Slates containing the First Fauna, or the Primordial Zone of Life: Letter from M. Joachim Barrande to Professor Bronn, of Heidelberg, July 16, 1860.

Belonging to the Primordial Zone of Life, and perhaps the equivalent of the Potsdam Sandstone: Letter from Sir William E. Logan to M. Joachim Barrande, January 3, 1861.

We use the term *Georgia Group* to designate this terrain from the town of Georgia in Franklin County, Vermont, where it is developed in its full proportions and where the most interesting fossils have been found. It is a name also which does not involve any theory and may be used by both parties in the controversy respecting its age.

The name of *Georgia Group* or *Georgia Slate* is given to this group of rocks rather than any other, such as *Fairhaven Slate* or *Castleton Slate*, because it is a purely geological designation and has no reference to the economical value of the slate. Two reasons may be given for the preference of Georgia: First. The whole of the group is developed in the town of Georgia, but is not in either of the others mentioned. It is a rule of geological nomenclature that the whole series of rocks must be developed in the town, mountain, or along the river from which the name is derived. Second. Nowhere but in Georgia, in Vermont, are the characteristic fossils of the group displayed. They have as yet been found only in the New York portion of the southern terrain. The geological character of the group is best developed in Georgia, and we are therefore compelled to use the name of this town in describing the slates geologically.

Lithological characters.—The Georgia slate includes all the following varieties of rock:

1. Clay slate.
2. Roofing slate.
3. Clay slate, approximating to micaceous sandstone.
4. Various kinds of limestone.
5. Brecciated limestone.
6. Conglomerate, composed of pebbles of limestone.

The Georgia slate includes what Professor Emmons has ranked as the black slate, Taconic slate, and roofing slate; and yet not altogether, for we have regarded all the black slate beneath the red sandrock as belonging to the Hudson River Group. The characteristic trilobites of the Georgia slate are represented by Emmons in his *Taconic System*, 1844, as found in the black slate.

There are three views respecting the age of the Georgia slate:

(1) Professor Emmons says it is the uppermost member of the Taconic System and that the Taconic System is stratigraphically below the Potsdam sandstone—that is to say, that the Taconic System is Cambrian. Upon pages 90, 91, of Part V of American Geology, the Taconic System is directly compared with the Skiddaw slates of Cumberland. In opposition to this view, we would say that the Georgia slate rests conformably upon the Red Sandrock series, as is shown in Fig. 257, and its fossils rank it as Lower Silurian rather than Cambrian.

(2) M. Barrande and Sir W. E. Logan, judging from paleontological evidence, regard the Georgia slate as equivalent to the Primordial Zone C of Bohemia, or very nearly the Potsdam sandstone of North America. * * *

(3) The stratigraphical view of the Georgia slate, which has been so ably defended by Professor Hall, seems to demand for it a place either above or equivalent to the Oneida conglomerate.

§ 11. As we now know the Georgia Formation, it appears that Dr. Emmons was correct in placing it below the Potsdam sandstone, as was also done by Mr. Billings and later writers.

§ 12. The typical Georgia Formation, as developed in the town of Georgia, Franklin County, Vermont, consists, as seen at the base, of a great