

entire absence of tracks or roads of any kind, are obstacles which have hitherto prevented the acquisition of any really accurate geographical or geological details concerning it; and, before these can be obtained, the requisite surveys and explorations will probably have to be undertaken during the winter.

It can, however, now be affirmed that this extensive mountain region has no connection with the Cambrian (Lower Silurian) formations of the *Quebec group*, but is a detached area of the Pre-Cambrian formations which constitute the chief mineral-bearing belt of the Eastern Townships, extending from the Vermont boundary north-eastward to a little beyond the latitude of Quebec. In the Shickshock Mountain area as yet only serpentine and chromic iron have been recognized, but as these everywhere accompany the deposits of crysolite or asbestos and the ores of copper, lead, antimony, and iron, with some gold and silver, in the region to the south-west, it is not unreasonable to anticipate their discovery in this unexplored area of the Gaspé peninsula. It should therefore be more closely examined, and its physical and geological features more accurately determined. The measurements and observations made during the past season by Mr. Ellis in furtherance of this object were, from the causes already referred to, chiefly confined to the proximity of the coast, and to some of the more accessible of the river valleys. In the prosecution of this work between Little Pabos and Métis 300 miles of road were chained, 135 miles of road and 275 miles of shore line were paced, and interesting and instructive photographs of the scenery were secured. Collections were also made of typical rocks and of the fossils from the newer formations which surround and lie against the older nucleus of the mountains. The highest peaks of these attain to elevations ranging from 2,000 to 3,700 feet above the sea, and were graphically described, now nearly forty years ago, by Sir W. E. Logan. (P. 13, Report of Progress, Geological Survey, 1844).

Mr. Ellis was assisted by Messrs. Low, Brumell, and Peers, and the cost of the season's exploration was \$1,376.71, including the salaries of Messrs. Low and Brumel to the 1st of October, and of Mr. Peers to the 15th of September.

In western New Brunswick, counties of York and Carleton, Mr. W. Broad continued the surveys and explorations, in which he has now been engaged for four seasons, assisted during the past season by Mr. Robert Chalmers and by Mr. McInnes, B.A.

Mr. Chalmers' attention was devoted entirely to the superficial geology of the area, and a detailed report of this investigation will be prepared.

Mr. Broad and Mr. McInnes devoted their attention chiefly to the procuring the additional data required to complete the map, and in doing this surveys were made of the different branches of the Eel, Meduxnakeag, Nackawick, Keswick, and Mac-tagnac Rivers. The roads on both sides of the St. John River, between Woodstock and Victoria Corners, were surveyed with odometer, and the banks of the river between the points named were measured by pacing. Various small streams and wood roads were also traversed, and Mr. Broad states that the region in which he has been working, embracing about 4,000 square miles, is now surveyed with minuteness of detail not hitherto attained in any other part of New Brunswick.

The field work commenced about the 18th of June, and was continued to the 13th of November. The cost, including salaries of Messrs. Chalmers and McInnes, the former to the 20th of September and the latter to the 31st December, was \$1,071.79.

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In eastern Nova Scotia, the work was continued by Mr. Hugh Fletcher; but, owing to the lateness of the season, very little was done in Cape Breton before the 7th of June. A detailed examination was then made of the manganese mines, extensively worked by the Hon. E. T. Mosely, in the lower Carboniferous rocks at Enon, Loch Lomond, and also a further examination of the copper mines which are worked in the Pre-Cambrian rocks of the Coxheath hills, and which were described p. 123 F. of the Geological Report, 1879-80.

The survey of the Baddeck and St. Ann's Rivers was then resumed, and finished about the end of August. On the lowland near the mouths of the rivers of this