

## WEATHER NOTES FOR APRIL 1980

*General*—Throughout most of New Zealand April was slightly wetter and cooler than usual, and the month was notable for the absence of strong winds. For example, the mean daily wind run of 245 km at Kelburn, Wellington, was the lowest in April since 1928 when recordings began. Mean monthly pressures were above normal over the whole of New Zealand for the first time since November 1979.

The majority of farmers throughout the country reported that grass growth had been very good during the month. Stock in general was in good condition, apart from lambs which need more sunshine and drier pastures.

*Rainfall*—The only areas with below normal rainfall for the month were Northland, Auckland, parts of Bay of Plenty, Taranaki, the West Coast, and Southland. At Invercargill Airport only 20 mm were recorded for the month, the lowest April figure since the station began in 1941, the previous low being 30 mm in 1978. Whangarei was also unusually dry, recording its lowest April total since 1958.

The wettest areas were Manawatu, Wellington, Hawke's Bay, Wairarapa, Marlborough, and parts of Otago and Canterbury. At Timaru the highest April total since the station began in 1897 was measured and also the highest 1 day fall (72 mm) since 1957. Some stations in Marlborough, Canterbury and Otago recorded rainfall above average by more than 200 percent.

A depression moving slowly across the North Island brought heavy rain to many eastern districts from the 9th to the 11th. The most affected area was that southwest of Martinborough, in the Wairarapa. Five families were evacuated from the Pukio-Pahautea area when the Ruamahanga River threatened to breach its banks, and Martinborough township was almost isolated by floodwaters resulting from widespread heavy falls in the Ruamahunga catchment. At Ngaumu Forest, for example, 153 mm were recorded between 7 a.m. on the 9th and 10 a.m. on the 11th.

Rainfall resulting from the depression also caused flooding in the Blenheim region and families were evacuated from areas near the stopbanks of the Taylor River. Surface water and land slips closed the railway line south of Blenheim and many roads in the area. Between 6 a.m. on the 9th and 5 p.m. on the 11th, 85 mm of rain were recorded, the highest 2-day fall in April since 1957 (96 mm).

*Temperatures*—Temperatures were above normal by 0.5°C in Nelson, Marlborough, the West Coast, parts of Canterbury and Otago. Throughout the rest of New Zealand they were below average by 0.5°C to 1.0°C. The only generally warm spell during the month was from the 24th to the 29th. Temperatures were very cold from the 2nd to the 5th when some east coast daily maximum temperatures were 5.0°C less than usual.

*Sunshine*—Sunshine hours were above average in Auckland, parts of Bay of Plenty, South Canterbury, Otago, and Southland by over 10 hours. In other districts there was a deficit of between 5 and 50 hours. Wellington experienced its second lowest April sunshine total since 1938.

## WEATHER SEQUENCE FOR APRIL 1980

The complex trough of low pressure that had been moving across New Zealand at the end of March was followed by a depression that had formed in the north Tasman Sea early on the 1st. Parts of Waikato, Bay of Plenty, Taranaki, Manawatu, and Wellington recorded 24-hour falls in excess of 30 mm. Most of the North Island and the northern half of the South Island reported moderate falls of rain. By the 2nd an anticyclone had become established in the Tasman Sea and was proceeding to the east. A strong southerly airflow ahead of the anticyclone brought isolated showers to some areas, and cooler temperatures to most of New Zealand. On the 3rd a depression formed off the Australian coast and began to move eastwards. The cold front associated with the depression was lying over the west coast of the North Island by the morning of the 6th, and many districts had moderate rain. In the Nelson area between 20 and 30 mm were recorded in the 24 hours up to 9 a.m. on the 7th.

The depression did not move to the east of New Zealand until the morning of the 11th, when a ridge of high pressure extended onto the South Island from an anticyclone in the Tasman Sea. The only areas that did not receive rain were parts of Otago and Southland. In parts of Bay of Plenty, Poverty Bay, Hawke's Bay, Wairarapa, and Marlborough, some stations recorded 24-hour falls of more than 50 mm, the highest being above 80 mm in Marlborough. The ridge of high pressure covered the whole of New Zealand by the morning of the 12th, and the anticyclone had moved onto the country by the morning of the 13th. Apart from some isolated showers in both Islands, fine weather prevailed throughout New Zealand from the 13th to the 23rd when the anticyclone began to move eastwards.

On the 24th a cold front associated with a depression moving to the south of the country was approaching the South Island. By the early morning of the 25th it had moved onto Fiordland and the West Coast bringing heavy rain to these areas. More than 220 mm were recorded at Milford Sound in the 24 hours up to 9 a.m. on the 25th, and in excess of 150 mm in some parts of the West Coast during the same period. The rain became more widespread as the front moved northwards across the country. Early on the 26th a depression formed on the front in the Tasman Sea, and this later began to move south-east towards New Zealand. Temperatures were warmer than usual along the east coasts of both Islands from the 23rd to the 26th.

By the 27th the cold front ahead of the depression in the Tasman Sea had moved onto New Zealand bringing heavy rain to areas West of the main ranges, and moderate rain elsewhere. The heaviest rain was recorded in parts of Bay of Plenty, Taranaki, Nelson, Marlborough, and Westland, these areas having 24-hour falls in excess of 40 mm. As the depression moved across the country on the 28th and 29th heavy rain was also reported in Canterbury and Otago, the only areas which did not record rain were Hawke's Bay and parts of Wairarapa. By the morning of the 30th the depression had moved to the east of New Zealand, and a ridge of high pressure from an anticyclone in the Tasman Sea was approaching the country.

J. S. HICKMAN, Director.

(N.Z. Met. S. Pub. 107)