Forest Problems in New Hampshire,

by

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FOREST PROBLEMS IN NEW HAMPSHIRE.

Observation of New Hampshire forests reveals two leading problems, that of reforesting the White Pine areas in the southern portion of the state, and of maintaining the output of spruce in the northern portion.

White Pine has an unrivaled growth in New Hampshire. Twenty-five years sometimes produce a merchantable crop suitable for the manufacture of boxes, pails and matches, while forty years produce trees that begin to have timber value. There are instances of pine land having been cut over twice by the same man, the profits of the second cut being greater than of the first, owing to changes in market conditions. Only a few scattered groves of the old, original White Pines remain.

The bulletin of the Twelfth Census relating to New Hampshire agriculture shows that one million seven hundred and sixty-four thousand (1,764,000) acres of land in the state have reverted from improved to unimproved farm land since 1850. These abandoned fields and pastures lie, for the most part, south of the White Mountains and contain much promising pine growth. One may find well-made stone walls in woods fifty years old, indicating that the land was once tilled; and choked and dying apple orchards in the woods are not infrequent. So much abandoned land would make a bad showing for New Hampshire were it not for the fact that through intensive cultivation, farm values have increased by eight million dollars during the last decade. Thirty-seven per cent. of the land area, chiefly non-agricultural, has never been taken up in farms. This with the unimproved farm land makes a total of more than 70% of the land area under some form of forest cover, a portion of it is, however, brush and not forest land. The chief difficulty from a silvicultural point of view is that nature's seeding has been in most places irregular.
As the pastures grow up to pines, a few trees appear first getting the start of the others, becoming limby and less profitable for lumber, and interfering with the growth of the trees that come later. It is estimated that the oncoming pine forests will utilize not more than sixty per cent. of nature’s forest and soil capacity, while some of it will utilize only thirty per cent. The problem is to develop this growing forest so that it will utilize the full capacity of the soil, by (1) Planting in the fall places. (2) Thinning when necessary. (3) Reforesting the cut-over areas, and (4) Extending the forest area over land not profitable for agricultural crops.

Numerous experiments in sowing seeds of White Pine and transplanting young trees have been made in New Hampshire. The chief one of sowing seed was made by a gentleman in the town of Winchester, who sowed two hundred and ten acres, taking advantage of a good seed year and collecting the seed himself, and sowing about a quart to the acre. The ground not being well prepared the seed did not reach the mineral soil in all cases, and the stand is only partially satisfactory. On a portion of this tract only two hundred trees to the acre are now found after five years; but over other portions a good stand is found of about twelve hundred trees to the acre. Experiments have been tried with fair success in transplanting natural seedlings two to ten years old. The best results are seen in Westmoreland, Moultonborough and Bedford, but none of them are on an extensive scale. Of groves thinned and pruned there are interesting examples throughout the pine region of the state, but the practice is not at all general. The great need is definite, practical instruction, attractively presented, in agricultural and other meetings. The Society for the Protection of New Hampshire Forests provides addresses with lantern photographs freely throughout the state. There is need also of a demonstration forest, conveniently located for showing results in management.

Taken as a whole, there is an extensive and very valuable second growth of White Pine in the state. In this respect New Hampshire differs from the western pine states, where the new growth is less vigorous and rapid. Besides, the soil in large portions of New Hampshire is better adapted to forest than to agriculture. The state promises to be a timber-producing state in years to come. Much more profit, however, can be secured by
improved management, and the forest area can be profitably extended. To supplement nature’s seeding and to plant pieces of non-agricultural land not forested, the Society secured the introduction in the legislature of a bill for the establishment of a state nursery through which forest seedling trees and seeds adapted to the soil should be grown and distributed throughout the state at cost. This bill passed the House of Representatives, and though reported favorably by the Senate committee on forestry, failed of passage in the Senate.

The spruce problem is different. The mountain region and northern portion of the state contain some forests of virgin spruce, much of it, however, on the high slopes where diameters are small. In a felling on Black Mountain forty trees six inches in diameter averaged one hundred and twenty-five years in age. The pulp and paper companies control the greater portion of the spruce in the state. As their mills are large and expensive it is the policy of the three most important companies to cut to a diameter of ten inches or sometimes twelve, expecting to return after twenty or twenty-five years for another crop. One of these companies cuts its logs into twelve foot lengths in the woods in order to remove them with less injury to the young growth. This restricted cutting applies only to the valley and lower slopes, however, because on wind-swept places, including all high slopes, and on all steep slopes it is not profitable except to cut clean. These high forested slopes are particularly attractive to the summer visitors in the mountains, who are reported to leave annually $8,000,000 in New Hampshire, a sum equal to about one-half the annual lumber output. The aesthetic side of forestry is more important, therefore, here than in many other places.

The wasteful method of the lumbermen on these high slopes is sometimes excessive, two-thirds or more of all the trees being left upon the ground, trunks down hill, in order that the remainder may roll down over them to the road below. Such timber should be cut only by a conservative use of the selective method, and this can probably be done only when the government takes control. New growth reappears very slowly and in places never. Besides, the smaller concerns slash the woods recklessly in the valleys as well as on the slopes, having no interest in a future crop.

Until the year 1869 New Hampshire owned the greater portion of the White Mountain region which it then sold for $25,000. It
is reported that a single tract of spruce on the northern slope of the Presidential range was recently purchased by the company now cutting there for $600,000.

What can be done to prevent the rapid disappearance of the spruce forests on the high slopes and in the places of particular scenic value? This question is hard to answer. The principle of state interference by restricting the cut to a given diameter below which the operator may not fell his trees has been proposed in previous sessions of the legislature and defeated. This principle appears to be contrary to American independence, curtailing a man's right to do what he will with his own, and while there are instances of similar paternalism in our government—confiscation of diseased cattle for instance—the farmers to a man are opposed to such restrictive legislation for forest cutting. Moreover, no restrictive law has been formed by any of the states that cover the multitude of varying conditions in the forest. The principle of state ownership alone remains, and the education of private owners to better methods. While New Hampshire has no state debt, it is not a rich state. The burden of taxation is felt, particularly in the hill towns from which the forest has been removed. Population in these towns has greatly diminished, and the families remaining have difficulty in supporting the schools and many miles of road. In the legislature members from these rural towns, not yet aware of the true significance of the forest, have a preponderating influence, and refuse to submit to further taxation for forest purposes. They do not yet realize that New Hampshire can do in proportion to her means what Connecticut, Massachusetts, New York and Pennsylvania are already doing. State ownership, therefore, cannot be brought about except gradually, and meantime the virgin forests are rapidly disappearing.

A solution has been proposed through an appeal to the federal congress for a national reservation in the White Mountain region similar to that proposed in the Southern Appalachian Mountains. It has been objected that it is inexpedient for the United States to interfere with the forest management of any single state, but the interstate character of the White Mountains is sufficiently established by the fact that the waters flowing from them—the Androscoggin, the Saco, the Merrimack and the Connecticut rivers—supply power to more factories than any other waters in the country, and their even flow is of vast importance, and that
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the mountains are visited already annually by people from every state in the Union for rest and recreation of a kind found in few other places. As nothing can be done by congress until the facts of the case are fully set forth, the Society for the Protection of Forests has had introduced in the state legislature another bill appropriating $5,000 for an examination of the forests in the mountain regions of the state by the Bureau of Forestry at Washington. This bill has passed, and the work will shortly begin.

The plan for a national reservation has the emphatic endorsement of President Roosevelt, Secretary Hay, and the senators and representatives from New Hampshire and prominent citizens in all parts of New England are giving active support. Aside from this hoped-for reservation much benefit must result from the examination itself, because it will give to New Hampshire people knowledge of their own conditions and offer suggestions as to the best means of managing our mountain forests.

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