

country generally is characterized by these hills of boulder and gravel and intermediate valleys very largely muskeg. Except in the immediate valleys of the larger rivers there is very little land that would be suitable for agriculture, very little indeed, and that is a characteristic of the whole country Mr. McInnes was over; that is of the upper waters of the Agnooski and the Winisk rivers and down to about 150 miles from the sea. From the point specified, down to the sea, the country is of an entirely different character again; that is to say, it is country that is originally overlain by from a very few feet at its edge, to 100 feet or more, of boulder clay of a very tough impervious boulder clay, which holds up the water, and on which the drainage, up to the present time, is of a very imperfect character. The present drainage of that area is comparatively recent.

There is overlying this boulder a marine clay which holds very well defined marine fossils, some of the shells quite as well preserved as you will pick up on the seashore to-day. The witness picked up some of these species which showed that subsequent to glacial time that country up to the 450 foot limit was down in the sea.

A GREAT KEEWATIN RIVER.

The present drainage has only had since that time to work itself out, and has not yet become very perfect. An instance of that is seen in this Winisk river. There is a lake under the head of the Winisk from which the main river flows, and from which the west branch flows north. They come together at a point, following the main stream, 250 miles below, enclosing an island 250 miles long. There are two other islands of this character along the Winisk river, one 80 miles and the other about 50.

It is a good large river. Mr. McInnes estimated it in cubic feet per second, some 25,000 cubic feet per second. It runs in size somewhere between the Gatineau and the Ottawa, not as much as the Ottawa quite, but larger than the Gatineau. Over the whole of the country, the last 150 miles down to Hudson bay, granting the proper climate and granting proper drainage, this green clay would make an excellent soil. In fact it is quite the same as the clay in the vicinity of Ottawa, practically clay of the same soil. It is very impervious clay and the country is extremely fit, except for the moderate slope down towards the bay, and it occurs in east and west undulation, so that there is no drainage except by the larger rivers down to the bay. There are little streams running into the sides of the river, but they cut very sharp walled trenches, sometimes 80 feet, as steep as boulder clay will stand, and that means an angle of say 60 degrees, 80 to 90 feet high. You get on top of these banks and you have a mossy place, sometimes 6 feet of moss. It is never peat; never having turned into peat. It is simply a green moss which is pressed into layers of a couple of feet thickness at the bottom of the 6 or 10 feet, but never apparently oxydized or never carbonized at all, practically unchanged. The growth is going on still. It is merely the successive layers which are pressed down by subsequent layers on top of them, so that in places the thickness is quite ten feet. The first week in August Mr. McInnes got down to the sea coast and spent a month there. There was an ice barrier when he reached Hudson bay, off the mouth of the Winisk river. It had grounded about five miles out. It is very shallow water. It extends out four or five miles exceedingly shallow, the large boulders sticking out in high water. In low water there are extensive mud flats running out four or five miles from the shore, and the company's fishing boat had to make a circle of eight miles out of the bay before they could run up the coast.

AGRICULTURE.

There are no grasses in that mossy district in the valley of the Winisk. A river of that size in places has some shores, perhaps a quarter of a mile, here and there, beyond the actual shore of the river, and it is grassy there. That is, there are occa-