CANADIAN MINING & MECHANICAL REVIEW

CONDUCTED BY - - - - - - - H. T. A. BELL.

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The School of Mining at Kingston.

This School begins its second session next October, with increased staff and equipment It has already done good service in giving to men interested in our mineral wealth opportunities for acquiring precise and practical knowledge of this subject. This it has done not only by its regular classes conducted throughout the session, but by special short courses at the School and at Marmora. This latter feature of the work of the Mining School commends itself to us as of great importance and value. The men who attended the class at Marmora speak in the highest terms of the character of the work conducted by Mr. Hamilton Merritt. We note that in the calendar for 1894-95, just published, provision is made for extension of these classes to other mining centres. No doubt practical men will be ready to take advantage of this opportunity. We note also that "the School is provided with chemical laboratories, an assay, a blowpipe, and a petrographical laboratory. There will be built during the summer a mining laboratory and experimental reduction works, which will be furnished with a stamp mill, concentrators, separators, amalgamators and other machines with which ores are treated at the mines. The machines will be of sufficient size to operate upon large quantities of ore, and those opening up mines are invited to send in large samples of ore (a ton is a good sample), to be put through a milling process in order to test the suitability of the process for their ores. In this way, costly mistakes may be avoided. The School is prepared to undertake a limited number of such tests and will charge only for running expenses."

These laboratories must give every opportunity for practical study in assaying and milling. Certificates are given by the School for a special course in Analytical Chemistry and Assaying. The course as laid down in the calendar is very complete and practical.

In our opinion the proper functions of a Mining School in Canada are (1) to provide education more particularly in those subjects which bear upon the discovery, winning and dressing of ores, rather than upon smelting and metal working, (2) to give opportunity for working out problems in Canadian mining, ore dressing, &c., and (3) to lead the way in improving methods at present in vogue, and in suggesting new methods, to keep a step in advance of the requirements of the country; to be the pioneer in mining ideas.

The School at Kingston bids fair to discharge most, if not all, of these functions.

Mr. Hugh Fletcher, B.A.

On the eve of the visit of Canadian mining men to the Sydney coal field, the subject of our portrait this month is, appropriately, Mr. Hugh Fletcher, B.A., whose geological investigations in this field are so widely known and have been of so much value to the development of the coal mining industry of Cape Breton.

The official reports of the Geological Survey since 1874, speak for themselves of the zeal and industry of Mr. Fletcher in the work of unravelling the structure of Cape Breton, and recording its resources, and mapping the surface configuration as well as its geological features. Of Mr. Fletcher it may be said no other living man is possessed of his familiarity with crag and fell, with wave washed cliff and wood encumbered dell throughout the Island of Cape Breton. From Cape North to Cape Porcupine, from Cape Mabou to Scaterie, he knows it all.

Mr. Fletcher was born in London, England, of Scotch descent, in 1848, and emigrated to Canada in 1857, when his father leased the Bruce copper mines. He is a graduate of Toronto, with honors in languages and science. His vacations were spent with his father at the various operations with which he was engaged, and he thereby acquired a valuable insight into copper, silver and gold mining and the associate rock formations. A term spent in an engineer's office fitted him for the preparation of the neat and careful mapping for which his geological work has since been distinguished. In 1872 he joined the Geological Survey of Canada, under Mr. Robb, in Cape Breton. On Mr. Robb's resignation he succeeded him in the charge of that important work, and ever since has devoted himself to the survey of Eastern Nova Scotia. It was in 1875 that he made the important discovery of copper ores in the Coxheath felsites that has led to the operation of the Eastern Development Company. In the same year he found fossils of Lower Cambrian age at Long Island on the Bras d'Or and at Mira, the first to be noted in Nova Scotia. His systematic surveys naturally took him over the portions of country that had been given previous attention by Dr. Dawson and Dr. Honeyman, and with a wider range for generalization, his conclusions were not always quite in accord with what they had written. That the close observations of the Survey would lead to conclusions in some cases different from theirs was to be expected, the only surprise is that Sir W. Dawson with his comparatively limited opportunities should have been so generally correct over so wide a field.* Differences seemed to turn on names rather than facts in the correlation of some horizons, as in the age of the rocks below the primordial, and as to whether the slates and quartzites of Loch Lomond are Horton or Devonian.† That the latter are unconformable below the Carboniferous Limestone is certain.

On crossing the Strait of Canseau the differences of opinion became more marked, Fletcher declining to recognize Medina at Arisaig or to regard the rocks at Riversdale otherwise than as Devonian. This remark is merely by the way, *our present purpose being to confine ourselves* to Cape Breton only.

Having separated the Laurentian rocks of Cape Breton into an upper crystalline and gneissic series, and into a lower syenitic and feldspathic series, he traced, in 1876, the Cambrian rocks to East Bay, and found in them Lingula nodules.

Among the coal measures the Survey was anticipated by Brown, Lesley and Lyman. The former especially, did a great deal of valuable work and recognized the conformability of the millstone grit with the coal measures in Nova Scotia, a point of much importance. Mr. Fletcher, in going over the work that had been done in the carboniferous, was able to correlate the several portions of the coal field and show the relation of the coal beds throughout it. The voluminous reports and the maps which accompany them, speak for themselves; they are mines of facts for subsequent writers to work in and although they have not been the finger posts to wealth that some have hoped for, they should *be as "danger boards" to those otherwise* tempted to seek their fortunes in unkindly ground.

Of Mr. Fletcher's subsequent work on the main land we make no reference on this occasion, nor of his services as the representative of the Geological corps before the special committee of the House of Commons, their value is so well known.

EN PASSANT.

In view of the Cape Breton meeting of Canadian mining societies, at which the REVIEW will be represented, the present number is issued earlier than usual. Our next impression will contain a very full report of the proceedings of this meeting and many portraits of the principal operators, engravings of the collieries and works to be visited, a new map of the Sydney coal field, drawn specially for the REVIEW, and other features which will insure our readers an unusually interesting and attractive number. Look out for it!

Mr. A. L. Russell, Dominion and Provincial Land Surveyor, Port Arthur, has, with character-

*Acadia Geology, 1878, pp. 86-90.
†Acadian Geology, 1891, p. 20, line 3.