mont, that indicate species different from those described. The undescribed species of Hyolithes is from Troy and will probably be described by Mr. Ford. The species of Ptychoparia, from Nevada, is known only by imperfect fragments, and the Nevada species of Archæocyathus is not represented by sections that give anything of the exterior form or surface. The Eocystites, from Vermont, is represented only by a few detached plates.

STRATIGRAPHIC POSITION OF THE FAUNA.

§ 96. The relations of the Georgia and the Potsdam faunas have been noticed in speaking of the Nevada sections, where they are shown to be stratigraphically separated by 3,000 feet or more of limestone. But three species, *Protospongia fenestrata*, *Stenotheca elongata*, and *Acrotreta gemma*, are known to pass up to the Upper Cambrian or Potsdam horizon. In the Georgia section, Vermont, one of the species, *Ptychoparia Adamsi*, appears to pass up into the horizon of the "lentile" (9) of the section, where the fauna is more like that of the Potsdam; and, of the other species, *Orthisina orientalis* is much like *O. Pepina* of the Potsdam sandstone of Wisconsin; but the fauna as a whole is so clearly distinct from the typical Potsdam of New York, Wisconsin, Tennessee, Alabama, Texas, Arizona, Nevada, and Montana, that, even without any section to show their relations to each other, I would not think of correlating them as possible faunas of the same geologic horizon.

§ 97. The stratigraphic relations of the fauna of the Paradoxides horizon of St. John, Braintree, and Newfoundland are not so clearly proven as those of the Upper Cambrian fauna. The only locality known where the two faunas are in the same geographic area is about Conception Bay, Newfoundland. At Topsail Head about 100 feet of limestone is exposed, overlaid by a dark shale. All stratigraphic connection with other sections in the vicinity is broken. The fossils in the limestone are not numerous, but Mr. Billings pronounced them Potsdam (Geol. Newfoundland, p. 157; reprint of report for 1868), and identified Salterella and *Crania* (*Kutorgina*) *Labradorica*, and I found in the collections of the Geological Survey of Canada *Scenella reticulata*, *Stenotheca rugosa*, *Iphidea bella*, and *Protypus senectus* var. *parvulus*, which gives six species that are also known from the Middle Cambrian horizon of L'Anse au Loup.[1] Special stress is placed by the writer on the occurrence of these fossils at Topsail Head, as it is in the midst of the Paradoxides basin. Mr. Alexander Murray correlated the Topsail Head limestone with that of other localities, and places it beneath the Paradoxides-bearing shales of St. Mary's Bay (on the page cited above), but without paleontologic or stratigraphic evidence that authorized him to say more than that a supposed connection is indicated.

[1] Mr. Billings called all the Middle Cambrian fauna Lower Potsdam, which explains his referring the Topsail Head fossils to the Potsdam.