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Montreal.

ANNUAL BUSINESS MEETING.

The annual meeting of the Canadian Forestry Association for the receiving and considering of reports of standing committees consideration of matters arising out of the Winnipeg convention, election of officers and other business affecting the cause of forest conservation will be held at the Chateau Laurier, Ottawa, on Wednesday, February 4, 1914. It is expected there will be two sessions and that during the day a delegation of members will wait on representatives of the Dominion Cabinet to present resolutions properly coming before that body.

Those desiring to bring forward motions of which notice is required should notify the Secretary at once that these may be included in the official call.

The annual meeting and banquet of the Canadian Lumbermen's Association, according to custom, will be held in the same place on the preceding day, Tuesday, February 3, and members of the Canadian Forestry Association desiring to attend the banquet may obtain tickets from the Secretary.

Further information will be contained in the official notice sent out to members, or may be obtained by writing the Secretary, Canadian Forestry Association, Canadian Building, Ottawa.

CHANGE OF ADDRESS.

Since the *Canadian Forestry Journal* is now issued monthly our mailing lists are revised with like frequency. Members who have changed their addresses, or who do not receive the *Journal* regularly and promptly are requested to write to the Secretary. Do this now before you forget it.

EDITORIAL NOTES.

There has probably never before been such a strong effort on the part of maple sugar makers to protect their pure product. The Chief Analyst for Canada recently analysed 128 samples of maple syrup and found 55 adulterated. It is reported that the adulterated samples were wholesome and palatable and a controversy has arisen. Some hold that as these adulterated samples are cheaper than real syrup and yet wholesome there is no reason why they should not be sold so that the poor man might get his 'maple' syrup and sugar as well as the rich man. The Pure Maple Syrup and Sugar Association of Quebec does not object to the sale of wholesome syrup made from cane or beet sugar, flavored with coal tar products, but what it does object to is the use of the word 'maple.' The controversy is going on warmly just now and the maple sugar men will undoubtedly make an effort to have a change made in the law and regulations to restrict the word 'maple' to products wholly of the maple tree.



The interest of the Canadian Forestry Association comes in to this controversy in this way: Maple sugar making is carried on in Ontario, Quebec and the Maritime Provinces and its centre is the Eastern Townships. Much of the land devoted to maple groves is fit for nothing but tree growth. A good maple grove properly worked and cared for is the most profitable use to which this land can be put provided a fair price can be got for the product. The claim is made that owing to the ease of making up substitutes for maple sugar and syrup, substitutes that contain nothing whatever of maple, the real product has been saleable with great difficulty. Many farmers have cut down and sold their groves for cordwood and the land is totally unpro-

ductive. This is a state of affairs to which conservationists are opposed. They want to see such land put to the best use, and the best use at the present time is a profitable maple grove. Maple syrup is a luxury and the people who buy it want to get 'maple' not syrup. They pay for 'maple' and they ought not to be humbugged with sugar cane or beets, no matter how life sustaining a combination of beet sugar and coal tar may be. The friends of forest conservation want to see the land devoted to its best use and will do what they can to keep rocky and non agricultural lands covered with trees instead of becoming barren wastes.



Readers of Canadian publications of all kinds and particularly readers of agricultural journals, have had dinned into them the dangers in the decline of population in rural Ontario—Ontario being the province in which the tendency is most marked. Rev. John MacDougall, Spencerville, Ont., has issued a book '*Rural Life in Canada*,' on this subject. He estimates that in the decade 1901-11 rural Ontario lost 373,567 people. One of the chief causes of this decline in population noted by Mr. MacDougall is the farming of soil unfit for cultivation. The invariable rule is found to be that rural depopulation is greater from those localities with the less fertile soils. Many of these soils are splendidly adapted to forestry, and Mr. MacDougall regards it as a duty of the nation to see that such soils are reforested and that further denudation of such soils be prevented. This is not a new story to the forest conservationist but evidently other people are arriving at this conclusion from another starting point. Some of the counties that have lost most heavily have large areas of abandoned sand lands and it would be interesting to follow this out county by county.

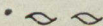
It was very significant that Hon. W. H. Hearst in addressing the Ottawa Canadian Club appealed for the support of lumbermen and the general public in his work of administering the forests of Ontario. This bears out what was said in these columns last month that the most important work before the Canadian Forestry Association was to arouse and educate public opinion. The proposals of forest conservationists are so self-evident that their clear presentation generally means their acceptance but the people are busy and they are many and the subject must be preached without ceasing. A synopsis of Hon. Mr. Hearst's address on another page will be read with interest and profit.



One subject that will not down is that of brush disposal. Almost every mail brings letters or manuscripts or printed articles on this matter. Burning has many advocates and others propose piling or lopping. Evidently the old method of doing nothing cannot long continue.



It is significant that not all the states' delegates at the National Conservation Congress at Washington were in favor of handing over the United States federal forests to the several states in which they are located. A specific and marked instance is the conclusion of the Oregon State Conservation Commission appointed by the Governor under legislative authority. This body after deliberating on this question came to this conclusion 'It would seem that everyone except those directly interested in profiting thereby has all to lose and nothing to gain by a transfer from nation to state. In our opinion the proposition is wrong in principle and would be disastrous in results.'



When Hon. J. K. Flemming, Premier and Surveyor General of New Brunswick was in Ottawa recently he stated that the new Crown Timber

Act of that province which went into force this year was working out very satisfactorily. It will be recalled that under the old Act all the timber leases ran out in 1918, and as practically all Crown Timber lands in New Brunswick are under lease that lease termination affected every limit holder. Under the present Act new leases are granted for twenty years, with the privilege of renewal for ten years more, rentals, stumpage, etc. to be readjusted every ten years. In the case of pulpwood the new leases are for thirty years renewable for a further period of twenty years. Hon. Mr. Flemming stated that practically all lease-holders under the old Act had taken out leases under the new and that he believed the new Act would prove satisfactory all around.



The movement in favor of the extension of civil service regulations to the outside service grows constantly. The *Ottawa Citizen* says 'A great service could be done to Canada by the inauguration of a civil service efficiency campaign, as the result of which all offices in the public service would be taken out of politics, and a merit system introduced which would guarantee that the best man for the job got it.'



The *Toronto News* thus concludes a thoughtful article on 'Forestry in Ontario.' 'In 1830 when forest conditions were less favorable than in Canada today the forests of Prussia produced less than 200 board feet per acre per year, giving the state 44 cents per acre net revenue. In 1907 this annual production had reached 427 board feet, with a revenue of \$2.52 per acre. Forestry has paid well in Prussia. It should pay in Ontario.'

During the past ten years, forest fires have cost Minnesota \$3,968,418.51. The fires burned over 1,682,669 acres. One great loss was recorded in 1908, when 405,748 acres were swept by fire, entailing a loss of \$2,003,633.

New Fire Prevention Organization.

Ottawa Branch of the Ontario Fire Prevention Association formed.

On Nov. 29 Mr. Franklin H. Wentworth of Boston, spoke before the Ottawa Canadian Club on fire prevention and immediately at the close of his address a further meeting was held at which an Ottawa branch of the Ontario Fire Prevention Association was formed. The Canadian Forestry Association has always been strongly in favor of this work and the list of officers of the newly formed association resembles a partial list of the Ottawa members of the Canadian Forestry Association. Last year just after the Ontario Fire Prevention Association was formed with headquarters in Toronto the Secretary of the Canadian Forestry Association was asked to act with the Grass and Timber Committee of the Fire Prevention Association in securing the insertion of warnings against careless handling of fire, in railway time tables, etc. The Secretary found the railways very favorably inclined. In fact the Canadian Pacific Railway had for the past ten or twelve years been inserting a warning to tourists and campers in all its folders dealing with this traffic. This was due to forethought of Mr. C. E. E. Usher, Passenger Traffic Manager of the C. P. R. and one of the charter members and now a director of the Canadian Forestry Association. This it is believed made the Canadian Pacific the first railway in America to issue these warnings in its tourist and

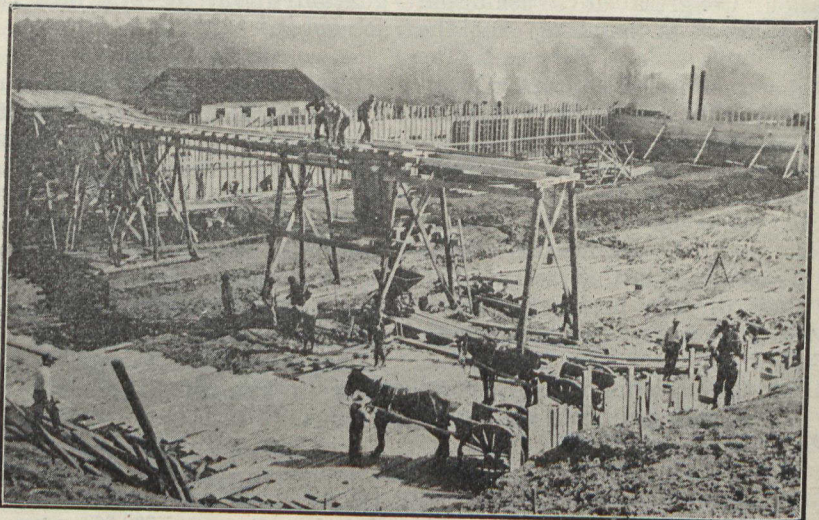
settler literature. The Grand Trunk Railway System, it was found had also for some years under the care of Mr. H. B. Charlton, General Advertising Agent, included such warnings in its campers' and tourists' literature. The General Manager of the Bell Telephone Company of Canada, Mr. C. F. Sise, Jr., also gladly consented to place a warning about forest fires, and the name of the person who should be notified by telephone of the breaking out of fires, in all telephone directories covering forest territory, Mr. Percy Robertson of Toronto, secretary of the above committee, of which Dr. Fernow is a member, communicated direct with the head office of the Canadian Northern Railway at Toronto and found the officers of that company ready to assist in the work.

Fire loss is dead loss whether it be in the forests or in the cities and the aroused public opinion that lessens this criminal waste in the one will lessen it in the other. The Canadian Forestry Association therefore urges on the efforts of the Ontario Fire Prevention Association.

The officers of the Ottawa Branch are as follows:—

President, Hon. W. C. Edwards; 1st vice-president, C. Jackson Booth; 2nd vice-president, H. K. Egan; secretary, E. D. Hardy; treasurer, T. E. Clendinnen.

(Continued on page 183.)



Erecting Abitibi Pulp Co. plant, Northern Ontario.

Northern Ontario's Timber Resources

Synopsis of an Address by Hon. W. H. Hearst, Minister of Lands, Forests and Mines for Ontario, before the Ottawa Canadian Club.

A large and distinguished audience, in which were many lumbermen, greeted Hon. W. H. Hearst on the occasion of his first visit to Ottawa in his public capacity when he addressed the Canadian Club after the luncheon held in the Chateau Laurier on Nov. 8.

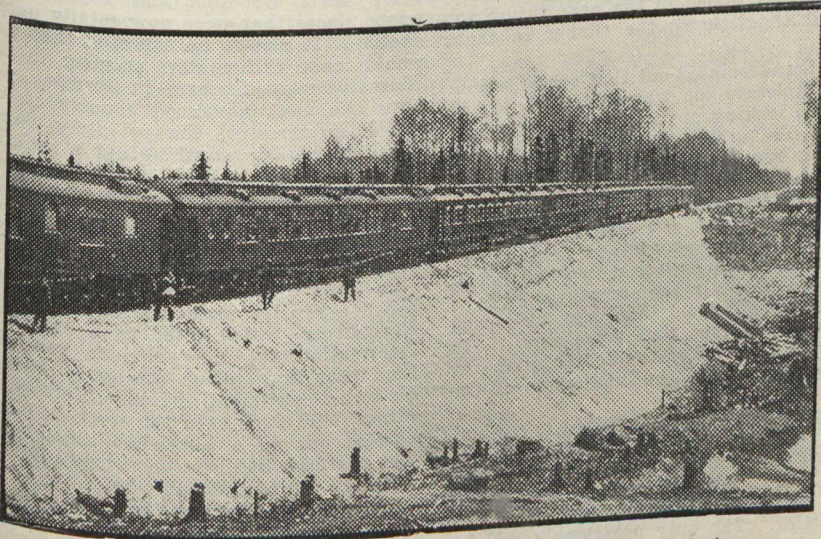
In opening his address Mr. Hearst pointed out that by the addition to Ontario in 1912 of the District of Patricia, with an area of 157,400 square miles, the province now had an area of 418,262 square miles. Of this large area the province had parted with less than 10%, leaving in the Crown in the neighborhood of 375,000 square miles. Ontario was now the second largest province in the Dominion, being exceeded by the Province of Quebec with an area of 706,000 square miles, and followed by British Columbia with 357,000 square miles. About thirteen million acres of land was under cultivation, which amounted to less than 6% of the total area of the province. The field crops of the Dominion for 1912 were worth \$511,000,000, of which Ontario contributed \$192,000,000 worth or fully 37% of the total field crops of the Dominion, exceeding the two largest provinces of the West by over \$26,000,000.

Mr. Hearst dealt in detail with the mineral output of Ontario, and then took up the question of timber. He showed that since Confederation (1867) the province had received a revenue from timber of over \$47,000,000, and the revenue for 1912 from this source was \$1,985,000.

The value of forest products in the Dominion in 1911 was \$166,000,000, about \$22.00 per head of the population of which Ontario contributed a large part. Mr. Hearst illustrated one important aspect of the timber industry in that every year northern Ontario required in farm produce, and other supplies needed for the men in teams engaged in the north country, over two and one half million dollars worth. He also pointed out that besides its initial value in the rough, timber went into almost every kind of manufacture, and that in 1912 Ontario used over \$19,000,000 worth in her manufactures, of which 82% was produced in the province itself.

Ontario's Standing Timber.

As to what standing timber Ontario had, they had not as full a record as they wished, or as they hoped to have in the near future. But the reports of the experts of



Scene on National Transcontinental Railway, Northern Ontario.

the Department indicated that the Province of Ontario had on lands of which the whole title both to land and timber remained in the Crown, at least thirteen and one half billion (13,500,000,000) feet of red and white pine; and on lands licensed to lumbermen about seven billion feet of red and white pine. Of spruce pulp wood the stand on Crown lands was at least three hundred million cords. Turning these into dollars they had an asset in timber of three or four hundred million dollars, and that was without taking into consideration the hardwood or any wood outside of red and white pine and spruce.

One of the steps that had been taken with reference to the conservation of timber was the formation of forest reserves and national parks. These were as follows: — Temagami Forest Reserve 5,900 square miles, Mississauga 3,000 square miles, Nipigon 7,300, Algonquin Park 2,066 square miles, Sibley Reserve 70 square miles, Eastern Reserve in Frontenac County 100 square miles, Quetico Forest Reserve 1,700 square miles, and Rondeau Park, a small park on Lake Erie.

In all the province had over 20,000 square miles in forest reserves and provincial parks, and in these reserves they had at least ten billion (10,000,000,000) feet of pine, and possibly twenty million (20,000,000), cords of pulpwood. These reserves and parks were lands that were not adapted for settlement, and it was not intended to let settlement into them, or to endanger the preservation of the timber. In Algonquin Park they had received back into the Crown a number of licenses that originally existed for the cutting of timber, and they hoped in the near future to have all the title to the timber in that park.

Mr. Hearst pointed out that conservation did not tolerate the waste that would result from locking up timber. Trees ripened just like other crops, and unless cut within a reasonable time they began to decay and were eventually entirely lost. So, one of the problems they had was to arrange to harvest the ripe crop so that the most might be obtained from it for the province and for commerce and industry, and still retain the unmatured trees so that the benefit from them may be reaped by the generations that come after. In this problem he asked the hearty sympathy and co-operation of the lumbermen of Ontario.

So much for lands not suited to agriculture. On lands fit for settlement the problem was to find the best method of getting off the timber to get the most out of it and at the same time benefit the incoming settler. The only practicable solution that he knew was to encourage the establishment of industries that would manufacture the timber from the settler's land.

This would aid the industries of the country and would give a market to the settler so as to enable him to get some return from his work in clearing his land.

Already considerable had been done in that line in saw mills and related industries. On the north side of the Height of Land pine ceased and the timber of greatest importance there was spruce and other soft woods. There had been established at Sault Ste Marie, Spanish River, Sturgeon Falls, Fort Frances and Dryden large pulp and paper plants which would work up this timber, and at the present time a very large plant was being constructed in the Abitibi district. In the near future they expected to have more similar plants.

Reforestation Sand Lands.

This was the situation in regard to timber lands unfit for settlement, and those fit for farming and into which settlement was being directed. There was a third class of lands, namely, those not fit for settlement but which owing to mistakes in the past (and he was not blaming anyone) had been cleared and cultivated. In the old part of Ontario a careful estimate indicated that about 9% was in woodland of a more or less inferior character, and that probably as much more might be better employed in growing timber than for any other purpose owing to the character of the soil. In other words they had in southern Ontario approximately ten million acres of wood land or land which was only fit for timber. These lands were privately owned, and the Province was endeavoring to encourage the owners to develop their woodlots and reforest the waste places that were now totally unproductive. It was to be expected that they would make rather slow progress in this educative work, for even in Germany, perhaps the most advanced country in the world in forestry, the privately owned woodlots were in anything but a satisfactory condition. In 1906 an Act was passed permitting municipal councils to pass by-laws exempting woodlots from taxation, but so far as he knew this had never yet been taken advantage of.

In 1905 a forestry station was established at Guelph under the Department of Agriculture, which acted as a bureau of information for the province generally. Last year this station was transferred to his own Department of Lands, Forests and Mines, and since then the work had been carried out on a somewhat larger scale. The nurseries had been removed to St. Williams in Norfolk County. Here they had acquired about sixteen hundred acres of sand lands for forest plantations, where they were carrying on perhaps the most extensive exemplification of forestry that was to be found in the Dominion. They were doing this to show by actual demon-

stration what could be done by reforestry for these sand plains that had become absolutely useless for any other purpose. The staff of experts there were giving information by bulletins and by lectures to encourage farmers to take up this work, and from the nursery over one and one half million forest seedlings had been distributed to woodlot owners in all the southern counties of the province.

So far as northern Ontario was concerned, artificial reforestation was not now a practical question. Nature was doing more than they could in an artificial way in northern Ontario. It would cost anywhere from six to fifteen dollars per acre to plant up these lands, and they could expend the money to much better advantage in acquiring lands on which there was considerable growth at the present time.

Cost of Fire Protection.

But the great question in the north was to secure proper cutting and protection from fire. He doubted whether they fully appreciated as a people the immense areas of timber land that Ontario had in its absolute possession. Only a small area of land had been alienated from the Crown, leaving tens of millions of acres for the Province to use as it thought best. As to fire ranging, a few years ago a new arrangement was made with the lumbermen whereby they bore the total cost of the fire ranging on their limits. The Province placed over these supervising rangers who had authority to compel limit holders to put the necessary number of men on these limits. Then upon Crown timber lands and forest reserves the Province employed its own rangers. They had also provincial patrols upon railway lines and other places where there was special danger. Last year there was a staff of 925 rangers on Ontario's timber lands. The cost of fire ranging to the province was \$233,000. If to that was added what he was informed was paid by the limit holders, namely, \$92,000, it would be seen that the total cost of fire ranging in the province last year was \$325,000. They were gradually strengthening and perfecting the system of fire protection in the north. This included the erection of telephone lines and lookout stations. It was impossible to totally prevent fire in these millions of acres, but the Government was endeavoring to minimize that danger as much as possible. But the Government could not do all this itself, it required and asked the co-operation of lumbermen and citizens generally. Last year he had had an Act passed in regard to the making of ties, by which the Government might suspend this work during the danger season from April to August, or might make such regulations as it deemed proper.

It seemed to him that perhaps the time had now come when they might require railway companies to treat these ties so as to extend the life of them as long as possible, and thus conserve that kind of timber.

Mr. Hearst then gave a review of the timber regulations in Canada from the earliest time, and pointed out that a number of the gentlemen that he saw before him whose names were household words in timber districts all over Canada, had themselves experienced a number of these changing regulations.

In closing Mr. Hearst said they sometimes heard too much of the differences between the manufacturing East and the grain-growing West. Perhaps one of the things that had helped to keep these two sections apart was the hitherto unoccupied portion of northern Ontario. To his mind that north land with its wealth of timber, minerals and water powers was bound to become one of the great manufacturing centres of the continent. It might be the home of millions of people in the not far distant future, and would thus bridge over the gap between East and West. In future there would be neither East nor West, but a united Canada from Atlantic to Pacific. He concluded, 'This is the object I have before me as a public man. This is my ideal that I have in view. Then I hope we shall perform our duty as citizens of this fair province of Ontario so that we shall make this great Dominion of Canada not only a source of strength to, but the dominating influence in that empire whose flag encircles the globe, whose standard is righteousness, whose path is duty.'

NEW FIRE PREVENTION ORGANIZATION.

(Continued from page 180.)

Executive committee—Sir H. N. Bate, Cecil Bethune, R. H. Campbell, W. H. Dwyer, H. L. Drayton, C. D. Findlayson, Chief Graham, Frank Hawkins, Controller Kent (as fire commissioner), J. A. Machado, Col. C. P. Meredith, P. D. Ross, Walter Ross, W. H. Rowley, W. M. Southam, E. Norman Smith, H. I. Thomas, Mayor Ellis, J. R. Booth, Chief Ross, City Engineer Currie, Mr. A. Alford, Ex-M.P., Dr. Chabot, M.P., E. J. Laverdue, Controller Parliament.

The following constitution was adopted: The objects of this association shall be to promote the science and improve the methods of fire protection and prevention, to obtain and circulate information on these subjects and to secure the co-operation of its members in establishing proper safeguards against loss of life and property by fire.

The Fire Season in British Columbia.

The Vancouver *News-Advertiser* recently had a very appreciative article of the work of Mr. H. R. MacMillan and the British Columbia Forest Branch of which the following is a condensation:

The forest fire damage of 1913 is the smallest in the history of this province. While the weather is responsible for a share of the credit, it is the efficiency and the organization of the Forest Branch which has been the big factor of this splendid record.

The Forest Branch has a staff which, including forest guards and patrolmen on duty, numbered 415 during the summer. Thirty rangers and 280 guards protected the forests from the fire, while eleven district foresters and twenty-three forest assistants were largely occupied with these duties. Fifty-one of this staff of 415 were railway patrolmen, part of whose wages are refunded to the Government by the railroads, and in addition there were about sixty railway employees who were employed on patrol duty.

Telephone Lines.

The enormous area of merchantable timber which this small army was able to supervise was practically honeycombed with a system of telephones and look-out stations. The telephones are built by the forest branch for protection in places where it is certain that commercial lines will not be established in the near future. The majority of the lines are tree lines, poles being eliminated as far as possible on account of expense. The work is carried out under the supervision of expert linemen, but a large part of the labour is supplied by forest guards.

There are two classes of telephone line for fire protection. One is a long line built from some central point through heavily timbered country such as a river valley. The object of this class is to make quick communication with headquarters possible, so that assistance and supplies can be sent at the shortest notice.

The second class of telephone line is that built from some headquarters of the fire patrol service to a look-out point commanding an extensive view of timbered country.

Of these the Mount Baker Look-Out Station is perhaps the most interesting. In this station, at an elevation of over 7,000 feet, the Forest Branch has the honor of having the highest telephone line in Canada. From this station a view is possible

in every direction of over thirty miles, and a fire in any part of that area can be immediately reported directly to the District Forester at Cranbrook.

The B. X. Mountain Look-Out Station, in the Vernon district, commands the largest single body of licence timber in the district, and fires can be reported directly to the District Forester at Vernon. The Vernon City Council showed their appreciation of this project by voting \$300 contribution towards it.

Trail Building.

The policy of the Forest Branch in trail building is firstly to open up important bodies of timber both for patrol and to make them accessible in case of fire; and secondly to connect up existing trails or roads so as to allow round trip patrol. Whenever horses are available, horse trails are built. Heavy grading and rock work are avoided wherever possible, but, on the other hand, excessive grades are also avoided, the idea being to obtain as great a distance as possible of practicable trail for the money. The trails are, as a rule, built by small crews working under the direction of a Forest Guard or Forest Ranger. Made somewhat roughly at first, they will be improved each year by the Forest Guards during patrol and slack times. In no case does the Forest Branch build a trail where it is probable that one will be built soon by other interests for other purposes.

Slash Burning.

The chief slash burning carried on in the province so far has been done in railway construction, where all the debris is piled in the centre and burned clean. In addition, all those railroads under construction have been required to pile all slash resulting from the cutting of ties, bridge timber and other construction timber. This work has been carried on by the G. T. P., C. N. R. and P. G. E., etc., under the direct supervision of officers of the Forest Branch, with results on the whole very gratifying.

Less has been done in this direction by loggers, but, nevertheless, an encouraging start has been made. The Forest Branch has used every opportunity to encourage loggers to dispose of their slash with the result that this year over 15,000 acres of slash were burned by private parties. It is confidently expected that a much larger amount will be burned next year, because this was an unusually wet season and the slash, therefore, difficult to burn.

National Conservation Congress

Proceedings of the Fifth Annual Gathering at Washington, D. C.

The Fifth Annual National Conservation Congress of the United States was held in Washington, D.C., Nov. 18, 19 and 20, the main meetings being held in the ball-room of the New Willard Hotel, and the sectional meetings in smaller rooms of that and other buildings.

It was intended that the main interest on this occasion should centre in forest and water power conservation, and as it turned out the time of the meeting was nearly wholly taken up with the latter in its relation to State versus federal rights, and the danger of monopolistic control of water powers.

The chair at the opening session was occupied by Mr. Charles Lathrop Pack, the president, and the first speaker was Hon. David Houston, Secretary for Agriculture in President Wilson's cabinet. Mr. Houston while instancing the great need of better farming, held that the most pressing need was an improvement in methods of distribution that would give the farmer for his products a larger share of what the consumer paid for them.

Hon. James Wilson, ex-United States Secretary for Agriculture, spoke on soil conservation, and Mr. James White, Assistant Chairman of the Canadian Commission of Conservation, told of the work of that body, particularly in regard to forest fire prevention along railways through co-operation with the Canadian Board of Railway Commissioners.

The Waterpower Battle.

The committee on waterpowers, which had been at work all that morning and all the preceding day, presented three reports in the afternoon. The first report presented the resolutions on which all the committee were agreed, the second was of the majority and the third of the minority, which latter was signed by Hon. H. L. Stimson, former Secretary for War, Joseph N. Teal of Portland, Oregon, and Dr. Gifford Pinchot ex-Chief Forester of the United States.

The unanimous report stated that compensation for privilege of waterpower use should be reserved to the government, state or federal, from which the privilege came. Both majority and minority reports agreed that the three essentials of a sound waterpower policy were: Prompt development, Prevention of unregulated monopoly, Good service and fair rates to the consumer.

The majority favored the indeterminate franchise with no fixed term limit. The minority would allow a period not exceeding thirty years during which the franchise would be irrevocable except for cause. The minority specified ownership by an unlawful trust, or in restraint of trade as sufficient for immediate termination of the franchise. The minority report stated the central fact in the waterpower situation today was that of concentration of control. Ten groups of individuals controlled 65 per cent. of the waterpower of the United States, and the amount of concentration had nearly doubled in the last two years. The fight for the conservation of waterpowers was first of all a fight against monopoly. The second prime necessity was to forbid and prevent the speculative holding of power.

The majority report stated that it was essential that capital should be attracted to these enterprises, and while they must fully protect the interests of the public both present and future, they were not conservationists if they advocated the imposition of terms which restricted rather than encouraged progress.

Senator Shaforth, one of the early speakers in the debate on the motion to adopt the unanimous report, said, 'I have never been impressed with the idea that down here in Washington you can control waterpowers or anything else as well as we can in our own States.' He declared there could never be any danger of monopolistic control of waterpower because under the United States statutes the transmission of power between states brought the companies under the Interstate Commerce Act, and the federal government had as much right to fix their rates as it had those of the railways.

Several other speakers took this attitude, while Mr. Pinchot, Mr. Stimson and others replied by urging the activity of the waterpowers trust, and stating that the United States could control companies and monopolies which were so strong that they could control state legislatures.

The vote was on the question of sending the unanimous report to the resolutions committee. This was finally, defeated by a majority of 434 to 154, and the report adopted by the Congress without roll call.

The States Rights Question.

This first vote took place on Wednesday afternoon, Nov. 19. On Thursday the Resolutions Committee in reporting on the ma-

majority and minority reports referred to it submitted that the matter had been taken from its hands by the action of the Convention in adopting general principles on which the whole committee were agreed.

When the report had been read, Dr. Gifford Pinchot, former forester of the United States, and father of the minority waterways report in the congress, moved as an amendment to the resolutions committee's report a declaration of principles on waterway control similar to the ideas in the minority report signed by himself. Henry L. Stimson, former Secretary of War, and Joseph N. Teal of Oregon.

This amendment was adopted by a vote of 317 to 96 after one offered by Representative Burnett of Alabama, which proposed to insert the words 'state control' wherever 'public control' appeared had been defeated, 378 to 132.

It was upon these motions that the convention was brought to a stormy climax, and at one time some of Mr. Pinchot's friends, including the president of the congress, urged him to consent to an adjournment. Motions to adjourn were made before the final roll calls, but were hooted down by the convention.

Among those who led in the fight for federal as opposed to state control were Messrs. Gifford Pinchot, Hon. W. L. Fisher, ex-Secretary of the Interior, Hon. H. L. Stimson, ex-Secretary for War, and Hon. James R. Garfield, also an ex-Secretary of the Interior.

Delegates from the District of Columbia supported the motion while the state delegates were not all for states' rights. The delegates who spoke and voted against federal control came chiefly from Alabama, Arkansas, Colorado, Kansas, Louisiana, Montana, Nevada, New Mexico, South Carolina, Tennessee and Washington State.

The Points at Issue.

As the matter, so to speak came into the Congress on a slide wind, the situation may perhaps best be explained by quoting the words of the leaders on both sides after the contest was over.

Mr. Pinchot said:

'The vote this afternoon was on two perfectly clear issues. Although the so-called Pinchot amendment had nothing to do with states' rights, the states' rights men injected that question and were defeated by three to one. The other issue was whether or not the National Conservation Congress should take strong ground as to the charge of monopoly in waterpower, or whether the waterpower interests at the congress should prevent it from doing so. The waterpower interests failed to bottle up the congress, and again were overwhelmingly defeated.

'Now that the fight is over, all of the friends of conservation should be glad of the victory for the public control of this great public necessity and should get squarely behind the movement to open the waterpowers to full development without delay and on terms fair to the power interests as well as to the public. We took a real step forward in conservation this afternoon.'

Mr. Walter Powell, chairman of the Arkansas delegation said 'I have been delegated by the representatives of twenty-three states of the middle west, and south, to call a separate convention, which will take up only the subject of waterpower and irrigation. It will be composed of practical men, not of government officials and former cabinet officers, and will try to come to some definite conclusion on the subject of conservation from the practical and not the theoretical standpoint. This convention will be held in about a month, and states from Maine to California will be represented. It will probably be held in Washington, though it might possibly be held in St. Louis.'

The Pinchot Amendment.

The Pinchot amendment declared that monopolistic control of waterpower in private hands was swiftly increasing in the United States 'far more rapidly than public control thereof'; that increasing 'concentration of waterpower in some hands was accompanied by growing control over the power consuming agencies, the public service companies of the country.' It continued:

'Whereas this concentration, if fostered, as in the past, by outright grants of public powers in perpetuity, will inevitably result in a highly monopolistic control of mechanical power, one of the bases of modern civilization and a prime factor in the cost of living.

'Therefore, be it resolved, That we recognize the firm and effective control of waterpower corporations as a pressing and immediate necessity urgently required in the public interest; that we recognize there is no restraint so complete, effective and permanent as that which comes from firmly entrenched public ownership of the power site, and that it is the solemn judgment of the fifth National Conservation Congress that hereafter no waterpower now owned or controlled by the public should be sold, granted or given away in perpetuity, or in any manner removed from the public ownership, which alone can give sound basis of assured and permanent control in the interest of the people.'

Officers Elected.

The congress elected Charles Lathrop Pack of Lakewood, N.J., as president to succeed himself; Mrs. Emmons Crocker, Fitchburg, Mass., vice president; N. C.

McLoud, Washington, D. C., recording secretary; Dr. Henry S. Drinker, South Bethlehem, Pa., treasurer, and Thomas F. Shipp, Indianapolis, corresponding secretary.

Other Business.

Miss Mabel Boardman, President of the National Red Cross Association, read a paper in which she proposed that the N. R. C. Association should provide \$500 for \$2,500 provided by lumbermen in a given locality to defray the salary and expenses of a physician to teach the men in lumber camps first aid to the injured and the prevention of accidents.

Mr. E. A. Sterling held that when the virgin timber of the United States was used up forest supplies would have to come from national and state forests. He held

that present tendencies in private forest management were now logically developing the fire protection and natural regeneration aspects, and that after this would come more intensive forestry.

Mr. H. S. Graves, Chief Forester of the United States, read a paper on Federal Forestry. The policy ahead was the development of the present plans of delimitation, classification, segregation of agricultural from forest lands and the handling of the latter under permanent policies based on full recognition of lasting public interests. He showed how the present United States forest policy was steadily winning out in every way.

These and other addresses will be dealt with more fully in future issues of the *Canadian Forestry Journal*.

Forest Protection in Canada, 1912.

Report of Mr. Clyde Leavitt, Chief Forester, Commission of Conservation and Chief Fire Inspector Board of Railway Commissioners for Canada.

The report of Mr. Clyde Leavitt, M.Sc.F. Chief Forester of the Commission of Conservation of Canada, and Chief Fire Inspector of the Board of Railway Commissioners which has just been issued is a document of 175 pages illustrated by numerous engravings which add to the clearness of the letter press descriptions.

The report is divided into six parts and three appendices dealing with specific aspects of the subject.

Protection from Railway Fires.

Part I. is devoted to Protection from Railway Fires. It first deals with the passing of Order 16570 by the Board of Railway Commissioners for Canada which directs the railways to provide fire preventive appliances, fire patrols, etc., and places the authority for seeing these carried out under the Chief Fire Inspector, Mr. Leavitt. He points out that the three railways which are not subject to the regulations of the Board of Railway Commissioners are the Intercolonial and National Transcontinental Railways (owned by the Dominion Government) and the Timiskaming and Northern Ontario Railway owned and operated by the Ontario Government. As soon as this order was passed Mr. Leavitt undertook the work of organizing the inspection of appliances, fire guards and patrols in Western Canada. The Dominion Forestry Branch had already prepared a plan of patrols over the railway



Mr. Clyde Leavitt.

lines in Manitoba, Saskatchewan and Alberta and in the Railway Belt in British Columbia; and the Government of British Columbia had prepared a similar plan cov-

ering all other lines in British Columbia. These bodies and the Department of Lands and Forests for Ontario provided inspectors for all the railway lines from Lake Superior to the Pacific Ocean.

Forest Fires and Brush Disposal.

Part II. deals with settlers' slash and lumbering slash. It is recommended in regard to the former that the time of burning be fixed and that there be a sufficiently large force of rangers to see that the law is carried out. Regarding lumbering slash it is stated that while patrols and other measures would continue to be necessary the root of the problem could best be reached through disposal of the slash. In the case of unleased lands held by Dominion and Provincial Governments. Mr. Leavitt holds no trouble should ensue, since when new areas were leased the new requirements in regard to brush disposal would be taken into consideration by the lumbermen in bidding on the limit. In the case of renewal of licenses, while not so easy, still the growing value of the stumpage and the need of protecting the holdings were all factors in making the new price.

Then follows a review of methods in the Adirondacks, in the United States National forests in Idaho, Montana and Minnesota, in Oregon and Washington, and in Minnesota State forests. The general trend of this review is to show that everywhere there was a growing recognition that brush must be disposed of and that there is a disposition to try different methods and to adopt those best suited to each condition and locality.

Top-Lopping in the Adirondacks.

Part III. continues this brush disposal problem by discussing top-logging in the Adirondacks. It is set out that in 1908 very severe fires swept the Adirondacks and as a result a conference of lumbermen and the State Forestry Commission decided that the best way to check these fires was to lop the tops of all coniferous trees cut for commercial purposes. This was crystallized into law in 1909 and since that the fire loss had been greatly reduced. Owing to fewer losses and the feeling that the financial burden was too great lumbermen protested in 1912 against the continuance of the practice. A series of field investigations was held to reconsider the question. Mr. Leavitt attended these for the Commission of Conservation and Mr. T. W. Dwight, Assistant Director, for the Dominion Forestry Branch. The matter was fully gone into and as a result it was decided that where brush burning was practicable this was the most efficient method of slash disposal; where it was not practical the lopping of tops might be advisable. The beneficial effects of top-logging it was held outweighed the disadvantages

due to any possible injury to soil, reproduction or old growth. Lopping to only a three inch diameter materially reduced the cost. Since the preparation of this report the New York Legislature had changed the law so as to make compulsory only lopping to down to three inches in diameter.

Oil as Locomotive Fuel.

Part IV. deals with the use of oil as locomotive fuel. Mr. Leavitt states that in 1912 oil was used wholly as fuel on 20,910 miles of railway in the United States and 587 miles in Canada; and used in conjunction with coal on 4,720 miles additional in the United States. All the railways using oil fuel in Canada were in British Columbia; and were: Canadian Pacific, 338 miles; Esquimalt and Nanaimo, 134; Great Northern, 115. As to effectiveness it is stated that the use of oil practically eliminates all danger of forest fires due to locomotive operation. The use of oil was increasing on the west coast where convenient supplies made it cheaper than coal.

Forest-Planting in Canada.

Part V. takes up the subject of forest planting. Investigations of the Dominion Forestry Branch indicated that half of the original forest of Canada had been destroyed by fire. This timber would if cut have yielded not less than a billion dollars to the revenue of the country. There were enormous areas of non-agricultural land in Canada which however, were very suitable for the growth of timber and should be put to that use.

The subject is then dealt with geographically from east to west. Mr. H. R. Christie of the B. C. Forest Branch deals with the situation in British Columbia and comes to the following conclusions: 1. Forest planting in British Columbia is silviculturally possible. Hardwoods may be grown as well as soft woods. 2. Forest regeneration in B. C. is financially practicable, and possibly also forest planting. 3. But forest planting is now, in general, neither necessary nor the most profitable way to spend time, energy or money in British Columbia.

The statement regarding tree planting in Alberta, Saskatchewan and Manitoba was prepared by Mr. R. H. Campbell, Dominion Director of Forestry. The work of farm planting was begun in 1901 with the sending out of 58,000 trees from the Experimental Farms at Brandon and Indian Head. In 1912 this output of trees from the Forest Nursery Station had increased to 2,729,135 trees to 3,618 farmers. The total sent out to the end of the planting season of 1912 was nearly 22,000,000 seedlings. These were planted for shelter belts and wood lots and consisted chiefly of Manitoba maple, elm, ash, cottonwood willow and Russian poplar. In 1911 distribution of

coniferous trees began. The species were white spruce, Scotch pine and tamarack.

A beginning has been made in planting on the Spruce Woods Reserve near Brandon and on the Turtle Mountain Reserve in Southern Manitoba. On the former over 50,200 trans-plants were living, and on the latter a plantation of 14,000 Scotch pine was doing well. Preparations for much larger planting operations on the Spruce Woods Reserve were under way. Seven thousand five hundred transplants on the Riding Mountain Reserve were doing well. Planting had not been considered necessary on the Rocky Mountains Reserve as natural reproduction was excellent. Seeding had not been successful except in certain spots on the Turtle Mountain Reserve.

The Canadian Pacific Railway of which company Mr. R. D. Prettie is superintendent of Forestry had planted 1,356,200 trees along its main line between Calgary and Winnipeg. These trees were grown at the company's nursery at Wolseley, Sask. The object was to form windbreaks and thus do away with the necessity for maintaining portable snow fences to prevent the drifting of snow across the railway tracks. The loss and renewal of these trees had not exceeded ten per cent. The company also had set out 25,000 tamarack trees near Wolseley to determine the feasibility of growing railway ties and fence posts. The average height of trees in this plantation in 1912 was 9 ft. and the diameter 18 inches from the ground $1\frac{1}{2}$ inches. The height growth for the season of 1912 was 1 ft. 8 inches. The company was also giving prizes to induce settlers on its lands to grow trees about their farm buildings.

Forest planting in Ontario is described in the report by a statement taken from the report of Mr. E. J. Zavitz provincial forester of Ontario. It was estimated that about 10,000,000 acres in Southern Ontario was suited only to forest growth. As much of this had been cut off the Ontario Government had embarked on a scheme of co-operation by which advice and planting material were furnished free of charge to parties planting wood lots. Up to 1912 1,500,000 trees had been sent out from the Provincial nurseries. The planting had been chiefly on waste soils, such as sand formations. The forest nursery station in Norfolk county contained 1,500 acres in 1912. This station was being planted up with experimental plantations, and was also being used as the source of supply for nursery stock. Legislation was passed in 1911 permitting counties to acquire and operate land for forest plantations. The county of Hastings had secured 2,200 acres of cut over lands and the purchase of additional lands was contemplated. Fire protection and natural restocking from seed trees would be the policy pursued for the

present. Other counties were looking into the matter.

The statement in regard to Quebec was prepared from the report of the Minister of Lands and Forests and from a statement by Mr. G. C. Piché, chief of the Quebec Forest Service. The Government had a nursery station at Berthierville where seedlings were supplied to farmers to plant their woodlots and where seedlings were also grown to plant up sand land areas, such as at Lachute, acquired by the Government. These were acquired at the rate of \$1 per acre with the agreement that the former owners might reacquire them upon paying the cost of the planting which it was guaranteed would not exceed \$10 per acre. Twenty-five acres at Lachute were reforested in 1912. It was intended to assist the rural communities by establishing township reserves where the inhabitants might cut wood required for their real wants.

Mr. Ellwood Wilson forester for the Laurentide Company furnishes the data for the planting of that company which in 1912 had reached fifty acres. The trees used were Scotch, white and jack pine, white and Norway spruce, hemlock and basswood. The company expected to plant 200,000 trees per year and would plant up its waste lands with the object of supplying wood for making pulp and paper. Different methods of cutting were being tried with the object of testing reproduction.

On account of the excellent natural reproduction in the Maritime Provinces the necessity for artificial planting had not been strongly felt up to the present. The great need was instruction in the best methods of handling existing timber lands. Nothing in the way of encouraging replanting had been done by the governments but there had been some planting under private initiative.

With the assistance of Mr. R. B. Miller, Professor of Forestry in the University of New Brunswick, Dr. A. R. Myers had planted fifteen acres of white pine near Moncton, N.B. The Pejepscot Paper Company had a nursery at Salmon River, N.B. and another at Cookshire, Quebec, with the idea of planting its cut over lands.

The Rhodes-Curry Company of Amherst, N.S., had planted about fifteen acres of Norway spruce seedlings on smooe of its burnt over lands near Little River, N.S. The object of these plantations was to get data as to the probable success of larger efforts.

Committee on Forests.

Part VI. embodies the report of the Committee on Forests made to the Commission of Conservation in 1912. A synopsis of this was published at the time. The recommendations are as important as they then were and include the following: that

the Dominion Government establish fire protection service on the Intercolonial and National Transcontinental Railways; that the Governments of New Brunswick and Nova Scotia be urged to form forest fire protection services; that brush disposal be carefully considered by all forest owning governments; that co-operative fire protective associations be approved; that Dominion and Provincial Governments be urged to make a systematic study of the extent and character of the forest resources within their bounds, etc.

The remainder of the report is taken up with three appendices. These embrace a study of the extension of the Dominion Government Forest Reserves and the report of Mr. J. H. White on the district lying between Sudbury and Port Arthur. The general summary of this report is that the whole of the area between Mattawa and Nipigon and south of the Clay Belt should be made a forest reserve. Opinions on oil fuel given by railway men, foresters, and mechanical experts conclude the report which is well prepared and provided with a copious index which renders all parts readily available.

BRUSH DISPOSAL IN NEW BRUNSWICK.

Views of the Deputy Minister of Lands and Forests.

Lt.-Col. T. G. Loggie, Deputy Minister of Lands and Forests for New Brunswick, writes in the current issue of the *Canada Lumberman*:

I have read Mr. Allen's able articles in your two editions of October 1st and 15th and quite agree with all he says regarding waste in logging operations. To get the top out of the woods is something many of us have been striving after, for a great number of years. The Timber Regulations of this Department for some time have contained a provision that all logs must be taken out up to 5 inches in diameter, and, while I do not claim that it is wholly carried out in practice, our lumber operators are gradually seeing that an era has arrived when less wasteful methods must be followed to get the true value from our forests.

Mr. Allen in his two articles has not touched upon the more important aspect in the removal of the tops, viz., the lessening of the fire danger. I am quite convinced that, if the land owner were to allow the operator to remove these tops without stumpage cost, with a further provision that the crowns of the trees should have their under branches lopped off, it would, to a large extent, minimize the fire danger, and be a tremendous advantage to our forests.

I also quite agree with what Mr. Allen says about more forest supervision in the actual work of lumbering. These matters have been repeatedly advocated at meetings of the Canadian Forestry Association and the time is assuredly coming when wasteful methods such as he speaks of will be, to a large extent, if not altogether, eliminated from forest operations.

I will say for Mr. Allen's information that I have leased some lands of my own for a considerable spruce operation which required the log-getter, not only to pay the same stumpage for the tops as for the merchantable, but to remove everything up to five inches and to underlop all the crowns. All trees are sawn down at the swell of the roots and sawn up into lengths. I have placed competent overseers to see that the conditions are carried out and I expect to have good results. Ten years ago I would have been laughed at, were I to have exacted these conditions.

I am sorry I cannot agree with Mr. Allen in his statement that after virgin growth is cut away, quite as good never follows. This statement is something new to us, and upsets the principles of nature. If one were to follow this reasoning, as well might he say that when you break up land and sow it to wheat, you will never have so good a crop as the first one. My theory is in lumbering: remove the merchantable log at maturity; let in the air and light, and the same process will rotate, resulting in a bountiful nature supplying as good a log as the virgin one that was cut away.

DAMS VERSUS FORESTS.

The waterworks commissioners of the city of Brantford, Ontario, have instructed the city engineer to prepare plans for a dyke to protect the waterworks property and the lowlying lands between the canal and the river. The city of Brantford has been building dams for twenty years to protect its lower parts from the floods of the Grand River. Mr. Thomas Southworth, when Clerk of Forestry for the Province of Ontario, was consulted on this matter and told the people of the lower Grand River Valley that they had begun at the wrong end, and that, instead of building dams at Brantford and Galt, they should have kept trees on the hillsides of the upper waters of the river. This, is also the conclusion of Mr. W. H. Breithaupt C.E. in his paper read at the Victoria Convention, wherein he pointed out that the forest at the headwaters of the Grand River which regulated its flow, had been ruthlessly cut off to make farms, with the result that floods now occurred nearly every spring, while on the other hand this particular land was, much of it, not even third rate farming land.

QUEBEC'S RECORD REVENUE.

A despatch from Quebec states: In his annual report submitted to the Quebec Legislature, Hon. Jules Alard, Minister of Lands and Forests, states that the receipts of the Department for the year amounted to \$1,760,466.25, the greatest revenue ever received by that department. Part of this amount was derived from the sale of land, but the chief revenue comes from the woods and forests department, the cutting licenses alone giving \$1,134,147.19, the rent \$330,203.09, and penalties, interest, etc., bringing the total up to \$1,510,171.41. The fire protection system was successful in preventing all but a few fires. Seventeen stations were established for observing the water-powers of the province at all seasons, for the purpose of noting their adaptability for industrial purposes.

MR. BOOTH'S PHILANTHROPY.

Mr. John R. Booth, Ottawa's veteran lumberman, has donated a new wing to St. Luke's Hospital, Ottawa, at a cost of \$125,000. Mr. Booth has been president of the Board of Directors of the institution for many years. Mr. Booth is now very largely recovered from the serious injury which he recently suffered when he was struck by a falling timber at one of his mills which had been destroyed by fire.

THE HARDY CATALPA.

Warning Issued against planting in the North.

The New York State College of Forestry has issued a warning to farmers against planting the Hardy Catalpa tree in New York State, except for experimental purposes. A college bulletin states that many land owners have been induced to

plant this tree because of statements regarding its growth and durability, and that without doubt much planting has been done that will result in failure. It points out that the Catalpa is a native of river bottoms in the middle west of the United States, where, under favorable conditions it makes exceedingly rapid growth. Because of the ease with which the nurseries grow it from seed it has been exploited very widely through the country, and it is believed has been planted too widely in New York State. This bulletin goes on to point out that the Catalpa is a specialized forest crop requiring good agricultural soil and more care than the ordinary farmer cares usually to give it. As the college authorities do not want to see land of any value for agriculture used for forestry, they urge farmers to plant Catalpa only in very limited quantities and as an experiment. If there are idle lands in the State in the form of hill sides or ridges it would be better to grow quick growing ever-greens, such as red and white pine or Scotch pine, or such hardwoods as the common black or yellow locust. Experience with the Catalpa in States to the west of New York does not promise success with it in the latter State.

As there has been considerable attempt at exploitation of the Hardy Catalpa in Ontario it may be well to say that the view of persons of experience is that these warnings in regard to New York State would apply with equal force to this Province.

A writer in the *Toronto Daily Star* urges the Province of Ontario to go into fur farming as a public business. He argues that Ontario is one of the greatest producers of fur in the world. Strict laws have caused the increase of the fur bearing animals, notably beaver, and yet the beneficiaries of this protection are chiefly two private fur companies.

With the Forest Engineers.

(Contributed by the Canadian Society of Forest Engineers.)

The formation of local forest engineers' organizations is projected in Ottawa and Victoria, B.C.

Advisory Committees.

The following are the Advisory Committees, appointed in accordance with the resolution passed by the last annual meeting:—

Quebec and Maritime Provinces—G. C. Piché, R. B. Miller, R. R. Bradley.

Ontario—C. Leavitt, A. H. D. Ross, T. W. Dwight.

Prairie Provinces—N. M. Ross, W. N. Millar, L. M. Ellis.

British Columbia—Dr. J. F. Clark, H. R. MacMillan, D. R. Cameron.

Quebec Forest Protective Service.

Mr. W. C. J. Hall, superintendent of the Quebec forest protective service, writes:—

'We have had a very successful season. Though there were lots of fires, as the weather was very dry up to the middle of October, we succeeded in extinguishing them all with very little damage done. The only exception was one bad fire on the upper Ottawa, which we are getting details about now. The railway work was most satisfactory.'

The St. Maurice Valley.

Mr. Ellwood Wilson, forester for the Laurentide Company, writes:—'Mr. Clyde Leavitt has just been on an inspection trip through the logging operations of the Laurentide Company with me. The sections where top-logging was tried last winter were visited, and Mr. Leavitt made some very valuable suggestions for the conduct of the work this year. Cuttings of other companies were also visited and the contrast was very marked. One company had left pine logs twenty two inches in diameter in the woods and had used large pine and spruce for skids and left them to rot. Tops eight inches in diameter and even larger were common. The condition of such cuttings from the point of view of fire protection is very dangerous and it might be mentioned that this is the only company which has refused to join the Fire Protective Association.

'Mr. M. C. Small is continuing his experiments with top-logging on the limits of the Laurentide Company. Last year this company, for the first time in Canada, tried top-logging and found it so successful that it is to be continued this year and experi-

ments undertaken to show the exact cost and the best and cheapest way to do it. By an efficient system of inspection Mr. Small has reduced the woods waste to the lowest possible point and very materially reduced the fire risk. As an instance of this, two thousand logs were made this fall from the tops of trees used in building a log flume.'

Wide-Awake Western Foresters.

Mr. R. D. Craig, of Vancouver, writes:—'This summer I made a trip from Kamloops to Tete Jaune Cache along the line of the Canadian Northern, as it follows the North Thompson, and came out to civilization at Edmonton (if you consider the prairies civilized). I wrote a description of this trip for the last issue of the Western Lumberman.

'I spent two weeks up the Toba river, 150 miles north of Vancouver, last month. This is one of the finest valleys of timber in British Columbia. We went up in a canoe over thirty miles, all through excellent fir, cedar and spruce. The firs averaged about 8,000 feet, board measure, to the tree, with 125 feet of log length. The cedar and spruce were also very fine. This timber is owned by the Canada Timber and Lands, Ltd., of which Mr. E. Stewart is managing director. The river is drivable throughout the timbered area, and in the summer is navigable for launches for over twenty miles. It is a hunter's paradise for mountain goat, deer and bear.'

Mr. D. R. Cameron writes from Kamloops:—'I have just returned from an inspection trip of the Lower Fraser country, made in company with Mr. R. E. Benedict, of the British Columbia Forest Branch. Our object was to work out a basis for more co-operation in forest protection. The intention is for the Dominion forest rangers to take over the issuing of burning permits, thus preventing duplication of staff and giving the Dominion service better control of the fire situation.'

Mr. E. G. McDougall writes again, dating his letter from Clinton, B.C., (on the old Caribou Road) and describing his work in the valley of the Bonaparte river (which joins the Fraser at Ashcroft). He says:—'I am still at work in the plain drained by the Bonaparte river, and hope to be able to keep the field until well into December. The Bonaparte plain is settled to some extent, and, at a pinch, shelter

for the party and horses can be obtained. Forage, however, is abundant, and in good weather the horses can still pick up a living.

'Timber is nowhere abundant, black pine and a little fir, spruce and poplar forming straggling stands. Except where wind-falls have accumulated, the woods may be travelled in any direction with pack-horses. The country depends chiefly on stock-raising, but there appear to be good possibilities for dry-farming in the future. At present the cost of clearing land is a serious hindrance to development. Even to the rancher, the forest growth, and particularly the litter of wind-fall, is a detriment rather than a resource. The suggestion is repeatedly made that such sections of country should be burned over until the forest has been reduced to a sufficient quantity of wind-break, although it is admitted that to withdraw the rangers entirely and permit indiscriminate firing would be a course involving grave danger to property, if not to human life. Possibly some plan of co-operation between the Government and the settlers, for the safe removal of forest debris, may be evolved in the near future; the expense to both parties would be considerable, but the benefits would be certain and commensurate with the outlay.'

In the Rockies.

Mr. W. N. Millar writes from Calgary under date of Nov. 26:—

'I was out so long on my last trip that I am pretty hard pressed to catch up, particularly as I have to make short trips for special cases every few weeks. I had a very successful trip, covering 850 miles, and have practically completed my examination of the Rockies south of the Athabaska river. In another season we shall have the fundamental improvements well along toward completion, a complete revision of the map with all blanks eliminated, sufficient ground work in the line of volume and growth-tables and primary traverses on which to start intensive reconnaissance, if desired, comprehensive improvement, fire and administration plans for which nearly all of the data has been assembled, a scheme for game preservation completely worked out, and a reasonable start toward a field organization. All we lack is properly equipped men to furnish the motive power and make the things go.

'There's great activity here now in the cabin-building line. We expect to complete at least twenty six during the winter—maybe a couple or three more, all by ranger labor. We have one reconnaissance crew at work on the Athabaska under Clark, examining a large proposed sale, and another going to work in a week on the Brazeau on several proposed mine-prop sales. We will also start a crew tak-

ing volume and growth figures on pine and spruce under McVickar next week.

'We collected thirty bushels of spruce cones and fifty of lodgepole pine cones for the Indian Head nursery, pine on the Clearwater and spruce on the Cypress Hills. This was a most prodigious year for spruce, both white and Englemann, throughout the Rockies, and I rather think throughout the entire West this side the Divide. Nothing unusual in pine or black spruce.

'We had a fire season remarkably free of fires. The Bow River heads the list with only one fire, and that a very small, incipient, "class A" one. We had only four "class C" fires, one on Clearwater, one on Athabasca and two on Brazeau. . . . Am going to Vancouver next month to the Western Conservation and Forestry Association, and perhaps I'll give you some notes about that.'

University of Toronto Notes.

The Faculty of Forestry of the University of Toronto reports a comfortable increase in its registration, there being twenty new-comers, which brings the total number of students up to fifty. This makes the distribution for the different years, beginning with the first year, twenty, nine, ten and five, respectively, besides one in each of five years of the six-year course. The graduating class next spring will count only six.

Mr. Asa S. Williams, a graduate from the original New York State College of Forestry at Cornell in 1903, has been giving a short course of lectures on logging operations. Mr. Williams, after serving two years with the Berlin Mills Company in New Hampshire, one of the largest operators in that state, as forester supervising the lumber camps, with a view of introducing more conservative logging, then engaged as forester to the Lidgerwood Manufacturing Company, who are manufacturing logging machinery. Mr. Williams' business consists in surveying the situation of proposed logging operations and determining what method and machinery are to be used. For the last three or four years he has been engaged in the same business in Canada, mostly on the Pacific coast.

Several of the men in the field were prevented by snowstorms from returning in proper time, but all of them eventually turned up all right.

Mr. Frank Stanley Newman, who had been employed by the Dominion Forestry Branch as forest assistant in the Duck Mountain Forest Reserve, Manitoba, has accepted a position as assistant to Mr. E. J. Zavitz, forester for the Ontario Government, and will probably be placed in charge of the nurseries at St. Williams.

EMPIRE STATE FOREST PRODUCTS ASSOCIATION.

The Empire State Forest Products Association held its 8th annual meeting and banquet in New York, Nov. 13. Mr. Frank L. Moore of Watertown, N. Y., the president, in his address said that the two greatest problems that confronted the people of New York were the practical management of the forests and the regulation of flood waters. He referred to the foolish law of the State of New York by which not even the dead and mature timber on the 1,600,000 acres of state forest could be cut or utilized in any way. He suggested a carefully chosen board might be given the power to decide what trees might be cut in the state forests.

The forestry committee recommended:— Efforts to secure larger appropriations for fire protection. A larger appropriation to the extent of one million dollars annually for additional forestry purposes. And the investment of several million dollars for starting new forests on cut-over lands.

Mr. Clifford R. Pettis, Superintendent of State Forests, estimated that the 1,600,000 acres of state forest preserve was worth thirty million dollars. He pointed out that under proper forest management the annual growth could be taken each year and the necessary forest maintained. The an-

nual growth on this he estimated at 250,000,000 board feet, or one-quarter the entire cut of lumber in the state. At the present time the interest on the cost of this preserve, which was about four million dollars, was \$200,000 per year, the taxes which the state pays were \$150,000 per year, the cost of fire protection was \$15,000 per year, making a total carrying charge of \$365,000 a year. The utilization of the ripe timber would change this deficit of \$365,000 into a net revenue of \$635,000.

CANADIAN FORESTRY ASSOCIATION.

The Canadian Forestry Association is the only popular organization in Canada having for its object the conservation and development of our forests through wise use. It holds conventions and lectures and publishes the Annual Report and *Canadian Forestry Journal* (monthly).

All friends of the forests are eligible for membership, the fee for which is one dollar per year. Members receive without extra charge all the publications of the Association.

All who have not done so are invited to become members to help extend the work.

Address The Secretary,
Canadian Forestry Assn.,
Canadian Building, Ottawa.

SPREADING THE WORK

THE CANADIAN FORESTRY ASSOCIATION wishes all its members and friends a Happy and Prosperous New Year.

In 1914 it hopes to do more than in any previous year in the protection of the forests, which means the protection of the interest of every Canadian citizen.

In this work it requires the assistance of every member. One of the best means of spreading the work is for members to interest their neighbours. A very efficient way of doing this is to send the names of those likely to be interested. The Secretary then communicates with these persons, and experience shows that a good percentage become members.

Help on the work by sending in a list of names to

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