

PRINCIPAL NEW ZEALAND EARTHQUAKES IN 1978

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No important earthquake occurred in the New Zealand region during 1978, making that year and the previous one two of the quietest since modern recording instruments were first installed in the 1930s. There was no significant damage, and only two shocks were felt over wide areas. No shock reached magnitude 6, and there was less than half the usual number of shocks reaching magnitude 5. Although the Seismological Observatory located and assigned magnitudes to some 700 small events, this is about 300 less than in a normal year.

On the morning of May 15 some minor damage resulted from a shock of magnitude 3.9 near Maungatauroto in North Auckland. A hopper at the Ruawai lime-works fell and hit an adjoining building, and in a few places where local soil conditions intensified the vibration, plaster and brickwork was slightly cracked. This part of New Zealand is widely believed by the public to be free from earthquake risk, and it is unusual for damage to result from so small a shock. This may be possibly attributed to the failure of local builders to consider the need for earthquake resistance, and to the unusually shallow origin of the shock.

The largest shock within the New Zealand region proper was a shallow earthquake of magnitude 5.7 on the morning of January 18. Although it was felt over much of north Canterbury and Westland, the shaking was nowhere severe enough to move goods or cause damage. The only other event of comparable size was a deep event of magnitude 5.6 on September 22. It was centred some 200 km beneath the western Bay of Plenty and attracted attention in many places from Tolaga Bay to Blenheim. It was not, however, felt in places near the epicentre, the felt area being displaced to the east by the structural peculiarities of the North Island. This is usual with shocks of this kind. Because of the large focal depth, surface intensities were everywhere low.

Of the minor shocks that were felt the most important were shallow earthquakes of magnitude 5.0 and 5.3 in the Te Anau district on Jan. 31 and July 21 respectively, and smaller events near Maruia Springs on June 12 and again on June 21, in central Hawke's Bay on May 4, and near Wellington in the early morning of August 15, when a few light sleepers were awakened. A similar shock occurred south of Blenheim on December 1.

A shock of unusual scientific interest occurred on July 1. This was centred on the West Norfolk Ridge, some 350 km to the west of Cape Reinga and 400 km south

of Norfolk Island. Earthquakes beneath the deep ocean are rare, but occasional shocks have been felt on Norfolk Island in the past. As the magnitude of this shock was only 4.7, it has been difficult to place accurately, even with the help of Australian stations. Unfortunately the former station on Norfolk Island was closed a few years ago as an economy measure.

Volcanic activity has been limited to intermittent ash and steam eruptions from White Island throughout the year. The volcanoes of the central North Island have been quiet.

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