

f ancient beaches and  
 valley is occupied by a  
 Bay by "Burlington  
 from the waters (of the  
 from 108 to 116 feet,  
 y a few hundred feet.  
 y from the lake is the  
 eight feet above the  
 quarter of a mile wide.  
 e clay and is 78 feet

et us now consider the  
 and their composition.

the present lake margin  
 et above its surface, of  
 is composed wholly of  
 ved from the ruins of  
 ation, with a few small  
 en full of characteris-  
 ne rounded slabs meas-  
 gh usually much less.  
 nt beach does not con-  
 a. The nearest expos-  
 an twenty miles away

t above the lake, and  
 alley, where it forms a  
 of thin-bedded loose  
 ong the margin. This  
 nant of the deposits of

terraces is that at 116  
 on Heights" is a por-  
 e nature of Burlington  
 structure will be more  
 g with that of Burling-

nical hill, rising to 180  
 composed of stratified  
 ver formation, but with  
 times a foot and a half  
 and other rocks of that

of Dundas there is an  
 exposed from 224 to

6. Higher up, on the side of the escarpment north of the town (at the mouth of Glen Spencer), and not distant from the last beach, there are still the fragmentary remains of stratified gravel and sand rising to 335 feet above the lake. This deposit probably reached higher at a former time, but has been removed from the steep side of the so-called "mountain." It is composed of a mixture of Niagara and Hudson River pebbles and sand, with a few crystalline pebbles. Farther up the Dundas valley and near Ancaster, this same beach is represented in fragments on some of the hills. But there they are composed more largely of fine materials of Hudson River age, with only slabs of Niagara rocks (being farther removed from the escarpment).

7. Westward of Ancaster village, and near the watershed between the present Dundas valley (at an estimated height of 440 feet above the lake), there is another beach composed largely of Hudson River pebbles, and showing much oblique bedding, dipping at 23 degrees to the southeastward. Farther southeastward we again find an old beach at the same elevation adjacent to the Grand River.

8. On top of the Niagara escarpment, just north of the village of Waterdown, there is a beach of very fine gravel at a height of about 500 feet above Lake Ontario.

From the study of the beaches in the Dundas valley there appears to have been simply a gradual recession of the water with comparatively few sudden changes of level—the most sudden being between the deposit of the terrace at 116 feet above, and that at the present lake level.

Between Toronto and Lake Simcoe, Mr. Thomas Roy, in 1837, measured beaches at 110, 210, 282, 310, 346, 402, 422, 502, 558, 626, 682, 734, 764 feet respectively above Lake Ontario. In addition to these gravel beaches, others at 600 feet, and, on descending toward Georgian Bay (along the Northern Railway) at 520, 388 and 354 feet, have been measured. Along the Toronto, Grey and Bruce Railway, which extends in a direction north of west from Toronto to the highest portions of the peninsula of Ontario, and crossing the "Artemesia Gravel" ridges, there are a number of conspicuous beds of sand and gravel, which follow contour lines more or less closely. The elevations of some of the most conspicuous of these deposits were furnished by the kindness of Edmund Wragge, Esq., Chief Engineer of the Railway. They are at 160, 280, 370, 710, 990, 1120, 1340 feet respectively above Lake Ontario. After passing the summit of the road, at 1462 feet above the lake, there are extensive gravel beds at 1310 feet, and from 1000 to 697 feet above the same datum, along the main line, and along the western branch at 1299, 1130, 1050, 870, 850