

close of the episode which ended 14,000 years ago. Whilst, however, the date of the decadence of the Ice age in this region is told, the falls do not necessarily record its termination in other and distant regions.

14. *Recurrent Drainage of the Great Lakes into the Mississippi River by way of Chicago.* Long ago, Dr. E. Andrews described the deserted beaches south of Chicago, and found that the highest reaches an elevation of 45 feet above the lake. For many miles around the head of the lake, the deserted shores are found far inland. There are other raised beaches near the lake. The different sets form an apparent succession, but in reality there is confusion between the old water-margins and the very recent beaches. The low plain at the head of the lake rises so gradually that at the divide between it and the Mississippi drainage southwest of Chicago it is only eight feet above the lake, with a rocky floor a foot or two lower (canal survey). In proceeding northward along the margin of the Michigan basin, beaches are found emerging from beneath the waters. From the measured deformation of the various sets of deserted shores, the depth to which the tilted beaches are depressed beneath the lake can be calculated.* These record the shrinking of the lake from the highest level south of Chicago to others even hundreds of feet beneath.

The Ridgeway beach extends from the Erie basin across southern Michigan, by way of Saginaw bay and the Grand river valley, and southeast of lake Michigan it descends and is lost in the sand dunes of that region; but, with the measured rate of deformation, it is computed to pass about 40 feet beneath the surface of the water. The Forest beach, the last strand of Warren water, is about 100 feet lower. The still lower Algonquin beach (the great shore line of the dismembered upper lakes) occurs well defined about the northern half of the lake (Andrews and Taylor); but if produced to the southern end of the basin, it would be submerged between 250 and 300 feet. There are other lower and less important deserted shores; but all these represent the subsiding of the lakes during the time of discharge of the waters of lake Huron

*"High Level Shores in the region of the Great Lakes and their Deformation," before cited.