

The natural and instrumental data for each station are as follows:—

Hullfax.—Lat., 44° 38' N.; Long., 63° 36' W., Alt., 47.3 m. Substrata, carbonaceous slate. Equipment:—Small Mainka Pendulum Seismograph. Mechanical registration. Components N.S., E.W. Mass of each 139.3 kgm. Period of each 10 sec. Damping ratio of each 6:1. Magnification of each, about 60. Time is checked automatically each hour by signal from Western Union Telegraph and is to be depended on to one or two seconds.

Ottawa.—Lat., 45° 23' 38" N.; Long., 75° 42' 57" W.; Alt., 82 m. Substrata, boulder clay over Limestone (Ordovician). Equipment:—(1) Bosch Horizontal Seismographs. Photographic registration. Independent components, N.S., E.W. Mass of each 200 gm. Period of each, about 5.5 sec. Damping ratio N.S. 2:1, E.W., 13:1. Magnification of each, 120. (2) Milne-Shaw Horizontal Seismographs. Photographic registration. Independent components, N.S., E.W. Mass of each, 1 lb. Period of each, 12 sec. Damping ratio of each 20:1. Magnification of each, 250. (3) Wiechert Vertical Seismograph. Mechanical registration. Mass, 80 kgm. Period, 6 sec. Damping ratio, 20:1. Magnification, 160. (4) Deformation Instrument. Photographic registration. Components, N.S., E.W. Mass of each, 20 gm. Period of each, about 36 sec. No damping. Used for determination of tilt. The time service at Ottawa is that of the Dominion Observatory and the registration on the record is kept correct to within 0.2 sec.

Toronto.—Lat., 43° 40' N.; Long., 79° 24' W., Alt., 115.5 m. Substrata, sand and gravel on boulder clay to a depth of about 15 m., then shale over crystalline rock (Laurentian) to a depth of about 335.5 metres. Equipment:—(1) Milne Seismograph. Photographic registration. E.W. component. Mass, 0.3 kgm. Period, 18 sec. No damping. (2) Milne-Shaw Horizontal Seismographs. Photographic registration. Independent components, N.S., E.W. Mass of each, 1 lb. Period of each, 12 sec. Damping ratio of each, 20:1. Magnification of each, 150. Time markings by Toronto Observatory clock. The registration has an error of 2 sec. The time is checked by meridian transits.

Saskatoon.—Lat., 52° 8' N.; Long., 106° 30' W.; Alt., 515m. Substrata, clay and sand. Equipment:—Small Mainka Pendulum Seismograph. Mechanical registration. Components, N.S., E.W. Mass of each, 139.3 kgm. Period of each, approximately 9 sec. Damping ratio of each, 5:1. Magnification of each, about 60. Time by local clock, checked occasionally by telephone with train time.

Victoria.—Lat., 48° 24' 50" N.; Long., 123° 19' 28" W. Alt., 67.6 m. Substrata, igneous rock. Equipment:—(1) Milne Seismograph. Photographic registration. E. W. component. Mass, 0.23 kgm. Period, 18 sec. No damping. (2) Milne-Shaw Horizontal Seismographs. Photographic registration. Independent components, N.S., E.W. Mass of each 1 lb. Period of each, 12 sec. Damping ratio of each, 20:1. Magnification of each, 250. (3) Wiechert Vertical Seismograph. Mechanical registration. Mass, 80 kgm. Period, 5 sec. Magnification, 70. Time service of the meteorological station. Registration correct to ± 0.1 sec.

PART IV.—THE FLORA OF CANADA.

Under the above heading the Canada Year Book, 1922-23, contained an article prepared by the late J. M. Macoun, C.M.G., F.L.S., and M. O. Malte, Ph.D., and revised by the latter. See p. 25 of the 1922-23 edition or p. 73 of the 1921 edition.

PART V.—FAUNAS OF CANADA.

The Canada Year Book, 1922-23, contained an article under the above heading by P. A. Taverner of the Department of Mines, Ottawa. See p. 32 of the 1922-23 edition or p. 82 of the 1921 edition.

PART VI.—THE NATURAL RESOURCES OF CANADA.

The economic life of new countries must at first depend entirely, and later mainly, upon their natural resources. Older countries, after exhausting their most easily obtained resources, turn for a livelihood to manufacturing and similar pursuits, conserving their remaining resources and utilizing those of less developed areas.