CLIMATOLOGICAL TABLE—continued Summary of the Records of Temperature, Rainfall, and Sunshine for August 1951-continued

Station.	bove		Air Temperatures in Degrees (Fahrenheit).								Rainfall in Inches.				
	Height of Station above M.S.L.	Means of		Mean		Absolute Maximum and Minimum.				***************************************	N -		Maximum Fall.		Bright
		A Max.	B Min.	of A and B.	Difference From Normal.	Maximum.	Date.	Minimum.	Date.	Total Fail.	No. of Rain Days.	Difference From Normal.	Amount.	Date.	Sun- shine.
Rudstone, Methven Akaroa Lincoln The Hermitage Winchmore	Ft. 1,217 150 36 2,510 626	°F. 49·8 51·0 51·4 42·7 49·9	F°. 33·6 38·8 34·0 27·1 32·2	°F. 41·7 44·9 42·7 34·9 41·0	°F. -1·9 (-1·5) -0·4 -3·1 (-1·3)	°F. 59·0 61·2 61·9 50·0 63·0	29 29 29 2, 3 29	°F. 25·2 31·8 22·0 20·0 21·0	5 13 15 6 19	$\begin{array}{ c c c }\hline In. \\ 2 \cdot 06 \\ 2 \cdot 81 \\ 1 \cdot 37 \\ 7 \cdot 60 \\ 1 \cdot 21 \\\hline\end{array}$	14 18 16 11	In0.91 (-1.79) -0.78 -3.61	In. 0·46 0·55 0·31 1·50 0·32	23 23 29 9 17	Hrs. 132·0 97·4 139·6 99·1
Haast Ashburton Fairlie Lake Tekapo Timaru Adair	15 323 1,004 2,400 56 200	51·6 50·6 43·5 52·4	$33.6 \\ 27.9 \\ 24.3 \\ 32.9$	42.6 $39.2$ $33.9$ $42.6$	$ \begin{array}{c c} -1 \cdot 1 \\ -1 \cdot 0 \\ -3 \cdot 5 \\ -1 \cdot 2 \end{array} $	$65 \cdot 2$ $62 \cdot 0$ $50 \cdot 4$ $60 \cdot 0$	29 22 28, 29 9	$26.0 \\ 20.0 \\ 15.1 \\ 26.5$	16 16, 19 4 18	0.98 1.00 0.74 1.06	11 10 4 7	$ \begin{array}{ c c c c c } -1.25 \\ -0.84 \\ -1.24 \\ -0.33 \end{array} $	0·30 0·29 0·62 0·63	17 29 11 23	125·7 144·5 124·5
Adair Tara Hills Milford Sound Waimate Queenstown Cromwell Ophir Earnscleugh	1,600 20 200 1,100 720 1,000 500	44·5 49·6 52·0 48·1 47·9 48·0 49·1	$27 \cdot 7$ $32 \cdot 9$ $34 \cdot 3$ $30 \cdot 0$ $29 \cdot 1$ $26 \cdot 5$ $28 \cdot 5$	36·1 41·2 43·2 39·0 38·5 37·2 38·8	$ \begin{array}{c}                                     $	52·1 57·8 62·5 54·0 58·2 58·8 59·3	2 25, 27 9 25 21 28 28	20·2 28·0 25·0 24·0 23·5 20·2 23·9	13 19 13 13, 19 6 19 6	1·03 10·88 1·77 2·36 0·51 0·87 0·73	8 14 12 15 6 6 8	$ \begin{array}{c}     \vdots \\     (-4.96) \\     +0.14 \\     +0.34 \\     \vdots \\     +0.08 \end{array} $	0.64 2.11 1.12 0.62 0.21 0.36 0.33	10 30 23 10 9 29	123 · 4 130 · 6
Waipiata Alexandra Roxburgh Hydro Mid Dome Moa Flat, West Otago	1,550 520 350 1,252 1,345	44·8 49·3 49·4 	$ \begin{array}{c} 29.7 \\ 29.2 \\ 33.8 \\ \hline 31.1 \end{array} $	$   \begin{vmatrix}     37 \cdot 2 \\     39 \cdot 2 \\     41 \cdot 6   \end{vmatrix} $ $   \vdots $ $   38 \cdot 2 $	$egin{array}{c} -2\cdot 5 \\ -2\cdot 2 \\ & \ddots \\ & \vdots \\ & \ddots \\ \\ & \ddots \\ & \ddots \\ & \ddots \\ \\ & \ddots \\ & \vdots \\ & \vdots \\ & \ddots \\ & \vdots \\ & \vdots \\ & \ddots \\ & \vdots $	$55.0 \\ 59.2 \\ 60.0 \\ \vdots \\ 53.2$	5 28 28  28	22·5 25·4 25·5 22·8	13 7 13 	0·79 0·90 0·89 	9 10 10 	$ \begin{array}{c c} -0.31 \\ +0.25 \\ \vdots \\ \vdots \\ \vdots \end{array} $	$ \begin{array}{c} 0.24 \\ 0.36 \\ 0.29 \\ 0.29 \end{array} $	13 16 13 	145 . 9
Manorburn Dam Taieri Musselburgh, Dunedin East Gore Gore Otautau Pebbly Hills Invercargill Invercargill South	2,448 80 5 245 240 180 150 32 8	50·2 49·3 50·7 51·2 50·2 50·4 51·6 50·9	33·2 36·9 32·9 32·3 30·7 32·5 32·2 34·3	41·7 43·1 41·8 41·8 40·4 41·4 41·9 42·6	$(-2 \cdot 0)  (-2 \cdot 4)  (-0 \cdot 9)  (-1 \cdot 2)  (-2 \cdot 6)   -2 \cdot 0  -1 \cdot 4$	58·1 57·2 60·0 60·0 60·8 60·0 61·0 59·8	10 9 27 26, 27 27 28 28 28	$23 \cdot 3$ $27 \cdot 8$ $25 \cdot 0$ $24 \cdot 5$ $22 \cdot 5$ $26 \cdot 4$ $25 \cdot 0$ $27 \cdot 3$	13 13 13 13 6 13 19	$\begin{array}{c} \cdot \cdot \cdot \\ 1 \cdot 71 \\ 1 \cdot 15 \\ 2 \cdot 10 \\ 1 \cdot 98 \\ 3 \cdot 51 \\ 3 \cdot 02 \\ 3 \cdot 18 \\ 3 \cdot 72 \end{array}$	13 14 13 12 14 14 17	$ \begin{array}{c} \cdot \cdot \cdot \\ (-0.24) \\ -1.07 \\ -0.08 \\ \cdot \cdot \cdot \\ +0.15 \\ (+0.61) \end{array} $	0·44 0·17 0·44 0·60 0·48 0·60 0·94	16 13, 17 30 30 30 30 15 15	$124 \cdot 7$ $131 \cdot 3$ $146 \cdot 3$ $\vdots$ $157 \cdot 2$
							RETU					. (10 02)		. 23	
Dannevirke, July 1951 Haast, July 1951 Milford Sound, July 1951	685 15 20	$51 \cdot 9 \\ 52 \cdot 6 \\ 49 \cdot 2$	$   \begin{array}{r}     36 \cdot 4 \\     38 \cdot 2 \\     35 \cdot 7   \end{array} $	$44 \cdot 2 \\ 45 \cdot 4 \\ 42 \cdot 4$	+1.0	$63 \cdot 1 \\ 57 \cdot 6 \\ 60 \cdot 0$	20 5 4	$25 \cdot 4$ $29 \cdot 8$ $27 \cdot 6$	2, 29 13 13	$4.51 \\ 18.38 \\ 35.13$	15 21 22	$ +22\cdot 74$	$egin{array}{c} 0 \cdot 91 \\ 3 \cdot 32 \\ 6 \cdot 45 \end{array}$	6 17 17	97

Note.—At stations where departures from normal are in parentheses, the temperature record has been maintained for less than ten years, the rainfall record for less than twenty years, and the normals are partly interpolated. The five-yearly revision of temperature normals has been completed, and the new values adopted from this month.

## Notes on the Weather for August 1951

General.—August's weather displayed much variety, but generally it was cold and unsettled. Pasture growth was backward and cattle fodder became rather scarce in some districts. It was a bad month for North Island sheep-farmers, and many new lambs were lost after heavy snowfall on the 14th and the rains of the 22nd-25th.

Rainfall.—There was a slight or moderate rainfall surplus in Southland, in eastern districts from North Canterbury to East Cape (including the whole of Hawke's Bay), and north of a line approximately through Hamilton and Tauranga. A few places in Central mately through Hamilton and Tauranga. A few places in Central Hawke's Bay and the higher parts of the Coromandel district received twice the normal rainfall for August.

Although rainfall was below normal over the greater part of the country, the deficiency was in most cases comparatively small. However, totals were only half the normal in the interior of South Canterbury and North Otago, and on the coastal strip around Tasman and Golden Bays.

Temperature.—Mean daily temperatures were below normal throughout the country mostly by 1° F. to 2° F. The departure was slightly less in Westland, but in the interior of Canterbury it was

as much as 3° F.

During the 12th-14th heavy snow covered most of the South Island, although in coastal districts falls were only light and scattered; the North Island high country also received a thick coating.

Sunshine.—It was a sunny month in Southland and Westland,

while Nelson also had a small surplus. Elsewhere totals were below normal, mostly by small amounts, except in Hawke's Bay, Wairarapa, Canterbury, and in the far north.

Weather Sequence.—With the advance of an anticyclone from the Tasman Sea south westerlies decreased and the weather gradually

cleared except for occasional showers between Cook Strait and

East Cape.

After the collapse of the anticyclone over New Zealand on the After the collapse of the anticyclone over New Zealand on the 4th, conditions deteriorated generally. Under the influence of a complex and very extensive low-pressure system, unsettled weather continued until the middle of the month. The first depression centre crossed Northland on the 6th. The second was more vigorous and passed eastwards across the middle of the North Island on the night of the 8th.

The first of a series of troughs crossed the country from the west during the 10th. This series was associated with a very deep depression whose centre passed in the south on the 10th. A second trough followed a day later, both troughs being accompanied by a

belt of thunderstorms. In addition, two tornadoes were reported during the passage of the first trough, one from North Taranaki and the other from Bainham, Nelson, while the second trough

and the other from Banham, Nelson, while the second trough produced much hail over wide areas.

During this unsettled westerly spell the weather east of the main ranges had been mainly fair and mild, but with a change to south westerlies on the 13th cold showery weather became fairly general and heavy snow fell on the high country of both islands.

On the 14th the weather improved in the interior of Canterbury and Marlborough, in the Bay of Plenty, and in a few other districts sheltered from the south westerlies.

Winds turned south-easterly on the 16th shead of a depression

Winds turned south-easterly on the 16th ahead of a depression from the north Tasman Sea. As it advanced south-eastwards across Northland and the Bay of Plenty heavy rain spread for a time over the Auckland Province and southwards as far as North Canterbury.

The passage of a ridge brought a temporary clearance during the 18th and 19th, although the weather had cleared two days earlier in Westland.

earlier in Westland.

An active cold front moving northwards over the Dominion on the 20th was closely followed by an anticyclone which crossed the South Island from the west. The front soon retreated southwards with the development of depressions in the Tasman Sea. Winds turned north-easterly and temporarily increased to gale force in exposed parts of the Auckland Provice. Rain spread rapidly over the greater part of the country, and continued intermittently for several days during which period a low-pressure centre moved slowly eastwards across Northland. Heavy falls in Hawke's Bay and in those districts of the Auckland Province with a northeasterly aspect resulted in some minor flooding.

and in those districts of the Auckland Province with a north-easterly aspect resulted in some minor flooding. Barometers remained relatively low over the north Tasman Sea and northern New Zealand. While another depression was moving eastwards across Northland on the 28th, the first of a series of westerly depressions passed in the far south, bringing to an end a spell of settled weather which has prevailed in Westland and Southland since the 20th.

With the approach of an anticyclone across the north Tasman Sea the weather improved on the 29th east of the main ranges and in the north. However, showers also extended to these districts for brief periods when two cold fronts moved up from the south during the final two days of the month.

M. A. F. BARNETT, Director.