

Mackenzie, indulges in prophecy. He writes: "As I stood upon the summit of the bluff looking down upon the glittering lake 300 feet below, and across the boundless plains, no living thing in view, no sound of life anywhere, I thought of the time to come when will be seen passing swiftly along the horizon the white cloud of the locomotive on its way from the Atlantic to the Pacific, and when the valley will resound with the many voices of those who have come from the busy city on the banks of the Red River to see the beautiful lakes of the Qu'Appelle." How natural it all sounds now, but doubtless it fell in 1869 upon as deaf ears as similar forecasts made at the present time by members of our geological survey, or as the fervid words of Mackenzie a hundred years ago.

I have not examined the various British blue books from 1832 to 1876, nearly forty in number, relating to the settlement of the boundary between the United States and Canada, but in addition to the work by Bigsby and Bouchette this is the time to mention two scientific results arising from marking the forty-ninth parallel. John Keast Lord who acted as Naturalist to the British North American Boundary Commission when marking the boundary line from the Pacific coast to the eastern slope of the Rocky Mountains, published two illustrated volumes in 1866 on the natural history of British Columbia.* And in 1874 and 1875, Dr. George M. Dawson, not yet connected with the Geological Survey of Canada, made his reports on the geology and resources of the "region in the vicinity of the forty-ninth parallel from the Lake of the Woods to the Rocky Mountains."†

I have thus far indicated, not with precise accuracy, but perhaps sufficiently, the extent of the exploratory work done in the country now included in Canada, under the auspices of the trading companies and the early governments, and not by established geological and natural history surveys. If we consider the publications by their number they stand as an evidence of the inability or unwillingness of Canadians in the past to grasp the future of their country, and judged by the quantity of matter of a purely scientific nature, they betray an indifference to higher considerations not creditable to their intelligence. We certainly owe a debt of gratitude to the few ardent men who braved the terrors of our unknown lands and gave us this scanty literature.

Before referring to the regular geological survey established in Canada in 1843, I should like to compare the exploratory work done in the United States before the establishment of a regular geological survey, by the Federal Government. It must be borne in mind that during nearly half a century before the Federal Government established a regular survey most of the States had established surveys on their own account just as we shall have occasion to remind you that our survey was originally a Provincial and not a Dominion survey. Not referring, then, to the work done by the various States, but merely to the exploratory work of a similarly irregular character to that done in Canada in early days, I shall read a list of expeditions ordered by the United States Government. It does not pretend to be accurate either as to the number or as to the details given of the various expeditions. It was compiled merely in order to indicate how much more earnestly the people of the United States craved for information about their unsettled areas. The majority of the reports are quartos illustrated with expensive plates and often running into several volumes. The Pacific Railroad reports alone exceed in matter all that we have done. The dates given in the following list sometimes indicate the date of the expedition, sometimes of the publication of the reports:—

1804-6. Captains Lewis and Clark. From the mouth of the Missouri River through to Pacific Ocean.

1805-7.—Lieut. Zebulon M. Pike. Through western territories of North America. To head waters of Mississippi River, through Louisiana Territory and in New Spain.

1819-20.—Major Stephen H. Long, Pittsburg to the Rocky Mountains.

1820—Henry R. Schoolcraft. From Detroit through Great Lakes to source of Mississippi River.

* "The Naturalist in Vancouver Island and British Columbia." J. K. Lord, 2 vols., Bentley, London, 1868.

† "Report on the Tertiary Lignite Formation," etc. B. N. Boundary Commission, G. M. Dawson, 1874. "Report of Geology and Resources," etc. B.N.B.C., G. M. Dawson, 1875.