| Station |  | Air Temperatures in Degrees (Fahrenheit) |  |  |  |  |  |  |  | Rainfall in Inches |  |  |  |  | $\begin{aligned} & \text { Bright } \\ & \text { Sun- } \\ & \text { shine } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Means of |  | $\begin{aligned} & \text { Mean } \\ & \text { of A } \\ & \text { and } \\ & \text { B } \end{aligned}$ | Differ-enceFromNormal | Absolute Maximum and Minimum |  |  |  | $\begin{aligned} & \text { Total } \\ & \text { Fall } \end{aligned}$ | $\begin{gathered} \text { No. } \\ \text { of } \\ \text { Rain } \\ \text { Days } \end{gathered}$ | $\begin{aligned} & \text { Differ- } \\ & \text { ence } \\ & \text { From } \\ & \text { Normal } \end{aligned}$ | $\underset{\text { Fall }}{\text { Maximum }}$ |  |  |
|  |  | $\underset{\text { Max. }}{\text { A }}$ | $\underset{\text { Min. }}{\text { B }}$ |  |  | Maximum | Date | Minimum | Date |  |  |  | Amount | Date |  |
|  | Ft. | ${ }^{\circ} \mathrm{F}$. | ${ }^{\circ} \mathrm{F}$. | ${ }^{\circ} \mathrm{F}$. |  | ${ }^{\circ} \mathrm{F}$. |  | ${ }^{\circ} \mathrm{F}$. |  | In. |  |  | In. |  | Hrs. |
| Oamaru Aerodrome | 99 | 56.8 | 44.5 | 50.6 |  | 68.8 | 9 | 33.6 | 15 | 7.66 | 18 |  | 2.33 | 11 |  |
| Tara Hills, Omarama | 1,600 | 56.7 | 38.9 | 47.8 | -0.9 | 75.9 | 6 | 26.9 | 28 | 1.95 | 12 | $+0.2$ | 0.46 | 23 | 132 |
| Lake Hawea . . | 1,147 | 58.4 | 42.4 | 50.4 | $-1.1$ | 72.9 | 6 | 32.5 | 28 | 2.27 | 11 | -0.9 | 0.43 | 18 |  |
| Naseby Forest | 2,000 | 54.4 | 35.0 | 44.7 | -2.6 | 74.0 | 8 | 26.0 | 15 | 5.96 | 12 | +4.0 | 2.01 | 12 |  |
| Herbert Forest | 200 | 60.7 | 42.4 | 51.6 |  | 74.0 |  | 33.0 | 15 | 8.08 | 11 |  | 2.52 | 15 |  |
| Cherry Farm, Waikouaiti | 21 | 58.2 | 44.9 | 51.6 | +0.4 | 70.0 | 5 | 35.1 | 15 | 7.07 | 16 | $+5.2$ | 1.65 | 18 |  |
| Taieri | 80 | 58.9 | 43.1 | 51.0 | -0.1 | 79.2 | 8 | 30.7 | 28 | 10.24 | 14 | +7.9 | 2.50 | 10 |  |
| Berwick Forest | 60 | 58.0 | 41.6 | 49.8 | -1.4 | 81.2 | 8 | 30.6 | 27 | 6.03 | 14 | +3.5 | 1.62 | 10 |  |
| Oamaru | 99 | 58.9 | 45.2 | 52.0 |  | 71.0 | 9 | 36.8 | 15 | 6.43 | 16 |  | 1.20 | 18 | 98 |
| Dunedin Airport. . | 4 | 59.5 | 40.7 | 50.1 | $-0.7$ | 80.3 | 8 | 30.8 | 18 | 7.20 | 15 | $+\dot{5.3}$ | 1.60 | 12 | 106 |
| Musselburgh, Dunedin | 5 | 57.4 | 46.7 | 52.0 | -0.8 | 71.2 | 8 | 36.7 | 18 | 10.33 | 18 | +7.8 | 2.12 | 15 | 97 |
| West Arm, Lake Manapouri | 590 | 56.4 | 40.6 | 48.5 | $-0.2$ | 68.5 | 7 | 31.3 | 29 | 5.73 | 18 | -6.8 | 1.60 | 8 |  |
| Queenstown .. | 1,080 | 58.0 | 41.2 | 49.6 | -1.4 | 75.3 | 8 | 33.1 | 16 | 1.37 | 13 | -1.5 | 0.59 | 9 | 92 |
| Mid Dome | 1,252 | 57.0 | 38.1 | 47.6 |  | 74.8 | 8 | 26.8 | 26 | 12.77 | 15 |  | 3.30 | 11 |  |
| Cromwell | 698 | 59.3 | 40.0 | 49.6 | -2.1 | 76.0 | 6 | 27.1 | 15 | 1.71 | 12 | $+0.2$ | 0.53 | 23 |  |
| Ophir | 1,000 | 58.5 | 36.3 | 47.4 | -1.6 | 77.0 | 1 | 24.8 | 28 | 2.52 | 8 | +0.9 | 0.63 | 12 |  |
| Moa Creek | 1,400 | 57.7 | 35.4 | 46.6 | $+0.1$ | 74.1 | 1 | 21.1 | 28 | 2.14 | 8 | +0.8 | 0.51 | 18 |  |
| Earnscleugh | 500 | 61.0 | 35.8 | 48.4 | -1.9 | 80.0 | 1 | 23.5 | 15 | 1.68 | 7 | +0.3 | 0.62 | 23 |  |
| Alexandra . | 461 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Roxburgh Hydro | 350 | 59.3 | 40.8 | 50.0 | $-2.1$ | 77.0 | 1 | 28.0 | 27 | 2.06 | 11 | $+0.2$ | 0.69 | 23 |  |
| Moa Flat, West Otago | 1,345 | 55.4 | 39.4 | 47.4 | -1.1 | 70.7 | 5 | 31.2 | 17 | 5.02 | 15 | +2.4 | 1.26 | 12 |  |
| Lake Mahinerangi | 1,300 | 55.4 | 39.2 | 47.3 |  | 74.3 | 8 | 31.3 | 16 | 7.32 | 12 | +4.0 | 1.79 | 10 |  |
| Tapanui $\quad$. | 740 | 57.2 | 41.0 | 49.1 | $-1.3$ | 74.3 | 5 | 28.0 | 27 | 6.36 | 13 | +3.4 | 2.04 | 12 |  |
| Rankleburn Forest Taieri Mouth | 835 | 56.3 | 40.4 | 48.4 | -0.8 | 70.8 | 8 | 30.2 | 27 | 4.17 | 15 |  | 0.94 | 12 |  |
| Taieri Mouth | 50 | 56.6 | 43.4 | 50.0 |  | 69.6 | 6 | 32.5 | 27 | 8.09 | 15 |  | 1.83 | 11 |  |
| Otautau | 180 | 58.0 | 37.9 | 48.0 | -2.4 | 74.0 | 8,31 | 27.0 | 27 | 4.78 | 14 | $+1.3$ | 1.29 | 13 | 129 |
| Gore | 230 | 58.2 | 41.2 | 49.7 | -1.6 | 75.0 | 5 | 32.3 | 27 | 4.73 | 16 | +1.9 | 0.94 | 11 | 115 |
| Winton | 150 | 57.8 | 39.3 | 48.6 |  | 73.5 | 5 | 29.9 | 18 | 5.49 | 16 |  | 1.62 | 11 | 132 |
| Pebbly Hills . . | 138 | 58.5 | 39.3 | 48.9 | -1.8 | 73.0 | 5 | 29.0 | 17 | 6.75 | 15 | $+3.5$ | 1.60 | 11 |  |
| Invercargill Airport | 1 | 57.6 | 38.5 | 48.0 | $-2.1$ | 69.8 | 5 | 29.0 | 27 | 4.61 | 14 | +0.8 | 1.66 | 11 | $1 i 7$ |
| Milton | 60 | 58.5 | 40.4 | 49.4 |  | 76.1 | 5 | 27.8 | 27 | 7.85 | 15 | $+5.4$ | 1.87 | 10 |  |
| Balclutha | 20 | 57.9 | 39.3 | 48.6 |  | 71.9 | 8 | 30.1 | 27 | 5.20 | 11 |  | 2.10 | 23 | 104 |
| Rarotonga | 15 | 82.0 | 71.2 | 76.6 | -0.8 | 84.0 | 22 | 64.0 | 11 | 4.17 | 21 | -2.7 | 0.82 | 23 | 153 |
| Raoul Island Chatham Islands. | 126 | 74.7 | 64.6 | 69.6 | $+0.5$ | 79.8 | 5 | 57.2 | 30 | 6.29 | 18 | $+1.5$ | 3.11 | 1 | 202 |
| Chatham Islands. . | 157 | 62.4 | 52.8 | 57.6 | +3.9 | 68.2 | 1 | 45.6 | 18 | 5.33 | 21 | +2.8 | 1.28 | 16 | 105 |
| Campbell Island .. | 49 | 50.5 | 43.5 | 47.0 |  | 58.2 | 8 | 34.6 | 11 | 3.53 | 18 |  | 0.80 | 13 | 57 |
| Scott Base, Antarctica | 45 | .. |  | -10.1 | . | 23.7 |  | -46.5 |  |  |  |  |  |  | 57 |

LATE RETURNS

| Waitangi Forest March 1968 | 180 | 75.7 | 62.8 | 69.2 |  | 82.4 | 9 | 55.4 | 20 | 4.62 | 13 |  | 1.29 | 6 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Hastings, March 1968 | 40 | 78.1 | 58.3 | 68.2 |  | 91.0 | 9 | 45.2 | 23 | 0.43 | 7 |  | 0.13 | 28 |  |
| Moa Creek, March 1968 | 1,400 | 67.8 | 49.0 | 58.4 | $+5.8$ | 76.5 | 5 | 32.3 | 25 | 4.38 | 11 | $+3.1$ | 1.23 | 5 |  |
| Kaitoke Farm, March 1968 | 625 | 71.2 | 53.1 | 62.2 | .. | 79.2 | 2 | 35.0 | 22 | 2.54 | 10 |  | 0.64 | 13 | 224 |

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 1968

General-The weather for April was dominated by a tropical storm which originated near New Caledonia. It crossed the North Island on the night of 9-10 April and moved down the Canterbury and Otago coasts on the 11th. Violent gales caused damage over the greater part of the North Island and the northern half of the South Island. The greatest destruction from wind was reported in and around Wellington, where southerly winds averaged as much as 80 miles per hour on the morning of the 10th, with gusts to 120 miles per hour; while on exposed hilltops gusts were recorded to 150 miles per hour. Thousands of trees were uprooted, and roofs were blown off houses. During the storm the inter-island ferry Wahine ran aground at the mouth of Wellington Harbour. Flooding occurred in many areas, notably around Christchurch and Banks Peninsula on the 12th and in Southland and West Otago on the 15 th.

Rainfall-Rainfall was above average or close to average over almost the whole country. It was more than double the average value on the east coast of the South Island and up to about 50 miles inland from Balclutha to Blenheim; north of a line from Hamilton to Tauranga; and also over the greater part of the North Island south of a line from Stratford to Waipukurau. Around Lyttelton and Banks Peninsula some stations recorded 5-8 times the average value, the highest totals there being 27.69 in. at Hickory Bay, on the eastern tip of Banks Peninsula, and 20.46 in. at Purau, on Lyttelton Harbour. In these areas at least two-thirds of the monthly total was recorded during the 10th and 11th, amounting to 16.21 in . at Hickory Bay and 14.33 in . at Purau; while many other stations had more than 8 in . for these two days.

The highest total rainfalls for the month were recorded at two stations in central Northland, Tau's Falls with 31.05 in. and Puketi with 30.71 in . At Puketi the total for the first 3 days of the month was 11.86 in ., for the first 9 days 28.52 in . and for the 14-day period 27 March-9 April 33.8 in. Flooding was reported in Northland on the 3rd and again on the 9th and 10th.

Heavy rain caused serious flooding in Buller and North Westland on the 9 th.

The Southern Lakes district received less than half the average rainfall, and it was also appreciably drier than usual in Fiordland and over the greater part of the Alps.

Temperatures-Temperatures were 1-2 degrees below average over the South Island and 1-2 degrees above average over the southern half of the North Island. The first 9 days were exceptionally warm for April
Sunshine-Sunshine was below average over most of the country. Greatest deficiencies of up to 50 hours were recorded in Canterbury and Nelson, also in parts of the central North Island. Nelson, Hanmer, Christchurch, and Lake Tekapo all had their lowest April sunshine since 1938.
Weather Sequence-A depression which had developed near North Cape at the end of March remained stationary there during the first 4 days of April. In Northland these were 4 very wet days, with some flooding. Pressures were high near the Chatham Islands. On the 1st the passage of a weak trough brought fairly general rain to the remainder of the North Island, except for Hawke's Bay and Wairarapa, and also to the northern half of the South Island. From the 2nd to the 4th the easterlies brought rain to eastern districts from Cape Palliser to East Cape. As the depression lost intensity during the 5 th and 6 th, the rain in Northland became temporarily lighter; and a trough of low pressure brought rain to Southland, the West Coast and Nelson. Temperatures were for the most part unusually warm during these first 6 days.
On the 7th an anticyclone was still centred to the south-east of the Chatham Islands, and a tropical storm over New Caledonia was moving southward. Temperatures remained warm, and it was still raining in Northland. On the following day, in the warm moist north-easterlies rain spread to the West Coast and Bay of Plenty. By the 9th the tropical storm had reached Northland, while a cold front moved on to the South Island. Rain spread over the whole country, with many heavy falls on this and the following day; flooding being reported especially in Northland, Auckland, Bay of Plenty, Nelson, and Buller. The tropical storm moved rapidly southward and by early morning on the 10 th it was centred near Napier, while the cold front had reached Cook Strait. Strong

