

## WEATHER NOTES FOR MAY 1980

*General*—May was considerably drier and milder than usual throughout most of New Zealand. Mean monthly pressures were the highest over the whole country since June 1979, and on the 9th, Kelburn, Wellington recorded 1036.4 millibars, its highest May 9 a.m. pressure since 1934. There was a marked absence of strong winds over the North Island, but westerly winds were stronger than usual in southern areas of the South Island.

Mild drier conditions produced good grass growth in most districts, and stock was reported to be in excellent condition. Some farmers have experienced one of their best dairying seasons for many years.

*Rainfall*—The only areas that recorded above normal rainfall totals for the month were parts of Westland and Southland. Even here the excesses were less than 50 percent. The greatest departures below normal occurred in Bay of Plenty, Hawke's Bay, Wairarapa, and Canterbury. Many stations in these districts recorded less than 25 percent of their usual May rainfall, and on Banks Peninsula, Okuti measured only 4 mm for the month, the lowest May total since 1927. The station at Castle Point, Wairarapa, recorded 11 mm, the lowest in May since observations began in 1902.

On the 21st, heavy rain in the Otira area caused a major washout on the main railway line between Greymouth and Christchurch. Three locomotives plunged into the Otira River, killing the driver of the first. From 9 a.m. on the 20th to 9 a.m. on the 21st 152 mm of rain were recorded at Otira, and the washout occurred during the period of heaviest rain between 8 p.m. on the 20th and 7 a.m. on the 21st when nearly 130 mm of rain fell.

Invercargill city and surrounding areas suffered surface flooding on the 24th when 36 mm were recorded between midnight and 7 a.m. The total daily fall of 45 mm made this the highest May one-day fall since the station at Invercargill Airport began in 1941. The town of Kelso was flooded once again during this heavy rain.

*Temperatures*—Temperatures were warmer than usual throughout New Zealand apart from some areas in Northland and Bay of Plenty. In the North Island temperatures were above normal by 0.5°C and in the South Island by more than 1.0°C. At Invercargill the highest May mean temperature of 9.0°C since 1954 (also 9.0°C) was recorded. In eastern districts daytime temperatures were colder than usual by 2.0° to 4.0°C from the 28th to the 31st. During a warm spell from the 23rd to the 25th maximum temperatures were generally above normal by 3.0°C.

*Sunshine*—Total sunshine hours for the month were near normal in most districts. On the West Coast they were below average by about 10 to 20 hours, but in eastern districts of both islands they were above by the same amount. Apart from 1975 (164 hours) Christchurch Airport, with 163 hours, recorded its sunniest May since the station began in 1949.

## WEATHER SEQUENCE FOR MAY 1980

The ridge of high pressure that extended onto New Zealand from the Tasman Sea at the end of April moved slowly east, and by the morning of the 3rd an anticyclone had become established over the whole country. This anticyclone persisted until the morning of the 12th, with most of the country experiencing fine weather during this

period. Some districts in both islands had some showery conditions, but they were of short duration. During the evening of the 12th a trough of low pressure in the Tasman Sea began to move eastwards towards the South Island, and by the morning of the 13th had reached the West Coast. Heavy rain was reported in Fiordland and Westland, and moderate falls in areas west of the main ranges in both islands. More than 40 mm were recorded at Milford Sound in the 24 hours up to 9 a.m. on the 14th, and 30 to 40 mm in some parts of Westland in the same period. Temperatures were cooler than usual during the first week of the month, but then became milder than average.

By the morning of the 15th the trough of low pressure had moved to the east of New Zealand, and had been replaced by an anticyclone moving from the Tasman Sea. During the morning of the 17th depressions formed in the north and south Tasman Sea and began to move east towards the country. One depression had moved onto Northland, and the other onto Fiordland by the afternoon of the 18th. Heavy rain was recorded in Northland, Auckland, Taranaki, Manawatu, Nelson, Westland, inland Canterbury, and Fiordland. At Otira more than 70 mm were recorded in the 24 hours up to 9 a.m. on the 19th, and many of the above districts had in excess of 50 mm. Moderate rain was reported in all areas west of the main ranges and lighter falls in the east. Temperatures remained warmer than usual throughout the country.

On the morning of the 20th a cold front, associated with a depression moving to the south of New Zealand, had moved onto the South Island and this brought very heavy rain to western districts of the South Island. Again at Otira the heaviest falls were recorded, more than 150 mm in 24 hours. In other areas on the West Coast 100 mm were recorded in the same period. The only areas that did not report rain were parts of Hawke's Bay and Wairarapa. From the 21st to the 24th a strong westerly airstream covered New Zealand, and disturbances in this flow brought heavy rain to the West Coast and Southland, and moderate rain to many areas west of the main ranges. Most eastern districts had fine weather during this period.

A ridge of high pressure extended onto the South Island on the 25th, and two small depressions had formed within a trough of low pressure, and were lying to the east and west of the North Island by the morning of the 26th. As the depression to the west moved across central districts of New Zealand during the 26th, heavy rain was reported in Wellington and Poverty Bay, with moderate falls in Wairarapa and Hawke's Bay. Some areas recorded 24 hour falls of more than 40 mm. Temperatures were warmer than usual throughout New Zealand from the 21st to the 25th, especially along the east coasts of both islands. By the 27th an anticyclone in the Tasman Sea had begun to move eastwards onto the country bringing fine weather to most districts. Some areas east of the main ranges in the North Island did report some showers.

From the 27th until the end of the month an anticyclone covered the whole of New Zealand and most of the country experienced fine weather. Showers were reported in Poverty Bay, Hawke's Bay, and Wairarapa as small disturbances in the southerly airflow onto these regions persisted for 2 days. By the 31st a depression that had formed in the Tasman Sea was moving south-east towards the country.

J. S. HICKMAN, Director.

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