

and 830 feet above Lake Ontario. Near Owen Sound there are others at 546, 496 and 466 feet above Lake Ontario.

Along the Great Western Railway, adjacent to the valley of St. David's (near the Niagara River), there are stratified sands and gravels (of Hudson River epoch) from 383 to 250 feet above the lake.

In New York State, eastward of Lockport, the lake ridges rise from 158 to 190 feet above the lake (Hall). On the southeastern margin of the lake-basin there are old beaches at 400 feet, and at the north end of Skaneateles Lake, at about 625 feet above Lake Ontario, there are still others. But the collected records of the New York terraces are too fragmentary for general comparison.

In the appended table the reader will be immediately impressed with the relationship existing between the beaches at the various elevations which surround the lake, and the continuity of the slow recession of the waters. The higher beaches, of course, refer to the time when the waters of all the Great Lakes were united in one body. In Michigan there are beaches at 1350 feet above Lake Ontario. Near Petits Écarts, Lake Superior, beaches at 398, 408, 458, 592, 627, 635 and 699 feet above Lake Ontario were measured by the Geological Survey of Canada.

Again to the southwestward of Lake Erie, Messrs. Gilbert and Winchell measured beaches or ridges at 65-90, 165, 195, 220, 350-408, 386-490 feet above Lake Erie.

The belt of the *Artemesia* gravel may approximately be represented by the contour line of 1250 feet above the sea, but extending southward of this line to somewhat beyond the contour of 950 feet. It is thus described by Dr. Bell: "This great belt of gravel has a general parallelism with the Niagara escarpment and follows the highest ground of the peninsula. The materials composing it consist principally of the ruins of the Guelph formation, on which the greater part lies, except toward the southern extremity, where the Niagara formation is largely represented. Pebbles of Laurentian and Huronian rocks are everywhere mixed with the others, and sometimes form a considerable proportion, while rounded fragments from the harder beds of the Hudson River formation occur locally in some abundance." (These last rocks are derived from lower levels.) "The gravel is all well rounded and generally coarse. It often constitutes what might properly be called 'cobble stones,' being loose and free from any admixture of clay; and it is distinctly stratified. Well worn boulders of Guelph, Laurentian and Huronian rocks are disseminated through the whole mass." In a few places this gravel overlies blue Erie clay. From the eastern side of the *Artemesia* gravel ridges, there extends a long comparatively narrow ridge for about 100 miles