

SEISMOLOGY.

Seismic Activity in New Zealand during 1937.—Seismic activity in New Zealand during 1937 appears to have been slightly greater than during 1936. A larger number of shocks were reported felt, and the maximum intensity slightly exceeded that of 1936. The principal features of the activity in 1937 were as follows:—

- (1) Three moderately powerful shocks and six aftershocks, all occurring on June 3 in the Coromandel Peninsula.
- (2) Continuous activity along the zone of the main ranges of the North Island, preponderating between Dannevirke and Napier.
- (3) Continuous activity along the depression or graben to the west of the main ranges of the North Island; from Wanganui through Taupo and Rotorua to Whakatane.
- (4) Some minor shocks near New Plymouth.
- (5) Continuous activity in west and north-west Nelson, comprising mainly small shocks of shallow origin.
- (6) Occasional shocks in north Marlborough.
- (7) A few minor shocks in the vicinity of Akaroa Peninsula.
- (8) An occasional minor shock in Otago.

The North Auckland Peninsula has remained quite inactive. The apparent inactivity in the Southern Alps is somewhat surprising and may be due partly to lack of recording-stations in the region. Steps are being taken to establish one or two more reporting-stations on the west coast of the South Island.

A somewhat more detailed distribution of earthquake activity is shown on the accompanying map, where earthquake epicentres are indicated by black circles and crosses. The black circles indicate the positions of the 43 epicentres determined from seismograph records. Most of these are accurate to within about fifteen miles. The crosses indicate small shocks which it was possible to locate within about thirty miles solely from non-instrumental reports. Preliminary epicentres in the south-west Pacific generally are shown on the small inset map.

Information regarding felt earthquakes is furnished by officers of the Post and Telegraph Department, officers of the Marine Department, and several private observers. There are about 120 non-instrumental reporting stations distributed throughout the Dominion.

A total of 179 shocks was reported felt during the year, of which 126 were felt in some part of the North Island and 56 in some part of the South Island. Only three shocks were felt in both Islands. The maximum intensity was R.-F. 6-7, which occurred in the Hauraki Peninsula on June 3.

The following table shows the number of earthquakes reported felt and the maximum intensity reached, for each month of the year 1937:—

Month.	Number of Earthquakes reported felt.				Maximum Intensity R.-F.	Locality of Maximum.
	North Island.	South Island.	Both Islands.	Whole of New Zealand.		
January	15	4	..	19	5+	Waiotapu.
February	9	3	1	11	6	Hastings.
March	5	5	1	9	5	Stephens Island.
April	10	7	..	17	5+	Puysegur Point.
May	18	16	1	33	5	Whakatane.
June	17	3	..	20	6-7	Hauraki Peninsula.
July	13	1	..	14	6	Hawke's Bay, Manawatu.
August	6	7	..	13	5	Hicks Bay.
September	9	1	..	10	4	Dannevirke, Upper Takaka.
October	11	4	..	15	6	Opotiki, Kahurangi Point.
November	3	2	..	5	6	Southern Hawke's Bay.
December	10	3	..	13	5	Waipawa, Upper Takaka.
Totals	126	56	3	179	..	

The following list gives some particulars of those earthquakes during 1937 in which the maximum intensity reached or exceeded R.-F. 6:—

New Zealand Mean Time.		Approximate Position of Epicentre.		Remarks.
		Latitude.	Longitude.	
1937. d. h. m.		°	°	
Feb. 3 05 42	..	..	..	Felt at Hastings, R.-F. 6.
Apr. 11 16 20	..	45.5 S.	166 E.	Felt at Puysegur Point, R.-F. 5+.
June 3 11 34	..	37.0 S.	175.8 E.	Felt in Hauraki Peninsula, max. R.-F. 6-7; also felt at Auckland.
July 8 00 20	..	40.4 S.	176.6 E.	Felt in southern part of North Island, R.-F. 6 at Palmerston North.
13 22 22	..	39.4 S.	177.25 E.	Felt fairly widely in North Island, max. R.-F. 6 in southern Hawke's Bay.
Oct. 12 03 22	..	41.2 S.	172.2 E.	Felt in West Nelson region, max. R.-F. 6.
24 04 24	..	37.9 S.	177.8 E.	Felt Raukumera Peninsula, max. R.-F. 5-6.
25 22 04	..	37.9 S.	177.8 E.	Felt at Opotiki, R.-F. 6.
Nov. 15 13 48	..	39.7 S.	176.4 E.	Felt at Waipawa and Hastings, R.-F. 6.