

privately owned. The total volume of standing timber in the province is estimated at 20,400 MM cu ft; coniferous species make up 70% and deciduous species the remainder.

Protection from forest fires, the first requirement for forest conservation, is mainly the responsibility of the Department of Natural Resources which also carries out duties in connection with game management and protection, mines, water, and the administration of provincial Crown lands. A large-scale aerial spraying program to protect balsam fir and spruce from the spruce budworm has been carried on since 1952 by a Crown company sponsored by the federal and provincial governments and by representatives of the forest products industries. Forest management licences authorize operators to cut and remove forest products in accordance with forest management plans and cutting permits. Royalty is paid to the province when products are cut by the licensees.

New Brunswick does not maintain a forest research organization but co-operates with the Canadian Forestry Service in that field. The University of New Brunswick has also undertaken a small number of forest research projects in co-operation with the National Research Council, the provincial government and other interested organizations.

In the field of education, the University of New Brunswick offers undergraduate and graduate courses in forestry leading to BScF and MScF degrees. It is also responsible for the administration of the Maritime Forest Ranger School in conjunction with the governments of New Brunswick and Nova Scotia and with private industry. The forest extension services of the University assist both government and private agencies in the direction and planning of various forestry extension programs. The provincial Department of Agriculture and Rural Development also provides an expanding extension service to the owners of farm woodlots.

**Quebec.** Forests with economic potential cover 298,000 sq miles, about 50% of the total area of the province. This forest-cover stretches northward to an irregular line near 52°N on the east and 54°N on the west of the province.

These forests may be divided into two separate tenure groups — private forests and public forests. Private forests cover an area of 27,900 sq miles. Public forests cover 270,300 sq miles of which 180,200 sq miles are under management; of the remaining 90,000 sq miles, 31,600 sq miles are considered highly productive although still inaccessible. Public forests carry a volume of almost 93,900 million cu ft of standing timber of various species; private forests contain 16,600 million cu ft. Coniferous species make up 78% of the total volume. Public forests under management and private forests supply the pulp and paper mills and the sawmills of Quebec. Private forests account for about 25% of the annual cut (about four million cunits). Quebec forests account for approximately 25% of the gross provincial product.

Management of public forests and assistance to private forestry is carried out by the Forestry Branch of the Department of Lands and Forests which controls development and the use of woodlands, and undertakes conservation measures. Principal management controls are: the annual inventory of some 30,000 sq miles of forest land; study and regulation of silvicultural practices for this area and the zoning of the land for its best use; and restoration of lands destined for forestation by replanting or by proper treatment — to achieve this Quebec maintains some 100 million plants in nursery stock. Regulations governing the use of the forests cover operational control, the issuance of permits for establishment of mills and cutting permits, measurement of wood harvested on Crown land, aid to development of private forests, and building and maintenance of forest roads. Through regional conservation groups, this branch is responsible for forest protection against insects, fire and fungus attack.

**Ontario.** Forested land in Ontario amounts to 188,334 sq miles, of which 180,588 sq miles are classified as forest land bearing or capable of bearing timber of a commercial character suitable for regular harvest and not withdrawn from such use. About 90% of this forest land is owned by the Crown, administered and managed by the Ontario Ministry of Natural Resources.

The Ministry of Natural Resources came into being April 1, 1972 as a result of a major restructuring of the government of Ontario. The goal of the Ministry is separated into three programs: Land Management, Outdoor Recreation and Resource Products.

Principal Divisions with their constituent Branches are: Forests (Forest Research, Forest Management, and Timber Sales); Mines (Geological, Mineral Research, Mineral Resources, Mines Engineering); Fish and Wildlife (Commercial Fish and Fur, Fish and Wildlife Research, Sport Fisheries, and Wildlife); Parks (Historical Sites, Park Management, Park