ \text { Fall } \end{gathered}$ | $\left\lvert\, \begin{gathered} \text { No. } \\ \text { of } \\ \text { Rain } \\ \text { Days } \end{gathered}\right.$ | Difference Normal | $\underset{\text { Fall }}{\text { Maximum }}$ |  |  |
|  |  | $\underset{\text { Max. }}{\text { A }}$ | $\underset{\text { Min. }}{\text { B }}$ |  |  | Maxi- | Date | Minimum | Date |  |  |  | Amount | Date |  |
|  | Ft. | ${ }^{2} \mathrm{~F}$. | ${ }^{2} \mathrm{~F}$. | ${ }^{2} \mathrm{~F}$. |  | ${ }^{2} \mathrm{~F}$. |  | ${ }^{2} \mathrm{~F}$. |  | In. |  |  | In. |  | Hrs. |
| Berwick Forest | 60 | 61.2 | 41.2 | 51.2 | 0.0 | 75.1 | 20 | 27.4 | 28 | 1.90 | 11 | -0.6 | 0.63 | 20 |  |
| Dunedin Airport. | 4 | 61.5 | 40.3 | 50.9 | +0.1 | 76.7 | 22 | 24.2 | 28 | 2.04 | 12 | $+0.1$ | 0.64 | 26 | 140 |
| Musselburgh, Dunedin | 5 | 60.9 | 45.6 | 53.2 | +0.4 | 75.3 | 22 | 34.8 | 28 | 2.38 | 12 | -0.1 | 1.10 | 26 | 131 |
| Oamaru | 47 | 62.5 | 44.6 | 53.6 |  | 75.5 | 22 | 30.1 | 24 | 1.81 | 8 |  | 0.83 | 26 | 134 |
| West Arm, Lake Manapouri | 590 | 55.4 | 43.7 | 49.6 | +0.9 | 63.2 | 5 | 34.5 | 28 | 28.00 | 20 |  | 7.33 | 25 |  |
| Queenstown | 1,080 | 60.7 | 42.0 | 51.4 | +0.4 | 71.9 | 4 | 32.5 | 28 | 6.02 | 12 | $+3.1$ | 1.14 | 25 | 132 |
| Cromwell | 698 | 63.5 | 40.9 | 52.2 | +0.5 | 77.7 | 5 | 29.0 | 28 | 4.75 | 12 | $+3.8$ | 1.34 | 22 |  |
| Ophir | 1,000 |  | 37.0 |  |  |  |  | 26.3 | 4 | 2.94 | 9 | $+1.3$ | 0.92 | 26 |  |
| Moa Creek | 1,400 | 60.9 | 33.1 | 47.0 | +0.5 | 73.8 | 5 | 21.5 | 28 | 2.31 | 8 | $+1.0$ | 0.65 | 26 |  |
| Earnscleugh | 500 | 63.0 | 36.0 | 49.5 | -0.8 | 79.6 | 5 | 26.0 | 28 | 3.76 | 13 | $+2.3$ | 1.06 | 22 |  |
| Alexandra | 461 | 62.0 | 40.6 | 51.3 | -0.1 | 76.6 | 5 | 30.6 | 28 | 3.24 | 13 | +1.9 | 0.82 | 22 | 172 |
| Roxburgh Hydro | 350 | 61.6 | 41.0 | 51.3 | -0.8 | 76.5 | 5 | 30.0 | 4 | 2.83 | 11 | $+0.9$ | 0.69 | 25 |  |
| Moa Flat, West Otago | 1,345 | 56.8 | 39.4 | 48.1 | -0.4 | 68.1 | 5 | 30.2 | 28 | 3.72 | 12 | $+1.1$ | 0.82 | 7 |  |
| Lake Mahinerangi | 1,300 | 56.4 | 39.3 | 47.8 |  | 71.8 | 5 | 28.0 | 28 | 2.92 | 18 | $-0.4$ | 0.87 | 26 |  |
| Tapanui . | 740 | 58.3 | 41.7 | 50.0 | -0.4 | 71.5 | 5 | 34.0 | 24 | 3.30 | 15 | $+0.3$ | 0.66 | 25 |  |
| Rankleburn Forest | 835 | 57.4 | 41.8 | 49.6 | +0.4 | 69.8 | 22 | 31.0 | 28 | 3.78 | 18 |  | 0.86 | 25 |  |
| Taieri Mouth | 50 | 60.2 | 43.3 | 51.8 |  | 75.0 | 22 | 30.6 | 28 | 2.26 | 13 |  | 0.73 | 26 |  |
| Otautau | 180 | 58.8 | 42.2 | 50.5 | +0.1 | 70.0 | 20 | 31.0 | 5 | 5.97 | 19 | $+2.5$ | 1.13 | 25 | 110 |
| Gore | 230 | 58.8 | 42.1 | 50.4 | -0.9 | 70.8 | 5 | 32.9 | 27 | 4.72 | 18 | $+1.9$ | 1.19 | 25 | 114 |
| Winton | 150 | 58.7 | 42.3 | 50.5 |  | 71.6 | 5 | 31.8 | 5 | 4.77 | 19 |  | 0.95 | 8 | 112 |
| Pebbly Hills | 138 | 59.6 | 43.3 | 51.4 | $+0.7$ | 73.0 | 5 | 30.0 | 28 | 5.76 | 17 | +2.5 | 1.27 | 8 |  |
| Invercargill Airport | 1 | 57.6 | 42.0 | 49.8 | -0.3 | 69.0 | 20 | 29.2 | 5 | 5.88 | 20 | $-2.0$ | 1.22 | 25 | 94 |
| Milton . | 60 | 60.0 | 42.0 | 51.0 |  | 73.5 | 22 | 29.2 | 28 | 2.25 | 12 | -0.3 | 0.86 | 26 |  |
| Balclutha | 20 | 59.2 | 42.7 | 51.0 |  | 74.8 | 20 | 33.4 | 28 | 2.43 | 15 |  | 0.71 | 25 | 130 |
| Rarotonga | 15 | 81.9 | 71.6 | 76.7 | $-0.7$ | 84.3 | 2, 28 | 66.0 | 18 | 14.67 | 24 | $+7.8$ | 2.82 | 21 | 140 |
| Raoul Island | 126 | 73.2 | 65.2 | 69.2 | $+0.1$ | 77.0 | 17 | 58.7 | 19 | 6.40 | 23 | $+1.6$ | 2.05 | 17 | 159 |
| Chatham Islands. | 157 | 60.0 | 50.8 | 55.3 | +1.6 | 64.8 | 9 | 42.1 | 19 | 3.31 | 19 | +0.7 |  | 1 | 125 |
| Campbell Island | 49 | 47.8 | 38.6 | 44.3 |  | 51.8 | 5 | 30.2 | 30 | 5.52 | 28 |  | 0.52 | 12 | 26 |
| Scott Base, Antarctica | 45 |  |  | -15.9 |  | 12.0 | 16 | -47.0 | 10 |  |  |  |  |  |  |
| LATE RETURNS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Whatawhata, Mar 1967 | 340 | 71.6 | 54.9 | 63.2 | +1.0 | 77.4 | 2 | 45.0 | 14 | 6.85 | 11 | $+2.9$ | 3.17 | 23 | 166 |
| Retaruke, Feb 1967 | 680 | 73.8 | 50.9 | 62.4 |  | 84.0 | 25 | 36.5 | 4 | 4.80 | 9 |  | 4.01 | 2 |  |
| Retaruke, Mar 1967 | 680 | 71.9 | 50.2 | 56.0 | $\cdots$ | 82.4 | 6 | 38.2 | 29 | 5.28 | 8 |  | 2.64 | 24 |  |

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.
*Sunshine recorder is not located at the station but is in the near vicinity.

## Notes on the Weather for April 1967

General: Winds from a westerly quarter were usually frequent in April and they blew almost continuously during the last 16 days. In the North Island the weather was drier than usual, and in the north and east also sunnier; in most areas the drier weather was appreciated after the previous wet months and farmers found it a good month. In the South Island it was wetter than usual and also more cloudy in some areas. Following several months of rather dry weather the additional rain was appreciated so that here also farmers found April a favourable month. However, in parts of Canterbury and Otago the ground was still too dry.

Winds were particularly strong from about the 20th to the 25 th, with many gales, especially from Cook Strait southward. Some particularly strong gales were reported on the 25th, especially about Cook Strait and in Fiordland.

Rainfall: In the South Island rainfall was mainly 50 percent above average. It was more than double the average value in Fiordland, the Southern Lakes, and also most of the Alps, the high country of South Canterbury, and Central Otago. In some northern and eastern coastal districts, notably the Marlborough Sounds and the Christchurch area, rainfall was below average by at least 25 percent.

In the North Island rainfall was mainly only two-thirds of the average value. Central districts of the North Island together with Bay of Plenty, Waikato, and Auckland received less than half. On the other hand, in Wellington and southern Manawatu and on the Wairarapa and Hawke's Bay coasts, rainfall was somewhat below average.

On the West Coast most of the rain fell in two periods: 6-8 April, in moist northerlies; and 19-26 April, in westerlies. In the Alps and Fiordland some areas received monthly totals of $30-50$ inches, of which $20-35$ inches fell during the period 20-26 April, with serious flooding around Milford Sound and in parts of Westland. The highest recorded rainfall was $47 \frac{1}{2}$ in. at Doubtful Sound of which more than 36 in. fell during 19-25 April.

Temperatures: Temperatures were close to, or a little above, average over the whole country.

Sunshine: Eastern and some northern districts of the North Island were favoured with 15-50 hours sunshine above average. On the other hand western and some inland districts of the South Island together with Manawatu received 15-50 hours below average.

Weather Sequence: Pressures were high over the country at the beginning of the month and up to the 5th. For the first three days weak troughs crossed the country, and a depression developed far to the southeast. Some rain was recorded, mainly on the 2nd, on the Southland coast, in North Canterbury, Buller, Wellington, and Wairarapa, Waitomo, and Northland. The weather became generally fine during the 4th and 5th with an anticyclone over the North Island moving slowly eastward.

A depression over the North Tasman Sea had been moving slowly south-eastward and on the 6th, moist northerlies set in over the South Island, with a rapid deterioration in weather. During this and the next two days considerable rain was reported in the Alps and on the West Coast, with quite good falls soon extending to the remainder of the South Island and also to Bay of Plenty, while temperatures became warmer. The depression moved to the south of the South Island and the associated trough of low pressure soon became almost stationary through Cook Strait, with rain from the 9 th to the 11 th in the northern half of the South Island and the southern half of the North Island. By the 12th a ridge of high pressure extended across most of New Zealand and to the east from an anticyclone over the Tasman Sea.

The trough of low pressure had moved to a position just off the north-east coast of the North Island, but it became stationary again owing to the presence of a tropical cyclone south of Fiji. Rairi soon extended to eastern and northern districts of the North Island, with some heavy falls in eastern Northland. During the next two days the weather gradually improved in these districts but by the 14th some light rain was still being reported in Gisborne and a few showers in eastern Northland.

For the remainder of the month, from the 15th to the 30th, winds were continuously from a westerly quarter, apart from southerlies on the 26th and 27th.

From the 15 th to the 19th an anticyclone was centered over the Tasman Sea while depressions passed far to the south and south-east of New Zealand. Winds were westerly to south-westerly and the weather was mainly fine. However, from the 15th to the 17th there was rain in Fiordland, with lighter salls in Westland and Buller and on the Southland coast, and on the 18th, showers were reported in Northland and Auckland.
From the 20th to the 24th there was an anticyclone to the north while pressures were low to the south, and several troughs of low pressure crossed the country. Frequent periods

