

its vessels, having found it cheaper to assume its own risk. Dr. Bell, the Dominion Government explorer, agreed with the reports of those who have spent years in residence on the shores of the Hudson Bay, that these waters are remarkably free from violent storms, particularly in summer months. Taking all months of the year together, the Hudson Bay is a mill pond compared with the north Atlantic, while the total hours of fog in the year are only one-third those of that part of the Atlantic through which most of our present ocean steamship tracks are mapped. These are important points which are now beginning to be realized by Canadians.

When we come to the question of climate, we must remember that we are dealing with a stretch of country nearly 2,000 miles from north to south if you take the Height of Land of northern Ontario and Quebec as its southern boundary. There must of course be a considerable variety of climate in so large an area. Taking the country from the Height of Land to the northern part of the James Bay on both the east and west sides, we have the most positive evidence of a climate as temperate and healthful as any part of the St. Lawrence Valley or that part of Ontario between the Ottawa and Georgian Bay. The voyageurs who accompanied some of the Dominion Government explorers to the James Bay were surprised at the mildness of the climate and the high summer temperatures of the water, compared with their experiences along the shores of Lake Superior where most of their life had been spent. This is accounted for partly by the greater length of the summer day in these northern regions and partly by its nearness to the level of the sea. Dr. Bell found the average temperature of sea along the east coast of the Hudson Bay to be 53 degrees Fah. and of the rivers 61 degrees, and he and his party bathed in the sea almost daily on their journeyings along the coast. The various farm and garden products that have been grown for the last half century or more by the Hudson Bay factors and the missionaries around the Bay, and the character of the forests, are further evidences of the suitability of the climate for successful settlement. Starting from the Height of Land in either Ontario or Quebec, the traveler passes through an extensive shallow basin, comprising not only vast tracts of splendid agricultural land, but numberless lakes of all sizes linked together by rivers and streams. From the northern rim of this broad basin the land again slopes gently towards the shore of James and Hudson Bays, cut through here and there by rivers. These numerous rivers, though navigable for stretches 100 miles or more, have numbers of falls and rapids, which, while they are an impediment to navigation, give promise of immense industrial advantages in the creation of water powers. On the Abitibi one exploring party had to make 21 portages, owing to the rapids, falls or chutes, some of which could be transformed into ideal water powers. There is probably no similar area of country in the wide world capable of yielding such an enormous amount of water power for industrial purposes. Right here we may say, that in view of the illimitable area of splendid spruce land and cheap power in this region a railway through the Hudson Bay Territory could be made a profitable investment if the wood-pulp industry alone were in question. The finest spruce in the world is to be had in these northern forests, the extent of which is beyond estimation. White and black spruce and the larch tree thrive well up to a point north of Richmond Gulf, and when this line is carried some distance inland eastward it again curves north to Lat. 59, or to a point north of Cape Dufferin. Balsam, poplar, canoe birch, aspen, mountain ash, balsam fir, bird cherry and Banksian pine,

have their northern limits at various points farther south on the shores of the James Bay, but in each case this limit is also extended farther north as you go inland to the east and west of the Bay. The white cedar, mountain maple, white and red pine, white elm, red oak, ironwood, basswood, birch, ash, and other deciduous trees are to be found in areas of varying extent from the head of James Bay down to the settled districts of Ontario and Quebec. J. C. Bailey, who was on the exploration for the Nipissing and James Bay Railway, found splendid specimens of Norway pine, yellow and black birch, and sugar maple, many trees measuring from 20 to 40 inches in diameter, and standing 70 to 80 feet high. As to the soil, almost every traveler and explorer has been surprised at its fertility and the depth of vegetable mould. Dr. Bell, in his report to the Government on the country between Lake Superior and James Bay, says: "After passing the 'swampy grounds,' the traveler cannot fail to be struck by the abundance and fertility of the soil exposed on the banks of the rivers all the way to Moose Factory. I have no doubt that at some future time this country will support a large population." Among the agricultural products that have been grown year after year at various Hudson Bay Company's posts, and by missionaries living among the Indians, may be noted barley, oats, rye, peas, beans, melons, cucumbers, castor oil beans, tobacco, balsams, cauliflowers, cabbages, lettuce, turnips, radishes, beets, carrots, onions, coleworts, cranberries, gooseberries, currants, strawberries, raspberries and cherries. Wheat has also been grown at the Hudson Bay posts. Sarsaparilla of a very superior quality grows wild over a wide area of country. Archbishop Tache gives at least 223 species of birds, and 72 species of fur-bearing animals to be found in this region. The wealth of the Hudson Bay district in fur is too well known to need emphasis here. Agriculture in the Lake Temiscaming and Temagami districts has passed the experimental stage, tracts of land having been brought under cultivation, the farmers finding a market in the supply of men and horses engaged in lumbering operations there. An abundance of hay is grown, the clover of the Temiscaming district being said to excel that grown in any other part of Canada. Root crops are successfully raised. Of oats, barley and peas the farmers have large harvests; cultivation of wheat is alone limited by the narrowness of the market. All that is wanted to place agriculture in this district upon a well established basis, and open up the rich territory around Lake Abitibi to the north, is efficient railway communication with the commercial centres of the Dominion.

We now come to the mineral features of the Hudson Bay slope, and here it must be remembered that nine-tenths of the country has remained until now absolutely unknown and untouched by the geologist or prospector. The cursory examination of this one-tenth of the region in question has disclosed the following minerals:—gold, silver, lead, iron (magnetic and hematite), nickel, copper, pyrrhotite, zinc, galena, antimony, arsenic, tellurium, platinum, tin, bismuth, molybdenum, cobalt and manganese. While among the non-metallic minerals may be noted agates, carnelians, epidote, porphyries, granite, syenite, sandstone, quartzites, flagstones, slates, marbles, ornamental argillites, jaspers, garnets, chalcedony, white quartzites for glass making, asbestos, graphite, actinolite, lithographic stone, gypsum, salt, amethysts, soapstone, ochres and other mineral paint material, kaolin, lignite, mica, peat, axinite, limestones, brick clays, petroleum, and last of all anthracite. When we consider how slight has been the geological examination of this region, the foregoing list is certainly imposing, and of the minerals here enumerated