

## THE NEW ZEALAND WEATHER IN APRIL 1981

*General*—April was a warm, sunny month for much of New Zealand.

In the north of the country south-westerly winds were far more prevalent than usual for April. Winds from the south-west or north-west also prevailed to the south. This marked westerly tendency was in direct contrast to the predominantly north-easterly flows of last month.

Farmers were still experiencing some problems with facial eczema in drier areas of the North Island. Where good rainfall was reported grass growth was good, also due to a lack of frosts and warmer weather generally. In the South Island growth was poor in drier areas to the north, otherwise most farmers reported a good start to the autumn season. Exceptional pip fruit crops were harvested in many places.

Gale force winds affected many parts of the North Island on the 12th. Areas where wind damage was reported included Waitemata Harbour, where many private and commercial craft were severely damaged, and Te Aroha and Paraparamu where roofs were lifted.

*Rainfall*—Dry conditions continued in central New Zealand with rainfall generally well below normal for the fourth consecutive month. Other areas with low rainfall this month were Northland and Central Otago.

The rest of the country had higher than normal rainfall, especially Westland, Thames, Bay of Plenty, Gisborne, and Hawke's Bay.

A complex frontal system covered the country between the 11th and 13th and an associated north-easterly flow brought heavy rain to districts in the north and east of the country. Some exceptionally heavy falls were experienced around Coromandel and the Hauraki Plains. After heavy rain on the 12th the Ohinemuri River broke stop-banks and caused extensive flooding in Thames and Paeroa. A state of civil emergency was declared and over 900 people were evacuated. Other towns badly affected were Waikino, where several buildings were swept away in the Ohinemuri River, and Te Aroha, where, in addition to severe flooding gale force winds blew roofs off. Some 72-hour totals recorded from 9 a.m. on the 11th to 9 a.m. on the 14th were: Mahoetahi 212 mm, Katikati 232 mm, Whangamata 307 mm, Coromandel 383 mm, Waihi 520 mm, and Puriri 650 mm. Heavy rain and gales also affected parts of Gisborne and Hawke's Bay, where 72-hour rainfalls for the same period included 190 mm at Te Puia Springs, 200 mm at Tutra, 240 mm at Brentwood, and 270 mm at Whakarara. For many places rainfall over this period contributed up to 90 percent of the month's total, the rest of the month being relatively dry.

*Temperature*—Mean temperatures in April were above normal by an average of 1°C in the North Island and 2°C in the South Island. Westport was particularly warm with a mean monthly temperature 3.2°C above normal—equalled only once in April since 1938.

The first 10 days of the month were very warm in all areas, but particularly central and southern regions where mean temperatures were frequently over 5°C above normal. However, by the end of April temperatures over the whole country had become close to or slightly below normal.

*Sunshine*—April was sunnier than normal in all areas except Westland, the south-east of the South Island, and the Nelson-Marlborough region where it was slightly below normal. For Westland this was the third consecutive month with below normal sunshine.

Gisborne had its second highest April sunshine total since records began in 1938, and Ohakea its second highest since 1954 when records began. It was the sunniest April for New Plymouth since 1966.

## THE WEATHER SEQUENCE FOR APRIL 1981

An anticyclone which lay to the south-west of New Zealand at the end of March became stationary and persisted until the 9th. This situation brought fine, settled weather to the whole country apart from isolated showers in some districts.

By the 10th, the centre of the anticyclone had moved northwards to lie west of Northland and a westerly airstream spread onto the South Island, bringing rain to Westland, Fiordland, and Southland, and showers to some western parts of the North Island.

A trough of low pressure in the southern Tasman Sea moved over the south of the country on the 11th, bring rain to most parts of the country and cool temperatures in the south.

Meanwhile a small depression developed north Norfolk Island and began to move south into the Tasman Sea. It developed rapidly and by the 12th formed part of a complex frontal system lying across the centre of the country. Heavy rain fell in northern and central areas of the North Island during the 12th and 13th, becoming more widespread as the depression deepened on the 14th. This developed into a broad trough covering the country on the 15th and a series of cold fronts developing within this trough brought showery weather to most districts until the 19th.

An anticyclone developed in the northern Tasman on the 19th, and brought fine, warm weather to the North Island and eastern South Island, but a continued south-westerly airflow and a series of cold fronts within the flow caused a continuation of cool, wet weather in Westland and Fiordland, and light rain in some western districts of the North Island over the next 4 days.

A cold front crossed the country on the 24th bringing showers to Fiordland and much of the North Island.

A resumption of the south-westerly airflow over the south and an anticyclone to the north brought a return to wet weather in western districts, particularly the south-west, until the 27th.

An anticyclone lay in the Tasman on the 27th and fine weather was experienced in most areas. This anticyclone weakened considerably in the next 24 hours, and although a weak ridge still brought fine weather to some northern districts on the 28th, a series of small depressions within a complex trough to the south spread rain over much of the South Island. Rain spread further to most of the country as the trough moved over New Zealand on the 29th. Although still covering the country on the 30th, there were only isolated areas of light rain.

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