half of its thickness, is formed of blue black, brittle, somewhat muddy limestones, carrying a trilobite, cephalopod, lamellibranch fauna, as distinguished from the abundant brachiopod fauna of the gray limestone. These rocks are nearly on the strike of the section north of Bluff point, and there is unquestionably some overlap in the two; but, as the larger part of the Crab island section is of higher beds than any shown in the other, these three sections can only be fitted together by the most painstaking paleontologic work, perhaps not even by that. The writer is confident that the upper beds on Crab island are from 300 feet to 350 feet above the base of the formation. These are the three best sections of the Trenton which the writer has seen toward the lower end of the lake. They indicate a large thickness for the formation, but give no clue to the amount that may be lacking above the upper beds of the Crab island section.

In a recent report on the geology of Grand isle, Vermont, Professor Perkins has described an interesting section which shows that there is no sharp, lithologic break between the limestones of the Trenton and the overlying black shales of Utica age, but rather an imperceptible gradation from the one into the other, forming a series of passage beds.[1] These consist of rapidly alternating shales and limestones, with a comparatively steady increase upward in amount of shaly matter. The thickness of these beds is not stated, possibly because the section is not sufficiently complete, possibly because their recognition as a separate lithologic unit simply increases the difficulty of constituting boundaries by making two vague horizons instead of one. The beds of distinctively intermediate character seem however to be of considerable thickness.

Along the shores of Cumberland head, on the New York side of the lake, is an excellent, though much disturbed, section, consisting of blue black slaty limestones and calcareous shales, with some firmer limestone bands. These rocks are much faulted and squeezed, and somewhat folded, with much development of slaty cleavage at a high angle with the bedding planes. These rocks extend along shore northward to beyond Point au Roche, in Beekmantown. Dr White states that similar rocks occur on

[1] Rep't Vt. State Geol. 1901–2, p.167–68.