

Artemesia gravels, which for long distances crown the summit of the escarpment parallel to its face, and are largely derived from its debris; prior to the elevation of the ridge or anticlinal which lies between Lake Huron and the Trent Valley, and gives to the escarpment its highest elevations above the lakes; prior to the Niagara Falls; and prior to the erosion which widened the fractures in the escarpment at the Dundas Valley and at the points of meeting of the waters of the Georgian Bay with those of Lake Huron proper, as well as the waters of Green Bay with those of Lake Michigan. On the other hand, this period of elevation of the escarpment was contemporaneous with the appearance in their present outlines of Grand Manitoulin, Cockburn and Drummond Islands in Lake Huron, and viewing all the facts was undoubtedly pre-glacial. Whilst the elevation of the escarpment gave in general terms the outlines of the basin of the three lakes, it is not to be inferred that these basins were at once filled with water to present levels. The country surrounding the lakes must have been higher than now to enable the pre-glacial river to cut the deep channels in Lakes Ontario and Huron which now exist.

LAKES ERIE AND ST. CLAIR.

These two lakes have undoubtedly been within a very recent period more intimately united than now, and are probably the most recent in origin of the St. Lawrence Great Lakes. They lie in a Devonian basin with the Silurian rocks forming the portion of the rim of Lake Erie between Sandusky and Toledo. This basin is, however, overlaid with superficial deposits to such an extent that both lakes really fill shallow depressions on the surface of these deposits, and appear rather to be overflows caused by the restricted passage now of the waters over the Niagara escarpment in the one case, and through the Detroit River in the other, than to be due to physical forces which operating in past ages excavated preparatory basins.