

§ 32. The beds 2, 3, 4 fill in, to a certain degree, the gap which exists between the Potsdam and the Chazy, in the Chazy section. In the Mohawk Valley, at Little Falls and at Fort Plain, the Chazy formation is absent, a considerable development of the Calciferous, 300 feet or more, filling in the space between the Archean and the Trenton (Bird's-eye limestone); the Potsdam and older Cambrian formations being absent except at the "Little Nose," on the New York, West Shore and Buffalo Railroad, Montgomery County, New York, where a band of decomposed gneiss and lenticular masses of shale, that occurs between the gneiss and Calciferous sandrock, is referred to the Potsdam horizon. (Prof. James Hall.)

§ 33. In the February number of the American Journal of Science (3d ser., vol. xxxi, pp. 125-133), Prof. W. B. Dwight describes a belt of limestone near Poughkeepsie, New York, containing fossils of the Potsdam fauna that, from the references made to them, appear to be identical with the fauna of the Saratoga Potsdam limestone, even to an identity of species. The limestone is described as over 300 feet in thickness, and 12 or more species of fossils have been recognized. This discovery is of great interest and importance, as it shows the presence of the Potsdam fauna of the Adirondack region 100 miles farther south and in the line of a series of sediments that, 50 miles north, carry the fauna of the Middle Cambrian. The inference is plain that we may expect to find the two faunas in the same section, somewhere along the line of the Upper Taconic of Emmons.

§ 34. From what has already been given, it is evident that the Potsdam formation has not been observed by the writer in Northern Vermont as it exists in New York, but the inference is that the upper members of the Georgia section, or those carrying the lenticular and brecciated masses of limestone, are near the Potsdam horizon, or, as Sir William Logan said, in speaking of the equivalents of the Potsdam (Geol. Canada, 1863, p. 235), "out in deep water the deposit may have been a black, partially calcareous mud, such as would give rise to the shales and limestones which come from beneath the Quebec group." This view is illustrated by the ideal diagrammatic section, fig. 2, page 25.

§ 35. Accepting the conclusion that the matrix of the conglomerates at Point Levis is of Calciferous age, which was Sir William Logan's view, as expressed on page 233 of the Geology of Canada, the above view of the origin of the Georgia shales and the included calcareous beds, and their equivalency to the Potsdam Sandstone, is, to a certain extent, correct; the error consisted in considering the entire deposit as equivalent to the Potsdam, whereas it appears from the faunas that the limestone series of the Georgia Formation, including the "Winooski marble" and "Red sandrock," was a deposit antedating the Potsdam Sandstone of the New York series; that a considerable portion of the Georgia shales also antedated the latter, and that strata of an age equivalent to the Potsdam Sandstone were deposited in a continuous series, and conformably