

NEW ZEALAND WEATHER, JULY 1981

General—July was generally milder and wetter than usual throughout New Zealand.

South-easterly winds were more frequent than usual in both the north and south of the country this month, with north-westerlies also being more than usually frequent in the north. There were fewer strong winds than normal for July.

The prolonged spell of wet weather caused a severe shortage of feed in many farming areas, particularly the central and southern North Island. Lambing began towards the end of the month, and calving in some northern areas.

Heavy fog in the Auckland area closed airports at Auckland, Whangarei, Hamilton, Rotorua, and Taupo on the 2nd, and a second fog on the 22nd again disrupted services in the Auckland area.

A small tornado partly demolished a tavern roof in Ohaupo (Te Awamutu) on the 6th.

Rainfall—Rainfalls were above normal for most of New Zealand this month.

Areas receiving less than normal rainfall were: Northland; Auckland, parts of Waikato and western Bay of Plenty, and in the South Island, Kaikoura, northern and central Canterbury and parts of Central Otago. Some stations around Kaikoura recorded less than 50 percent of their normal rainfall.

This has been the wettest July on record for the Dunedin area. The following totals are new maximum July falls in the Dunedin area. They are expressed as percentage of normal and the year recording began follows in brackets: Centrewood 427 percent (1968), Blackstone Hill 424 percent (1915), Burnside 404 percent (1916), Ross Creek 336 percent (1929), Southern Reservoir 340 percent (1954), Dunedin Airport 292 percent (1966). The Botanical Gardens had 346 percent, the highest since 1966 only, and Musselburgh 291 percent, the highest since 1939. Some stations in the Balclutha area also had over 300 percent of normal rainfall this month.

Temperature—Mean temperatures were an average of 0.5°C above the July normal over the whole country.

There were two warm spells, the first at the beginning of the month and the second between the 24th and 30th. During the latter, parts of the South Island recorded mean temperature 4°C to 8°C above average, while temperatures were 2°–4°C above average over the rest of the country.

There was a marked cold spell between the 10th and 18th. This affected most of the country but particularly southern and central areas. Many parts of Otago had heavy snowfalls during this period and mean temperatures were 3°–5°C below average at times. Temperatures remained cool until the 23rd.

Sunshine—Sunshine hours were high in the north of the country and low in the south, with central areas recording close to normal sunshine.

Auckland City recorded 177 hours, its highest July total since records began in 1963, while Dunedin Airport had only 67 hours, its second lowest total for July for the same period. Timaru was also cloudy, recording its third lowest sunshine total for July since 1930.

WEATHER SEQUENCE FOR JULY 1981

A ridge extending from an anticyclone near Lord Howe island covered the North Island and the north of the South Island on the 1st of July. The weather was fine in these districts although a westerly airstream to the south brought some rain to Westland and Fiordland.

Rain spread to all districts except those to the east as two cold fronts within a trough moved across the country on the second and third. By the 4th a high pressure centre had developed to the south-

west of New Zealand and although the trough still covered much of the country, there was a general clearance in the weather.

A depression, with an associated cold front lay in the Tasman Sea on the 5th. Heavy rain fell in most areas, but particularly around the Cook Strait region. Rain continued to fall over much of the country during the next 3 days as the depression, now within a broad trough, moved eastwards.

By the 9th, two low pressure centres had developed to the south-west and east of the South Island, with a trough joining them. Rain fell in Westland and Southland while a front in the central Tasman Sea brought rain to some northern districts. Temperatures were cool.

By the 10th the western low pressure centre was centred in the Tasman Sea and rain fell in all districts except Westland, Nelson, Blenheim and Auckland, with temperatures remaining cool. The whole system continued to move north-west and formed a belt of low pressure across the North Island with centres still to the east and west of the North Island. Cool temperatures continued although rain cleared from all districts except those to the east and about Cook Strait. The system continued moving east and by the 12th lay off East Cape. Although there was some rain in isolated areas to the north and east, the rest of the country had fine, cool weather.

An anticyclone then developed to the south-west of the country bringing fine, cool weather to all districts on the 13th and 14th, although there were isolated falls in southern areas of both Islands.

Two small centres of low pressure developed over Norfolk Island and Stewart Island on the 14th, both with small associated cold fronts. As this system moved eastwards on the 15th, it brought isolated falls of rain, particularly in eastern districts. Temperatures remained cool.

An anticyclone over east Australia extended into the Tasman Sea on the 15th. By the 16th it was centred south of Lord Howe Island with a southerly to south-easterly flow onto New Zealand and rain fell in eastern districts and about Cook Strait.

On the 17th a complex trough, which developed in the southern Tasman Sea, moved onto the South Island with rain over most of the South Island and fine weather to the north. By the 18th two fronts within this trough lay across Cook Strait and the centre of the South Island. Rain began clearing to the South but there were some heavy falls in the North Island. This frontal system moved off the country on the 19th bringing a clearance to most districts except the central North Island and around Wellington.

The anticyclone which had been situated over the western Tasman Sea since the 16th, extended a ridge onto the South Island on the 19th resulting in fine, cool weather everywhere except East Cape and Gisborne which still had some rain. Fine conditions continued until the 23rd as the anticyclone moved onto the country.

Unsettled weather returned as two cold fronts crossed the country over the next 3 days. Many areas had rain, particularly those to the west. The second front crossed the country on the 26th and the rain cleared apart from some eastern areas. The anticyclone which had earlier covered the country still lay to the north east and mild temperatures continued in many areas.

A trough developed south of Australia on the 26th and by the 27th covered most of the Tasman Sea. Fronts within this trough brought rain to most of the country over the next 3 days.

By the 30th a deep depression had developed within this trough and it lay off the west coast of the South Island. Associated fronts lay across Fiordland and along the western coasts of both Islands. The whole country experienced unsettled weather over the next two days as the depression crossed the country to lie east of Banks Peninsula on the 31st.

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