

The following is a list of places (arranged in order of latitude) where the shock was reported as R.-F. 8 or greater :—

Station.	Intensity (R.-F. Scale).	Station.	Intensity (R.-F. Scale).
Opotiki .. ..	7-8	Te Aute .. ..	9
Gisborne .. ..	8	Taihape .. ..	7-8
Wairakei .. ..	7-8	Hunterville .. ..	8-9
Wairoa .. ..	8	Waipawa .. ..	9
Mohaka .. ..	10	Waipukurau .. ..	9
Ohakune .. ..	7-8	Dannevirke .. ..	7-8
Patoka .. ..	8-9	Porangahau .. ..	8
Napier .. ..	10	Woodville .. ..	8
Hastings .. ..	10		

The distribution of seismic intensity for the Hawke's Bay earthquake of February 3rd is shown on the map (fig. 1).

After-shocks were frequent for some weeks after the main earthquake, but fortunately the activity subsided fairly rapidly. During the remaining days of February 595 after-shocks were recorded at this Observatory, but in March the number fell to seventy-nine. The number of after-shocks as recorded at Hastings during the year showed a steady decline, only twelve being recorded in December.

Epicentres were determined for about forty of the principal after-shocks, most of which occurred in February.

The positions of the epicentres in the Hawke's Bay region for 1931 are shown on the map (fig. 2). The epicentre of the main shock on February 3rd, as determined by the Jesuit Seismological Association (J.S.A.), and the Manila Observatory, are also indicated on this map.

A second severe shock occurred on February 13th, reaching R.-F. 8 at a number of places in Hawke's Bay. The epicentre of this shock was located about thirty miles east of Napier.

A more detailed report of the Hawke's Bay earthquake, embodying also the geological and other aspects, is in course of preparation and will be published by the Department as a special bulletin.

#### PUBLICATIONS.

The Observatory has continued to publish preliminary seismological reports promptly at the end of each month, giving sufficient information for a preliminary determination of the epicentres of the principal earthquakes.

From August onwards a preliminary seismological report from the Magnetic Observatory, Christchurch, has been published, together with that from this Observatory.

The following full seismological reports of this Observatory have also been published :—

- E.-23.—Earthquake Reports for 1929, October to December.
- E.-24.—Earthquake Reports for 1930, January to June.
- E.-25.—Earthquake Reports for 1930, July to December.
- E.-26.—Earthquake Reports for 1931, January.

In addition, the following bulletins have been issued :—

- Bulletin No. 78.—History of the Date or Calendar Line.
- Bulletin No. 79.—Report of the Dominion Astronomer for 1929.
- Bulletin No. 80.—Seismology in New Zealand.
- Bulletin No. 81.—Earthquakes in New Zealand.

#### STAFF.

The staff for 1931 was as follows. Mr. R. C. Hayes, Professional Assistant; Mr. I. L. Thomsen, clerk. Mr. C. J. Westland was on the staff from February 3rd to March 31st as Assistant in Seismology. Besides his official connection with the Observatory, Mr. Westland gave voluntary assistance in the seismological work from April 1st to November 9th.

C. E. ADAMS,

Dominion Astronomer and Seismologist.

Dominion Observatory, Kelburn, Wellington, N.Z.,

June 9th, 1932.