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BACK THEM UP.

At last what believers in forest conservation have asked for so long has happened—a man has been sent to jail for three months for leaving fire in a forest. Forest protection is as much a moral question as it is a political or administrative question. The public has for a long time believed that stealing a ham or setting fire to a woodshed were crimes for which the perpetrator should be sent to jail, but that to send a man to jail for setting fire to a forest was a cruel and brutal thing to do. This was so, though the burned woodshed might be worth \$50 and the burned forest worth \$50,000, true also in spite of the fact that homes and even lives might be endangered by the forest fire. It is only lately that the public conscience has been sufficiently aroused to agree that it is proper to fine men for burning down forests, but few hoped to live long enough to see the day when a man would really be sent to jail for setting forest fires.

Now it has happened. The Lower Ottawa Forest Protective Association has had a good many men fined for setting fire to their slashings to clear off their farms, contrary to law. at a time which endangered the surrounding forests. But the Association found that many of those fined considered that the more trees burned the more land cleared, and that a fine was a small price to pay for clearing their own farms-no matter what happened to the adjoining forest. It was, therefore, decided to press the matter, and as a result the delinquent was convicted and sent to jail for three months.

We do not present this in any vindictive spirit. We are sorry for the man who has had to go to jail. But if Canadian forests are to be saved somebody had to begin the unpleasent business of teaching men that arson is punishable whether in town or in the forest. In the past individual timber owners have hesitated to prosecute because of the attitude of public opinion, and because of the fear of retaliation by more fire upon their particular holdings. Now the union of owners known as the Lower Ottawa Forest Protective Association has acted, and it is the duty of every good citizen to give them their countenance and support. This is not a matter which concerns the Lower Ottawa or the Province of Quebec alone; it concerns every township in Canada where there is standing timber, nay, it concerns every part of Canada in which there is a man, woman or child. This indifference to forest fires and to the incendiaries who start them has been one of the scandals of North American civilization.

This is not a case of vindicating the rights of private property as against the rights of the citizen. The timber that is burned does not, in

the ultimate analysis, belong to any individual or corporation. It belongs to the people of Canada. Whatever the lumbermen get out of it the public get at least three times as In spite of this the Lower Ottawa Forest Protective Association will be subjected to much criticism by the people with whom they have to deal, and, possibly, to recrimination. It is the duty of all (anadians to support the Association and to endeavour to bring puble opinion into the right attitude on this question. Until public opinion is right no army of fire rangers, however large, or however well organized, will protect our Canadian forests from their great enemy

A NOVA SCOTIA OPPORTUNITY.

The Maritime Farmer, in a recent issue, refers to the natural park in connection with the Dominion Experimental Fruit Station at Kentville, Nova Scotia, and to the value of this park to the people of the province. The Kentville Station embraces about three hundred acres of land, of which nearly one-half is in the form of a deep glen, the sides of which are covered with virgin timber of large growth. In urging the selection of this site for the station, the committee of the Fruit Growers' Association appear to have taken into consideration that this was one of the few remaining pieces of primeval forest readily accessible to the people. The idea was a very good one, but fruit growing and forestry are different businesses, and it is doubtful if those in charge of the station know just what to do in order to protect and handle the forest to the best advantage. At cretain seasons the tract is liable to be endangered by fire, and what to do with a forest to get the best results does not fall within the training of a horticulturist. It would be a good thing if some arrangement could be arrived at whereby the Department of Agriculture could avail itself of the technical knowledge of the officers of the Forestry Branch of the Department of the Interior in this matter, as this piece of primeval Nova Scotia timber is not only well worth preserving from a scenic and historic standpoint, but could also be made of great use as a demonstration station to assist the owners of Nova Scotia timber in handling their forests.

PURE MAPLE SUGAR.

A member of the Canadian For estry Association has called attention to the fact that grocers are still selling compound maple syrup and sugar, that is, syrup and sugar in which there are other ingredients than the pure product of the maple tree. He also states that some of the grocers do not seem to be aware that there has been any change in the law. In reply, it may be stated that the new law, passed last session, does not go into force until January 1, 1915. This was done in order that all the old stocks of the compound maple sugar and syrup might be disposed of before the explicit provisions of the new law went into force. After the new year it will be well for our members to take note of this fact, and in case of infraction of the law call attention to the severe penalties. In Canada, for some years, it has been possible to get butter and honey without any fear that a compound article was being sold under these names, and there is no reason why there should not be the same safeguard in the case of maple syrup and sugar.

THE FOOL WITH AN AXE.

Farm Journal.

It took old Nature some fifty years
To give a tree its majesty and power,
And now some fool with an axe appears

And cuts it down in a short half hour.

MAKING THE DESERT BLOSSOM.

All of us remember seeing pictures of the desert of the Landes in France, with the sand dunes interspersed with marshes and shepherds going about on stilts. Landes still exists, but through the energy of the French forest service the desert has been abolished and the district turned into a productive part of France. Though Mr. R. H. Campbell, Dominion Director of Forestry, was not able to complete his projected tour of European forests, he was able to visit southwestern France to see the district of the Landes. The country a century ago consisted of sand dunes for a long distance back from the sea with marshes lying between the dunes. Seventy-five years ago the French Government began to reforest this district. To-day it is covered with timber in all stages of growth, and while it was originally planted, reforestation is now secured by natural regeneration by following good cutting methods. The exposure to wind is too great to permit the growth of trees on the dune nearest the sea and this is covered with beach grass to hold the The next row of dunes is covered with trees stunted and bent inland by the wind, but inland from that good straight timber is grown. The outer dunes are never deforested but inland clean cutting is practised. The prevailing tree is the maritime The fixing of the sands has allowed agriculture to be carried on where previously it was impossible. As an evidence of increased prosperity caused by the foresting of the country Mr. Campbell noted one parish among others, which before planting began had a population of 1,600 and which now has a population of 14,000. The picturesque shepherds on stilts have disappeared, but forests and prosperity have come in their place.

The Land and Forest Department of Ireland has applied to the Chief Forester of British Columbia for seed of British Columbia fir and spruce. These will be used in reforestation work in Ireland.

Jack pine trees planted ten years ago in the sand hills of Nebraska are now large enough to produce fence posts. Last year the first seed was gathered from this plantation.

The New York state forest nurseries have a capacity of twenty-eight million young trees a year.

Dominion Forestry Branch Work.

Salient Points from the Report of the Dominion Director of Forestry for 1913

The Forestry Branch of the Department of the Interior, Canada, has charge of all the forest reserves in the three prairie provinces of Manitoba, Saskatchewan and Alberta and in the Railway Belt in British Columbia. This latter is a strip of land forty miles wide, twenty miles on each side of the main line of the Canadian Pacific Railway deeded to the Dominion by -e Province of British Columbia when the province joined the Confederation of the Canadian The work has now grown very Provinces. large, and the report makes a volume of 136 pages. This report covers the calendar year 1912, and its contents will, perhaps, be best understood by giving the leading points of the report of the Director, Mr. R. H. Campbell, supplemented by points from the reports of his assistants. These follow:

APPROPRIATIONS.

Total appropriation for fiscal year 1912-13, \$362,500; among the chief items were: Management of Forest Reserves, \$169,000.

Fire Ranging, \$99,000. Tree Planting, \$49,500. Forest Surveys, \$13,000.

The revenue from settlers' permits to cut timber and hay, and for grazing, was

\$23,000.

Note.—It should be noted that another Branch of the Department of the Interior collects the revenue from licensed berths outside the Forest Reserves, and from berths inside the Reserves which were licensed prior to the establishment of the reserve system. The collections of this branch, the Timber and Grazing Branch, for the year 1912 were \$434,000.

STATISTICS.

One of the important duties of the Dominion Forestry Branch is the collecting and publishing of timber and forest products statistics for the whole Dominion. The figures for 1912 are:

Lumber, lath and shingles\$	84,000,000
Firewood	50,000,000
Pulpwood	12,000,000
Posts and rails	10,000,000
Cross-ties	8,000,000
Square timber exported	1,900,000
Cooperage	1,700,000
1	

Logs exported	1,100,000
Tanning material	1,000,000
	600,000
Miscellaneous exports	300,000
	10,500,000

Total \$172,300,000

TREE PLANTING.

In 1900 the Forestry Branch inaugurated the plan of supplying tree cuttings and tree seedlings free to prairie farmers, on condition of their paying the express charges and preparing and cultivating the soil of the plantations. This work has grown so that a second nursery station, in addition to the main station at Indian Head, Saskatchewan, has been opened near Saskatoon.

Trees distributed to settlers in 1912,

2,729,135.

Number of applicants receiving trees,

Total number of trees distributed since establishment of the nursery station, 21,-

Note.—The United States Forest Service after examining the Canadian system of distribution of trees to settlers has decided to adopt it.

FOREST RESERVES.

Organization. Reserves are divided into four districts with an inspector over each. Three of these districts correspond with the provinces of Manitoba, Saskatchewan and Alberta, and the fourth comprises the Railway Belt in British Columbia.

Permanent officers: District inspectors, 4; supervisors 12; forest assistants, 4; for-

est rangers, 46.

Area of Dominion Forest Reserves and Parks was in 1912 25,201 sq. miles, divided as follows: Alberta, 18,564; Saskatchewan, 937 sq. miles; Manitoba, 3,585 sq. miles; British Columbia, 2,115.

Note .- These figures have increased in 1913 and 1914 until now the total area in forest reserves and parks is 43,802 sq. miles, as follows: Alberta, 26,271; Saskatchewan, 9,681; Manitoba, 4,027; and Brtish Columbia 3,778.

The improvements on the reserves for the year were: ranger houses built, 10; stables, 10; cabins 15; roads built, 103 miles; trails (new), 175 miles; trails (old) cleared out, 191; bridges built, 10; fire guards cleared, 66 miles; plowed, 101 miles; telephone lines erected, 100 miles.

TIMBER SURVEYS.

The exploration of public lands to determine those which are non-agricultural and therefore fit to be included in forest reserves was continued by seven parties. This covered all the provinces from Manitoba westward, and special attention was given to the survey in advance of settlement in the Peace River country.



HON. W. J. ROCHE, Minister of the Interior.

FIRE RANGING.

Outside of the forest reserves in the Prairie Provinces the fire ranging was placed in charge of one inspector. In British Columbia it was under the charge of the district inspector. There were 12 fire ranging districts, covering the following territory: Southern and Northern Manitoba, The Pas, East and West Prince Albert, Battleford, Edmonton, Great Slave Lake, Mackenzie, Revelstoke, Salmon Arm and the British Columbia Coast. On these there were a total of 202 rangers in the season in addition to the force on the forest reserves already enumerated.

Fire patrol along railways was carried on by the Forestry Branch in conjunction with

the Dominoin Board of Railway Commissioners, the railways furnishing patrols and the Branch the inspectors.

FIRES.

The fire record for the season was very satsfactory, only one important fire occurring. This was near Golden, B.C., the result of a spark from a logging engine.

WOOD BISON.

The patrol of the country in which the wood bison are located was continued, and numbers of the bison were seen. It is estimated that they number between 200 and 300. Practically the last remaining herd of bison or buffalo, living in a wild state, is this herd, which is located near Fort Smith on the Slave river, and between Lake Athabasca and Great Slave lake. These are a variety of the prairie buffalo which have adapted themselves to life in a timbered country.

Copies of this Report may be had free on application to the Director of Forestry, Ottawa.

THE SOLITARY WOODMAN.

All day long he wanders wide
With the gray moss for his guide,
And his lonely axe-stroke startles
The expectant forest side.

Toward the quiet close of day, Back to camp he takes his way, And about his sober footsteps Unafraid the squirrels play.

On his roof the red leaf falls, At his door the bluejay calls, And he hears the woodmice hurry Up and down his rough log walls.

Hears the laughter of the loon
Thrill the dying afternoon,—
Hears the calling of the moose
Echo to the early morn.
—Charles G. D. Roberts.

KEEP PEGGING AWAY.

A Toronto member writes: I sympathize with you in the uphill work which you must find in attracting attention to a matter which is naturally overshadowed by the catastrophe in Europe, but the work done by the Association in connection with forestry is more appreciated than you, probably, are aware.

Approximately 750 acres on the Oregon national forest were planted with young trees this spring.

Douglas-The Man and the Tree

Romantic Life of the Man After Whom the Douglas Fir Was Named.

Douglas was the family name of Lord Selkirk, founder of the Red River Settlement, and it was the name of other men who have been prominent in Western Canada, so that considerable doubt exists in the popular mind as to the particular man after whom the famous Douglas fir was named. It is found that it was not named after a founder, governor, or chief justice, but after a remarkable man in a humbler sphere of life. It should also be noted, too, that while the name of Douglas will always be associated with the common name of this magnificent tree, yet the scientific name fails to show any connection. It is called scientifically Pseudotsuga, literally, false hemlock. It is not false hemlock, and it is a much finer tree than any hemlock, and it is to be hoped that a later generation of botanists will change the name and give Douglas a place in it.

Regarding Douglas, Dr. Charles S. Sargent, Director of Arnold Arboretum at Harvard University, has this to say of him

in a footnote in his famous work 'Silva of North America':—

'David Douglas (1798-1834), a Scotch gardener sent by the Horticultural Society of London to explore the forests of the Northwest Territory, is, from his courage, energy and success in the presence of great difficulties and dangers, and from his untimely and horrible death, a conspicuous figure in the annals of American botanical exploration. Douglis, who had been trained by Sir William Hooker, and had made a short botanical journey in eastern America in 1823, was sent, in 1824, by way of Cape Horn, to the Columbia River, where he arrived in April, 1825. He spent two years in Oregon, discovering some important trees, including Abies nobilis (noble fir), Abies amabilis (lowland fir), and Pinus Lambertiana (sugar pine), the largest of its race.

'In March, 1827, Douglas started from Fort Vancouver, on the Columbia River, crossed the continent by Hudson's Bay



Among the Big Trees that Douglas Discovered on the Pacific Coast.

Company posts, and embarked for England, which he reached in October of the same year. Two years later he left England for the last time, and reached the mouth of the Columbia on June 3, 1830, remaining in Oregon until the autumn, when he sailed for Monterey. Here he remained until the next summer, discovering no less than a hundred and fifty species of undescribed plants, and then sailed for the Sandwich Islands. In the autumn of this year he returned to the Columbia River, and in the following summer extended his exploration as far north as the Fraser River, in which he was wrecked, losing his collections and instruments, and barely escaping with his life. But the beauties of tropical vegetation lured him from the awful solitude of the sombre fir forests of the northwest, and in October, 1833, he sailed again for the Sandwich Islands. Here he passed the winter, and on the 12th of July, 1834, while engaged in exploring

the high peaks of the island, he fell into a pit in which a wild bull had been captured, and several hours later was found dead and terribly mangled.

'Douglas is said to have introduced two hundred and seventeen species of plants into English gardens, the list including many valuable and beautiful trees, like the Redwood, the Sugar Pine, and the Douglas Fir. No other collector has ever reaped such a harvest in America, or associated his name with so many useful plants. By an unfortunate hazard of fate the noble Douglas Fir, the most important timbertree introduced by Douglas, and one of the most valuable trees in the world, does not, as might well have been the case, perpetuate his name in the language of science, and it is a humble primrose-like alpine herb which commemorates this explorer of forests and discoverer of mighty trees.'



Algonquin Park, Live Beaver in a Trap.

Animals in Algonquin Park

Algonquin Park is the property of the people of the Province of Ontario, and lies in the heart of the province between the rich farm land of the southern border along Lake Ontario and the great clay belt, now being opened to settlement on the slope into James Bay. The southwestern corner of the park is about 150 miles north of the City of Toronto. It contains 1,750,000 acres, and is roughly a square of a little over fifty miles a side. A number of cutting licenses existed in the park when it was set aside as a provincial park and game refuge eighteen years ago.

Some of the licenses have been bought out and some remain. The shooting and trapping of game has been prohibited, with the result that the numbers of game animals have very greatly increased. The park, occupying a watershed, con-

The park, occupying a watershed, contains within it the source of a number of important rivers and streams, which fertilize the surrounding lands. In the same way this game refuge has become a reservoir of game from which the deer and other animals spread out into the surrounding part of the highlands of Ontario, greatly improving the sport in those parts of

the province where hunting is allowed.

The game refuge side of the work has been so successful that the park is in some respects overstocked with game animals, and these can now be taken in considerable numbers from year to year, without endangering the park as a source of supply and without diminishing the number below a safe point. It was first suggested that the Ontario Government would conduct a great fur farm and trap about 1,000 beavers per year, selling the skins. This is done to a considerable extent. But the growth of fur farming and the demand from zoological gardens for live animals has made it more profitable to catch the animals alive.



Taking Out a Live Beaver.

Various expedients were devised for this, and the most successful is a cage trap invented by Mr. James Bartlett, son of Mr. G. W. Bartlett, who has been Superin-tendent of the Park for the past seventeen This trap is like an old-fashioned valise or carpet bag, with sides made of chains. The animal steps on the baited spring and the trap closes around it, with-out hurting it, and at the same time hold-ing it securely. In the case of beaver, and other aquatic animals, the trap is set under water, but in such shallow water that when sprung the top of the chain bag will be above water, so that the animal can get its nose out to breathe. The general plan of these traps will be seen in the

engravings shown herewith. It is interesting to know that since this trap has been used very few animals have been caught only part way in it and killed, while, on the other hand, two animals have been caught alive at one time. The beaver and other animals, after being caught, are fed in a place properly protected until ready for shipping, when they are shipped in the boxes covered with wire netting, shown in one of the engravings.

snown in one of the engravings.

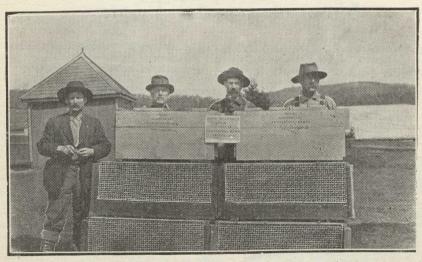
Beaver skins, when sold in quantities, average around \$10 per pelt, but the live beaver bring much more. If you think of starting a fur farm, or keeping some pet fur-bearing animals, you can be supplied to the control of the con by the Ontario Government from Algonquin Park at the following rates per pair: Mink, \$35; beaver, \$50; martin, \$80; fisher, \$150; otter, \$150.

OBITUARY.

Death has again been busy in the ranks of those who have taken an active part in forest conservation.

After a long illness, Hon. Colin H. Campbell, former Minister of Public Works and Attorney General of Manitoba, died at his residence in Winnipeg. Mr. Campbell attended the Canadian Forestry Convention at Victoria as the representative of the Province of Manitoba, and was so much impressed with the need of active measures of forest conservation that he was the inspirer of the invitation from the Government of Manitoba to hold the 1913 Forestry Convention in Winnipeg. Unfortunately, before the convention was held, Mr. Campbell suffered from a paralytic stroke, which was the beginning of the illness which caused his death. was away in Europe when the convention was held, and was never able to again take part in public affairs.

Mr. D. R. Wilkie, President and General Manager of the Imperial Bank of Canada, who, for a number of years, had been a warm supporter of forest conservation, died after a brief illness at his residence in Toronto, on Nov. 16. Mr. Wilkie was a Canadian by birth, a native of the city of Quebec, and had spent all his business life in Canadian financial institutions. He was made general manager of the Imperial Bank upon its incorporation, and retained that post until the time of his death, which was wholly unexpected. About eight years ago he was made president as well as general manager. For the past eight or ten years Mr. Wilkie had taken a personal interest in forest conservation, believing that much of Canada's prosperity depended upon the way she dealt with her natural resources.



Live Animals Ready for Shipment from Algonquin Park.

One of the best known residents of the Ottawa Valley, Mr. John Gillies, of Braeside, member of the well-known and extensive lumber firm of Gillies Brothers, died suddenly at Pembroke, Ontario, on Nov. 17. Mr. Gillies was a son of the late John Gillies, founder of the firm, and brother of Mr. David Gillies, ex-M.P.P. of Carleton Place, Ontario. The late Mr. Gillies specially devoted himself to the woods department of the firm's business, and, like other members of the firm, was impressed with the inadequate care Canadians have been taking of their timber wealth. Everybody will recall, at the opening of the Cobalt boom, the struggle there was on the part of prospectors and miners to get the 'Gillies Limit' thrown open to prospectors, careless of the results to the valuable timber on the limit. This was one of the firm's extensive holdings in Northern Ontario, in regard to the rapid clearing off of which for prospecting purposes Mr. Gillies held strong views. will be greatly missed throughout the Ottawa Valley where he was favorably known to everyone who was in any way interested in our forests.

The total amount of land purchased in the Eastern states for federal forests is nearly 800,000 acres. So far the principal work on these areas has involved their protection against forest fires.

Let us remember that the conservation of our natural resources, though the greatest problem of today, is yet but part of another and greater problem—the problem of national efficiency.— Ex-President Roosevelt.

SEEKING SUBSTITUTES FOR SPRUCE.

Pulp and paper men in Montreal have been much interested in an announcement from Washington, published in the daily papers, to the effect that the United States Government wood pulp laboratory at Wausau, Wis., is making experiments with a view to finding a substitute for spruce in the making of wood pulp for newsprint. Experiments along the same lines are being made in the Canadian Government laboratory at Montreal, as Canada has immense supplies of other timber, which might be utilized for the purpose if a suitable treatment could be discovered. It is pointed out that with the increasing consumption of newsprint in Canada, together with the ever-increasing demand from the United States, it will sooner or later be necessary to utilize other woods. The newspaper with a circulation of 60,000 of 20 pages every day uses the product of four acres of forest per diem. When the figure is multiplied by the great number of papers printed on this continent, it will be seen that the drain on forests is enormous.-Paper Trade Journal.

The Government of Quebec has increased the grant to the Forestry School affiliated with Laval University, Quebec, from \$5,000 to \$8,000 per year. The course of studies will be considerably increased.

The future well-being of Canada depends on the loyal acceptance by the people of the principles which aim at the profitable and scientific development and conservation of her natural resources.—Earl Grey.

Notes of Forestry Progress

Mr. J. Fraser Gregory, of St. John, N.B., was one of those who gave evidence before the Dominions' Royal Commission on Imperial Trade Relations before the work of that body was postponed because of the war. Mr. Gregory, who is an authority on lumber conditions, confined himself entirely to that subject, discussing the rate of tree growth, timber leases, the deterioration of the forests through the coming in of inferior species of trees, and the driving difficulties on the St. John River owing to its international character. The work of this Commission, which will be of great benefit to the Empire, will, it is expected, be resumed as soon as war is over.

Mr. F. E. Buck, B.S.A., assistant to the Dominion Horticulturist, is the author of Bulletin No. 19, on the 'Planting and Care of Shade Trees.' The bulletin deals with planting methods, what trees to plant, rapidity of tree growth, hints on selecting trees, distances apart to plant, ornamental trees, wind-breaks, care of trees, pruning, injuries to trees, how to protect trees, with general suggestions as to the system of planting trees in cities. The bulletin may be had free by those desiring it by addressing the Department of Agriculture, Ottawa, Ont.

The New Brunswick Government has decided to suspend during the war that provision of the law which prohibits the exportation of timber for pulp purposes cut on the Crown lands of the province, so far as it relates to Great Britain. This will allow pulpwood and pit props cut on Crown lands to be shipped to Great Britain.

Human carelessness was responsible for 75 per cent. of the forest fires in District No. 1 of the United States Forest Service, which includes Montana and Northern Idaho. The percentage is high, but probably is about a fair average in districts where the population is comparatively dense. The ordinary man rarely gives a thought to what may happen when he leaves a camp fire alight, or throws a burning match away.

The forestry movement in Pennsylvania owes much to the women of the State who were active in its organization, and have been its firm support individually and through their clubs and federation, and a number have been liberal contributors to the support of the association.

The British Columbia Forestry Branch, in addition to interesting woodsmen, and all who live near the woods in forest protection by the distribution of unique posters and useful articles which suggest carefulness, has sent out to members of the Boy Scouts one thousand pocket whetstones, which bear this motto: 'Build camp fires in safe places. When you leave put them out. Boy Scouts be prepared. Help protect our forests.'

The Canadian Engineer notes that the mines and metallurgical plants of northern Ontario are now for the most part operated by water powers, and that these powers have been of the greatest service in providing cheap motive force. Everybody knows that the permanence of these powers depends upon forest being maintained upon the headwaters of the streams, which is a reason added to that of our need for timber for protecting our northern Ontario forests.

A writer in the Toronto Weekly Sun notes that the farm in Halton County, Ontario, on which Honourable W. T. White, Minister of Finance, was born, was originally covered with some of the finest pine that grew on this continent. Mr. James Lyall White, son of the original settler, was afterwards a leading lumberman in Michigan, and he stated that never in all his experience as a lumberman did he see finer pine than that which grew on the old homestead.

In a recent address, Hon. W. H. Hearst, Prime Minister of Ontario, pointed out that the capital invested in lumber interests in the province was \$260,000,000. The wages paid amounted to \$39,000,000, and \$2,500,000 worth of farm products went into the lumber camps as supplies. The Government and lumbermen between them spent \$325,000 on fire protection in 1913.

In some parts of the United States native birds have begun to increase in numbers after having reached a very low ebb. This change is attributed to the dissemination of information by bird lovers and bird societies as to the great work done by birds in protecting farm crops and forests.

A movement has been on foot for some time in the United States looking to the formation of a treaty between the United States and Canada for the better protection of migratory birds passing back and forth between the two countries.

PULPWOOD PRODUCTION FOR 1913.

Bulletin No. 46 of the Forestry Branch of the Department of the Interior, Canada, 'Pulpwood Consumption in 1913,' compiled by R. G. Lewis, B.Sc.F., assisted by W. Guy H. Boyce, has just been issued. It shows that in 1913 there was consumed in Canadian mills 1,109,034 cords of pulpwood, valued at \$7,243,368, and that there was exported 1,035,030 cords, valued at \$7,070,571. The quantity consumed in Canadian mills was an increase of 28.1 per cent. over that of 1912. The average cost of pulpwood at the mill in Canada was \$6.53, an increase of 8.5 per cent. over 1912. The provinces produced pulpwood in the following order: Quebec, Ontario, British Columbia, New Brunswick, Nova Scotia.

Only five kinds of wood were used in the manufacture of pulp in the following proportions: Spruce, 68.1 per cent.; balsam fir, 25.5; hemlock, 4.3; jack pine, 1.7, and

poplar, .4 per cent.

As to the methods of making pulp, these consumed wood in the following proportions: Mechanical ground wood, 54.1 per cent.; sulphite pulp, 33.3; sulphate pulp, 12.3. Soda pulp has greatly reduced, only 5,144 cords being used for this purpose in 1913.

Copies of this Bulletin may be had free on application to the Director of Forestry, Ottawa.

IMPORTATION OF PINE SEEDLINGS PROHIBITED.

Dr. H. T. Gussow, Dominion Botanist, Department of Agriculture, Ottawa, supplements his previous information on the subject of legislation concerning White Pine Blister Rust by a note calling attention to the fact that on Nov. 9, 1914, an Order-in-Council was passed by the Government of Canada at Ottawa as follows: 'The importation into Canada of the following species of the genus Pinus and their horticultural varieties, viz: White pine (Pinus strobns), western white pine (Pinus monticola Dong.), sugar pine (Pinus Lambertiana Dong.), stone or cembran pine (Pinus cembra L.), and all other fiveleaved species of the genus Pinus is prohibited.'

A USEFUL HANDBOOK.

The Dominion Parks Branch has issued a 'Handbook of the Rocky Mountains Park Museum,' prepared by Mr. Harlan I. Smith. The book, which is a volume of 126 pages, is an effort to make the museum at Banff more useful, and this is done by making the handbook as non-technical and as interesting to the layman as possible. The attempt is made to link up the information contained in the museum with the

fund of knowledge that every man has, so that the visitor may at once go on increasing his knowledge without having to put on one side what he already knows and learn a new system and a new language. Those who are interested in the museum, or in the preparation of books with a similar purpose, may obtain a copy free upon applying to the Commissioner of Dominion Parks, Department of the Interior, Ottawa.



Storms Never Bother This Farmer.

Mr. Wm. Wightman, Glengarry Co., Ont., hardly knows when there is a storm raging, so thoroughly are his house and buildings protected by windbreaks. The windbreak here shown is 50 or 60 feet across, there being several rows of trees.—Photo by editor of Farm and Dairy.

THINK OF THE FUTURE.

'Let us think of the future. We are trustees for the future. We are not here for ourselves alone. All these gifts were not given to us to be used by one generation, or with the thought of one generation only before our minds. We are the heirs of those who have gone before, and charged with the duty we owe to those who come after.'—Rt. Hon. James Bryce.

FISH AND FORESTS.

The Government of Canada, with the idea of leading to a fuller utilization of our food products, has issued two books, one dealing with the cooking of apples, which may be obtained free through the Department of Trade and Commerce, and another pamphlet on 'Fish and How to Cook it,' issued by the Department of the Naval Service, Ottawa, copies of which may also be had free upon application to that Department. Foresters are interested in the latter subject from the fact that barren and burned over territory has no fish in its streams. If we are to have tourists we must have green woods for them to come to, otherwise there will be

neither game nor fish. Both subjects interest the friends of conservation from the fact that both apples and fish, in their sale and transportation, require considerable quantities of timber for the manufacture of barrels and boxes. We are beginning to see, however we look at it, that our forest wealth plays a large part of our national life.

OLD WAYS AND NEW.

One of our oldest members, Mr. R. J. Drummond, of Perth, Ont., writes that he recollects, as a boy in Ottawa, when Sparks street was a green common, seeing the men pass with cant hooks and other tools to repair the cribs at the foot of the locks of the Rideau Canal. In those days timber prices were low and the waste in the woods great. Every September the people of Bytown (Ottawa) and surrounding towns suffered from sore eyes from the presence of so many bush fires. Great improvements have been made, but more still remains undone, and Mr. Drummond urges greater activity, with a Dominion minister and department devoted exclusively to forests.

DESTRUCTIVE PEACE.

Forests have been ravished in Europe and towns and villages destroyed by men with a deliberate purpose, and the world stands aghast at the wantonness. But in the United States and in Canada the fire of the negligent camper, the indifferent

locomotive fireman or the careless bush ranger is just as destructive to property as the fire of an enemy, whose aim it was to work ruin. In time of war the greatest vigilance is maintained. Public property is closely guarded; every bridge, railroad and canal is patrolled in fear that by some remote chance it might be attacked by the enemy. But in peace, we leave our great forest possessions in many cases without a corporal's guard and often without so much as a sentinel. And we are shocked and secretly rail against Providence rather than against ourselves when the inevitable happens.—Pnlp and Paper Magazine of Canada.

LAURENTIDE CO. PLANTING.

The Laurentide Company, Limited, is enlarging its forest nurseries in order to provide for the systematic planting, on an increased scale, of considerable areas of nonagricultural, cutover lands in the watershed of the St. Maurice River. This work is being accomplished by the company's forestry division, which has just finished a survey and map of the company's limits, comprising 2,350 square miles of land, mostly timbered. The map shows all drainage, roads, portages and trails, lookout stations, telephone lines, and timber conditions. The company is also importing reindeer from Dr. Grenfell's herd in Newfoundland to take the place of sled dogs, which are very troublesome to keep in the summer and not very efficient in the winter. This experiment is being watched with much interest.—Paper.



Freighting Supplies to a Lumber Camp.

With the Forest Engineers.

DR. FERNOW'S SUMMER WORK.

Dr. Fernow spent his summer mostly at his summer home on the south shore of Lake Ontario, in New York, revising his Economics of Forestry. This volume, first printed in 1902, has become obsolete, especially in the statistics, and these have been brought up to date. Unfortunately, the firm of publishers who have handled this volume have suffered a financial setback, which will delay the printing of the new edition probably for a year.

Dr. Fernow attended the meeting of the

Society for the Protection of New Hampshire Forests at Gorham, N.H., in August, and in connection with this the meeting of the Society of Northeastern Foresters at Berlin Mills. This meeting was of unusual interest, not only in that it brought some 25 professional foresters to a meeting in the woods, but these woods, belong-ing to the Berlin Mills Company, were the first on this continent in which a lumber and paper company had employed a forester with a view of improving their logging operations as regards securing clean work and reproduction. Mr. Austin Cary was the forester.

Unfortunately in a selection forest, the results can only be realized by him who saw the original condition, and hence the excursion without guidance of such a man remained more or less barren of results. But there were other features in the operations of the Berlin Mills Company that made the visit profitable. The company owns not only some 300,000 acres of forest in the States, but controls even larger areas in Quebec, and is an active member of the St. Maurice Fire Protective Association. Its paper mills are, perhaps, the largest on this continent, if not in the world, and are organized for efficiency, making by-products which one would hardly expect, such as chloroform and crisco, by using the excess of hydrogen resulting from the manufacture of the bleaching powder. The company employs four foresters in its wood department.

QUEBEC FOREST WORK.

Mr. G. C. Piché, Chief of the Forest Ser-

vice, Quebec, writes:-

During the months of July, August and September the activity of the members of the Forest Service was devoted to the classification of vacant lots and the inspection of settlers' lots. We had 12 parties in the field, besides isolated rangers calling at the wood-working establishments

to obtain their reports, or watching the movements of timber along the railways, or in the harbors of Montreal and Quebec, etc. In all, we had about 100 men at work.

Now that we have used the month of October to complete the unfinished jobs and prepare the reports of these explorations, we are beginning the organization for the control of the logging operations. Until recently there was a good deal of hesitation with our lumbermen, and the prospects of the cut were very bad, but the thermometer seems to be rising, as very few firms will not be at work this winter, and the timber crop will be about as good as last year, perhaps, suffering a diminution of 15 to 25 per cent.

Considering the general situation, I believe this is remarkable, and it would surprise you, perhaps, to hear that some of the firms, especially the pulp mills, will

increase their production.

Regarding the Forest School, I must in form you that we have entered the new building which has been built by Laval University for the faculties of Law, Surveying and Forestry. As we have better legs than the others, they gave us the two upper stories of the building (90 x 50) for our classes.

Our new quarters are very suitable, and we can hope now to build up some nice collections, etc., and we will rely upon our friends to send us as much as they can. Everything will be welcome.

The Forest Service has published a second bulletin, which deals with the general conditions of the forest lands in this province. Our first bulletin gave the names of the wood-working establishments. Until now we have only a French issue of this bulletin, but we expect to have the English version out in a short time.

TRIP TO THE YUKON.

Mr. W. J. Boyd, of the Forestry Branch of the Department of the Interior, accomof the Department of the Interior, accompanied by Mr. E. S. Davison, another graduate of the University of Toronto Forestry School, has returned from a five months' trip from Prince Albert, Saskatchewan, to Yukon Territory, and is now at the head office, Ottawa, preparing his report. The object of the trip was to secure data regarding forest conditions and forest protection along the lower part of the Mackenzie River, and especially in the Yukon.

The start was made from Prince Albert on May 15, when the two men, with their baggage and a sixteen-foot Chestnut canoe, were taken by train on a logging railway running northwesterly from Prince Albert, a distance of about eighty miles, to Crooked Lake, the beginning of that wonderful series of watercourses, which, after three and a half months' hard travel, was to land them in Dawson, Y.T. Though this route, by way of a series of lakes, the Clearwater River, Athabasca River and Lake, and the Mackenzie River, to the Arctic circle, is not much heard of nowadays, it was, for a hundred years, one of the main highways of the Hudson's Bay Company. This part of the trip was accomplished without incident, the various points where there are Forestry Branch officers being visited and other duties performed.

This part of the journey was performed without guides, the two foresters paddling, portaging, camping and cooking along this two thousand mile journey without mishap. At Fort Macpherson, near the mouth of the Mackenzie River, Indian guides were engaged, as it was important to make good time, and the passage of the divide be-tween the valley of the Mackenzie and the valley of the Yukon is somewhat intricate. The party then ascended the Rat River, which enters the Mackenzie near its mouth. This route is known as Macdougall Pass. After paddling through some small lakes on the divide, they reached a tributary of the Bell River, and then passed into the Bell itself. Traversing the Bell throughthey entered the Porcupine and paddled down it to the Yukon River, which receives the Porcupine at Fort Yukon, in Alaska, U.S.A. They then ascended the Yukon River and reached Dawson on Aug. 24. From that time until they left to come out over the White Pass, on Oct. 9, they were engaged in exploring the different valleys and taking note of the state of the timber and the possibility of its protection from fire. Timber is vital to the carrying on of the industries of the Yukon, the different mining plants using thousands of cords for fuel every year. Fires have done great damage, and the need for protection was evident, but just what will be recom-mended will be made known in the report to the Branch. It is interesting to know that the trip was made without mishap, and that although the route from Prince Albert lay to the north and east of the Peace River country, into which settlers are now pouring, the travelers went over a comparatively well traveled path, and had no difficulty in securing supplies at the Hudson's Bay Company posts, sufficient to carry them over the next stage of the journey.

From the White Pass and Skagway they returned down the coast to Vancouver and returned east by railway.

Mr. E. S. Davison, who is a native of

Bridgewater, Nova Scotia, has enlisted with the second Canadian contingent for the war in Europe, and is now at the training camp at Kingston, where he has the rank of sergeant.

BRITISH COLUMBIA FOREST PROTECTION.

In spite of hard conditions, the British Columbia fire protection system rendered a good account of itself this year. A re-

port of the work says:-

'All records indicate that the weather has been drier during the present summer than at any other time during the past twenty years. Streams have run dry which have not been seen dry before. In addition, it has been very hot and windy in the southern portion of the province. Between 2,000 and 3,000 small fires have occurred, and it has been necessary to increase greatly the number of fire patrolmen and guards and to employ numerous fire-fighters. Fires have been fought regardless of their size or location, whether in settled country, range lands, scrub, reproduction or timber lands. The result has been that very few fires got beyond control, while those which had done so were brought under control before they had destroyed much merchantable timber. Thus the total fire loss for the province has been extremely small, although the cost of protection this year has been about \$350,000. These results prove the value of elasticity of organization, since the forces could be increased quickly wherever weather conditions made such action necessary. Protection has not been restricted to merchantable timber alone, but has covered the whole country, and fires have not been able to gain a foothold anywhere.'

ANNUAL CONVENTION OF HOO-HOO.

The twenty-third annual convention of the lumbermen's fraternal organization, known as the Order of Hoo-Hoo, held in Winnipeg Sept. 8 to 11, was very successful in spite of the outbreak of war, which somewhat reduced the expected attendance. Delegates were present from all parts of Canada and the United States, the total attendance, including delegates and their wives, numbering 524. The business of the Order was despatched at the morning sessions, and the afternoons and evenings were devoted to social features. Most of the functions connected with the convention were held at the Fort Garry Hotel. An interesting feature of the meeting was the election of a Canadian, Mr. E. D. Tennant, of Winnipeg, to the highest office in the Order, Snark of the Universe. San Francisco was selected as the place of meeting in September, 1915.

THE DYING TREE.

Ah, it is saddening to see a beautiful and stately tree in process of decay; it took years to reach its height, and then there fell a deadly blight that ate its heart away. It seems to know it's in the soup, for all its leaves and branches droop, 'tis a despairing thing; and in the zephyr or the gale it seems to moan and sigh and wail, when it should dance and sing. There's nothing nobler than a tree, there's naught that more appeals to me, and oh, it makes me hot to think such stately things must die, because some derned old worm or fly has given it dry rot. And in our towns a million trees are dying of some punk disease imparted in that way; great elms that pleased our pas and mas are crumbling to the ground because such pests we do not slay. A little hustling out of doors might save the threatened sycamores, the locusts and the elms; so let us gird our loins today, and spray our friends the trees, and slay the worm that over-whelms. If you would sit supinely by and see a splendid shade tree die, and never lift a hand, if you would rise no doleful sound, when trees are dying all around, you surely should be canned.

WALT MASON.

Maine has installed twenty steel towers with look-out houses on top as part of the State forest protective system in the forest districts of the State.

A number of prominent citizens of Waterloo County have purchased a block of fifty acres of pine woods to prevent it being cut, as it is one of the few remaining pieces of forest in the county. Just how this can be made a public possession has not yet been decided.

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