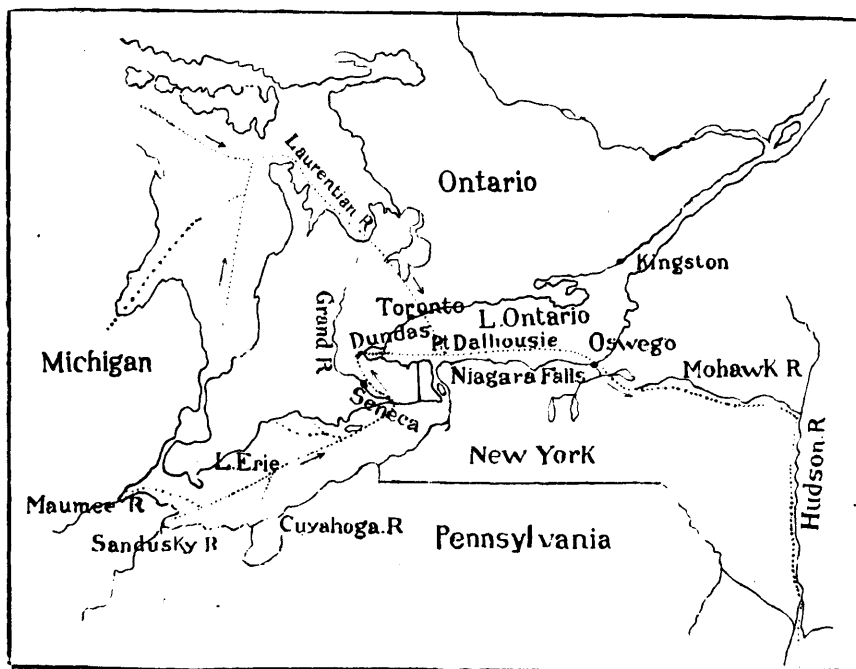


land has been rising and sinking during the present century, has been demonstrated in several localities. Dr. Bell has shown that the land about Hudson Bay is rising, and many authorities believe the eastern coast of North America to be slowly sinking. And, if the land is not now constant, relative to the ocean, why should it have been so in the past? Indeed, it is not difficult to prove by means of submerged watercourses and elevated marine shells, that oscillations have taken place in past ages. The Saguenay

dipping some 600 feet. The submarine valley is easily traced across this plain to the edge of the steep continental slope. The old river bed was here excavated some 2,200 feet. As such erosion could only have occurred on land, we have indubitable evidence of a former elevation of New York city of at least 2,500 feet.

Marine shells, found on Montreal Island at a height of 520 feet above sea-level, point, on the contrary, to a former depression. The land is thus continually oscillating—water alone is



THE ANCIENT DRAINAGE BY THE HUDSON.

River, for instance, has excavated a channel in the rock some 800 feet, in places, below the ocean level. As its cliffs rise abruptly some 1,000-1,500 feet above this, there is every reason for believing that the land there stood at least 1,000 feet higher in former times.

Again, the Hudson used to meet the ocean, not at New York, but 105 miles farther east. The sea-bed for that distance is comparatively level, only

in stable equilibrium. The "everlasting hills" are not so constant as the "unstable water."

The exact height of the Province of Ontario in pre-glacial times, we have no means of determining. It seems certain, however, that the elevation was quite sufficient to afford excellent drainage for the deepest portions of her lakes. The depression of the basin below the sea-level is thus no objection to the view that Lake Ontario