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The Forest Policy for Canada.

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ADDRESSING the Canadian Club on "The Forest Policy for Canada," Dr. B. E. Fernow, Dean of the School of Forestry, University of Toronto, said:

Mr. President and Gentlemen of the Canadian Club,—My speaking to you involves the ungracious duty of finding fault with my hosts. I am to prick your conscience into realizing that, in one direction at least, you have been neglecting your duty of citizenship and patriotism, namely with regard to your timber wealth. I understand that these Clubs are organized to foster patriotism and good Canadian citizenship. I am not a Canadian citizen as yet, as far as a formal declaration makes a citizen, and from that point of view you might think me, and my proposition to scold you, out of place. But I have never believed that citizenship consists in declarations, in swearing allegiance to a person or a document, in shouting for a flag, or in singing patriotic songs and bragging about my country. My citizenship, as well as my philosophy, has always taken another turn. I am not an optimist; neither am I a pessimist, but I profess myself a meliorist. Patriotism to me means a duty, a self-imposed duty to find fault rather than to admire, to detect defects and deficiencies and try to mend them; to improve, wherever I may be, the conditions of life, not only for myself, but for the community in which I live, and not only for the present generation, but for permanency, for future generations.

Perhaps this attitude is a moral outgrowth of my profession, for forestry is an art which, in the first place, is continuously bent upon improvement, and it is concerned with the future, a long distance future, even more than with the present.

Its political object is, indeed, to provide for the well-being of future generations, to resist, in a manner, the greediness and the thoughtlessness of the present generation, to protect the interests of unborn citizens. If caring for the continued well-being of our country is patriotism, then forestry, you must admit, is sublimated patriotism, and the forester, no

matter to what country he owes first allegiance, is, by the mere character of his calling, the patriot of the world.

The fault I have to find with you is that you have so long remained ignorant of this truth, that you have not informed yourselves thoroughly as to this one condition of your country, your timber wealth, that you have not found fault with the absence of a policy in its treatment which looks to the future as well as to the present, or, at least, have not actively moved to improve the methods of its use, namely, to introduce forestry methods.

Let me tell you, now is the time for all good citizens to come to the aid—not of the party, but of a true endeavor to keep your country in satisfactory condition for all generations to come.

It was just about a quarter of a century ago that the first efforts were made in Canada by some patriots to bring about a more conservative use of your timber resources, namely, when, in 1882, the first American Forestry Congress met at Montreal. But the results of this movement have been small indeed, and you are still going on destroying and frittering away your richest resource. This, I consider, can only be due to ignorance as to the value, and as to the meaning, of your forest resources to the future of your country.

Are you aware that Canada is destined to have a population of ten times the present number in less time than it takes to grow a sawlog?

Are you aware that the amount of log timber standing on your remaining timber domain, large as it appears when compared with present consumption, is small, very small, when the possibilities of the future, and the increasing demand for both land and timber, are considered?

Are you aware that your neighbor to the south has not thirty years' of log supply in sight to meet his increasing needs, and that soon, nay, that now, the clamor for free admission of Canadian supplies will start such an activity in your woods as was never dreamt of?

Are you aware that, accepting the highest estimate of your commercial log timber as likely correct, the present sawmill capacity of the United States could exhaust it in less than fifteen years?

Are you aware that there is no other source than the Canadian supplies to draw on for the class of wood that satisfies our requirements, for all the export countries of northern-grown woods find now, all at once, their timber resources near

exhaustion and are curtailing their cut and export? And you should realize that the tropical woods are not serviceable.

Are you aware that, therefore, Canada has in its timber wealth an asset which will be worth infinitely more if husbanded and left to the future use than if the money derived from its present sale were placed on compound interest for the same length of time? For prices of wood materials have grown in the past not only, but will grow in the future much more rapidly than those for any other materials, as it becomes known that the forests of the temperate zone, where industrial nations live, are nearing exhaustion.

Are you aware that the consumption of wood in all industrial nations has grown during the last two decades at a compound rate of three to five per cent. per capita per annum, and hence the decimation of timber is going on in the world at a geometric ratio?

Again, are you aware that, aside from the material value and direct use of your timber resources, there attaches to the forest, merely as a surface condition of the soil, an indirect value, which, in some localities, is of much more importance than the wood material it furnishes?

Great talk about the splendid water-powers that are to make Canada's great future, is now the order of the day. Yet, at the same time, you do all you can, with axe and fire, to impair this wonderful resource. For equable waterflow, which is an essential condition for developing effective water-powers, is not to be had without preservation of forest cover along the streams.

Let me tell you in a few words, broadly and frankly, what the condition and the treatment of your timber wealth is, as far as I have light on the subject.

Your vast Empire of nearly four million square miles has relatively only a small area on which commercial timber does or can grow, namely one area occupying the greater part of the Eastern Provinces south of the Height of Land, which may be set down as less than 300,000 square miles; and another, 2,500 miles away from your eastern civilization, covering the mountains of British Columbia, which, according to my calculation, may perhaps contain 150,000 square miles; or, altogether, there are less than 500,000 square miles of the 4,000,000 which may contain, and do in part contain, commercial timber fit for the arts and export. The rest of the vast territory contains woodlands, and sometimes even well developed forest, of highest value and importance to the localities where it exists,

invaluable for local use, but not to be counted in the commercial development of wood-working industries and for export demand. Although there does not exist detailed knowledge of this vast area of partially wooded country, a general knowledge of climatic and soil conditions suffices to predict the character of the tree growth in it. The future of the wood-consuming industries of Canada then depends upon the policy of the eastern Provinces and of British Columbia.

It must not be forgotten that in the eastern Provinces not only are there many acres under farm cultivation, but still many more acres are under wood which are properly claimed for agricultural use, so that, in the natural progress of colonization the forest area will eventually, from that cause alone, be reduced to probably below 300,000 square miles, say half and half on each side of the continent.

To show you that these area statements are not entirely baseless guesses and yet do not claim to be more than statements of probabilities or possibilities, I may say they are based upon the recognition of the broad fact that certain forest types are the result of certain types of climate and soil. In the east the Height of Land practically coinciding with the botanical distribution of the white pine, in British Columbia the known area of the distribution of Douglas spruce and Giant cedar, have served to determine the limits.

Who knows what the condition of the forest area is? All that is known is of the most general character. A large part, possibly the larger and better part in the eastern Provinces, is or has been under license and is robbed of its best timber, and fires have killed or damaged large areas, probably most of the lumbered areas. Certainly, nowhere has any care been used to secure a desirable aftergrowth, for the cutting is done with the sole purpose of present revenue. As to the saw timber still available and ready for use, no definite knowledge exists.

At the great Forestry Convention in Ottawa two years ago a placard announced what was considered a stupendous figure as the best estimate for the saw timber standing in all Canada, namely, not much less than six hundred billion feet. In order to understand what such a figure means, you must compare it with some figure of consumption. The mills of the United States cut now annually at least forty billion feet of timber, and about an equal amount of wood is consumed in the shape of bolts, poles, posts, railroad ties, pulpwood, etc. Great Britain, the most careful of all wood consumers, since she has to import practically all, at a cost exceeding her entire iron product, uses

perhaps ten billion feet. The present cut of Canadian mills with about five billion feet would indicate supplies for a hundred years to come. But can Canada shut herself out from the world? Or should she rather so shape her forest policy as to be able to control the wood market of the world? This she could undoubtedly do if, even at this late day, a vigorous forest policy could be inaugurated.

I give you liberty to double these guesses of timber supplies, to add at full value the scattered timber areas of your middle West, all of which would be unreasonable, and still your economic conditions, as regards timber supplies, are by no means such as to justify neglect, especially when you consider the chance which the world's market offers. I repeat—now is the time for abandoning the politician's method, who works for the day and to please his party, and to substitute a statesman's broad view, who works for all time and to please the country now and forever. You know, of course, the methods under which timber limits are, and have been, hitherto contracted away. While the Government reserves ownership of the land and the right to change the conditions of its contract at any time, practically and in equity it has never yet taken advantage of these reservations, and it would take indeed a strong Minister of Lands to assert the rights of the Government and limit the old licenses or alter their conditions with a view to applying forestry principles. If only present fiscal interests, i.e., the raising of a revenue, were to be considered, perhaps the present methods of ground rent, stumpage and bonus charges, were as good as any that could be desired. But, if the Government has any interest in the future of the limits, it can be easily shown that these sale methods are inimical to it. While there have been of late some conditions introduced in these contracts designed to secure more conservative cutting, let me tell you that technically they are of little value, and need not be expected to lead to tangible results, especially as long as no technical supervision is applied.

Let me declare to you emphatically, in the absence of time to argue the proposition, that the present methods of disposal of timber limits, whatever advantages they offer to the Government in securing present revenue, and to the limit holders in amassing fortunes, they work destruction of the goose that lays the golden eggs. There would be little use for me here to go into technical details as to how timber lands may be managed for continuity; how reproduction of the timber cut is to be secured. Only one thing I would impress upon you, namely,

this, that there is no rule which may be laid down in an office that applies to all conditions, or is the best anywhere. Just as there is no medicine for all diseases, so in the woods there must precede a diagnosis of the actual conditions, and the method of procedure must be varied accordingly. There is, however, one essential condition without which no prescription will work, namely, to keep the fire out. I am aware that efforts have been made in his Province and in other Provinces to furnish fire protection, but when you look closely into the methods employed, you will find again that they are designed only for the protection of the present, the log timber, while the young growth, the hope of the future, the most endangered part, seems to be entirely neglected.

Fire protection in this country will never be effective until the morals of the community at large, by proper education, have been brought to a higher standard, so that it will be felt as a sin to destroy valuable property; and not until a stable administration of timber limits in the woods is organized and the ephemeral fire ranger is supplanted by the permanent forester, will there be complete success. I am also aware that forest reservations have been made here and there. Indeed, the Dominion Government, which, however, controls mainly the timber outside of the commercial belt, excepting parts of British Columbia, has of late made a very fair beginning in inaugurating a forest policy. Not only has it established forest reservations, but it has provided for a forest survey of the same, and an administration under technical advice, as well as establishing nurseries from which plant material is furnished to planters in the prairies. The Province of Quebec, also, last summer reserved the bulk of her unlicensed lands, and is beginning to organize for their administration. The Province of Ontario may be said to be the most vitally concerned, for here the most valuable remnant of virgin timber is still to be found. As long ago as 1886 an effort was made by the Government to exhibit interest in the future of this valuable asset by the appointment of an agent to report from year to year on forestry matters. Also a commission, composed in part of lumbermen, furnished a valuable report with suggestions as to a future policy. A few reservations—some six to seven million acres—are the result of the effort of these agents, but so far no technical administration of these, or indeed any practical forestry principles in the licensed lands, has been attempted, and the attitude of the Government seems to be a waiting one, with

a tendency to hang back. I shall not characterize its policy further.

One difficulty, to be sure, in introducing forestry methods in the absence of technically trained men, and this deficiency at least the University of Toronto is trying to remedy by the institution of a Faculty of Forestry, where a complete education in the theory of forestry is to be had. When the first graduates of this school are available, in the next two or three years, it is hoped, the Government will have advanced to a policy in which they can be utilized.

And what may be done to improve conditions—to enter upon a forest policy for the future? It would be practically impossible to change at once present methods of administration of the licensed lands. The rights and justifiable expectation of the licensees must of course be respected, and, although the Governments have reserved the right to change conditions in the contracts, this can equitably be done only by compromises in which the financial burden attending changes in conditions would have to be borne by the Government. These conditions must be made as far as possible mutually advantageous, but if there is loss of present revenue for the sake of the future, the Government must bear it. But, in disposing of new timber limits, a radical change to conditions favorable to conservative lumbering and re-growth could be directly introduced. Such conditions, let me accentuate, always mean curtailment of present revenue for the sake of future revenues. And here is where politics are apt to prevent application of statesmanship. Curtailing present advantages is to a democratic government no less a bugbear than to the individual, and both are inclined to let the future wrestle for itself.

In the United States, where the timber lands were never a special source of revenue to the Government, but where land-grabbing had been developed to a fine art, after much struggle, the people succeeded in having about one hundred and fifty million acres of land in the West reserved of the public domain for forest purposes, and presently you will find them spending millions of dollars in the purchase of forest lands in the East.

I may now, in conclusion, only briefly formulate the first steps which your Governments should take.

1. Extend the reservations policy to include all undisposed timber limits, withdrawing them thereby from the operation of the existing license system and other modes of disposal.

2. Organize a department under technical advice with a view to formulating plans for the management of these reserves and developing a proper policy of disposal.

3. Let this department make a reconnaissance survey of the reservations, and at first of such parts of the reserved lands as are likely to come into demand in the near future for colonization and timber supply, with a view of segregating the lands fit for colonizing from the reservations, and disposing of them in such a manner as to secure the largest present revenue from the timber on bona fide farm lands, and the best continued revenue from the bona fide forest soils.

4. Give notice to the present limit holders of the time when new conditions are to be imposed for the continuance of their holdings, and formulate equitable conditions for their operation with a view of preventing the destruction of the permanent value of your property.

What I desire of you is, first, to recognize the reasonableness of such procedure, and then to bring, as far as lies in your power, pressure upon your Government to carry it out.

One observation that has impressed itself upon me during my short stay in Canada, as showing a difference from conditions in the United States, is that, with you, public opinion seems to lead the Government less than the Government leads public opinion. That is to say, there is more initiative in your Government than in the States, and less initiative on the part of your citizens. I hope your Club exists to correct this lack of democracy.

If I have succeeded in arousing your interest and bringing your Club to a realization that here is a duty to be performed singly or by associated effort, I shall consider that I have exercised my first duty and privilege as a Canadian citizen.