

THE FORESTS OF ONTARIO.

Having given, from the report by Mr. R. W. Phillips on the necessity of preserving and replanting forests in Ontario, voluminous extracts as to the treatment of forests in other countries we now proceed to quote from the same authority information as to our existing forests and the localities where they should be preserved or reproduced:—

THE HEIGHTS OF LAND OF ONTARIO.

We will now proceed to consider, in the light afforded us by the preceding, what should be done to preserve the due proportion of forest and consequently regular summer rainfall in Ontario. My readers will have noticed of what vital importance it is to preserve the higher lands in forest. There are four elevated ridges or plateaux in Ontario. The first and nearest of these is that, well known as the Oak Ridges, north of Toronto about thirty miles, which passes round to the west, coming at Hamilton close to the Lake, going round the head of the Lake, and dying away in the Niagara Peninsula. Going eastward from the same point, 30 miles north of Toronto, it gets much nearer to the Lake at Cobourg; passes on, strikes the Lake at the Trent and dies away there. This ridge being near the front, and entirely in the older settled portion of the Province, has probably long ago altogether passed out of Government hands. Much of it is by no means the best of soil, and could it have been retained in timber, and the height of the trees increased by replanting, the benefit to the Province would have been incalculable; for this long belt of forest would have met, and precipitated into rain, the moisture of the southwest winds coming across Ontario and Erie, which rain would then have frequently and regularly fallen through the summer on the great cultivable area of land to the north, instead of passing, as it now does, largely on to the Nipissing forests. In any scheme of planting forests for the benefit of the Ontario climate, the reforesting of portions of these ridges would exercise an influence extremely valuable. I should therefore recommend that the possibilities of working in this direction should be carefully considered.

THE WATERSHED BETWEEN KINGSTON AND NIPISSING.

This is a true watershed, the rivers running both ways from its summit. The height of land extends, with a slight curve to the north, from Kingston to Lake Nipissing. To the east of this all streams flow into the Ottawa, to the west of it they flow into Lake Ontario. Much of the land on this ridge is still in the hands of the Government, and, both for purposes of increasing rainfall, and preserving moisture at the source of numerous and important streams, it would be well that large masses of forest were preserved along the whole line. Along this line, if possible, hundred of thousands, or even millions of acres might be left in forests, for this ridge would be the preserver of fertility and source of moisture to the whole of eastern Ontario, from Toronto to the Ottawa. If this line should be allowed to become deforested, very injurious results may be expected throughout all Ontario, east of Toronto. On the other hand, if forest be maintained there, clearing can then be proceeded with along the whole northeast of the preserved forest, and this cleared region will then receive the spring and summer rain precipitated by the preserved line of forest along this watershed.

THE WATERSHED OF WESTERN ONTARIO.

This is a height of land about the centre of western Ontario, and is best known as the locality of the great Garafraxa Swamp, which contains many thousand acres. Such of this as is not in Government hands, might, no doubt, easily be obtained, and probably, much land in the neighborhood cheaply added thereto, and the timber on the whole reservation carefully preserved and increased by planting. This central point is a thousand feet above Lake Ontario, and from its four sides the rivers run to the Georgian Bay, to Lake Huron, to Lake Erie, and to Lake Ontario.

THE BLUE MOUNTAINS.

This is a ridge of mountains at the extreme north of peninsula, extending from near Collingwood, past Owen Sound, and to the northern point of the promontory extending between

Lake Huron and Georgian Bay. Much of this is yet in the hands of the Government, and much of it should, if possible, be preserved in timber.

For the purpose of attracting rain in summer and spring, which would otherwise probably pass to the north on its way to the pole in the great equatorial air current, there is little reason to doubt that large masses or belts of forest, left standing on these ridges, would be more efficacious than a much larger amount left scattered through the country. Moreover, these elevations are the natural storehouses and reservoirs of moisture. The woods on their slopes were intended to hold the water of rain and snow from flooding the land when it was not needed, and to deal it out in creek, river and underground channel, as it should be needed throughout the year. Any one who has read the valuable records, examples and statements, collected and compiled in the preceding part of this volume, will need no further evidence, and will well understand, on being shown the heights of land and watershed, what should be done with them. It is extremely desirable that they be, where possible, maintained in a forest state, the manner of doing which has been previously explained; and that, where deforested, they be, in preference to any other land, the scene of foresting operations.

It should be pointed out that it has been found in every country where forestry is practised, expedient to set in operation several nurseries for the purpose of raising the seedling trees adapted for planting, of such varieties as are most suitable. These should be selected, not necessarily in any of the localities described as heights of land, but as a small portion of land would be sufficient, in any part of the country, where the soil and situation are considered most favorable for the young plants, considered with regard to their future destination. This can be well learned by consultation with those who have made such experiments, of which some are reported in these pages. It may be remarked that, although it is recommended by some experimenters to rely on the forest for seedlings, yet in other countries, where equal or greater facilities exist in that respect, nurseries are always found necessary, and would, for various reasons, probably be so here.

It would appear that, in planting or preserving these heights of land, the trees chosen should be largely of the pine variety. In the first place, their height is of great additional service. 2nd. They are evergreen, and preserve deep forest shade and shelter in summer and winter, spring and fall. 3rd. The soil of these localities is likely to resemble that found suitable to these trees in other lands. 4th. They may be relied upon for a paying return, year after year, if preserved with care, as this is the most valuable tree for commercial purposes. 4th. They will, many authorities say, grow to a size fit to cut much sooner than the hardwoods of equal value. 6th. They can be, it appears, very successfully interspersed with the hardwoods, especially the beech, which would add to the plantation all the advantages of a deciduous forest.

THE GREAT FOREST TO THE NORTHEAST.

As mentioned in the first part of this book, there is a great and largely untouched forest to the northeast of the Province of Ontario. The reason why this mass of forest has not been ere this more deeply penetrated by the settler is, that the land is not nearly so good for agricultural purposes as that in the older settled districts of the Province.

In one word, it is the Laurentian formation, an outcrop of the backbone of the world, and that backbone, unlike other bones, contains no lime; it is a granite formation, and, though there are in parts of it opportunities for obtaining lime from the gneiss rock, yet, do what you will with it, this district will never equal in an agricultural capacity (*ceteris paribus*) that based on a limestone formation. The detritus of granite is not, and in the nature of things cannot be, for agricultural purposes, in any respect the equal of the detritus of limestone. This great region is reached from Toronto at a point near Gravenhurst, and its border would be marked by a curved line from Gravenhurst to a point about five miles east of Kingston. To the northeast of all this line is a vast mass of

forest, pierced in many points by colonization roads, and interspersed with clearings along its southern edge. To this district we may add the Muskoka and Parry Sound regions, which are, in many respects, similar. In those there are situated great pine districts, many of which have been cut over by the lumberman, while much is yet untouched and in the hands of Government. It is, it appears to me, a matter of great importance, to preserve many of the pine forests in these vicinities, and that for these reasons:—

1. They are the true reserves of the older districts of Ontario.
2. The land whereon they stand, can never yield, for purposes of agriculture, anything like the return it is capable of producing, if maintained in continual pine-bearing forest.
3. If proper care be taken these great districts can, by the adoption of European methods, be placed in a state of continual reproduction, which will allow, every year, a very large amount of valuable pine to be cut without clearing the land or in any way injuring the forest capacity for production.
4. It would be far better to commence the preservation of forest areas along the present existing line of clearing than to commence similar operations much farther back. If, as is stated, the land is much better farther to the north, it would be better to renew the clearing there, so as to leave a broad belt of forest to the south of the new settlements; for a forest district to the south (without prejudice to the height of lands considerations) will attract summer showers to the cleared land north of it, while from a north forest comes little rain at the season when most needed.

PROTECTION FROM FIRE.

The great difficulty in maintaining forests in this country lies in protecting them from the ravages of fire, to which they are peculiarly subject. Our hot summers dry the edge of the forest, the cuttings left by the lumberman greatly increase the danger, the cattle of the settler dry and impoverish the edge of the forest for many miles, a dry season comes, fire is ignited by the clearing fires of the settler, by those of the lumberman or the hunter, or it may be at some point where the railway has touched the forest line, by a spark from the locomotive. There are two seasons when fires are likely to run—the first is during the hot months of summer, the second late in a dry fall, when the fires run on the thick carpet of dry leaves. This last I think the more rapid of the two. I have seen it come miles abreast through the forest with the speed of a fast walker, firing every inflammable substance in its way. The terrible devastation caused by these fires when under full headway is ruinous beyond imagination. Hundreds and thousands of square miles of beautiful forest have been reduced to ashes in periods of a fortnight or even of a week. It has been well remarked by persons fully competent to express an opinion on the matter, that the fire destroys more timber in Canada than the axe. If, then, some means could be devised to check this devastation, the result would, no doubt, be extremely beneficial to the country.

The recommendation I have to make, with respect to these forests, is one based partly on the character of the soil, partly on the practice existing in India and in Europe, and pursued there with the same intention. It is impossible to preserve the extensive Canadian forests from fire without appointing extensive ranges, few or many, as may be judged expedient, whose business it shall be to carry out, in this country, as far as their numbers will allow them, the policy pursued in European countries of guarding against fire, giving warning where it occurs, and prosecuting all individuals who infringe the fire laws established by Government. To my own knowledge, the laws enacted by the Ontario Government with reference to the management of fires, their lighting and extinguishing, are carelessly observed, or even altogether ignored in the back districts through which I have travelled. I should, therefore, recommend that a certain number of men be appointed to watch breaches of these laws and institute the necessary prosecutions.

The East India practice to which I refer is this. In the vast Indian forests, under the

careful supervision which has been established there by the Indian Government, every effort has been made to suppress or hold in check what with them is a still more dangerous enemy than with us, the ignition of the forests. The principal means used and recommended by them is, the cutting of what are called fire lines through the forests for long distances. These lines, it is recommended should be made two hundred feet wide, and be kept quite clear of brushwood, or any other inflammable material.

In travelling through different parts of this northeastern district of Ontario, and having in successive years passed over several hundred miles of it in different directions, I became decidedly of the opinion, that the whole country was far better suited for extensive grazing grounds, interspersed with manufacturing villages, than to be given out in one or two hundred acre lots to the ordinary settler. Considering the character of the land, I am of opinion that many ordinary settlers will not be able to give it that care which alone can maintain its fertility; I fear they will in many instances, be obliged to overcrop it, to impoverish it, and to abandon it. The granite formation, I fear, will never show the staying qualities of the limestone-founded portions of Ontario. On the other hand, I think if much of this land were given out to men of capital, who would be willing to establish large grazing farms thereon, they would be able to cover the soil with a heavy clover sod, which, with careful management might be maintained for ever.

I will, then, suggest what would be my plan if some millions of acres of this vast forest were mine, and I were desirous of preserving it from the ravages of fire. I would cut the fire protecting lines, as used in India, through and through it at different points, clearing them thoroughly from brushwood, but I should make them wider, say, a hundred yards broad, and I should suggest that paths a hundred yards broad cut through these forests, and fenced at each side, would make excellent grazing runs for cattle, if got under grass, and would operate as most effectual firebreaks. I should think that an arrangement might be made whereby graziers would gladly lease these lines, undertake to seed them with grass and use them for the fattening of their cattle, which would readily find water at the numerous streams these firebreaks would necessarily cross. A portion of the consideration paid for the use of these grazing lines, might well be the undertaking on the part of the grazier to send a certain number of men to extinguish any fire which might arise in his vicinity. In this manner, I conceive that, by the assistance and supervision of a small force of Government ranges, very large forests might be preserved from the ravages of fire.

In connection with the manufacturing capacities of this region of country, I would remark, that it possesses many and valuable water-courses, which would dry up were the country cleared, but which the retention of the forests will retain in full value. I would also state, that the quality of the water flowing over the granite bed, it being from lime, is remarkably well adapted to various textile manufacture, and would suggest that large manufacturing villages and towns might find occasion for profitable existence in the heart of the large forests which, I conceive, Government should retain in this part of the country.

I would also suggest that such towns and villages will by no means lack communication with other parts of the country, as the Canada Pacific, and its connecting railways, will pass through the present wilderness near the vicinity where it is desirable these forests should be maintained.

I would here suggest that large portions of forest might be preserved, let us say after the merchantable lumber has been carried off by the lumberman, by allotting them in free grants to persons who would undertake to maintain the land in its wooded condition.

The opinion of Mr. Ward, of Montreal, is, "To have our country remain well wooded for many years, it is but necessary to give the trees indigenous to our country leave to grow, and there will be no necessity to plant. I have no doubt but that much of the land that has been