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well be done until the entire field had been surveyed and the rocks of this Province brought into connection with the previously studied and more typical sections afforded by the Island of Anticosti and the Gaspé Peninsula. This has now to a large extent been effected, partly by the explorations of Dr. R. W. Ells and his associates, in the peninsula referred to, and more recently by the author, in connection with Mr. McInnes, in the district lying between the Metapedia River and Lake Temiscouata. In the same connection a considerable amount of exploration has been made in the very interesting and highly fossiliferous region of Aroostook County, Maine, and thus the data are now at hand. not only for a comparison of these several localities with each other and the typical section at Cape Gaspé, but also for instituting a similar comparison between the succession and origin of the Silurian strata in northern New Brunswick, Quebec and Maine, and those of the equivalent strata near the Bay of Fundy. Several papers relating to this subject I have already had the honour to lay before the Section ; and during our present meeting, it is my desire, in another paper, to discuss at some length, the subject of our early Silurian geography, as indicated by the facts now in our possession. It will therefore not be necessary to dwell upon this topic now, further than to say that we have here, apparently, a pretty full representation of the entire Silurian system, with, however, considerable diversity, both of character and fossils, in the southern as compared with the northern sections of the area considered, and in both with features, particularly of life, which approximate to the geology of Europe rather than to that of the more westerly portions of our own continent. Thus, as regards the former point, while in both districts fossiliferous horizons have been recognized ranging from the lower part of the Niagara formation up to and including the Lower Helderberg, and while in both there are evidences of physical movements, accompanied by igneous extrusions and unconformability, between the lower and higher members of the formation, these in northern New Brunswick and Quebec were followed by a general subsidence, leading to an extensive invasion of the sea, and the formation of thick limestone strata abounding in corals, etc., while in southern New Brunswick, about the Bay of Fundy and Passamaquoddy Bay, the movement was largely upward, leading to the origination of shallow water sediments, with but little limestone.

Again, as regards the European aspect of our Silurian basin, this was early recognized and commented upon by the late Mr. Billings, being seen not only in the large number of genera common to the two, but also in the close approximation or identity of many of the species. It has also been quite fully and ably considered in a recent article by Sir W. Dawson.¹

An interesting discussion of the character and relations of the Silurian rocks as developed about Cobscook and Passamaquoddy Bays, near the boundary between Maine and New Brunswick, has, since the termination of the labours of the Canadian Survey in that region, been made by Prof. N. S. Shaler,² on behalf of the Geological Survey of the United States, but the conclusions reached are, for the most part, in accord with those already announced by the former.

The evidences of igneous activity, to which reference has been made as occurring during the progress of the Silurian era in the Acadian basin, constitutes another of its

¹ On the Eozoic and Palaeozoic Rocks of the Atlantic Coast of Canada, Quart. Journ. Geol. Soc., Nov., 1888.

² Am. Journal of Science, July, 1886.