

Forest Research in Eastern Canada

Some Developments that have Occurred in Various Experimental Plots
East of the Rocky Mountains

In two parts—Part I

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IN every province of Canada there have been four stages of development in the conservative use of our forests. First, the necessity of reducing the toll levied each year by the fire fiend has impressed itself on the public mind. Heavy palls of smoke obscuring the landscape after every period of drought brought this home to even the city dwellers who did not see the actual devastation wrought by the flames. Organizations were developed to cope with the evil and in most of the provinces the work of the first professional foresters was in the main confined to fire protection for a time.

The second stage has been the securing of an inventory of the forest resources; not a careful cruise such as is necessary for the sale of timber or the detailed direction of lumbering operations, but a stock-taking on a comprehensive scale of the timber resources of the province for the purpose of assisting in the proper development of public policies respecting the management of the timber.

The third stage of development has been the placing of the practical administration of the cutting of timber under the direction of the foresters. This step was usually delayed until the forest service established for fire protection had developed a field organization and had shown itself efficient in tackling practical problems. The incentive in this case was the prevention of careless waste of timber resources, more efficient collection of revenue, and the desire to take such steps as were economically feasible to ensure continuous production from our forest areas.

The actual administration of the timber lands has brought home to the foresters, and fortunately to many others as well, the presence of numerous problems on which exact information is necessary before they can be successfully solved. The solution of the problems is a necessity before the goal of continuous production from each area of timber land can be reached. This has

brought the fourth stage — the general demand for experimental work and study on an intensive but practical basis, to solve the silvicultural problems that are basic to the conservative management of the forests.

Developments East of Rockies

The developments that have taken place along this line east of the Rocky Mountains will be the subject of this article.

The first comprehensive plan for the carrying on of silvicultural research in Canada was outlined in a report prepared by Prof. W. N. Millar, of the University of Toronto, for the Dominion Forest Service in 1915. While several separate studies of silvicultural problems had been made such as those by Dean Howe in Nova Scotia, British Columbia and the Trent Watershed, this was the first effort toward providing for research to be conducted on the permanent basis essential to the successful solution of most of the important problems. It may therefore be considered to be the preface of the developments that this article is to describe.

Professor Millar outlined the general nature of the field of work, the facilities throughout Canada for carrying it on, and made practical suggestions for developing the work. He emphasized four things:

1. The necessity for co-operation.
2. The organization of special permanent research staffs.
3. The establishment of permanent experimental areas.
4. The formation of an advisory board representative of all forest services, public and private, to direct policies and secure co-operation in research work.

As a preliminary to securing definite action along the lines of the report, an advisory board was definitely organized consisting of six representatives of the forest schools, four of government services, and three of foresters in private employ. On account of the war, immediate

steps could not be taken in other directions, but the time has now arrived to reconstitute the board and to bring together all the agencies interested. It is hoped that definite progress can be made in this direction during the coming winter.

Central Research Staff.

Prof. Millar's report recommended that a central research staff should be organized in connection with the Dominion Forest Service, to carry on research for that Service, to co-operate with other services in carrying on research, and to assist in the establishment of uniform methods of carrying on investigations in all parts of the country. Such a staff is now in existence, consisting of six technical foresters and three non-technical assistants. A very competent forester, Major W. G. Wright, is in charge. He has had forestry training in Scotland, Germany, and in this country, and has shown great natural aptitude for this class of work. It is hoped with this staff, which will be strengthened as opportunity offers, to not only undertake investigations into a considerable range of silvicultural problems, but to keep closely in touch with investigative work done by others. It is expected that a freer exchange of data can be accomplished now that there is an organization to look after it systematically, and also that experimental work will be initiated by more agencies when plans for carrying it out and results of work previously done are readily available.

The research staff has up to the present been mainly occupied on the Petawawa Forest Experiment Station. This is a tract of approximately 100 square miles, lying on the Ontario side of the Ottawa river, about 125 miles above the city of Ottawa. It forms the greater part of the Petawawa military reserve, but as only the cleared portion of the reserve is used for military purposes, the wooded portion has been definitely handed over for forest investigations. A permanent house has been erected for the use of the staff, and it is