

DEPARTMENT OF AGRICULTURE  
CANADA

ANNUAL REPORT  
OF THE  
FOREST INSECT AND  
DISEASE SURVEY

FOREST BIOLOGY DIVISION  
SCIENCE SERVICE

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## FOREWORD

The national organization of the Forest Insect and Disease Survey has undergone a number of changes in territorial responsibility during recent years but only slight changes were made in 1955. A new laboratory was completed at Corner Brook, Newfoundland, making it unnecessary to have forest insect material from Newfoundland directed to the Fredericton Laboratory. This change is reflected in the Atlantic Provinces report where a special section dealing with Newfoundland conditions is presented for the first time. Forest Disease Survey activities for the Atlantic Provinces remained centered at Fredericton.

In 1955 a somewhat clearer definition of responsibilities for forest insect surveys in Quebec was attained. The province-wide general forest insect survey is the primary responsibility of the Quebec Bureau of Entomology. The Forest Biology Division's program in Quebec is concerned primarily with research problems and special surveys necessary for proper orientation of the research program. The results of the provincial survey unfortunately were not available for inclusion in this report; only the results of restricted surveys by Divisional officers are presented.

A number of staff changes involving Survey personnel occurred in 1955. W. A. Reeks, who has long been associated with the Survey in the Atlantic Provinces, assumed the duties of Officer-in-Charge of the Winnipeg Laboratory. R. S. Forbes is his successor at Fredericton. The transfer of Survey personnel from the Indian Head Laboratory was completed during the year.

Equipment and facilities necessary for the conduct of the Forest Insect and Disease Survey have now been realized in most regions. There were, however, some important additions in 1955. The completion of the Corner Brook Laboratory has already been mentioned. New ranger headquarters were erected at Hudson Bay, Saskatchewan, and at Williams Lake and Wasa Lake, British Columbia. A boat suitable for navigation in the large rivers and lakes of northern Alberta and the Northwest Territories was put in service in 1955.

The individual reports which follow show that a great variety of forest insect problems occurred in Canada in 1955. From a national point of view, two species in particular stand out, the spruce budworm and the larch sawfly.

The spruce budworm remained the dominant forest insect problem in New Brunswick and eastern Quebec and the large-scale aerial spray operations that have been in progress since 1952 were continued. Egg counts indicate a continuation of the outbreak in 1956. Outbreak conditions also persisted on Cape Breton Island and in parts of Newfoundland. The large-scale outbreak persisted in northwestern Ontario. It increased in area and extended into eastern Manitoba. An extensive outbreak of 1-year-cycle budworm on white spruce occurred along the Mackenzie River system for nearly 400 miles north of Fort Simpson, N.W.T. Severe defoliation continued in the Fraser-Nahatlatch area of southern British Columbia. Population levels of the 2-year-cycle budworm in British Columbia could not be satisfactorily appraised in the "non-flight" year.

Larch sawfly infestations followed the general trend that has become apparent during recent years. Population levels declined further in Central Canada where the outbreak first appeared; active infestations were found farther to the east and to the west. The outbreaks in Newfoundland continued. For the first time since 1942, increased numbers of larch sawflies were collected in the Maritime Provinces. In Ontario, the highest population levels were in the northern and central regions; increased numbers were observed in the southeast and further marked declines in the northwest. These latter declines paralleled those in Manitoba and Saskatchewan. The only extensive severe defoliation recorded in areas surveyed by the Winnipeg Laboratory was in the