

siderable size, occupying approximately the same position as the previous Beekmantown island, but with considerably diminished area, specially on the western side. As in that case, this land was massed on the south and west.

The only stratigraphic evidence of a break between the Black River and Trenton, seems to be in the upper Mohawk region, where there is certainly a slight unconformity, with locally entire removal of the Black River. In Trenton times also the Mohawk region was but slightly submerged, and the formation is but thinly developed. This would argue some shore line near at hand, and Kemp's study of the Paleozoic outlier at Hope demonstrates the presence of land near the southern Adirondack margin, during at least the early Trenton.¹ In addition, it seems to the writer that this outlier presents suggestive evidence of the truth of the arguments advanced in the preceding pages, regarding the small extent of the invasion of the southern Adirondacks by the successive seas. In this outlier Potsdam, Beekmantown, Trenton and Utica strata are all present, and, with the possible exception of the last, none of them seem to have been deposited in great thickness, though during intervening periods of wear some thickness of each may well have been removed. Apparently the deposits indicate the near vicinity of a shore line to the north in Potsdam, Beekmantown and early Trenton times, and their thinness and character are due to such proximity.

Throughout most of the Mohawk valley region the Trenton has no great thickness, indicating but slight subsidence during its deposition. On the east and west sides of the region, however, it attains large thickness, hence subsidence was in progress on all sides of the district, and the encroachment of the sea over it must have considerably exceeded in extent even that of the previous Black River sea. The Black River island must have been nearly, if not utterly, wiped out by the close of the Trenton.

Then came in the muds of the Utica, appearing first on the east side of the region and gradually encroaching westward. Ruedemann's argument for the extension of the Utica over the entire Adirondack region, based on the parallel alinement of the graptolite fronds found fossil in the shales, as indicative of a uniform,

¹18th An. Rep't State Geol. 1898. p.145-52.