These views would, therefore, make the origin of the Bay of Fundy trough, as well as the associated ridges and depressions, coincident with and the result of the very earliest orogenic movements of which we have any knowledge, and to any one interested in the probable history of this portion of the country, must be regarded as of extreme importance. We have now to inquire how far they are in accordance with our present knowledge.

In the first place it is to be noticed that in recognizing two belts only of Archæan rocks as traversing the Acadian basin, viz., that of northern or central New Brunswick and that of Nova Scotia, the only group or belt of rocks which in the former province is known to be of the Pre-Cambrian age is entirely overlooked; the great central basin of New Brunswick being at the same time made continuous with the Bay of Fundy trough, from which these Pre-Cambrian rocks now completely separate it. As to the ridges north of the central basin, now occupied by the Coal measures, and dividing the latter from the Gaspe-Worcester trough, it is true that a portion of these have, in the reports and maps of the Geological Survey, been represented as Archæan; but even if this be their age, of which there is as yet no definite proof, the area which they occupy is not large, and no evidence whatever is available to show that they were connected either on the one side with the rocks of Newfoundland, or on the other with those of southern Maine and Massachusetts. It seems much more probable that, if Archæan at all, the rocks in question represent one or more of several insular groups in the Cambrian seas, of which others were to be found in northern Maine, in southern New Brunswick and in eastern Nova Scotia.

If now we consider the facts connected more particularly with the Bay of Fundy trough, we find definite proof not only of the existence of terrestrial areas in this vicinity at the opening of the Cambrian era, but that these were so disposed as to determine a northern border to the trough, not widely different in position from that which now limits it in the same direction. For although among the formations adjacent to the Bay are found representations of all the successive eras, from the Laurentian to the Trias inclusive, they occupy in general very small areas, forming a mere fringe, as it were, to the Archæan ridges, which, for much of their length, rise directly and precipitously from the waters of the bay. That they similarly thus rose in early Cambrian times, or at least that ridges in part above the sea-level were not very distant, is fully shown by the nature and distribution of the Cambrian sediments, by their physical markings and by their contained fossils, as long since pointed out by Matthew. It seems probable, however, that their height was somewhat less to the eastward than to the westward, the Archæan rocks, which to the west of the St. John river form one broad belt, being to the eastward of that stream divided into several, possibly insular, ridges, by intervening parallel troughs of Cambrian sediments.