

Immediately after the Hawke's Bay earthquake on February 3rd a Milne-Jaggard shock-recorder was placed at Hastings for recording after-shocks. This recorder has been operated by Mr. Henry de Denne, of Hastings, and it has given a valuable record of earthquakes in Hawke's Bay during the year.

On February 6th a Wood-Anderson seismograph was established at New Plymouth under charge of Mr. McCabe, Chief Draughtsman, Lands and Survey Department, New Plymouth. On May 1st this station was discontinued until August, when it was re-established at the New Plymouth Prison under the charge of Mr. W. H. Todd, an officer of the prison.

In July a Wood-Anderson seismograph was sent to the Magnetic Observatory, Christchurch. The records are sent to this Observatory for measurement, and are finally returned to the Magnetic Observatory.

From November onwards Mr. C. J. Westland undertook to supply the Observatory with seismological data from his private station at Glenmuick, North Canterbury. Mr. Westland also has a seismograph located at Seatoun, Wellington. The records and reports supplied by Mr. Westland are very useful in the determination of epicentres.

The following is a list of the seismological stations operating in New Zealand and surrounding islands on December 31st, 1931 :—

Station.	Position.		Instruments.	Person or Institution in charge.
	Latitude.	Longitude.		
Apia, Samoa ..	13 48 S.	171 47 W.	Wiechert, three components ..	Apia Observatory.
Suva, Fiji ..	18 9 S.	178 26 E.	Milne, twin-boom ..	Miss Munc.
Arapuni ..	38 5 S.	175 39 E.	Milne, E.-W. component ..	District Engineer, Public Works Department.
New Plymouth ..	39 5 S.	174 4 E.	Wood-Anderson ..	Mr. W. H. Todd.
Hastings ..	39 38 S.	176 53 E.	Milne-Jaggard ..	Mr. Henry de Denne.
Takaka ..	40 51 S.	172 48 E.	Imamura, three components ..	Mr. W. J. Smith.
Wellington ..	41 17 S.	174 46 E.	(a) Wood-Anderson	Dominion Observatory.
			(b) Galitzin-Wilip	
			(c) Milne-Shaw, two components	
			(d) Ishimoto clinograph	
			(e) Milne-Jaggard	
Seatoun* ..	41 19 S.	174 48 E.	Inverted pendulum ..	Mr. C. J. Westland, F.R.A.
Glenmuick* ..	42 54 S.	173 9 E.	Inverted pendulum ..	Mr. A. S. Westland.
Christchurch ..	43 32 S.	172 37 E.	(a) Galitzin-Wilip, three com-ponents	Magnetic Observatory.
			(b) Wood-Anderson	

* Privately owned stations.

Thanks are due to those who are assisting the observatories in their seismological work by operating instruments and forwarding records and reports.

As the result of the increased number of seismological stations in New Zealand, earthquake epicentres can now be determined with greater precision, and an indication of the focal depth of the more important earthquakes can usually be obtained. Present results indicate that the average focal depth for most of the earthquakes in New Zealand is of the order of ten to twenty miles, while those in the Gisborne - East Cape region appear to have a somewhat greater depth.

The following table gives the number of earthquakes recorded at those stations which were operating during the greater part of the year :—

Month.	Wellington.			Arapuni.	Takaka.	Hastings.	New Plymouth.	Christchurch.
	Near.	Distant.	Total.					
1931								
January ..	4	24	28	4
February ..	625	12	637	21	23	141	179	..
March ..	81	12	93	8	7	71	70	..
April ..	58	14	72	7	4	50	78	..
May ..	56	7	63	4	10	44
June ..	40	4	44	5	3	42
July ..	53	4	57	1	6	29	..	1
August ..	30	9	39	6	3	23	17	1
September ..	74	7	81	4	4	24	10	4
October ..	30	14	44	2	1	21	6	8
November ..	57	19	76	9	1	22	8	8
December ..	36	25	61	6	1	12	..	9
Total ..	1,144	151	1,295	77	63	479	368	31

NOTE.—The stations at Takaka, Hastings, and New Plymouth were not established in January.

The New Plymouth seismograph was not recording during the months of May, June, and July.

The numbers given for Christchurch are those from the Wood-Anderson seismograph only, which was established in July.