

**CANADIAN**  
**FORESTRY**  
**JOURNAL**

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# Canadian Forestry Journal

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## NOTICE.

In regard to this issue of the Canadian Forestry Journal it may be stated that it has been decided to carry on the publication as a monthly. Further particulars will be given in the next issue.

## CIVIL SERVICE REFORM.

On all sides there is evidence of growing determination to separate politics from the civil service. In the Dominion in addition to the reports of Sir George Murray and the Special Commission, the Civil Service Association is pressing for the extension of Civil Service regulations to the outside services. There are similar movements in Ontario and Manitoba, and the newspapers of all political parties are asking for the change. By the very nature of things there is no department where the plan of appointment and promotion by test and merit is so necessary as in the forest service. Here by reason of the conditions under which the men work they are constantly thrown on their own resources to confront unexpected problems, and the best men are needed.

## A MONUMENT TO A TREE.

Attention has just been called to a unique ceremony which took place last summer near Morrisburg, Dundas County, Ontario, Canada. On this occasion a monument was unveiled to an apple tree. The farmers of Dundas County raised the money by popular subscription and placed a marble stone close to the

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## RANGER SCHOOLS.

In the City of Ottawa it has been found profitable to give the city firemen a course of instruction on chemicals, water pressure, building construction, etc. The lectures are held once a week and are supplemented by practical demonstrations. The men of the Ottawa fire brigade are all selected for efficiency and are supposed to know the essentials of their work. At the same time it is felt they will be vastly more efficient if given definite instruction by experts on certain parts of their work. In the same way it is the contention of the Canadian Forestry Association that forest rangers should be selected for efficiency in the first place, and that they should further be given specific instruction for a few weeks by men who can assist them by advising how to combat difficult situations that are likely to arise in the woods. If city firemen, who are always under the direction of chief and lieutenants, will be benefited by instruction, much more will the fireman who during a large part of the year has to work single handed many miles from his nearest neighbor.



spot where the original McIntosh Red apple tree stood. The newspapers in describing this ceremony stated that in 1797 John McIntosh, who was one of the United Empire Loyalists, came to Upper Canada from the United States and settled in Dundas County. On the ground which he cleared for a home he found a number of young wild apple trees. He tested these and one produced fruit of such superior colour and quality that he named it McIntosh Red. His son Allan propagated from it and disseminated the variety, which has become popular over a large part of the continent. In 1893 the old tree was injured by fire, but continued to bear till 1908 when it completely died down.

### **TEACHING CHILDREN TO LOVE TREES.**

The New York State College of Forestry at Syracuse University, designated and established by the Legislature for educational work in forestry in New York, has sent a letter to the Principals of all the High and Preparatory Schools of the State offering to give illustrated lectures and demonstrations upon forestry before the schools so that every pupil in these schools may understand what forestry is and may learn to love the trees and forests.

### **LUMBERING AS A SCIENCE.**

*British Columbia Magazine.*

Asserting that lumbering should be regarded as a science and as a profession, the British Columbia Lumber and Shingle Manufacturers' Association and the Canadian Forestry Association have asked for the establishment of a course in logging engineering at the new University of British Columbia. The success which has attended the agricultural colleges of Canada and the United States in equipping the farmers' sons with a scientific knowledge of husbandry, is

evidence of what might be expected from similar courses devoted to logging engineering. The courses of study in our agricultural colleges have been intensely practical and helpful. The lumber industry deserves the same consideration for those who desire to become expert loggers and lumbermen, in the broadest sense of the term.

### **CIVIL SERVICE PROMOTION.**

*Hamilton Herald.*

Promotion by personal favoritism and political 'pull' instead of promotion by merit and seniority is one of the gravest abuses of the Canadian Civil Service. It is a deep-rooted evil, and as old as the service itself. It impairs the efficiency of the service by putting a premium on inefficiency. Able men in the public service are deprived of the natural incentive to do their work well and qualify for higher duties. When it is known that efficiency does not count for much, and that the man who bases his hopes for promotion solely on his efficiency has no chance in competition with the man who has an influential relative or political friend to work for his advancement, why should men waste time and energy in improving themselves? The system operates to kill honorable ambition to excel. It tends to lower the personnel of the Civil Service to a dead level of mediocrity.

### **AFTER THE GYPSY MOTH.**

The Canadian Department of Customs has issued an order prohibiting the importation from New England states of forest plant products including logs, tan bark, posts, poles, railway ties, cordwood and lumber, unless accompanied by a certificate from the United States Department of Agriculture that such products are free from the gypsy moth.



# American Forestry Association

A Vigorous and Progressive Campaign now Going on.

It was deemed advisable this year that the Secretary should attend the annual meeting of the American Forestry Association in Washington, D.C., on Jan. 8. This proved a very profitable trip and much valuable information was gained, particularly owing to the fact that several related organizations met in Washington at the same time. This enabled the Secretary to converse in a day and a half with more of those connected with forest conservation

work in the different parts of the United States than he could have met in several weeks steady traveling at other seasons of the year.

## FULL OF FIGHT.

The spirit throughout was one of optimism and at the same time the sentiment was constantly expressed that a most determined attack was about to be made on the natural resources held by the federal government of the United States, mineral



Wolves in Sheep's Clothing.

The Newark, N.J., *Evening News* had the above cartoon as its view of the remarks of Mr. Gifford Pinchot that States Rights would be made a cloak for exploitation.



lands, water-powers and forests, but particularly the latter. The general idea, however, was that the friends of conservation were more wide-awake than ever, and on every hand there were expressions of determination to work, to fight and to make sacrifices to have these resources developed and used for the very best interests of the whole country, and to keep them from falling into the hands of trusts and corporations with no other object than to exploit them for the greatest present profit regardless of the future.

The sessions were held in one of the halls of the magnificent New Willard Hotel. There was a meeting of Directors at 10.30, the general business opened at noon, and at one o'clock the assembly adjourned to an adjoining dining room where lunch was served to about one hundred and twenty five including quite a sprinkling of ladies. It may be remarked in passing that while this luncheon was in every way strictly first class the determination of the American Forestry Association to keep their organization as democratic as possible was shown in the fact that the charge for tickets for the luncheon was only \$2 apiece. This was in all respects a most enjoyable function and at the close there were several significant speeches.

#### HON. W. L. FISHER.

Hon. Walter L. Fisher, Secretary of the Interior, made a most illuminative address in which he emphasized two points. The first was that the cause of forest conservation had lost in the past and would continue to lose in the future if its friends did not kill the old belief, industriously propagated by its enemies, that conservation meant negation, stagnation, the locking up of forest resources and the keeping back of development indefinitely. The thing which conservationists must now do was to show the public, what they knew to be the case themselves.

namely, that conservation was affirmative constructive and progressive. And second, he told the great steps forward that had been taken in the past year in the matter of disposal of water-powers on federal lands. Up to 1912 there were only two methods of developing water-powers. The water-powers might be deeded outright to the applicant or they might be leased to the applicant on a lease which could be revoked without five minutes' notice by the Secretary of the Interior. During 1912 the law had been so amended that water-powers could be now leased for a period not to exceed fifty years, the rentals to be reviewed and if necessary readjusted every ten years. Where the government and the applicant were not able to agree upon the new rent to be charged at the end of any ten years' period the matter was to be settled by arbitration and the onus was on the lessee to show that the rent was too high. While at first some of the organizations claimed that no water-powers would ever be developed under the leasing system, the great majority had admitted that the system was fair. As confirming this Mr. Fisher pointed to a lease to a powerful corporation of rights which would result in the immediate future in the electrification of five hundred miles of main line of one of the transcontinental railways. A leading railway man had told him that this was just the beginning and that within a few years under the same system twenty thousand miles of railway lying between the Rocky Mountains and the Pacific Ocean would be electrified. He had drawn attention to the fact that this was a powerful corporation as showing that this was not a case of the government 'squeezing' a small concern that was not able to take care of itself. He predicted that under this new system a very rapid development of water powers on national lands of the United States would take place, and this



development would be on terms fair both to the lessees and to the nation at large.

This announcement of a new arrangement in this important matter was received with prolonged applause.

HON. GIFFORD PINCHOT.

Mr. Fisher was followed by Hon. Gifford Pinchot, who in a forceful speech held that the 'predatory interests' having come to the conclusion that no more plums were to be snatched from the national tree had decided to make a last effort to have the federal resources divided up amongst the states in the belief that they would be able to get from poor and struggling states what they could not demand from the strong national government. To this end he predicted that the next session of Congress would see a tremendous revival of the States Rights movement. The danger was this that while this States Rights cry would be raised largely by men who cared not a straw for the states and who cared altogether for their own pocket-

ets, yet there would be others in the States Rights ranks who would be actuated entirely by principle and a sense of duty. This made the fight all the harder, but the friends of conservation must win, for if they did not the work of the last twenty five years would be lost, and within a few months the immense natural resources of the United States would be in the hands of the grabbers. That this was a prize worth fighting for he indicated by estimating that the forests of the United States alone were worth two thousand million dollars.

STATE VERSUS FEDERAL CONTROL.

After Dr. Drinker (President of Lehigh University) the new President of the American Forestry Association had made his confession of faith and started out the fiery cross to rally all good men to the cause of conservation, the regular session was resumed in the assembly hall. Here papers were read by Prof. H. H. Chapman of Yale University on federal versus state management of forests, and by Mr. W. B. Greeley



Travelers in winter on the route of the Hudson Bay Railway North east of the Pas.



of the United States Forest Service on the need of trained men in forest conservation. The conclusion of the first paper was that for many reasons the federal government was better fitted to do forest work than the states, and this was also indirectly the conclusion of the second paper. It was pointed out that a forest was of such slow growth that working plans must be made looking for almost a century ahead. These plans had to take in the whole country, and in many cases they would result in the spending of millions of dollars spread over a long period of years before the cash returns from a particular tract began to come in. The federal government with its large revenues and its power to employ the best men in the nation was much better fitted to systematically manage the forests than a state legislature which was often in such desperate need of funds that instead of allowing a forest to grow till fit to be harvested, would be constantly pressed to sacrifice this asset for whatever it would bring in the immediate present. It was impossible that twenty struggling states could secure and hold twenty staffs of forest engineers for the general direction of the work who would be anything like as competent as the staff which could be secured by the national government to do this same work for the whole nation.

#### INTERESTING THE POLITICIANS.

In the evening there was a 'smoker' at a leading restaurant given by the local members of the American Forestry Association to which the delegates and their friends were invited. The advantages possessed by such a non-governmental and non-partizan organization such as the American Forestry Association (or the Canadian Forestry Association) were shown in the fact that administrators, lumbermen, foresters and representa-

tives of both political parties met here on common ground and delivered their views. Among those who spoke were Mr. Henry S. Graves, United States forester; Mr. Chas. Lathrop Pack, President of the National Conservation Congress; senators and congressmen both Republican and Democrat. Mr. E. A. Sterling, forest engineer of Philadelphia, well known in Canada, was the chairman of the evening. While all the views expressed were not enthusiastically in line with the aims of the American Forestry Association, yet a surprisingly large majority were, and the minority speakers represented points of view which conservationists must take into consideration in making up their program.

#### THREE ACTIVE ORGANIZATIONS.

One matter of importance brought out at this annual meeting was that in the United States three active organizations are now co-operating in conservation work. These are the National Conservation Congress, which devotes its whole energy to carrying out a four days' congress each year in some leading city of the United States; the National Conservation Association (of which Mr. Gifford Pinchot is President), which devotes its attention to national legislation; and the American Forestry Association, which lays its chief stress on propaganda by means of literature, and which is in a sense the mouthpiece of the other two. Canadians have not a little to learn from the enthusiasm and spirit of sacrifice with which the members of these organizations approach their self-imposed tasks.

Before leaving for home again at noon the following day the Secretary visited the offices of the United States Forest Service and of the American Forestry Association gathering information for his work, which it is believed will bear fruit in the present year.



# Tree Planting Competitions.

Railway companies come in for no little criticism because of the damage it is alleged they do to forests, and it is, therefore, only fair to chronicle what they are doing on the other side of the scale.

The Canadian Pacific Railway has just announced a competition in the growing of shelter-belts on farms purchased from the railway in Alberta south of Township 28. To encourage farmers to take up this competition the company are offering cash prizes aggregating \$2,400. There is one sweepstake prize of \$600,—two grand prizes of \$300 each two of \$100 each, and 20 prizes of \$50 each. As a further inducement the Company is giving the contestants half the trees required free of charge, and has arranged the following prices for the other half:—one thousand trees or over, \$15 per thousand; under one thousand, \$5 per hundred. The following varieties are furnished:—Russian poplar, cottonwood, green ash, Manitoba maple, laurel-leaf, willow and caragana. Besides prizes and trees, the company's Forest Department stands ready to supply any information in regard to trees and planting.

Prizes are to be awarded in the autumn of 1914. Settlers who gain prizes then will be allowed to go on and compete for special prizes which may be awarded in the next three years. Wind-breaks in this competition must be planted in the Spring of 1913. The chief points to be considered when judging are as follows: preparation of the soil, 30 points; cultivation and care of trees, 30 points; bush-fruits, shrubs and flowers, 10 points; growth and appearance of trees at time of judging, 30 points; total, 100 points.

Having started out on this campaign the Canadian Pacific Railway is

explaining why it is doing so. The circular announcing the competition is accompanied by a neat circular entitled 'Increase the Value of Your Farm: Why Every Western Canadian Farmer Should Plant Wind-breaks.' The eight pages of this circular are filled with reasons why wind-breaks increase the value of Alberta farms, and with directions for attaining the best success in planting.

Time was when people believed trees could not be successfully cultivated west of Manitoba. Now, with twenty million trees sent out from the Dominion Government Forestry Branch nurseries at Indian Head, and with the C.P.R. pushing on the good work, the appearance and comfort of thousands of prairie farms will soon be changed for the better by the shelter-belts of millions of healthy trees.

## MERIT SYSTEM IN FOREST SERVICE.

### *Conservation.*

On December 6, a delegation representing the Canadian Forestry Association urged upon Premier Borden and the Minister of the Interior, that all appointments to the outside Dominion Forest Service be based on capability and experience ascertained by examination conducted by the Civil Service Commission. These representations are the result of recommendations made at the last meeting of the Association held at Victoria, B.C.

The winter is the best time to study evergreen trees. Find how many of the following are near your school: white pine, red pine, scrub or Labrador pine, fir, white spruce and red spruce, hemlock, white cedar.—*Educational Review.*



# Commission of Conservation

**Brief Report of the Fourth Annual Meeting at Ottawa, Jan. 21, 22, 1913.**

The fourth annual meeting of the Canadian Commission of Conservation held in the Carnegie Library, Ottawa, Jan. 21 and 22, gave evidence of steady growth. In the absence of Hon. Clifford Sifton in Europe the meetings were presided over by the Acting Chairman Hon. W. C. Edwards, Chairman of the Committee on Forestry. The sessions were well attended and nearly all the provinces were officially represented. The first morning was devoted to reports of work done during the year as follows:

Public Health—Dr. C.A. Hodgetts.

Mines—W. J. Dick.

Forests—Clyde Leavitt.

Extension of forest reserves and establishment of game preserves in Alberta—R. H. Campbell.

Fisheries, game and fur-bearing animals—M. J. Patton.

Fur-farming in Canada—J. Walter Jones.

Waters and water-powers — Leo G. Denis and Arthur V. White.

Press and co-operating organizations—M. J. Patton.

The first afternoon was taken up by an illustrated address on the Salmon Fisheries of British Columbia by Prof. J. P. McMurrich, Director of the Anatomical Department, University of Toronto, and by meetings of committees.

At the Wednesday morning session the following was the order of the work:

The Biological Board of Canada—Dr. E. E. Prince.

Trent Watershed Survey and Reconnaissance Survey of the Northern Ontario Clay Belt—Dr. B. E. Fernow.

Insect Food of Fresh-water Fish—Dr. C. G. Hewitt.

Work done by the Lands Committee during the past year—F. C. Nunnick.

Address on work of Lands Committee—Dr. J. W. Robertson.

Committee work and resolutions occupied all of Wednesday afternoon, and in the evening there was an illustrated address on Smoke Prevention by Dr. R. G. Benner.

Among the matters which related to forest conservation were the following:

Mr. Clyde Leavitt, Forester of the Commission of Conservation and Chief Fire Warden of the Board of Railway Commissioners for Canada, gave the results of organizing the patrol work along the railway lines in Western Canada and intimated that in 1913 this work would be extended all over Eastern Canada as well.

## DOMINION FORESTRY WORK.

Mr. R. H. Campbell, Dominion Director of Forestry, told of the setting aside of the forest reserve on the eastern slope of the Rocky Mountains and of examinations made in 1912 of areas in the Peace River Country and in the northern parts of Saskatchewan and Manitoba. He pointed out that not all of the reserves were game preserves but that such areas were being set aside for this purpose as would best conserve the characteristic game of Western Canada. The number of trees distributed by the Dominion Government Forestry Branch to settlers now amounted to 21,000,000 and four million more trees were ready at Indian Head Forestry Nursery Station to be sent out this coming spring. These were for wind-breaks and woodlots not for orna-



mental purposes. The varieties sent out were Manitoba maple, elm, cottonwood, green ash, willows, and some conifers as tamarack, white spruce, jack pine and Scotch pine.

#### TRENT VALLEY WATERSHED.

Dr. Fernow, Dean of the Faculty of Forestry, University of Toronto, said that in what had been termed the forest townships which comprised nine tenths of the 1,800 square miles in the district examined, the amount of land cleared was about nine per cent. Of this 8.4 per cent. was pasture and only 1.6 per cent. cultivated land. The general conclusion was that this area should have been protected and left to grow up again as a pinery. So unsuited was the district for farming that since the lumberman had left the families on the land were eking out a poor existence and should be given a chance to remove to better locations. It was estimated that after the fires had destroyed many millions' worth of property there was still left white pine young growth which mature would be

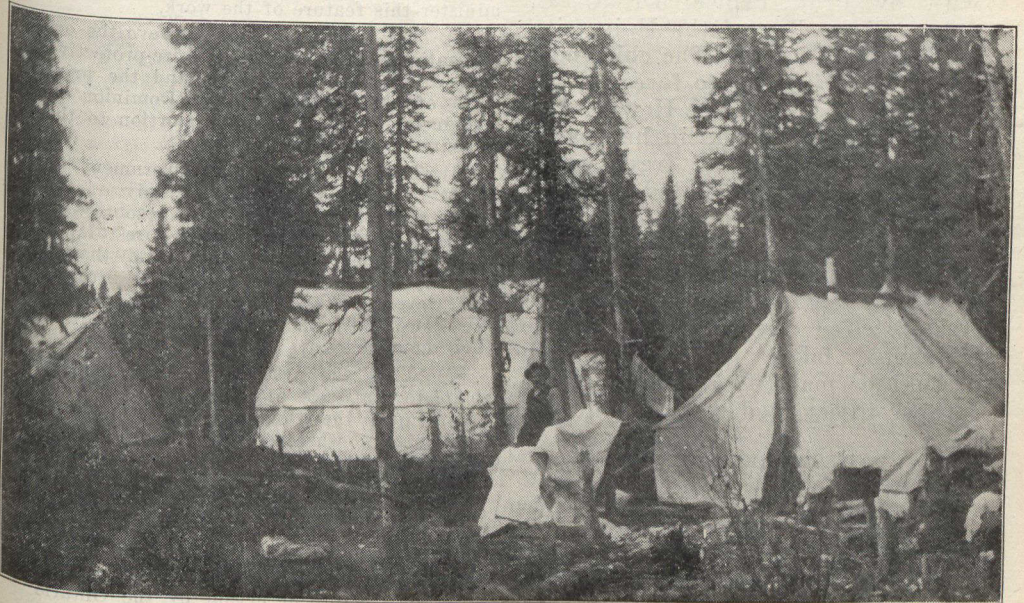
worth \$3,500,000, and pulpwood of potential value of \$4,500,000. Action looking toward the protection of this was urged. It was noted that Hastings County had acquired 2,200 acres of this area under tax sales for an average of seventeen cents per acre and was holding it for reforestation.

Regarding the northern clay belt of Ontario Dr. Fernow held that about fifty per cent. of the timber would be valuable for lumber or pulpwood, and he urged a classification of lands before allowing settlement to come in.

#### FUR FARMS AND ANIMAL SANCTUARIES.

Mr. M. J. Patton, the Assistant Secretary of the Commission in one part of his report dealt with the need for a system of national game refuges to preserve the beaver. This animal disappeared in Europe in the sixteenth century and would disappear in America in the twentieth unless national provision was made for its protection.

Very interesting was the report of



Camp in the Timbered Country between the Pas and Split Lake, Manitoba.



Mr. J. Walter Jones, B.S.A., special officer, upon fur-farming in Canada. He estimated that there were about four hundred fur farms in Canada at the end of 1912 with the number rapidly increasing. Most of these were in the Maritime Provinces, particularly Prince Edward Island where the rearing of black foxes for their fur had become a great industry.

Col. Wm. Wood of Quebec sent a paper on animal sanctuaries which was read by Mr. Patton. The plan advocated was to begin with a sanctuary in Labrador and then secure others in different parts of Canada later. A sanctuary, the paper explained, differs from a reserve in that the animals are never disturbed in season or out of season within the area. Thus left alone they multiply rapidly, and once the area is stocked the surplus seeks new pastures outside and thus the supply of game for the sportsmen is kept up in the rest of the country.

#### IMPORTANCE OF FISH FOOD.

The fishery question was dealt with by Prof. Prince, Dr. C. C. Jones, Chancellor of the University of N.B., and others. The chief contribution of interest to forest lovers was by Dr. C. Gordon Hewitt, Dominion Entomologist, in his paper on the insect food of fresh water fish. Dr. Hewitt pointed out that one of the causes why fish died when placed in lakes and rivers where the species had not been before was that the insects upon which that fish fed were absent. Before stocking lakes an examination should be made to ascertain if the proper insect food were there.

#### RECOMMENDATIONS.

The following recommendations in the report of the Committee on Forests were adopted:

(1) That the Commission approve the principle of co-operation between the Board of Railway Commissioners and the fire pro-

TECTIVE organizations of the Dominion and Provincial Governments in the administration and enforcement of the fire regulations of the Railway Commission, along the lines now in effect in the West and as proposed in the East.

(2) That representations be made to the Dominion Government looking toward the establishment of a fire-protective service along the Intercolonial and National Trans-continental Railways similar to that provided for in Order 16570 of the Board of Railway Commissioners.

(3) That the Governments of New Brunswick and Nova Scotia be urged to organize separate branches devoted especially to forest fire work, including all lines of railway fire inspection, as well as the handling of fire-ranging throughout the Provinces at large. Also that control be definitely taken over with regard to fire-protection along provincially chartered railways, through the enforcement of existing legislation or the enactment of new legislation where necessary.

(4) That the Commission urge the Dominion and all Provincial Governments not doing so, to consider carefully the question of brush disposal in connection with all new licenses and renewals of old licenses issued in the future. Especial care in this connection is needed to safeguard the country along railway and wagon roads. Especially in Ontario, New Brunswick and Nova Scotia and in the Timber Branch of the Department of the Interior is the further development of a forestry organization essential in order to properly study and administer this feature of the work.

(5) That the Commission approve the organization of co-operative fire-protective associations of limit-holders, and the principle of contribution by the Dominion or Provincial Government in proportion to the benefits received.

(6) That the Dominion Government be urged to begin a systematic study of the extent and character of forest resources in the forest reserves, and other forest lands under its direct jurisdiction; and that a similar course be urged upon the Provincial Governments of Ontario, Quebec and New Brunswick as to forest lands within their boundaries.

(7) That the systematic collection of complete statistics of forest fire losses be urged upon the Dominion and Provincial Governments wherever this action is not now being taken.

(8) That the Commission approve co-operation with the Government of Ontario in an examination of forest conditions outside forest reserves in the northern portion of that Province, south of the Clay Belt, and that reciprocal action by the Ontario Government be invited along this line, as



well as in developing a plan for recuperative measures in the Trent Watershed.

(9) That representations be made to the Dominion Government, urging that favourable action be taken with regard to the proposed additions to the Forest Reserves recommended by the Forestry Branch.

(10) That the proposed establishment of a game preserve in the southern portion of the Rocky Mountains Forest Reserve, and in southeastern British Columbia adjoining the Glacier National Park, be endorsed; and that favourable action be urged upon the Dominion Government and upon the Government of British Columbia.

(11) That, whereas, the Provinces of British Columbia, Ontario and Quebec have seen the value of organizing a Provincial Forest Service, representations be made to the Governments of Nova Scotia and New Brunswick, looking toward the establish-

ment of technically educated Provincial Foresters; this action to be taken not only for the purpose of securing a conservative use of the remaining forest resources, but also of stimulating and educating forest owners and woodlot owners in efforts at reforestation.

(12) The Commission desires to place on record its opinion that it is important that all appointments in the forest services of the Dominion and Provincial Governments should be based on capability and experience, such as may be secured through civil service examination.

(13) That the Government of Ontario be urged to undertake a systematic classification of land in the Clay Belt, in advance of settlement, to the end that settlement may be properly directed, and that non-agricultural lands may be reserved from settlement and entry.

## Notes on European Forestry.

In an article contributed recently to the American Lumberman on a visit to some European forests, in France, Switzerland, and Germany, Dr. Filibert Roth, head of the Department of Forestry at the University of Michigan, gives the following interesting and chatty notes regarding forests and forestry practice in the countries mentioned:—

“Recently I have visited Grenoble and the beautiful forests of the French Jura, especially about the Grand Chartreuse, that famous cloister of old. The forests here are largely private property, a sort of cared-for wildwoods, with fine growth of fir (balsam) and beech, also other trees. Plenty of them are over thirty inches in diameter and over 120 feet in height. The exploitation is primitive. A load of logs, full-sized stems, is not loaded one by one, but is lifted bodily into a two-wheeled cart and then drawn by five horses hitched tandem.

“In Switzerland I saw numerous forests, large and small, primarily private and village forests of spruce planted in the regular way. These woods are immensely productive and one sees new plantations everywhere, showing a tendency to increase the forest areas at the expense of the agricultural lands. My visit to the famous Sihlwald, the most ancient of well established forest properties in the world, was made doubly interesting, as I had a chance to spend the Fourth of July in a tour of inspection of this property with Mr. Meister, forester of the city of Zurich, and the society of foresters of Alsace-Lorraine, the latter having

come over sixty strong, from the valley of the Rhine and the Vosges mountains to see this great forest. The city of Zurich sent a special delegate, provided teams and refreshments and in every way showed its appreciation of this visit of foresters. It is a treat to see this beautiful old forest, which has supplied Zurich for fully 1,000 years with much-needed fuel and timber, and which to-day is one of the best producing forests of Europe.

“This forest occupies large mountain slopes entirely unfit for plow land; it is mainly beech and spruce, with the latter as the favored species. It is managed on a rotation of about 110 years, that is, the trees are left to this age before being harvested, and there is today an almost ideal condition with trees of all ages, so that the harvest comes like clockwork every year in amount and size of timber. Rainfall and snowfall are heavy and the heavy snows sometimes crush stands of timber when in the “pole” stage.

“Before leaving Switzerland I visited the upper Rhine, where the floods lately have done great damage. The forests in that section unquestionably have reduced this damage and prevented wholesale calamity.

“Coming into southern Germany I visited the royal forests in Baden, which yield fine incomes. They are largely spruce, planted or reproduced naturally, and produce a net revenue of over \$10 an acre every year. Similar conditions exist in the neighboring forests of the royal family of the King of Wurtemberg. Here the forest is for the



most part cut clean and replanted. The trees are allowed to grow to an age of 110 to 125 years. The forests are gone over once in five or ten years and cleaned of all poor, sickly trees, and opened up where the trees are too dense, so that in the older stands the trees practically are perfect, standing straight and a joy to any lover of good timber. The amount of timber per acre in these hundred-year-old stands is simply enormous, and the amount which has to be cut into fuel or cheap woods is very small, rarely over ten per cent of the total yield. All timber is cut in winter, peeled at once and hauled with team. All work is done by contract. The care which these forests receive is such that when I asked the forester about fires he looked at me in surprise and simply said, "We have no fires."

'As a matter of fact, in all my travels last summer I did not see one acre of woods which showed any signs of ever having been touched by fire. When one compares this with Michigan, where it is hard to find an acre that does not show such signs one wonders where the trouble lies. Here they see to it that law really is law. Roaming in the woods is forbidden; people are expected to mind their business.

'To my great surprise I found that even here, in a good agricultural district, the forest is being extended at the expense of agricultural lands. For example, a farm of 170 acres, which is large for this country, had been in possession of one family for over four hundred years, and was offered for sale. After several years it was bought by the king as a private property and was reforested. The land cost only \$60 an acre, contained a gravel pit valued at \$2,500, and was in good farming condition. Similar conditions were found in Baden, the explanation being that farm land does not produce the income which can be had from forests. Renting farms is generally by cash rentals of \$2 to \$3 an acre, while the forests make a secure net cash rental of over \$10. Since this is an old country, fortified by the Romans, well settled in the days of Charlemagne and densely populated today by one of the most frugal, industrious peoples in the world, these facts will serve to show how utterly nonsensical are the claims of opponents, who would have us believe there is no room for forests, since all land is needed for farming.

'I visited the forestry school at the University of Tuebingen, several districts of the Black Forest in Wurttemberg, also a district of hardwoods in the Rhine valley near Strassburg. In this latter district the black walnut is planted extensively on fertile valley land near the city, again a sign that forests have a place, even in fertile regions. In the Black Forest districts I found many interesting facts. In the higher locations — 2,400 feet altitude, with rainfall of over

seventy inches, heavy snows and much frost — agriculture is on the decline and even the farmers are planting forests. Some of the villages and towns own large forests. Bayersbrom has 6,000 acres of woods, worth over \$200 an acre. Here the fir and spruce predominate. The timber is cut in summer and is peeled. The bark of spruce is sold as tanbark at about \$4 a cord. The forests are reproduced naturally, but everywhere a little planting is done to prevent delay. The stands of timber are certainly fine. Near Obendorf I saw stands which contain over 20,000 cubic feet of timber an acre. Since this stuff is worth fully 15 cents a cubic foot, we have values of \$1,200 to \$3,000 an acre. But this is not rubbish or old pine stubs. It is a body of timber produced by careful treatment and decent protection against all kinds of injury. In such stands there is often not a single tree that needs culling on account of crook or other defect. A fine telephone pole sixty feet long, with ten inches as its upper diameter, is cheaper here than in Ann Arbor, Mich. While generally the small forests of farmers are not in especially good condition, several of the private forests about Freudenstadt are fine and these farmers are becoming really timber growers and are growing rich.'

## THE MOUNTAIN PINE BEETLE.

As a result of experiments carried out under the direction of the Department of Agriculture of the United States, a method of combatting the ravages of the mountain pine beetle has been found, according to a recent departmental report. The experiments were undertaken in northeastern Oregon, where beetles had worked havoc over more than one million acres of valuable timber land. The pest had destroyed more than 8,000 trees.

In conjunction with the forest service and private owners of timber, the department's experts confined their efforts to an area of 20,000 acres with such success that while surrounding territory suffered heavily the experiment ground's loss was 80 per cent. less. The march of the beetle to the south and southeast, it is believed, will be checked as a result of the knowledge gained from the tests which have been continued over a space of nearly five years.



# With the Forest Engineers.

(Contributed by the Canadian Society of Forest Engineers.)

## Notes of the Work of the Engineers in the British Columbia Forest Service.

The Province of British Columbia entered on a new line of development in the establishment, under the Hon. W. R. Ross, Minister of Lands, of a Forest Branch, the direction of which as is well known was given into the hands of Mr. H. R. MacMillan late of the Forest Branch in Ottawa. So many matters were pending the passing of the Act, so many new problems have arisen simply through the establishment of the Branch that the new Chief Forester, since assuming his duties, has been the centre of a veritable snowstorm of papers of all kinds which required attention. Consequently, he has been held to his desk for every minute of the day working with unceasing energy to organize new branches to take care of the details. He has made numerous trips around the country becoming acquainted with the government officers and lumbermen, and has made numerous friends in his official capacity in the City of Victoria. Naturally, in a new organization the equipment and staff were utterly inadequate for the press of business. But Mr. MacMillan had the authority to care for the needs of his department, and now, instead of one chief clerk and a stenographer, the Forest Branch consists of forty two individuals in addition to all who were with the Lands Department prior to the creation of the new base of administration.

Mr. M. Allerdale Grainger, who probably knows as much about the forest legislation situation as any other man in British Columbia, having been Secretary of the Royal Commission which brought about the

Act, has been steadily engaged in arranging the details of the Records Office, which falls to him under the provisions for the new Forest Board.

Mr. John Lafon, Chief of Management, has been occupied principally with the work of timber sales and the cruising being done upon tracts of land which it has been thought could be alienated.

Chief of Operation, R. E. Benedict, has been engaged mostly in inspection of fire losses, and in viewing at first hand conditions which he had heretofore known in only a general way. He reports a rapidly growing sentiment among people of all parts of the province for forest reserves to ensure thorough patrol in the vicinity of large towns, and to make certain a constant supply of water for irrigation purposes.

### THE RECONNAISSANCE SURVEY.

Since stock-taking ranks with protection as an essential of forest policy, the Branch has lost no time in bringing about a reconnaissance survey of a great part of the province. The Columbia and Western Land Grant comprises two and a half million acres recently sold back to the Government by the C. P. R., to whom it was deeded many years ago, and this tract has been the scene of a very active survey. Under Chief of Surveys H. K. Robinson twelve parties of reconnaissance men are working in the valleys of the Adams, Salmon, Nicola, North Thompson, Omineca and Columbia Rivers, around Mable Lake, and along the route of the Grand Trunk Pacific Railway.

The surveyors are noting every



natural feature, the topography, bodies of water (including water-powers), all the agricultural areas, down to forty-acre tracts, the nature of the soil, and, in a general way, the amount of timber standing. It is expected that the reports which these men will make will prove a revelation to the public. Undoubtedly there are many tracts of land which will produce good crops lying idle because their location is not accurately known.

The difficulties of carrying out this survey are very great, particularly in view of the season, but the ground is being covered as rapidly as possible, and the complete map will be compiled in the course of a few months.

'Timber Sales' have taken the place of the old form of license, under which 14,000 claims were filed between 1905 and 1907.

The Forest Act provides for the removal of timber after advertisement and tender. The land remains always vested in the Crown, and upset price, rental, royalty, cruising and advertising charges are made against the buyer.

So far, a great part of the work of the Branch has been the examination of lands by the foresters for the purpose of arriving at a proper price for the timber. Up to the end of November fourteen bodies were examined, representing an area of 6,716 acres, and 87,282,000 feet of timber. The lumbermen who accept the terms of the Government will pay altogether \$109,521 in upset price, \$1,304.55 annually in rental, and \$48,415.95 in royalties as the material is taken out of the forest. In a great many of these sales restrictions are made as to the time in which cutting shall continue, two years being the average time allowed.

There has been established in the Branch an Extension Bureau, for the purposes of spreading the gospel of forestry among the people of British Columbia, and of rendering

assistance in response to enquiries as to any phase of the problem of scientific management of woodlands. Mr. Roy. L. Campbell has this work in hand.

#### THE CANADIAN FORESTRY ASSOCIATION.

Extends a cordial invitation to those interested in the forests of this country, from whatever point of view, to join its ranks, and help to spread knowledge of, and interest in, the forests of Canada in particular, and in general of the world. During the past few years the interest in the proper use and the protection and perpetuation of the forests has greatly increased, and to this increased knowledge and interest the Canadian Forestry Association, by its propaganda work, has contributed its share. Founded in 1900, with a membership of 12, it has in twelve years increased its membership to 2,700. During these years it has held conventions throughout Canada from coast to coast, in the Ancient Capital and in the bustling cities of the prairies and Pacific coast, in the manufacturing east and the agricultural prairie country. Its official organ, *The Canadian Forestry Journal*, was started in 1905 and is now in its seventh volume. But as forestry goes on, circumstances change and new needs spring up, and the Association is anxious to do its duty in arousing public interest and pointing out ways of getting things done. One object of the Association was achieved when forest reserves were established; but that is merely a beginning and now proper administration of these reserves, on the basis of the public good, irrespective of any private or partizan interest, must be secured. When that is done other problems will present themselves for settlement. The Association wants the interest and enthusiasm and, in some degree, the contributions of the public. The annual membership fee is \$1.00; this entitles the member to *The Canadian Forestry Journal* for a year, the annual report of the society, and other literature. Life membership costs \$10.00. Applications for membership should be addressed to James Lawler, Secretary, Canadian Forestry Assn., Canadian Building, Ottawa.



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