

Flying Studies of Forests and Insect Damage

If the Air Board of Canada can give a few more demonstrations of the time-economy of aircraft, such as occurred recently between Ottawa and Haileybury, Ontario, the stimulus to civil aviation will be materially strengthened.

Col. Robert Leckie, D.S.O., M.C., D.F.C., Superintendent of Flying Operations, Air Board, Ottawa, Mr. Clyde Leavitt, Chief Forester, Commission of Conservation, Ottawa, and Dr. J. M. Swaine, Chief of Division of Forest Insects, Entomological branch, Dept. of Agriculture, Ottawa, comprised the aerial party.

The plane left Ottawa at ten o'clock, a.m., following the Ottawa River to Mattawa, thence to North Bay arriving at 1.15 p.m. where a stop was made for dinner and a fresh supply of gasoline. At 2.45 the air travellers left North Bay, returning to Ottawa to follow the Ottawa River again, as far as Kippewa and up Lake Temiskaming, reaching Haileybury at 4.20 p.m. The actual flying time was five hours, at an average rate of 65 miles per hour. The engine is a 350 horsepower, twelve cylinder V type, stationary Liberty motor, and was used by the Naval Board during the war. The airship carries tanks with a capacity of 100 gallons of gasoline sufficient for about five hours constant flying. Her rate of consumption is 28 gallons of gasoline an hour.

The party was met at Haileybury by Capt. Wickens, deputed by the Air Board to operate the machine, while it is in that district, and by Mr. Roland D. Craig, Forest Engineer for the Commission of Conservation and Major G. H. Edgecombe, who are conducting a survey of the forest resources in Ontario, with the view of finding out the present and possible future supplies of timber from which the pulp and lumber industries of the province can be supplied. This work is under the direction of Mr. Craig, who conducted similar surveys in British Columbia. Major Edgecombe and Mr. A.

V. Gilbert are also engaged in collecting the necessary information for this survey.

During the war the value of aircraft for mapping and reconnaissance was demonstrated, and now a number of planes are being used for this in forestry work in Canada.

The Air Board having been given over 100 machines of different types by the Imperial Government, is co-operating with the other Government departments by supplying machines and pilots for such work as mapping, forest fire protection, fisheries patrol and transportation.

Taking advantage of this opportunity, Messrs. Craig and Edgecombe are going to make reconnaissance of the forests in the Temiskaming district from the air, in connection with Dr. Swaine's Spruce Budworm studies.

The advance of the aerial survey is that it enables the observer to map in, with considerable accuracy, the various types, such as swamps, burns, hardwoods and softwoods, in a few hours on an area which could not be covered by a ground survey in as many months. It is not claimed that the amount of standing timber can be judged from the air, but with the area defined, a comparatively small amount of ground work will give a very satisfactory basis for a timber estimate.

Dr. Swaine is studying the injury caused by the outbreak of the spruce budworm which is spreading into Ontario pulpwood forests from Northern Quebec. The injury is to the balsam and spruce timber, and is caused by myriads of caterpillars devouring the foliage. The injured timber turns red and may be distinguished from the air. It is planned to map this area, and the timber owners can then be advised of the rate and direction of the spread, so that they may salvage their timber in advance of the outbreak.