2. CHAZY EPOCH: that of the Chazy limestone, Emmons. Final Rep. Geol. N.Y., 1843. 1. CALCIFEROUS EPOCH: that of the Calciferous sandrock of Amos Eaton, Geol. and Agric. Survey distr. adj. Erie Canal, N.Y., under S. Van Rensselaer, 1824. Part of the Levis, of Logan's Quebec group.

In the Reports of the first Pennsylvania Geological Survey, Professor H. D. Rogers uses the following terms and numbers: *Primal*, I., for Cambrian; *Auroral*, II., for the Calciferous and Chazy; *Matinal*, III., for the Trenton. The Taconic series of Emmons, along western New England and eastern New York, corresponds to the Cambrian and Lower Silurian formations combined. The geologists of the New York Geological Survey of 1836 to 1842 were Ebenezer Emmons, W. W. Mather, James Hall, Lardner Vanuxem, and T. A. Conrad, the last acting as paleontologist. After the close of the general survey of the State, Hall was given charge of the paleontology.

ROCKS-KINDS AND DISTRIBUTION.

The Lower Silurian formations are to a large extent limestone; they are partly calcyte, but more widely dolomyte. Arenaceous and shaly strata are most common in the earlier and later part of the series, that is, in the Calciferous epoch and the Hudson epoch; but in the Interior Continental region the larger part of the rocks of these earliest and latest divisions is calcareous. The Trenton rocks are remarkable for their wide distribution over the continent. Outside of the Archæo-Cambrian areas they extend for the most part from the Atlantic to the Pacific, though covered in general by later rocks. The larger part of the outcrops of the limestones follows the outline of the Archæan areas, separated from them, if at all, only by outcropping belts of Cambrian, showing that the shore line in the Lower Silurian era was not far distant from its Cambrian position.

This is true around the Adirondack area in New York, and from central New York westward to Wisconsin and Minnesota. It is also true along the Appalachian protaxis from Canada and the Green Mountain region to Alabama, on both its east and west sides; also in the Ottawa region, Canada, where there was a large Lower Silurian basin as successor to that of the Cambrian era; also along the St. Lawrence northeastward, along the western arm of the Archæan V northwestward, and on some Arctic islands. It was true, also, along portions of the Rocky Mountain protaxis; but here, owing to the thickness of the later formations, the Lower Silurian beds are not commonly at the surface. Some of the deep cañons of the Pacific Border region cut down to them through 1000 to 3000 feet of overlying beds.

In the Continental Interior two isolated areas lie in a line, one over southern Ohio, part of Kentucky, and the border of Indiana; and the other in Tennessee (C, T, on the map, page 536). The region is that of the so-called "Cincinnati uplift," or anticline.

On the borders of western New England and eastern New York, along the Taconic Range and either side of it, the crystalline schists and limestone