

FORESTRY.

The following sensible editorial appears in the *Stratford Beacon* from the pen of Dr. A. Eby, of Saddington, in the county of Perth:

"The recent meeting of the Forestry Congress brought out prominently some facts that should receive the serious consideration of the people of this province and of our Government. The first point that we wish to bring out is that the timber supply of this continent is nearly exhausted. At the present rate of cutting, it is estimated that the pine timber now standing in the different states and provinces will last as follows: Georgia, 75 years; Florida, 30 years; Alabama, 70 years; Mississippi, 150 years; Minnesota, 10 years; Michigan, 7 years; Wisconsin, 20 years; Louisiana, 540 years; Pennsylvania, 5 years; Arkansas, 325 years; California, 100 years; South Carolina, 27 years; Maine, 16 years. At the present rate of consumption only six of these states have a practically inexhaustible supply, but when we consider that the total production is 3,623 million feet annually in the United States alone, and divide that into the 264,750 million feet, estimated total of standing timber, we find that even at the present rate of consumption it will all be exhausted in 70 years. As it will take at least 70 years to grow a new crop, it will be seen that the total amount of timber now standing is only sufficient to last until a new crop can be grown, if it is planted at once, but if planting is delayed for a few years a scarcity will ensue before some now living will be gathered to their fathers.

Let us now look at Canada and its supply. According to Mr. Ward, of Montreal, who is doubtless well informed on the subject, Canada has 50,000,000 acres of timber standing. This according to the present rate of cutting, will last us 50 years. But we must not forget that the demand both in Canada and the United States will be immensely increased within the next ten years. The new settlements in Canada hitherto obtained the supplies from local sources. Within even the last decade immense quantities of pine have been exported from the older settlements of Ontario, but these resources are nearly, if not entirely, exhausted, and lumber will soon have to be carried to districts that formerly exported it. Take the township of Ellice. Hitherto there were in it eight or ten mills running the greater part of the summer, but the supply is now practically exhausted, and that township will have to import more lumber in the next 20 years than it exported during the last decade. There are many other places in the same position. They will have to draw their supplies from the great public forests instead of getting them from local sources as heretofore. But while the older provinces had local supplies for the most of their wants, such is not the case with the provinces now being settled. Manitoba and the Northwest will require more lumber than all the rest of Canada has standing. Even sparsely settled as it is, lumber is even now carried from Montreal to Winnipeg. What will be the demand when the settlers will once be able to erect permanent dwellings for themselves and stables for their cattle? But while the demand in Manitoba will increase immensely, that of the older sections of the country will not be diminished, so that we may well calculate that instead of the present supply lasting 50 years it may last from only 30 to 35 years.

The same holds good for the United States. States like Michigan, Minnesota, Pennsylvania and even Maine, will in a few years have to import instead of exporting as they do at present. Then the immense settlements that are now taking place on the treeless prairies of Dakota, Nebraska, Kansas, Texas, and other States and territories will increase the present enormous demand. Taking all this into consideration, we may well ask if the present supply will last 50 years instead of 70 years.

This is a matter of serious consideration, not the less so because the evil is remote and will not be materially felt by the present generation. It will come as certainly as time goes on. Though the evil will not strike the present generation, it is its duty to provide for future necessities. Many municipalities are incurring heavy liabilities on the principle that the next generation should assist in paying for improve-

ments of which it will reap the benefit. So this generation, while it uses the timber of natural growth, owes it to future generations to prepare a supply for them. It is our duty to increase instead of diminish the chances of life to our successors. It will become our wisdom and foresight to live on regardless of the future, it is our duty to provide for the future, knowing that if we ourselves shall not reap the harvest others will. Men lay up wealth not because they take the money with them when they go hence, but as a store for their children. In the same way we should prepare a supply of fuel and timber for future generations.

But while this holds good for individuals it is especially true of Governments. Governments have no end. The king never dies. One Ministry may be succeeded by another, yet it is the same Government. The aim and object of the Government should be the welfare of the country as a whole, not of any particular section of it, nor at any particular period, but its continued welfare. When the Government makes an improvement it should be so made as to be permanent. So the Government should prepare for the welfare of its future citizens as well as those of the present day. It is the duty of the Government to see that the resources of the country are not wasted and the chances of life and happiness of its future citizens are not endangered or made unnecessarily laborious.

It has been the experience of Europe that a supply of timber can be best secured under the control of the Governments. While each individual strives to benefit himself, the Government has no selfish or personal object to serve. While individuals cannot expect to reap the fruit of a planting or seeding that requires 50 or 100 years for its growth, such is not the case with the government. It can as certainly reap the harvest in half a century as in five or ten years. The Government alone can afford to wait the time necessary for the harvest and when its forests have once been put in order and the harvest time comes it can reap a rich revenue for its foresight. It will be a continued seeding and planting for many years to come, but when the harvest is once reached it will be as continuous a harvest as the seeding had been. Governments only can exercise the necessary oversight and control of so large forests as will be required to keep up the necessary supplies.

We will not undertake to say just what our Government should do in the premises, but we will point out what ought to be done. There are large tracts of country in different parts of the province that are practically unfit for agricultural purposes. Wherever such lands can be obtained at a low price they should be secured by the Government, where they are not already the owners, and take measures to have them planted with some suitable, valuable timber. To do this properly will require the organization of a forestry department altogether apart from the Crown Lands Department. To the forestry department all rocky, barren lands unfit for agricultural purposes should be turned over to be managed as public forests. Such as are already covered by forests should be put under such regulations as would best answer the purposes of revenue and the conservation for future use. Such as have been denuded either by the lumberman, by fire or otherwise, should be reseeded or replanted as soon as possible and be kept under the supervision of properly trained foresters. This would doubtless increase the expenses of the Government, but it would be investing money in such a way as to return a good revenue in the future. A moderate outlay in this way will bring a sure return in the future. While we believe the Government is acting in the interests of the public by selling the leases of its forests to the highest bidder, it should also take the necessary steps to keep up the supply. Full grown trees do not increase in value by letting them stand. They should be removed to give room for fresh timber to grow. Care should, however, be taken that young and growing trees are not removed or damaged.

The *Orillia Packet* says:—Mr. James Hadden, lumber and shingle manufacturer, at Foxmead, on the Midland Railway, is building a tramway from his mill to the timber limits. Mr. Hadden will not be dependent on snow for his stock.

THE COLLECTION OF AMERICAN WOODS AT THE CENTRAL PARK MUSEUM.

The Directors of the American Museum of Natural History are now preparing for exhibition in the arsenal building, in Central Park, one of the finest collections of native woods ever brought together. When rendered complete by the addition of 26 specimens that are expected to arrive before winter sets in, the collection will embrace specimen blocks from each of the 420 trees indigenous to this country, and most of which have some economic or commercial value. As is usual in collections of this kind, each specimen-block is saw longitudinally, diagonally, and transversely, so as to show the characteristics of the wood.

Among the many curious specimens in the collection now being prepared for exhibition, says the *New York Times*, one which will excite the greatest curiosity is a specimen of the honey locust, which was brought here from Missouri. The bark is covered with a growth of thorns from one to four inches in length, sharp as needles, and growing at irregular intervals. The specimen arrived here in perfect condition, but in order that it might be transported without injury, it had to be suspended from the roof of a box car, and thus make its trip from Southern Missouri to this city without a change. Another strange specimen in the novel collection is a portion of the Yucca tree, an abnormal growth of the lily family. The trunk, about two feet in diameter, is a spongy mass, not susceptible of treatment to which the other specimens are subjected. Its bark is an irregular, stringy, knotted mass, with porcupine quill-like leaves springing out in place of the limbs that grow from all well-regulated trees. One specimen of the Yucca was sent to the museum two years ago, and though the roots and tops of the tree were sawn off, shoots sprang out and a number of handsome flowers appeared. The tree was supposed to be dead and thoroughly seasoned by this fall, but now, when the workmen are ready to prepare it for exhibition, it has shown new life, new shoots have appeared, and two tufts of green now decorate the otherwise dry and withered log, and the Yucca promises to bloom again before the winter is over. One of the most perfect specimens of the Douglas spruce ever seen is in the collection, and is a decided curiosity. It is a recent arrival from the Rocky Mountains. Its bark two inches or more in thickness, is perforated with holes reaching to the sapwood. Many of these contain acorns, or the remains of acorns, which have been stored there by provident woodpeckers, who dug the holes in the bark and there stored their winter supply of food. The oldest specimen in the collection is a section of the *Picea Engelmanni*, a species of spruce growing in the Rocky Mountains at a considerable elevation above the sea. The specimen is 24 inches in diameter, and the concentric circles show its age to 410 years. The wood much resembles the black spruce, and is the most valuable of the Rocky Mountain growths. A specimen of the nut pine, whose nuts are used for food by the Indians, is only 15 inches in diameter, and yet its life lines show its age to be 369 years. The largest specimen yet received is a section of the white ash, which is 46 inches in diameter, and 182 years old. The next largest specimen is a section of the *Platanus occidentalis*, variously known in commerce as the sycamore, button-wood, or plane tree, which is 42 inches in diameter, and only 171 years of age. Specimens of the red wood tree of California are now on their way to this city from the Yosemite Valley. One specimen, though a small one, measures five feet in diameter and shows the character of the wood. A specimen of the enormous growths of this tree was not secured because of the impossibility of transportation, and the fact that there would be no room in the museum for the storage of such a specimen, for the diameter of the largest tree of the class is 35 feet and eight inches, which represents a circumference of about 110 feet. Then, too, the Californians object to have the giant trees cut down for commercial, scientific, or any other purposes.

To accompany these specimens of the woods of America, Mr. Morris K. Jesup, who has paid all the expense incurred in the collection of specimens, is having prepared as an accom-

panying portion of the exhibition, water-color drawings representing the actual size, color, and appearance of the fruit, foliage, and flowers of the various trees. Their commercial products, as far as they can be obtained, will also be exhibited, as, for instance in the case of the long leaved pine, the tar, resin, and pitch, for which it is especially valued. Then, too, in a herbarium fruits, leaves, and flowers, are preserved as nearly as possible in their natural state. When the collection is ready for public view next spring it will not only be the largest, but the only complete one of its kind in the country. There is nothing like it in the world, as far as is known; certainly not in the royal museums of England, France, or Germany.—*Scientific American*.

FRENCH RIVER MILL.

The *Midland Free Press* says:—"Last Friday the schooner *Nett Woodward* was loaded at Cook's dock here with the machinery for the American Lumber Company's mill at French River, and a finer lot of machinery, it is said, is not to be found in any mill on the bay. The six large boilers, the powerful engine, and all heavy shafting are from the Joseph Hall works of Oshawa. The stock for the machine shop, including engine and boiler, plane, lathe and drill are from the works of Morrison Bros., Toronto. The improved edger, with four saws was made at Wm. Hamilton's works, Peterboro'. All the steam feed circular machinery was manufactured in Stearn's establishment, Erie, Pa. On this lot alone the Company paid in freight and duty \$1,125. There were also fifteen sets of sleighs from Ramsay's carriage works, Orillia.

The machinery taken to the French River mill is guaranteed to cut from 80,000 to 90,000 feet per day, but gangs will be put in next season and the output of the mill increased to 150,000 feet a day. It is calculated that all the lumber manufactured at this mill will be shipped to the North-West.

We can give but a faint idea of the extent of the operations of the American Company, under the energetic management of Mr. John Dollar. Three hundred men are now employed at French River, in getting out 15,000,000 feet for the mill there. They are also getting out a large quantity of timber from 40 to 80 feet long, which is rafted and taken to Detroit where it is cut up for railway purposes. Men are also engaged in making 500,000 cubic feet of square timber which will be brought to Midland and shipped over the railway to Port Hope. At that place it will be made into rafts and taken to Quebec. They are also taking out of Muskoka 15,000,000 feet to be cut at the Company's mills at Midland and Gravenhurst—8,000,000 for Dollar's mill here and 7,000,000 feet for Gravenhurst.

Mr. D. C. Keane, is here looking after the machinery and supplies and attending to the business outside of the mill. He is an active young man, and looks well after the interests of the company.

NATURAL METHOD OF TREE PLANTING.

For some years back we have advocated through your columns the planting of the nuts of nut-bearing trees and the stones of peaches where the trees are going to stand, because these trees have great tap-roots running down into the ground, which in transplanting have to be cut off, thereby greatly weakening the natural strength of the tree, making it short-lived, easily blown over in storms, and preventing it from attaining the size and vigor it would otherwise have if grown in the natural way.

Within the past year writers on forestry and horticulture have been taking up this subject, the tide having turned in favor of planting seeds of all nut-bearing and stone fruits where the trees are to stand.

But the great mass of the public, who should be interested in the subject, know very little and care less about these matters, and either don't plant or do it in the old way, buying from so-called tree-agents, who cheat them nearly every time; but as they are told high-flown stories about the trees sold them, they rather like to be cheated than otherwise.

It is to try and enlighten them on this subject, and to show them a much better and cheap-