

PRINCIPAL EARTHQUAKES IN NEW ZEALAND DURING THE YEAR 1975

(Information Supplied by Seismological Observatory, Geophysics Division,
Department of Scientific and Industrial Research)

1975 was a year of moderate earthquake activity in New Zealand. No earthquake reached a magnitude of 6 on the Richter Scale, but two had magnitudes of 5.9. The largest shallow shock of the year occurred on the evening of 10 June, 1975. Its magnitude was 5.9, and its epicentre about 15 km south of Dannevirke, where there was minor damage, including broken windows and dislodged masonry. The earthquake was reported felt from the Bay of Plenty to Banks Peninsula. The other earthquake of magnitude 5.9 had a focus about 75 km deep beneath Cook Strait to the west of Kapiti Island. It occurred on the morning of 5 January, and was felt extensively in the central parts of the country. Some crockery was knocked off shelves in coastal areas to the north of Wellington.

The deepest earthquake in New Zealand since 1960 took place on 8 February, at a depth of 580 km beneath Taranaki. Its position was close to those of the three other earthquakes that have been located at depths of about 600 km beneath New Zealand, in an area where earthquakes are generally no more than 300 km deep. Its moderate magnitude of 4.9, and its great depth prevented it from being felt.

Four deep earthquakes with magnitudes of about 5½ occurred at more usual depths beneath the North Island. Those on 30 April and 19 August were about 140 km deep beneath Lake Taupo, and were felt from the Bay of Plenty to the north of the South Island. Deeper shocks, 220 km under Lake Taupo on 12 November and 300 km beneath the Tauranga area on 23 November were not felt so strongly, although of similar magnitude.

Shallow earthquakes of magnitude 5 that were felt extensively in the central parts of the country occurred on 13 April near Queen Charlotte Sound, and on 12 July and 30 December south of Nelson. A shock of magnitude 5.2 occurred in the Gisborne region on 26 August, but because it was 50 km off the coast it was not felt strongly. Earthquakes that were widely felt in the southern parts of the South Island originated near Milford Sound on 16 March (magnitude 5.5) and 5 June (magnitude 4.9). Two earthquakes in the mountains between Arthur's Pass and Lewis Pass were felt on the West Coast and North Canterbury on 28 April and 25 September. Their magnitudes were 4.7 and 4.8 respectively.

An earthquake of magnitude 4.4 was felt extensively in Northland on 12 February. It was centred about 50 km southeast of Whangarei, near the Hen and Chicken Islands. A further shock in this area occurred on 17 August, about 30 km south of Whangarei, and

was reported felt at Paparoa and Ararua, although its magnitude was only 2.8.

Other earthquakes in areas of less frequent activity occurred about 40 km off the coast to the west of Raglan on 14 March (magnitude 3.7) and 20 June (magnitude 4.0), and 170 km to the southeast of Chatham Islands on 26 July (magnitude 4.6). None of these earthquakes was felt.

Among the large earthquakes in the active area to the north of New Zealand, that which attracted most attention was a shallow shock of magnitude about 7½, that occurred between Tonga and Samoa in the early morning of 27 December. Such earthquakes may cause a tsunami, and on this occasion a civil defence alert was called until it had been established that no tsunami had been generated. During the alert the public was warned to stay away from beaches and low-lying areas.

Both Mt Ngauruhoe and Mt Ruapehu erupted spectacularly during the year. On 19 February Mt Ngauruhoe erupted ash and steam, and large rocks were thrown several kilometres. This was the mountain's most violent eruption since 1954. There was an ash eruption of Mt Ruapehu on 24 April, which caused a greatly increased flow in nearby streams and rivers. Local tremors were reported at the times of these eruptions, but no significant earthquakes were recorded.