

CLIMATOLOGICAL TABLE—Summary of the Records of Temperature, Rainfall, and Sunshine for June 1978—continued
LATE RETURNS AND CORRECTIONS—continued

Station	Height of Station Above M.S.L.	Air Temperatures in Degrees Celsius								Rainfall in Millimetres				Bright Sunshine Hrs	
		Means of		Mean of A and B	Difference From Normal	Absolute Maximum and Minimum				Total Fall	No. of Rain Days	Difference From Normal	Maximum Fall		
		A Max.	B Min.			Maximum	Date	Minimum	Date				Amount		Date
		°C	°C	°C	°C	°C	°C	°C	°C	mm		mm	mm		Hrs
Raoul Island, May 1978 ..	38	22.3	16.7	19.5	+0.7	25.0	25	13.6	7	218	23	+73	116	29	132
Campbell Island, February 1978	15	12.4	7.8	10.1	+0.9	16.9	12	4.1	20	89	22	-25	13	28	74
Campbell Island, March 1978	15	10.7	5.7	8.2	-0.3	14.0	12	1.2	2	146	29	+16	27	31	66
Campbell Island, April 1978	15	10.1	6.4	8.3	+1.2	13.8	26	3.2	15	141	24	+19	39	11	27
Campbell Island, May 1978	15	8.6	4.9	6.8	+0.7	11.7	11	1.7	13	156	29	+16	54	11	8

The "normal" refers to the present site of the instruments. Standard period for normals is 1941-1970. 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 JUNE 1978

General—Pressures were appreciably below normal over the northern half of the North Island, and slightly above in the south of the South Island during June. Winds were predominantly easterly over the whole of New Zealand throughout the month. In the Wellington area there were 17 consecutive days with southerly winds, and nearly 80 percent of the time during the month winds were from this direction, more than double the June average. Cloudy conditions prevailed in most areas east of the main ranges with sunshine well below normal. This was the first month this year with temperatures considerably below normal over the majority of the country. Conditions were unusually dry on the West Coast. Most farmers reported average grass growth, except in some areas where severe frosts had retarded growth. Stock condition on the whole was good, apart from districts where hay and feed were in short supply.

Rainfall—Rainfall was above normal in most districts east of the main ranges and especially high on the Coromandel Peninsula, Hawke's Bay, Wairarapa, the Kaikoura coast, and parts of Canterbury. In Buller, Westland, Fiordland, and parts of inland Southland the rainfall was well below normal. Milford Sound recorded only 30 mm for the month, and this is the lowest total for any month since the station began in 1930, the lowest prior to this (44 mm) occurred in May 1970.

On the 21st and 22nd torrential rain along the northeast coast of the North Island caused a large washout on the Auckland/Whangarei railway line near Wellsford, and roads were blocked by slips in the area. "Chiltern" rainfall station on the Coromandel Peninsula recorded a 24-hour fall up to 9 a.m. on the 22nd of 153 mm, and 70 mm in the previous 24 hours.

Road and rail services were blocked by debris and land slips when a combination of heavy seas and rain occurred on the 23rd/24th in the Kaikoura area.

Temperatures—Temperatures were below normal over the major part of New Zealand, the only areas slightly above normal being Northland, parts of Auckland, and Nelson. Some districts in Canterbury, Otago, and Southland were below normal by more than 2°C, and in the North Island they were below by ½°C in many areas. The coldest spell during the month was from the 26th to the 30th. On the 29th maximum temperatures were below normal by as much as 5° to 8°C on the east coast of the country.

Sunshine—Sunshine hours for the month were below normal over the whole country apart from parts of Taranaki, Southland, and the West Coast. Wanganui recorded only 63 hours for the month, which was the lowest recorded in any month since the station began in 1937. Kaikoura also recorded their lowest ever. Hokitika had 24 hours more than normal, and this was the highest recorded in June since 1967. Many stations on the east coast had 60-80 percent of their normal sunshine hours.

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The cold front that had been moving over the South Island at the end of May continued to move northwards, and by the 1st was lying across central New Zealand. Most areas of the North Island recorded light to moderate rainfalls during the passage of this front. A ridge of high pressure extended onto the South Island late on the 1st with a depression forming in the northwest Tasman Sea. Temperatures were higher than normal along the east coast of the North Island at the beginning of the month. By the 2nd an anticyclone had become established over the country, and this persisted until the 6th, bringing fine weather to most of New Zealand, with only a few areas reporting isolated showers. The depression in the Tasman Sea moved slowly southwest during this period, and on the 7th had begun to move east towards New Zealand.

On the 7th the main centre of the depression had moved south-east and by the 8th was lying just to the west of the South Island. A cold front associated with this depression crossed onto the North Island early on the 8th and also moved south-east. Later on the 8th the situation became complex, with a large low-pressure area in the Tasman Sea developing three main centres moving eastwards towards New Zealand. As the cold front and the depressions crossed the country from the 8th-10th many areas recorded moderate to heavy rainfalls. The heaviest falls during this period occurred in Northland, Wellington, Nelson, parts of Marlborough, Buller, and Westland. Some areas had 24 hour falls of more than 50 mm. Temperatures were above normal over most of the North Island.

Pressures were low to the north-east of New Zealand and to the south of the country, and higher in the Tasman Sea on the 11th. A weak ridge of high pressure extended onto the South Island but moved rapidly south-east on the 12th. A cold front associated with a depression moving to the south of the country moved onto the South Island on the 12th. Showers were reported in many areas of the country as this front moved northwards. A depression that had formed over the Australian continent moved slowly east and by the 13th was situated in the north Tasman Sea. Pressures were high over New Zealand until the evening of the 15th when the depression in the Tasman Sea moved towards the North Island.

A warm front ahead of the depression moved onto the Northland region early on the 16th and moderate rainfalls were recorded in areas north of Auckland. Later on the 16th a cold front associated with the depression also crossed onto the North Island bringing heavy rain to the Northland region. 24-hour falls in excess of 80 mm were recorded in some areas. Early on the 18th the depression had moved onto the North Island and was moving slowly east, another low pressure area had also developed in the north Tasman Sea, and pressures had become high over the South Island.

With the passage of the depression across the country heavy rain was recorded in many areas as far south as Kaikoura. The heaviest falls occurred in Northland, Auckland, Bay of Plenty, Poverty Bay, Hawke's Bay and on the north-east coast of the South Island. Temperatures were colder than usual on the east coasts of both the North and South Islands.

The depression in the north Tasman Sea had moved eastwards, and pressures remained high over the South Island on the 20th. By the evening of the 20th the depression and associated fronts had moved further onto Northland, and the ridge of high pressure extended northwards to cover the lower half of the North Island. As the depression moved slowly south-east across the country from the 21st-25th, further depressions formed on a cold front in the Tasman Sea and the ridge of high pressure weakened and also moved eastwards away from New Zealand. Pressures remained low over the country until early on the 28th with an anticyclone centred near Tasmania. During the passage of the complex low pressure system across New Zealand, many areas recorded moderate to heavy rain. In the 24-hour period up to 9 a.m. on the 22nd more than 100 mm was measured in the Coromandel area, and in excess of 50 mm the following day. The heaviest falls throughout the period occurred in parts of Northland, Auckland, Waikato, Bay of Plenty, Poverty Bay, Hawke's Bay, Wellington, Wairarapa and the Kaikoura coast. The only areas with dry conditions were Westland and Fiordland.

A strong southerly airflow became established over New Zealand as the anticyclone near Tasmania moved onto the country, and this persisted until the end of the month. Many areas on the east coast of both the North and South Islands recorded some rain, and temperatures were colder than usual in these regions.

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