

In many districts in Canada, radio-equipped aircraft are used to good effect for the detection and suppression of forest fires. Where lakes are numerous, sea-planes or flying boats can be used for detection, and for the transportation of fire-fighters and their equipment to fires in remote areas. In Western Canada, equipment and supplies are sometimes dropped by parachute to isolated fire crews; in one province parachutists are now employed to fight fires which are difficult of access by other means.

In the more settled areas with better transportation facilities, fire detection is carried out by means of lookout towers fitted with telephone or radio for reporting fires. Field staffs and equipment are maintained at strategic points ready to deal with fires when they are reported. These staffs, when not engaged on fire control duties, are employed on the construction and maintenance of roads, trails, telephone lines, fire guards and other necessary improvements.

Portable gasoline pumps, which usually weigh between 60 and 100 lb. each, and linen hose are important equipment. These pumps can be carried to a fire by canoe, motor-boat, automobile, aircraft, pack-saddle or back-pack and can provide hose pressures up to 200 lb. per square inch, depending upon the elevation above and distance from the water supply. Hose lines over a mile in length are frequently used. Small hand-pumps supplied by 5-gallon portable containers are also used effectively in many cases. Tractors equipped with bulldozers or ploughs are commonly used for fire-line construction. In some regions, trucks fitted with water tanks and power pumps are employed for the control of fires adjacent to roads.

In addition to these improved measures, the enactment of legislation has tended to reduce the fire menace. The establishment of close seasons for brush-burning, and seasons during which permits are required for setting out fires and for travel in the forests during dangerous dry periods, have been of enormous value as preventive measures. Education of the public as to the need for care with fire is, however, the basic method of reducing the large number of fires which occur each year as a result of man's negligence.

Another important advance in forest protection is the development by the Dominion Forest Service of methods for the daily measurement of the actual degree of forest-fire danger. In the forest types and regions in which the necessary research has been completed the forest authorities are able, not only to gauge the trend of increasing fire danger at any given time but, by the aid of weather forecasts, to anticipate the trend one or two days in advance and so regulate their activities to meet hazardous conditions as they develop. Increased attention is being devoted to the scientific planning of fire-control operations so as to achieve adequate protection at minimum cost.

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