

NEED FOR FOREST RESERVES.

Lumbering Has Meant Forest Destruction—It Takes One Hundred Years to Produce a Forest Tree Large Enough for Lumber.

Not long ago a report of disastrous forest fires in Michigan appeared in a German paper. The comment of the German editor respecting American fire waste was extremely caustic. The destruction of our forests, whether by the carelessness of our lumbering men or by fire, brings a train of evils in its path infinitely greater than the mere market value of the timber destroyed. The destruction of our forest means eventually the destruction of our agricultural areas and of our national prosperity.

The following able article on the forestry question is from the pen of Mr. H. R. MacMillan, of the Dominion Forestry Service. Mr. MacMillan has treated the matter in a comprehensive manner, showing the evil effects of poor methods of lumbering, and of destruction by fire. He also points out the necessity of guarding and properly caring for Government forest areas. He gives tables showing the extent of our forest areas, the annual cut of lumber, etc. Mr. MacMillan says in part:

Permanent Forest Reserves.

"The necessity for permanent forest reserves is new to Canadians, but it is, in spite of its newness, none the less imperative. Conditions have changed in this country from the days when the land was covered with valuable timber, the population was small, and the foreign trade was, in proportion to the timber resources, negligible. A brief survey of present conditions is sufficient to show that the forest resources of Canada are no longer inexhaustible or overwhelmingly large, that the domestic consumption has reached a point where it is much greater than the annual increment in Canadian forests, and that we are just entering on a period in which world-wide scarcity of useful timber is opening up such a market for Canadian forests as they cannot long sustain.

"The fact that vast territories in Canada are covered with trees has given rise to altogether false ideas of the quantity of timber available for manufacture. Were the whole timbered regions of Canada still as heavily clothed as it was when white men first saw it, we might be justified in saying that, with care, the supply is still inexhaustible. But there has been no care, and the forest regions of Canada have changed much in appearance and value during even the last fifty years.

No Second Crop.

"Lumbering on this continent, through no fault of the lumbermen, has almost without exception been forest destruction, and only rarely and accidentally has a second crop of timber appeared on the land upon which all the valuable trees have been cut. An extravagant and incredible waste has always marked the lumber business of North America. Even now, in the Laurentian Mountains of Quebec the French settlers are hauling to the mill white pine butts which were cut in the logging operations which cleared this country over twenty years ago. These butts, three and four feet through, were then left in the woods, being too large to float in the small streams. After lying in the brush twenty years or more, they are now, though partially decayed, valuable enough to haul several miles to the mill. Where lumbering has cleared land subsequently used for agriculture or some other productive industry, it has, of course, been beneficial. It is where the land is unfit for agriculture and is now in an unproductive condition, such as may be seen in the sandy or rocky soils of every province from the Atlantic to the Pacific, that the destruction of the forest by lumbering has resulted in a loss to the country.

Enemies of the Forest.

"The fires which, fed by the dry resinous slash, have followed lumbering operations, have been the most destructive enemies of Canadian forests. Few Canadians have any idea of how widespread and devastating forest fires have been. It is estimated that at least six times as much timber has been destroyed by fire in Canada as has ever been cut since the first hatchet was landed from Europe.

"The greatest damage wrought by these conflagrations is that which is least evident. The timber is only the crop; the soil, its ability to produce timber and to hold its place

in nature's balance, these are the capital of the country, the sole source of wealth in many large territories. The whole value of the soil, in many timbered districts, especially in the mountains and in the North, consists of a layer of a few inches of humus. Beneath this there is, in the region unfit for agriculture, nothing but rocks or sterile sand. Repeated forest fires, with their intense heat, have over large areas completely consumed the rich upper layer of the soil, the product of centuries of disintegration and plant growth, and have left a surface as unproductive, as desert as the Sahara.

"Even where the fire has not actually burned the soil, it has so completely removed the protecting vegetation that on the steep slopes all the loose earth or valuable ingredients are washed away or leached out by rapidly running water. The damage due to fire is in amount inconceivable and in permanency irreparable.

Remaining Forest Areas.

"There still remains, in spite of fires and exploitation, large areas of forest. Detailed and exact information is still lacking, but it is estimated that, including the timber fit for manufacture into pulpwood and lumber, there are about 120,000,000,000 cubic feet of merchantable wood standing in Canada to-day. This is just about one-quarter the quantity estimated to be available for manufacture in the United States. It is not nearly enough for our future needs in Canada, unless we adopt an advanced policy of forest administration that will enable us to treat our forests less like a mine and more like a crop.

"Canadians need never hope that their forests will permanently supply the demands of both Canada and the United States. If our timber lands were open to the unrestricted requirements of the United States, as they might be after the exhaustion of the United States forests, they would be swept clean within ten years. A realization of this, a long experience of the havoc of forest fires, a knowledge of the inevitable barren result of the exploitation of the forest by private parties who have no interest in the future, has induced the Government to adopt a new attitude towards the forest, to treat it as a crop like wheat or salmon and not as an irreplaceable natural resource such as coal or iron. The solution of the impending timber famine has been sought in a policy of forest reserves.

Forest Management in Germany.

"Forest reserves are better described as national forests upon which timber is grown as a crop and from which the trees are removed as they reach maturity, always in such a manner as to provide for the immediate start of another timber crop. This system of forest management originated in Germany, where it has reached its highest development and where now nearly sixty-four per cent. of the total forest area of 34,769,794 acres is under a more scientific and intensive management than prevails on most Canadian farms.

In Canada nearly 160,000,000 acres have been set aside as forest reserves, divided by provinces as follows:

Quebec	133,312,640
Dominion Lands	13,539,280
Alberta	9,310,720
Manitoba	2,288,160
British Columbia	1,467,800
Saskatchewan	473,600
Ontario	12,794,880

Total 159,646,800

Unfit for Agriculture.

"These reserves consist of areas, unfit for agriculture, withdrawn from settlement and, except in Quebec, have been given more fire protection than other public timberlands. But there management has ceased. Owing partly to lack of money, and partly to an absence of expert advice, nothing has been done to study these areas to see that the mature timber is marketed, to see that when one crop is removed there will immediately be produced on the same ground another crop of some valuable species. That is, on the forest reserves no forestry has been introduced. It is as if a large land owner had set aside a field of grain, neglected to reap it and left it standing for several seasons with no protection beyond a scarecrow, trusting that when a period of need arose he would find in this field a valuable crop ready for cutting. Excepting on the forest reserves, managed by the Dominion Government, exactly such a policy yet prevails.