

2. PRE-CARBONIFEROUS ROCKS OF EASTERN NOVA SCOTIA.

The second paper, above referred to, is of a character so autobiographical, contains so little that is new in a scientific point of view, and deals so unceremoniously with the reputations of nearly all who have worked in the geology of Nova Scotia, that it is difficult to criticise it without being personal. I shall endeavour, however, to avoid this, and to confine myself to the geological questions involved.

The first attempt, after Dr. Gesner's *Geology* of 1836, to deal with the complexities of the older rocks in Eastern Nova Scotia, was made nearly thirty years ago, in a paper on the *Metamorphic and Metalliferous Rocks of Nova Scotia*, published in the *Journal of the Geological Society* in 1850; a very imperfect attempt, no doubt, but still a step of progress, and one involving much hard labour under very difficult circumstances. Before preparing the paper, I had examined lines of section from Pictou to the Atlantic coast, and had collected fossils at Arisaig and on the East River of Pictou. In this paper, the "shales, slates and thin-bedded limestones of Arisaig" were referred to the Silurian system, on the evidence of their fossils, as were also the similar rocks occurring on the east side of the East River of Pictou. I was obliged, however, to add that specimens taken to England by Sir C. Lyell, with whom I had visited the East River in 1842, had been referred by palæontologists there to the Lower or Middle Devonian age, and that Prof. Hall, the best American authority on these fossils, appeared to lean to a similar conclusion.

The cause of this doubtful position of the matter is easily explained, without attaching any blame to the eminent geologists above named. At that time the line of separation of the Devonian and Upper Silurian was not very clearly defined; and indeed it may be said yet to be in some uncertainty, since it is only within a few years that it has been proposed to transfer the Oriskany sandstone to the Upper Silurian, and in the latest classification of the Gaspé series by the Geological Survey of the Dominion,* no less than 880 feet of shales and limestones are designated as "passage beds" between the two. In addition to this, the fossils from the Nova Scotia beds were to a large extent different from those both of the New York series and of England,

* Billing's *Palæozoic Fossils*, 1874.