

Development of Forest Policy in Canada---Forest Protection

James R. Dickson, Forestry Branch, Ottawa, Ont.

One of the most important and striking phases of development in policy in the handling of forest protective work in this country, has been the notable tendency of recent years, to put relatively less dependence and effort on fighting RESULTS and more on fighting CAUSES. Until very recent years, practically all the money voted for forest purposes by our federal and provincial legislatures was expended either in actually fighting fires or preparing to fight them. Then it was found by a study of statistics that some 90 per cent. of our forest fires were caused by human carelessness, and since then increasingly large amounts have been expended on fire PREVENTION propaganda in response to the enlightened conviction that the real root of forest protection lies in the education of public opinion. Good instances of this administrative progress in protection methods may be seen in the extensive newspaper "Save the Forest" campaign that is now staged in Canada each spring and in the vast children's forest essay competition now held at frequent intervals under provincial and even federal auspices.

In the year 1900, forest protection efforts in Canada could boast nothing more than the crude beginnings of ranger patrol services, largely manned by temporary and frequently poorly selected appointees. There was no control over settlers' fires the railways were heavy offenders and the only equipment furnished to fire fighters was an axe or a shovel, a green bough or a wet sack. In the past 20 years, however, the changes effected in the facilities for detecting and extinguishing fires, and in the matter of fire laws and regulations, have been kaleidoscopic.

All the Provinces have now adopted a closed season for brush burning, under a fire permit system, in order to minimize the fire hazard during the danger period of the year, that is in general from April to October. In Ontario this Act is very complete in its Province-wide application to any settler, railway, lumber concern or individual who desires to burn brush. A radical development of policy regarding settlers' clearing fires was effected last year in New Brunswick. In all past years it had been the general practice to burn in the Spring, but in 1923, fall burning was insisted on and some 600 safe burns were effected. The result was that in this Spring of 1924, no burning permits were issued.

In order to instill greater care into all who enter Crown forests in seasons of fire hazard, Quebec and New Brunswick began the issuance of "Travel Permits" in 1922, Ontario adopted the scheme in 1924, and our other forest authorities seem likely to follow. Today some 97% of all the railways in Canada are under the very able control of the Dominion Railway Board and railway fires have happily become one of the minor factors in our forest fire losses. Again, the construction of roads, trails, telephone lines, lookouts and fireguards, together with the provision of motor cars, power boats, fire pumps, railway speeders, aeroplanes and wireless equipment has revolutionized the conditions of 1900, both in communication and transportation. Finally, the science of weather forecasting gives promise of enabling the forester to know fairly well in advance when temperature, relative humidity and wind conditions are combining to produce a critical fire hazard in the woods. The Dominion authorities are now evolving a system of directly basing the incurred protection cost per acre in any given region on an appraisal of the timber values and fire risk involved. In Eastern Canada there is good promise of standardization in slash disposal requirements which should tremendously reduce what has been well termed "the visible fire hazard."

In actual fire fighting, the most effective and useful piece of equipment today is undoubtedly the portable fire pump, of minimum weight and maximum power. Ontario has about

one hundred and forty fire pumps in use, with British Columbia a close second.

Aircraft use as yet is generally limited to purposes of detection although during at least one recent season in Manitoba, the sea planes were largely depended on for the transportation of fire-fighters as well. In Manitoba and Alberta, the Dominion Forest Service, in co-operation with the Air Board, has been decidedly successful in systematic use of aircraft and radio in forest protection. Ontario has been using aeroplanes for the past two years through contract with a private company, and the experience has been so gratifying that recently a fleet of fourteen planes was purchased, and hereafter the Province intends to conduct its own air patrol service. These machines are being equipped with radio which will save valuable time in reporting location of fires to the chief ranger. The great drawback to the use of aeroplanes in Canada has been the high cost of purchase and operation, but a new type of machine is now being designed that is expected to be very economical of fuel and especially adapted to forest patrol and survey work.

Quebec has a well-equipped aeroplane base at Roberval and intends to make a large use of aircraft in the future both for conducting forest surveys and in fire detection. No air patrols have as yet been established in the Maritime Provinces. As the result of experience based on several years experiments in flying, the Chief Forester of British Columbia decided last year that aeroplane patrol was too expensive for general fire detection purposes in B. C. in view of the restricted use possible in a mountainous country, but that 'planes would none the less continue to furnish essential service for purposes of observation and control in actual fire fighting campaigns.

Nevertheless, despite every advance in policy and practice from year to year, the fire-swept area with accompanying loss, has not proportionately declined. In fact it seems to be generally increasing. What is the explanation of such disquieting phenomena? May it not be found perhaps very largely in our past policy of fighting results instead of causes? In our neglect of the "invisible" fire hazard? Of course it is true that slash accumulation, extension of settlement, growth of tourist traffic, construction of roads and railways and the growing use of motor transport, have from year to year increased the fire danger. But after all is said, the explanation would seem to centre in one chief cause,—the indifference and carelessness of the average citizen who has not yet realized the hundred reasons of self interest that really link the welfare of himself and his country to the continuous existence of green forests.

The whole administration of forest protection methods in Canada has been the story of gradual progress from ineffective CURE to effective PREVENTION, and yet we still have a long way to go before reaching the practical immunity from fire loss that countries like France or Sweden enjoy. In the past, the profound ignorance of the average citizen regarding not merely our mature timber and young growth losses from fire, but still more the incomparably greater intangible losses involved in the destruction of soil fertility and natural water control, engendered an indifference that is only now beginning to yield to the urging of forest-conservation publicity. It is true that the modern forest fire pump, the aeroplane and radio have today given forest administrators wonderful powers for detecting and extinguishing the careless camper's fire, but vastly greater immunity is destined to result from changing that same careless camper into a fire protector himself, as a result of applied psychology—the latest and most hopeful development in protective administration.