of fossils. The iron ore is not seen, but there are highly fossiliferous slates and coarse arenaceous limestone, and a bed of gray sandstone with numerous indistinct impressions apparently of plants. In addition to several of the fossils found at Nictaux, these beds afford *Tentaculites*, an *Atrypa*, apparently identical with an undescribed species very characteristic of the Devonian sandstones of Gaspé, and a coral which Mr. Billings identifies with the *Pleurodictyum problematicum*, Goldfuss, a form which occurs in the Lower Devonian in England, and on the continent of Europe.

Westward of Bear River, rocks resembling in mineral character those previously described, extend with similar strike, but in an altered condition, and in so far as I have been able to ascertain, destitute of fossils, quite to the western extremity of the peninsula, where they turn more to the southward, and are as I suppose, repeated by a sharp synclinal fold, after which they are succeeded by the Atlantic coast series, consisting of quartzite and clay slate, with chlorite and hornblende slates at Yarmouth and its vicinity, and further to the S. E. of mica slate and gneiss.

General Remarks.

The above facts show that we can recognise among the partially metamorphosed sub-carboniferous rocks of Nova Scotia, formations ranging from the Middle Silurian to the Lower Devonian inclusive; but of a more argillaceous and less calcareous character than the series occupying this position in the mainland of America. The principal masses of plutonic rock associated with these beds, and especially the granite, are of newer Devonian date; but there is evidence of igneous eruptions as far back as the beginning of the Upper Silurian, and of the continuance or recurrence of such action as late as the carboniferous period. In and near the non-calcareous Lower Silurian series, granite prevails, almost to the entire exclusion of other plutonic rocks. At a greater distance from these, the plutonic rocks penetrating the Upper Silurian and Devonian series, though apparently of nearly the same age with the granite, are principally syenite and greenstone.

With respect to the general arrangement of the formations, though I cannot venture to speak with confidence on this point, with reference to a district so much disturbed, and which I have been able only very imperfectly to explore, I may suggest, as at