

Recently revised statistics for the Great Lakes are presented in Table 2; the elevations and depths given are in accord with the latest data adopted by the Canadian Hydrographic Service, the lengths are those of the steamer tracks, which are usually the course from one end to the other, following the centre of the lake; the areas in Canadian territory agree with the figures adopted by both the Canadian and United States Hydrographic Services.

For further information under this heading the reader is referred to pp. 4-6 of the 1941 Year Book and to pp. 12, 13 and 15 of the 1938 edition where tables of lakes and principal rivers, respectively, will be found.

2.—Areas, Elevations and Depths of the Great Lakes

| Lake | Elevation Above Sea-level | Length | Breadth | Maximum Depth | Total Area | Area on Canadian Side of Boundary |
|----------------|---------------------------------|--------|---------|------------------|---------------|--------------------------------------------|
| | ft. | miles | miles | ft. | sq. miles | sq. miles |
| Superior..... | 602·25 | 383 | 160 | 1,302 | 31,820 | 11,110 |
| Michigan..... | 579·74 | 321 | 118 | 923 | 22,400 | Nil |
| Huron..... | 580·64 | 247 | 101 | 750 | 23,010 | 13,900 |
| St. Clair..... | 574·64 | 26 | 24 | 25 | 460 | 280 |
| Erie..... | 572·33 | 241 | 57 | 210 | 9,940 | 4,950 |
| Ontario..... | 245·81 | 193 | 53 | 774 | 7,540 | 3,980 |

Section 3.—Islands

See p. 6 of the 1941 Year Book.

PART II.—GEOLOGY OF CANADA

See list at the front of this edition for special material published, under this heading, in previous editions of the Year Book.

PART III.—SEISMOLOGY IN CANADA*

Seismology—that branch of science which treats of earthquakes—has received considerable attention in Canada during recent years. It has been generally recognized that earthquakes are frequent in regions of adjustment of strata and are characteristic of the newer mountain and coast regions where steep level-gradients occur. The energy radiated from an earthquake in the form of elastic waves in the earth is, however, recorded on sensitive seismographs up to great distances, even to the antipodes of the earthquake. Seismological researches, while regularly recording the routine statistical data regarding earthquakes, seek also to determine particular causes. Moreover, they endeavour to ascertain the physical properties of the earth's crust and interior as revealed by the peculiarities in the 'time-distance curves' for earthquakes.

A time-distance curve, as its name implies, shows the relation between the areal surface distances from the origin of the earthquake to the various recording stations and the elapsed time required for the initial impulses and their various reflections to reach each station from the origin concerned. Of late years, these time-distance curves have been greatly improved. It may be said that their further

* Prepared under the direction of R. Meldrum Stewart, Dominion Astronomer, Dominion Observatory, Department of Mines and Resources, by Ernest A. Hodgson, Ph.D.