

through the schools, by specially appointed junior forest wardens and other means to educate the younger generation as to the value of the forests, the devastation caused by fire and the means of preventing such destruction.

Prepared lectures illustrated by slides and films are distributed to volunteer lecturers and other educational work is carried on in schools and at public meetings. The different Dominion and provincial forest authorities also carry on extensive publicity work independently and in co-operation with the Canadian Forestry Association.

Another interesting development in forest protection has been the establishment of special meteorological stations for the study of the effects of weather conditions on the fire hazard, and the broadcasting of special forecasts of hazardous fire weather.

Subsection 3.—Scientific Forestry.

Up to the present the practice of forestry in Canada has consisted chiefly in the administration and protection of existing forest areas. About 35 square miles is now being planted out annually, largely in connection with farmers' woodlots, shelter belts, and reclamation work, while several commercial reforestation projects are being carried on by paper companies and by the Ontario Government on denuded Crown lands. The great forestry problem in Canada, however, is the management of Crown forests, first under provisional and later more intensive working plans, so as to ensure a sustained yield. To this end, forest research activities are now assuming great importance. Silvicultural investigations are receiving marked attention both from the Dominion services and some of the provincial services.

About 200 technical foresters find employment either under the Dominion and provincial forest services or with paper and lumber companies. In addition to administrative work, these men carry on forest surveys either for the estimation of timber stands and making of maps, or to determine natural growth and reproduction conditions and factors. They also direct any planting or nursery work and direct the regulation of commercial logging operations along forestry lines.

The Research Division of the Dominion Forest Service has established permanent forest experiment stations at Petawawa, Ontario, and at Lake Edward, near Grand'Mère, in Quebec, and carries on similar experimental work at other points throughout Canada. A considerable amount of this work is done in co-operation with provincial forest services and with pulp and lumber companies.

The Forest Service of the Department of the Interior is now conducting a National Forest Inventory in co-operation with the various Provincial Governments (see p. 285). It is expected that, in so far as the commercially accessible timber is concerned, this inventory will be completed by 1935. An important feature is that the Forest Service is conducting special rate-of-growth surveys in each province to determine the nature and extent of the natural reproduction and the annual increment now being secured under varying conditions of site and type, following cutting or forest fires. The valuable silvical data thus obtained will provide a sound basis for future forest policies.

Another important phase of forest research is found in the work of the Dominion Forest Products Laboratories in determining the best methods of forest utilization, that is, the converting of standing timber into saleable commodities with a minimum