

The northern border of the Bay of Fundy trough being thus fixed for the early Palaeozoic with some degree of certainty, though not in the position assigned to it in the manual of Prof. Dana, we have now to inquire as to the corresponding border on the south.

At the present time this southern border is, throughout its extent, marked by the trappean range of the North Mountains, which cannot possibly be older than the Trias, and is probably Jurassic. Eliminating this and the associated red sandstones, and uniting, as would then be the case, the waters of the Minas basin, Annapolis basin and St. Mary's bay with those of the Bay of Fundy, we find the rocks which next border the trough on the south side to be of Silurian or Eo-Devonian age, resting for the greater part of their length upon the granite ridge of the South Mountains, the latter forming the backbone of the Nova Scotian peninsula. But is the backbone Archaean? It is so represented in Prof. Dana's manual; but it is safe to say that, as regards all that portion at least of the peninsula which now lies south of the present Bay of Fundy, it contains no Archaean rocks whatever. The granites were long since described by Sir Wm. Dawson as being intrusive and of Devonian age, a conclusion which all subsequent investigation has tended to confirm; and though both that author and Dr. Selwyn were disposed to regard the hornblende and chloritic rocks of Yarmouth as probably Huronian, there is now no question that these too are really more recent, they being a member, and by no means the lowest member, of the same series as the gold-bearing rocks of the southern coast, usually regarded as Cambrian. Thus there are no rocks, at present disclosed to view, in the portion of Nova Scotia lying south of the present Bay of Fundy, which can properly be pointed to as a portion of the "Acadian protaxis"; the only rocks of Archaean age to be found in the province being limited to the island of Cape Breton, and possibly to some portions of the Cobequid mountains.

Before dismissing the Pre-Cambrian rocks it is interesting to note, in the case of those of southern New Brunswick, the large amount of volcanic matter which they contain, and which, in the rocks referred to the Huronian system alone, has been estimated to reach a thickness of at least 10,000 feet. So vast an accumulation of igneous matter along lines parallel with the present course of the Bay of Fundy trough, not only strongly marks out the latter as a subsiding geosyncline as far back as Pre-Cambrian time, but as exhibiting, even then, conditions which, in later eras and in the same geosyncline, were repeated in the igneous extrusions of the Silurian, the Devonian, the Lower Carboniferous and the Trias.

We have now to consider more particularly the information to be obtained from the study of the Cambrian rocks.