slabs, which are observed in the old beaches, higher than these original sources, can be best accounted for by the theory that they were carried upward by the coast-ice during the time when the continent was undergoing subsidence, and were rearranged by the waves and shore ice of a later period.

Let us now return to the lower water margins of Lake Ontario, represented by "Burlington Heights" and "Burlington Beach," which are almost wholly composed of Hudson River pebbles. The former of these ridges is 116 feet and the latter eight feet above the lake. Both of these beaches, of the same materials, skirt much of the western shores of Lake Ontario.

Their component pebbles and sand appear to have been entirely transported by the action of shore-ice and waves. At the commencement of the deposit of the beach at 116 feet above the present water, the Dundas valley formed one continuous basin with the lake bed. But at that time, as now, only the extensions of Lake Ontario forming bays were frozen over in winter. The Dundas valley, being a confined arm, was frozen over, and the pebble-laden ice, from the more exposed coast, was drifted by the winds and currents, and packed across the front of the ice-sheet, covering the waters in this arm of the lake, at 116 feet above their present level; and with annual dissolution of the ice, the small amounts of material transported during the winters began to deposit the barrier, which was in course of time destined to produce "Burlington Heights"—the beach of that day. The location of the "Heights" was in no way produced by the unimportant streams flowing down the Dundas valley, as is apparent, for the Pre-glacial and Inter-glacial drainage of the western peninsula of Ontario was turned into Lake Erie before the Terrace Epoch. The false and inclined bedding of the "Heights" is always toward the lake (the material sometimes consisting of fine beds of sand, and sometimes of clean large gravel) showing that the stratifying forces proceeded from the side of the lake. In addition to the transportation of the material by ice, the action of the waves in no small degree assisted in the production of this old beach.

The present "Burlington Beach" is simply a reproduction of the "Heights" since the time when the lake receded to its present level. Burlington Bay is frozen over every winter, but the lake is seldom frozen to a greater extent than enough to produce fringes. Yearly much ice shod with pebbles is drifted against the western shores of the lake by the action of storms and waves. In this way much of the western end of the lake, although almost against the foot of the Niagara escarpment, has had its shores made up of pebbles and sands of Hudson River formation. A small portion of the shore material may have been derived from the ruin of former beaches at higher levels.