

great region and you will see how little of it is now left untouched. On the Ontario side all the most accessible tributaries of the Ottawa—the Madawaska, the Bonnechere, the Mississippi, the Petewawa, and others—have been worked for years. The lumbermen are now round the eastern end of Lake Nipissing with the Matawan for an outlet that can only be reached by a land road; they are still much further north on the shores of the Montreal River.

"On the Quebec side they have nearly reached the head-waters of all the great tributaries of the Ottawa, the Rivière Rouge, the Rivière du Lièvre, the Gatineau, with the Jean de Terre and Lake Kakibonka, and the Lac des Rapides. They are now working 30 miles higher up the Ottawa, as the river runs, on Lake Teniscamigue and the Kippewa.

"On the St. Maurice they are as far up as Lake Manouan on the western side of the river. Its great tributaries on the eastern side, the Bostonnais and the Rivière Croche, have been deprived of the greater part of their fine pine; it is now sought at the head-waters of those rivers.

"As for the Saguenay region, it still contains a good deal of spruce, but there is only a limited extent of pine still untouched, or nearly so, south of Lake St. John, between the Metabetchouan and the head-waters of the Rivière Croche, near Commissioners' Lake and Bouchette's Lake. There is a little pine left north of Lake St. John, and a certain quantity on the river Shipsha and in the lower Saguenay on the Ste. Marguerite and Petit St. Jean, &c. As for the large rivers that flow into Lake St. Jean—the Chamouchoua, Mistassine, and Peribonca, the pine that was on the lower part of these rivers has been nearly all cut, and the remainder of their course, from their distant northern sources, is through an immense burnt-up wilderness where the vegetable soil has been consumed by fire.

"That huge tract of lumber country between the Ottawa and the St. Maurice, that separated (or rather appeared to separate) the lumbermen working on those two rivers by what seemed an inexhaustible and endless forest—that huge tract is tapped through and through, and the Ottawa lumberman has met the St. Maurice lumberman on the shores of Lake Manouan."

Mr. Joly concludes his run through the great Canadian forest with the following statement:—

"In a very short time since the beginning of the century we have overrun our forests, picking out the finest pine, and we have impoverished them to a serious extent, and what makes it worse, impoverished the country too, for, owing to the force of circumstances, our timber export trade has not given Canada such a return as she had a right to expect. There still remains to us a great deal of spruce and second-rate pine, which for generations to come will be in excess of our local wants if we are careful; but the really fine pine required to keep up our great timber export trade to its present standard is getting very scarce and inaccessible, and I fear that we must prepare for a sudden and considerable falling-off."

The market value of both pine and spruce limits have increased very much of late years. At the last sale of Government limits in Ontario, in 1892, the very high price of 17,500 dols. per square mile was paid by Gilmour & Co. for a pine limit in the Nipissing, Algoma, Thunder Bay, and Rainy Lake District, but it must be added that this included a considerable area of virgin pine, but it did not include the hardwoods. At the same sale another buyer paid 12,700 dols. per square mile. In addition to this lump sum, the lumberman has to pay the annual rent and stumpage dues. These figures show a great advance on any previous sales, and the increase in prices recently is largely due to the increasing number of American buyers who have competed. For spruce limits in Quebec province the highest that has been paid at auction is 125 dols. per square mile, and this is five times the price paid twenty or thirty years ago. But limits have changed hands by private sale at 1,000 dols. per square mile.

The provincial Government of Ontario, recognising the importance of some steps being taken to regulate the cutting of timber, so as to husband the remaining forests, and to protect the young second-growth pine in the burned-over areas, created in 1883 a Department of Forestry. The present Clerk of Forestry, Mr. Thomas Southworth, was appointed to the post in 1895, and has this year published his first report, which is full of interesting information and useful suggestions.

Mr. Southworth, speaking of Forestry in his province, says:—Owing to the timber policy of Ontario—which in

more important features coincided with that generally adopted throughout Canada—the question of future forestry operations in this Province is rendered comparatively simple. It has been in marked contrast with the course pursued in the United States, where the Government in dealing with large timbered tracts of land have, in selling the timber, disposed of the fee simple of the soil to capitalists and speculators. This renders the difficulty of adopting a policy of forest preservation much greater than if the public had retained the ownership of the land, as large corporat and private interests stand in the way of any change of system; and the right to deal with tracts of land originally parted with for comparatively trifling considerations must now in many cases be bought back at enormous expense. Ontario, keeping in view the fundamental principle of "the land for the settler" has wisely avoided this mistake. In the early days of the Province it was necessary for the settlers to cut down and burn the valuable timber in clearing their farms, but when government was organised it was soon found advisable to sell the standing timber to lumbermen, retaining the land which it occupied for the settler. This policy served the double purpose of assisting the farmer in his clearing operations, and lightening the burden of taxation, as the proceeds from timber sales formed a large portion of the provincial revenue. Until comparatively recent times, the possibility of a lumber famine or the disastrous effects of too thorough clearing on agriculture and climate, was little thought of. When the conditions prevailing at that time are borne in mind it is hardly surprising that our legislators, in their desire to divide the land among the people as it was needed for their homes, overlooked the necessity of providing for the maintenance of a due proportion of woodland in the settled area, either by restrictions upon the cutting of the trees or by the reservation of certain tracts to be kept always in wood. That we have suffered to some extent from this cause is evidenced by the drying up during the summer of many streams and springs which formerly maintained an even flow throughout the year. But despite any unfavourable climatic change which may be traceable to the policy of the indiscriminate opening up of lands for settlement, accompanied by over-clearance, it is fortunate for us that we have escaped the more injurious and less excusable mistake made by our neighbours of the United States in alienating the fee simple of large tracts to capitalists at nominal prices. It is more-over worthy of note that the timber and land policy of Ontario has so far been in the direction of the principles of modern scientific forestry. The timber has been treated as a crop, to be harvested when ripe, and not left to over-maturity and decay. Most of the area thus far denuded is good agricultural land and has in the main wisely been devoted to cultivation—although, as already remarked, the individual landowners, doubtless for want of proper knowledge, have not in all cases realised the fact that portions of their farms might be better suited for permanent woodland than for tillage, with the result that an insufficient wood crop is left in some of the older settled parts of the Province. That error it is possible to rectify, and the farmers of Ontario are too intelligent not to appreciate the wisdom of so doing.

In the process of converting Ontario from a wilderness to a thriving community, we have now reached a section of heavily wooded country, differing in many respects from the fertile region of Southern Ontario. Running from east to west across the Province is an elevated ridge commonly spoken of as the "height of land" forming the water-shed from which the streams flow north to Hudson's Bay and south to the great lakes and the St. Lawrence. This ridge is the source of our principal streams which provide water powers of great value in many places. Though for the most part rocky, and affording little land suitable for the plough, it is heavily clothed with timber, providing a magnificent reservoir as a feeder to our rivers, and a mine of wealth to the Province. The white pine, the greatest of our timber trees, is abundant throughout this region and for some distance northwards. Beyond the northern limit of the pines a vast forest of valuable spruce extends away to the Arctic circle around the shores of the great inland ocean, Hudson's Bay. This is destined to be in the future the great source of supplies for the manufacture of paper. As yet this territory has been but little explored by the lumbermen, and, in fact, only imperfect surveys have been made of it. This great area of land, much of it unfitted for general agriculture, is excellently suited for the production of successive growths of timber, and by the application of the simplest principles