

Thus, instead of a thickly settled country, opened up in all directions, and easy of access by railways or by ordinary roads, millions of square miles of our Dominion are at the present time inaccessible, except by means of canoes or boats and by the help of the hardy voyageur or hunter; and not only must the means of transport be provided for, but the means of obtaining subsistence, either from the woods or waters, by hunting and fishing, must also be taken into the account; and, in point of fact, with the exception of the more thickly settled portions of the older provinces, this mode of exploration must of necessity be constantly employed. To most people unacquainted with our country, and to many even in our midst, it will perhaps be news that even here in the Ottawa district, in the exploration of the area to the north of the rivers Ottawa and St. Lawrence, beyond a distance of twenty to twenty-five miles, where occasional settlement roads penetrate, the only means of carrying on the work to day is by the aid of the canoe and the Indian guide, by traversing the several rivers and the many lakes which lie so thickly scattered over the surface of the mountainous Laurentian country, communication between which is made by numerous and often exceedingly difficult portages, over which canoes and supplies must be carried upon men's backs wherever the route of the survey may lead; and all this in the very heart of the oldest province of our Dominion.

If now we compare the personnel and the financial outlay of the world's two greatest surveys in point of extent of area to be surveyed, we can see more clearly under what additional disadvantages the Canadian brethren of the hammer labour. Thus the expenditure for the year 1887-88 of the American Geological Survey, exclusive of publication, was about half a million dollars; that of the Canadian Survey for the same year about one-fifth of that amount, including publication and all expenses of management. A portion of this sum, amounting to about \$20,000 only, was divided among sixteen parties, whose operations extended from eastern Nova Scotia to Alaska, and included surveys in all the provinces, with special examination of the country east of Alaska and the Mackenzie River Basin, Hudson and James Bays and Lake Winnipeg and vicinity. In numbers the staff of exploration comprised in all, including assistants, thirty-five persons. In addition, work was carried on in the branches of Paleontology, Botany, Chemistry and