

WEATHER NOTES FOR MARCH 1980

General—During March pressures were below normal over the whole of New Zealand for the fourth consecutive month. Strong westerly winds were more frequent than usual in the north of the North Island. In the south of the South Island there was a greater frequency than usual of north-easterly winds. Over most of New Zealand March was a wet, cloudy, and cool month. From the 1st to the 3rd a depression of tropical origin moved across central New Zealand bringing rain and gale force winds to many districts. In the Auckland area winds gusting to more than 83 km/h (45 knots) caused yachts to break their moorings and run aground, and many houses lost roofs and had windows smashed. A further storm on the 15th/16th caused damage to yachts, houses, and power lines when winds gusting to 106 km/h (57 knots) were recorded in Auckland. The associated rain caused slips which blocked the main trunk railway north of Auckland.

Although grass growth was good in most areas, ground conditions had become very wet by the end of the month. Stock was in good condition, apart from some cases of bloat in dairy cattle and grass staggers in sheep. Milk production was higher than last year, but lambs were slow to fatten.

Rainfall—The only areas with below normal rainfall were parts of Northland, Bay of Plenty, Nelson, the West Coast, Otago, and Southland. Some areas in these districts had less than 75 percent of their normal March rainfall. The wettest areas were in Hawke's Bay, Wairarapa, Marlborough, the Kaikoura Coast, and North Canterbury. Departures of between 200 and 400 percent above normal were reported in Hawke's Bay and Kaikoura.

During the period from 9 a.m. on the 1st to 9 a.m. on the 5th, 335 mm of rain were recorded at Kaikoura. On the 2nd the 1-day rainfall total was 235 mm, the highest recorded in any month at this station since it began in 1950. The east coast railway line from Picton was closed by numerous slips, and many inland roads were also closed. Some families were evacuated as flood waters rose in western areas of the town. The total for the month of 384 mm was more than 400 percent above normal.

At Albert Park (Auckland) 78 mm of rain were recorded in the 6 hours from 9 a.m. to 3 p.m. on the 15th, this being the fourth highest 6-hour fall in any month since the station began recordings in 1962.

Temperatures—Temperatures were below normal throughout the whole of the country apart from some areas in Southland. In Bay of Plenty they were below average by more than 1.5°C, and in Northland, Auckland, Manawatu, Wellington, Wairarapa, Canterbury, and parts of Otago by 1.0°C. Both daytime maximums and nighttime minimums were lower than usual in most districts. The only warm spell was from the 4th to the 6th and the coldest day was the 18th. Kelburn (Wellington) recorded its lowest March minimum temperature (5.0°C) since 1949 on the 18th of the month.

Sunshine—The only areas with near normal sunshine hours were Northland, Waikato, Canterbury, Otago, and Southland. In Bay of Plenty, Poverty Bay, Manawatu, Wellington, Wairarapa, Hawke's Bay, Marlborough, and the West Coast the totals were between 60 and 80 percent of normal. The following stations recorded their lowest March sunshine hours since they began recordings in the years indicated. Gisborne 146 (1938), Waipukurau 113 (1945), Waingawa (Masterton) 103 (1930), and Blenheim 146 (1930).

WEATHER SEQUENCE FOR MARCH 1980

The depression in the Tasman Sea that had been moving towards New Zealand at the end of February continued to move southwards, but late on the 1st began to move south-east across central districts of the country. Late on the 2nd the depression had moved north-east and was lying to the east of the North Island. Heavy rain was recorded in Wairarapa, Wellington, Marlborough, and the Kaikoura coastal area during the passage of this depression. In the 48 hours up

to 9 a.m. on the 3rd 300 mm of rain were recorded at Kaikoura, and more than 200 mm at Cape Campbell. In other districts falls of between 50 and 100 mm were recorded in the same period. The only areas without rain were parts of Westland, Fiordland, and Southland.

On the 3rd a ridge of high pressure covered the South Island and by the 4th extended onto the North Island. By the evening of the 5th the ridge had moved eastwards, and a weak cold front was approaching the South Island. A small disturbance in the Tasman Sea moved across the north of the North Island late on the 5th and this brought moderate rain to some parts of Northland. Light showers were reported in some eastern districts of the South Island. The ridge of high pressure became re-established over most of the country on the 6th and this then persisted until late on the 9th. Some moderate to heavy rain was recorded in Northland and Poverty Bay as a small depression moved eastwards to the north of the North Island on the 7th. Early on the 10th a trough of low pressure had moved onto the South Island and then moved north. Some heavy rain was reported in Fiordland and Westland, but in other districts light to moderate falls were recorded. Temperatures were cooler than usual throughout the whole of New Zealand during the first 9 days of the month, in some eastern districts daytime temperatures were below normal by 5°C.

By the 13th an anticyclone had moved from the Tasman Sea onto New Zealand, and a depression of tropical origin was moving slowly south-east towards the North Island. Most of the country had fine weather for most of the 13th and 14th. On the 15th the depression had moved onto Northland, and a cold front associated with a depression moving to the south of the country had passed onto the South Island. Heavy rain was recorded in areas north of Wellington and southern Wairarapa, and also on the West Coast. Some stations in the North Island had 24-hour falls of 50 to 100 mm and on the West Coast more than 50 mm were reported. A strong south-west airstream covered the country from the 16th to the 18th and disturbances in this flow brought light to moderate rain to most of New Zealand. Temperatures were cooler than normal until the 18th in most districts.

During the afternoon of the 19th a cold front crossed onto the South Island and moved north-east. More than 100 mm of rain were recorded in 24 hours on the West Coast, with moderate falls west of the main ranges in the South Island and throughout the North Island. By the morning of the 21st a ridge of high pressure extended onto New Zealand from an anticyclone centered in the Tasman Sea. Fine weather prevailed in most districts apart from Poverty Bay, Hawke's Bay, Wairarapa, Fiordland, and Southland. The ridge persisted until the 24th when a trough of low pressure moved onto Fiordland during the evening. Most of the country reported light rain as the trough moved northwards. On the 26th a further trough had crossed onto the South Island and this brought rain to most areas west of the main ranges. The only warm spell during the month occurred on the 19th and 20th, with maximum temperatures 5°C above normal in some districts.

On the 27th the situation became complex, with a ridge of high pressure over the North Island, and depressions developing in a trough of low pressure in the central Tasman Sea. A cold front ahead of one of the depressions brought heavy rain to Taranaki, Waikato, and Bay of Plenty. Some stations recorded 24-hour falls in excess of 40 mm. A cold front associated with a depression moving to the south of New Zealand caused heavy rain in Fiordland and Westland on the 29th and 30th. By the afternoon of the 30th multiple low pressure centres developed in a trough in the Tasman Sea, and this progressed eastwards towards the country. As this complex system crossed the country on the 30th and 31st heavy rain was recorded in Taranaki, Manawatu, Wairarapa, Wellington, Marlborough, and the West Coast. Most other districts of New Zealand reported moderate falls. On the West Coast there were 24-hour falls of more than 100 mm, and in the North Island nearly 50 mm. Temperatures were cooler than usual at the end of the month.

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