

The various governmental forest authorities conduct forest conservation publicity work independently and in co-operation with the Canadian Forestry Association. Since its beginning in 1900, that Association has played an important part in securing popular co-operation in reducing the fire hazard. By means of its magazine, which has a large circulation, by railway lecture cars and motor-trucks provided with motion-picture equipment, and by co-operation with radio broadcasting stations and the press, the Association reaches a large proportion of the population of the Dominion. Special efforts are made through the schools by specially appointed junior forest wardens and other means, to educate the younger generation as to the value of forests, the devastation caused by fire and the means of preventing such destruction.

Forest Insect Control Board.—The composition, object and functions of the Forest Insect Control Board are dealt with in the special article at pp. 399-400.

Subsection 3.—Scientific Forestry

The great forestry problem is the management of Crown forests, first under provisional and later under more intensive working plans, so as to ensure a sustained yield. Forest research activities in this direction are now assuming great importance. The Dominion Forest Service operates five forest experiment stations with a total area of 227 sq. miles.* Here investigations of the underlying principles governing the growth of forests are made and practical methods of management are tested.

About 600 technically trained foresters are employed by the Dominion, by provincial forest services or by pulp, paper, and lumber companies. A number of foresters are actively engaged in commercial logging operations and, 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.

Through the use of air photographs taken by the Royal Canadian Air Force and base maps prepared by the mapping organizations of the Departments of Mines and Resources and National Defence, the Dominion Forest Service has taken a leading part in the development of methods for the interpretation of air photographs for forestry purposes. Most of the provincial forest services and many timber-owning companies are also making extensive use of aerial photographs. It is now possible not only to map the areas occupied by the different forest types but to estimate the volume of standing timber with an accuracy that compares favourably with ground surveys. Aerial photographs drawn to scales suitable for mapping purposes and covering about 1,000,000 sq. miles are now available in the National Air Photographic Library of the Department of Mines and Resources, and about 123,000 sq. miles of forest have been mapped and classified from the photographs. Still greater use of air photographs for forestry purposes is expected in future.

Research Work in Forestry.—The work at present being conducted on the control of forest insects is dealt with at pp. 395-400. In a special article on Scientific and Industrial Research in Canada, which appears at pp. 979-1012 of the 1940 Year Book, a comprehensive review is given of all phases of scientific research work being undertaken by the various Government Departments.

* See Table 4, p. 402.