

II.—TOPOGRAPHY AND DISTRIBUTION.

Extending along the southern shores of Lake Ontario, at distances varying from one to a few miles from its waters, there is a ridge of hills, or more properly an escarpment, known to geologists as the "Niagara Escarpment," extending from the State of New York into Canada, and entering our country near Queenston, whence the *cañon* of the Niagara Falls has worked backward for several miles. From the Niagara River this ridge extends westward to the town of Dundas, and thence the trend is a little west of north to Lake Huron and Manitoulin Islands.

This range everywhere forms a bold feature. Along the southern shore of Lake Ontario, the brow is 400 feet above the lake, while near the "Peak," north of Dundas, the height is 520 feet, from which place the ascent is gradual as it extends northward, until just west of Linchouse, the cliffs have a height of 847 feet, whence the plateau gradually rises to 936 feet at Rockwood (on the G. T. Railway), and northward, in Amaranth township, it has an elevation of 1400 feet above Lake Ontario. In its course, south of Lake Ontario, the slope is generally more abrupt than after the range assumes a northerly trend,—the upper portion often forming almost perpendicular cliffs from 100 to 250 feet above the rising slope at its base. The brow where the H. & N. W. Railway ascends the mountain (four miles east of Hamilton) is 395 feet, and at the head of James street, Hamilton, it is 388 feet above the lake, while the plateau above gradually rises to 493 feet, five and a half miles south of the former place, and to 485 feet, two miles south of the latter. This height of land forms the watershed between Lakes Ontario and Erie, and from it the country gradually slopes to the latter lake.

The rocks of this range belong to the various subdivisions of the Niagara Group of the Silurian Age. The Canadian Geological Survey, many years ago, separated the Niagara and Guelph groups from the overlying Lower Helderberg group, and called these Middle Silurian, whilst the New York geologists placed them all together, and called them Upper Silurian. We will adopt that nomenclature which recognises the rocks of the various groups from the Niagara to the Lower Helderberg (inclusive), as being members, not of the middle or upper, but of the one great Silurian Age, and consider the Lower Silurian formations (Tren-