

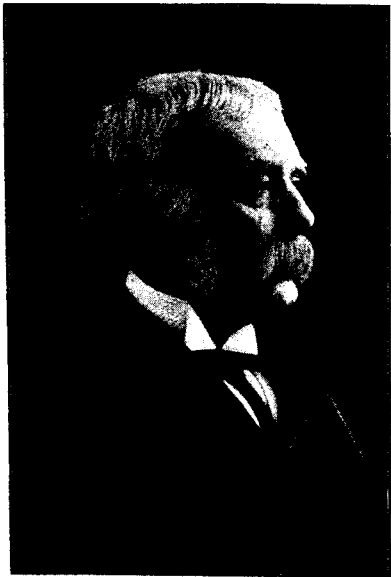
VALUE OF FOREST TREES.

BY THEIR REPRODUCTION AND CARE.

A LECTURE of much importance to the people of Canada was delivered by Mr. H. G. Joly de Lothbiniere in the Someville course, in the Natural History Society's building, Montreal, Que., a fortnight ago, the subject being: "The Value of Forest Trees, Individually and Collectively."

Hon. J. K. Ward, one of the best known lumbermen of Quebec, and himself a careful student of forestry, occupied the chair.

The Chairman in introducing Mr. Joly, said: "I deem it an honor to have this opportunity of introducing a gentleman whose name and character are as familiar as household words to all of Canada, and far beyond it, not only for his public services, but as a scientist in the



MR. H. G. JOLY DE LOTHBINIERE.

art of arboriculture and forestry. It would be folly on my part to attempt to eulogize one so able and willing to tell us how the woods indigenous to our country can be propagated, conserved and made to beautify the land. He can also tell us the commercial value of the product of the forest, how it supplies the material that furnishes employment to a great number of men, representing a large population, and making up the greatest industry in our country, except agriculture; how the lumberman with his axe carves his way into the woods, making his road as he goes along, building his shanty and stables, cutting down the giants of the forest to be converted into timber and sawlogs, hauling them to the lakes and streams, down which they are floated in the spring, followed by the hardy driver, cant-dog in hand, until they reach the mills, where they are made into boards, planks and deals; then the artisans, mechanics and laborers, who build and man the mills, steamboats, ships and barges, to freight all this material to its many points of distribution, to the hundreds of workshops where it is manipulated into every conceivable article from a piano frame to the tiny match. Then as to the utility of the forest, though it may not attract the rain or influence its downfall, there can be no doubt as to its regulating the flowing of the waters by holding them back in the glades and swamps, sheltering the land from the fierce rays of the sun, preventing evaporation to a great extent, and thus equalizing the flow of water, preventing oftentimes damaging floods and dried-up streams."

THE LECTURE.

As to the value of forest trees individually, Mr. Joly said, timber for use as fuel, and for the construction of houses, ships, etc., could easily be replaced by coal and iron, but nothing could displace the forests for the laying up and dispensing gradually the store of water necessary to the fertility of the land, upon which depended the life of nations. Many instances, he said, had been found on the old continent of the fatal results following the destruction of the forest, once fertile land, being transformed into wildernesses.

In Algeria, Southern France, Colorado, Idaho and the West, Mr. Joly continued, forests have been planted more for the sake of water and irrigation than for the timber they will yield. The forest acts as a screen

against the drying winds, which suck the moisture of the land. It is even claimed that they increase the rainfall. Their temperature being lower than that of the open country, it is said that they cause the vapor in suspension to condense and descend in the form of rain.

How are we provided with forest trees in our old settlements? Many lands have been denuded of their natural forests, and the scarcity is now seriously felt by the farmers.

There is a very simple remedy: plant trees. It is not easy to procure young forest trees, worth planting. The trees raised in the nurseries can generally be relied upon, and they are sold at moderate prices, but, owing to distance, want of easy communications, delays in forwarding and delivering (which are often cause that the trees, when received, are unfit for planting) and to the cost, however moderate, it is very seldom that the farmers have recourse to the nurseryman for the forest trees they intend planting (I do not allude, here, to fruit trees).

They generally go to the woods for them, often a distance of several miles. Those who have tried it know how hard it is to find such trees as they want, how much time and trouble it takes to dig them up, and how impossible it is, even with the greatest care, to avoid wounding and tearing off the roots. They know, too, how little satisfaction they have generally derived from all that work. Trees taken out of the forest and transplanted on the open are placed at a great disadvantage; they fail so often that people get discouraged, and many give up tree planting, as too difficult an undertaking.

Nothing is easier; in the proper season, with soil fit to grow the kind of tree you wish to plant, if the tree is in good order, with a little care you ought to succeed. But the trees you dig out of the woods are seldom in good order, and they cost you a high price in time, if not in money. If you wish for good trees, in great number, safe to grow, without trouble nor expense, procure them from a nursery, but let that nursery be your own.

Any farmer can start, in the corner of his garden, a nursery of forest trees, by sowing the seeds of the trees he wishes to plant. With a little observation, it is easy to find out when the seed is ripe; for instance, towards the end of June, beginning of July, the seed of the elm and of the soft maple (*acer rubrum*) is ripe; by sowing it at once it will sprout and the little trees grow nearly one foot in height this summer.

The maple, oak, ash, birch, butternut, &c., ripen their seed in autumn; better sow it at once than winter it in the house. Sow in straight rows, with a garden line, leaving a picket at each end to guide you when weeding. Sow, say half an inch deep, for the maple seed, and for other kinds, in proportion to the size of the seed, two or three inches deep, for butternut and walnut. Thin after the first year, if needed, and transplant further on the little trees removed in thinning. After three or four years, more or less, (the time will depend on the rate of growth of each kind of tree) plant your young trees where they are destined to stay. In our cold climate it has been established beyond a doubt that the spring is the proper season for planting. It is always a great trial for a tree to be transplanted, but much less so in the spring, when everything is in its favor, than in the fall, when everything is against it. Choose a cloudy or rainy day in the spring, and, without leaving home, with no trouble, without breaking any roots, you will take up and plant at once, without allowing the roots time to dry, one hundred young trees, certain to grow in less time than it would take you to go the woods and dig up ten trees, with a poor chance of their taking root and living.

These young trees will cost you nothing; your children will soon learn how to weed and take care of them, especially if you set them the example. Our own children when quite young, took pleasure in sowing acorns and watching the growth of the young oaks as they came up. By sowing, you can procure, with no expense, any number of young trees, and rewood, by degrees, all the land which is not fit for cultivation and ought to have been kept as wood land.

There is a general prejudice against growing forest trees from seed; people think it takes too long. It is a great mistake, as will be found on trial. Here Mr. Joly showed samples of black walnut, soft maple, oak and elm, grown by him from seed; these samples con-

sisting of trees one year, two years and three years old, showing the great progress of growth from one year to the next.

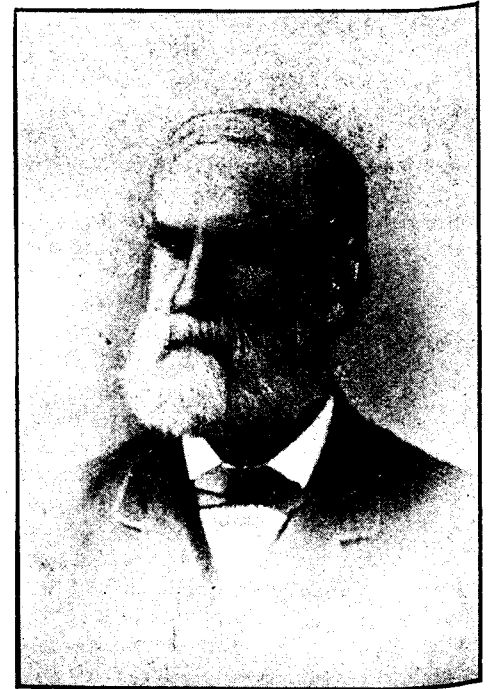
But, do not forget to fence carefully your nursery and your plantations, so as to keep out the cattle. No use planting trees without fences, the cattle will destroy everything.

In many cases nature will spare you the trouble of sowing where the ground is favorable, in July and August, along the ditches, the roads, the fences, on the moss on barren patches; wherever there is a little dampness in the neighborhood of the elms and soft maples, you will find hundreds of young elms and maples, just sprung from the seed fallen from those trees; plant them in your nursery; try it this summer; the seed of the elm is so minute and delicate that it is better to pick up those young seedlings than to attempt sowing the seed.

In the maple groves the ground is covered with a regular carpet of young maple seedlings. You can pull them up easily by hand in the fall or early spring, when the ground is still damp, without breaking any of the small roots. Plant them at once in your nursery.

It is very difficult to collect pine and spruce seed. Early in the spring, when the ground is still soft and spongy, in the pastures, near where those trees grow, you will see a number of young pines and spruces that you can pull up very easily; plant them at once, for that kind of tree you must shelter them from the sun until they are well rooted.

Whenever the ground of a garden has been dug up and worked in the fall, if there are any maple or ash growing in the neighborhood, it will be noticed that the ground, in the spring, is more or less covered with maple



HON. J. K. WARD.

and ash seedlings, grown from the seeds fallen from those trees. It takes a very little time to pull up and replant hundreds of them, and scarcely any of these will fail. Of course they must not be pulled up too roughly or it may damage the delicate roots; if the ground is too hard, use a trowel. As much as practicable, they ought to be pulled up when they have only got their two first leaves, which are easily known by their peculiar shape, long and narrow, from one inch and a half to two inches long and about a quarter of an inch wide.

For several years past I have been seeking the cheapest and, at the same time, most effective mode of restoring the woods, where they have been destroyed. Many of our old settlements are completely denuded of trees, and I can recommend this simple mode as the best, from my personal experience. Let those who suffer for the want of fuel, of timber for building, of trees for shelter and ornament; and those who would look to have a sugar maple grove at their door; let them start their own nurseries this very next summer. It will entail no expenditure of money, take but very little time and repay them bountifully.

Mr. Joly, continuing, alluded to the number of black