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The Ottawa Free Press says:—Two trains of lumber per diem are now being run out from the city by the Canada Atlantic Railway.

A LARGE amount of lumber will be left over at Manistique, Mich., when the navigation season closes. It is being carefully cross-piled.

THE Menominee manufacturers are not afraid. There is every prospect that an immense log crop will be gathered on that stream and tributaries the coming winter.

THE North American Contracting Company are shipping a large quantity of lumber from Rat Portage to Calgary, for the construction of bridges and culverts on their work.

THE Winnipeg Times of Sept. 23rd says—The steamer Glendevon arrived at Selkirk yesterday morning with two barges heavily laden with lumber, and after depositing them in the harbor she cleared for Fisher River.

A seven-foot rise in the Chippewa river, Wis., on the night of September 25th, cleared out the scattering logs from Paint creek and Little Falls to the Beef Slough works. Between 10,000,000 and 15,000,000 feet were started.

THEY are sawing lumber at the mouth of the Menominee without any reference to the cry of accumulation. At the close of last week the N. Ludington Company had cut 23,000,000 feet, the Carney mill 28,000,000, and the McCartney mill 15,000,000.

THE Ottawa Citizen says:—One of the best sales in timber this season was that made recently by Messrs. Barnard & Mackay, of Pembroke, who disposed of a white pine raft consisting of 24,000 sticks to Dobell & Company of Quebec at 29½ cents per foot.

THE Northwestern Lumberman says that a sink hole near South Lyons, Mich., has swallowed up three acres of heavy timber. These sink holes are a peculiar feature of Michigan. They have devoured sections of railroad. Several thousand loads of dirt disappeared on the Washburn farm. South Lyons, and another hole on the Clark farm has been taking in 1,200 to 1,600 loads of dirt a day for some time.

#### NORTHWEST TERRITORY.

We make the following extracts from the official report of the evidence of Prof. R. Bell, F. G. S., Assistant Director of the geological survey, before the Committee on Immigration and Colonization:—

Q. What kind of timber is found there?—('James' Bay waters)—On the head waters of the Moose River, white pine is abundant and of good size. Red pine also exists and extends

rather further north than the white. Then there is "Jack pine" or "cypress," or more properly the Banksian pine, which, though not a timber tree in its southern extension, becomes so in the northern region, which is its home. In the Albany region, I have seen large groves of this tree, quite different from the ordinary scrubby variety, and from which one or two very good saw logs might be cut. Then there is tamarack of good growth, and white spruce, cedar in the southern part, a great deal of white birch, and other trees, which will some day be valuable.

Q. If the navigation of Hudson's Bay becomes practicable, it seems to me, if there is much timber in that locality, it will be a valuable item of export. Perhaps you can tell us what the extent of the timber resources of those rivers that fall into Hudson's Bay are—whether there is likely to be a large export of timber from that region?—The Moose River, which is perhaps the most valuable for timber, has some, perhaps twenty principal branches that spread out and cover a transverse area of more than two hundred miles from the neighborhood of the Ottawa westward, to beyond Michipicoten valley. These join together and form several fine large streams running northward parallel to each other, and they unite to form the Moose, which falls into the head of James' Bay. The southern parts of these streams are clothed with white and red pine, and, as you go northward, you have good cedar, spruce and tamarack and the Banksian pine. The southern branches of the Albany also afford valuable timber; but northward of that, I do not think you could say the timber would be valuable for export commercially, as long as we have the other rivers to fall back upon. As to the limits of timber generally, I have paid a good deal of attention to the subject of scientific foresting, and have prepared maps showing the northern limit of every tree that occurs in Canada. The most northern species is the spruce, the limit of which runs from Seal River north of Churchill to the mouth of the Mackenzie River, or in a north-westward direction; and on the other side of the Bay, from Richmond Gulf up to Ungava Bay in Hudson's Straits, and down to the Straits of Bellisla. The whole country to the southward of that line is wooded.

Q. You speak of that being the northern limit. For a considerable distance south of that the timber would not be merchantable?—No, it is scrubby, but it becomes larger as you go south and westward. In my last report there is a map showing the northern limits of thirty of the principal trees. We have about sixty species of timber trees east of the Rocky Mountains and thirty west. There are 310 kinds of timber in North America, and we have ninety of these in the Dominion.

Q. There is a considerable quantity of good

timber in that locality, is there not?—Yes, but after leaving the lake a good deal of the forest is burned in the neighborhood of the river.

Q. The Ontario Government has sent a man to Lake Temagaming?—Yes, that discharges into both the Montreal river and the Sturgeon River. I have gone from the north shore of Lake Huron to James Bay by a zigzag course, following no particular course.

Q. Have you any knowledge of scientific forestry?—As I mentioned before, since 1860 I have paid a great deal of attention to that subject. In that year I published a statement of the limits of the trees and shrubs, particularly in regard to Lake Superior, and wherever I have gone since then I have noted the species of trees existing and tried in every way by information from travellers to ascertain what the exact northern limit of each kind is. I think now they are indicated on my maps so that the lines can be depended on as nearly accurate. This is of great interest and importance, because it shows the limit of our wealth in timber, and is a valuable indication of climate, and also, because the distribution of trees suggest some important geological problems.

Q. Have you noticed the map showing the northern limits of some kinds of timber prepared by the Interior department?—It was a very bad copy of a temporary manuscript map of my own.

Q. It is not true as to the northern limit of some timbers in Ontario?—No, not strictly true. I have altered it in some places since that copy was made.

Q. White oak occurs 100 miles further north than is shown there?—Yes, to the northern end of Lake Temiscamingue.

Q. If a country was denuded of its timber by fires, what effect would that have on the climate and rainfall?—If it was entirely denuded, it would have a considerable effect, but if it is only denuded in comparatively small areas each year, the average rainfall remains the same.

Q. In a series of years the aggregate effect would be cumulative, I suppose?—Yes, the effect of one year would influence the next year and so on.

Q. Do you think it is because the timber is getting limited that the streams are falling off, because there is nothing to hold the water and it rushes down more rapidly in the spring, and in the summer gets lower?—Where a great deal of clearing has been done, as in parts of western Ontario, it has that effect. Perhaps the aggregate rainfall does not differ, but the water flows off rapidly and is over, whereas formerly the trees shaded the ground and otherwise retained the moisture.

Q. It is not so much that the timber is being stripped?—Perhaps that influences the rainfall to some extent, but another reason is, that the water runs off more rapidly from cleared land than from forest land. Every log lying across

the little streams in timbered land helps to keep the water back.

Q. Is not the rainfall much less on the broad, open prairies—at Moose Jaw, Regina—and so on, than in Manitoba proper?—I think it is considerably less.

Q. How do you account for that?—It is owing to the country being denuded of its timber?—Its elevation has something to do with it, and probably the currents of air that bring the moisture from the south cannot precipitate it till they reach a more northern latitude. The rainfall is not regular. You cannot draw regular lines on a map to represent it. It would be represented rather by irregular lines and areas.

Q. You think it more influenced by currents of air than by the timber limit of a country?—Both will affect it. When heated air, bringing a large quantity of moisture comes to a country, it may be induced to precipitate the water in the way of rain from different causes chilling it. It has been found so in Europe. The higher mountains and the proximity of cold lakes condense it, while the heat of an extensive bed of sand will prevent it condensing. The heat from the ground keeps the moisture in suspension in the air, and it is carried on.

Q. Do you believe the planting out of the timber in those regions of the Northwest which are now timberless would improve the climate? It would increase the rain probably, but is a problem whether timber would grow there. Where it does not grow naturally, it is doubtful whether it would grow at all. In approaching the open country the tree lines do not end abruptly as if the prairie country had been cut out by fire, but tend southward before they reach the beginning of the prairie, and are replaced by western species, showing that the present condition of things has existed for an immense length of time.

Q. Do you imagine that on our treeless prairies of the west, it is impossible to cultivate forests?—Some worthless trees for timber like willows or cottonwood would grow, but they would never amount to much. Coniferous trees and hard woods, I think, will never be induced to grow permanently where they are not found naturally.

Q. That would limit very materially the utility of the science of forestry?—To that extent. But it has to do with keeping up the existing forests.

Q. The greatest arguments in its favor have been used by the people of the Western States as to the planting out of trees?—It is to be hoped they will succeed, but it is very doubtful to what extent, I think, as yet. It is very hard to alter the face of nature. Generally the condition of things we find existing is what has long existed and must continue to exist. Otherwise we should find a greater tendency to change.