A HISTORY OF RECENT FOREST TENT CATERPILLAR INFESTATIONS IN THE INTERIOR OF BRITISH COLUMBIA

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The forest tent caterpillar, *Malacosoma disstria* Hbn., (*M. erosa* (Stretch)), was recorded in the interior of British Columbia as early as 1906. In the past the species was known primarily as a pest of shade trees and shrubs in parks, resort areas, and about homes. Recently the insect has been considered important as a forest species and has received added attention from the Forest Insect Survey. The forest tent caterpillar is of interest in studies on population dynamics, natural control, and as a possible indicator species for predicting outbreaks of other forest insect species. Though severe infestations have resulted in complete defoliation tree mortality has not been recorded in British Columbia.

Earliest records of infestation found by the author dated to 1923 and 1924 as occurring in "Interior B.C.", and in the Revelstoke area. Infestations were recorded for the period 1934-1939 at Vernon, Salmon Arm, Kamloops, and "Interior B.C." For the period 1939-1946 records were more numerous, but unfortunately neither continuous nor complete.

Beginning in 1946 the Forest Insect Survey included *Malacosoma disstria* among the species to receive special attention, resulting in the accumulation of more reliable and continuous records on infestations.

In 1948 an infestation was found at Quesnel which continued during subsequent years. In 1950 infestations

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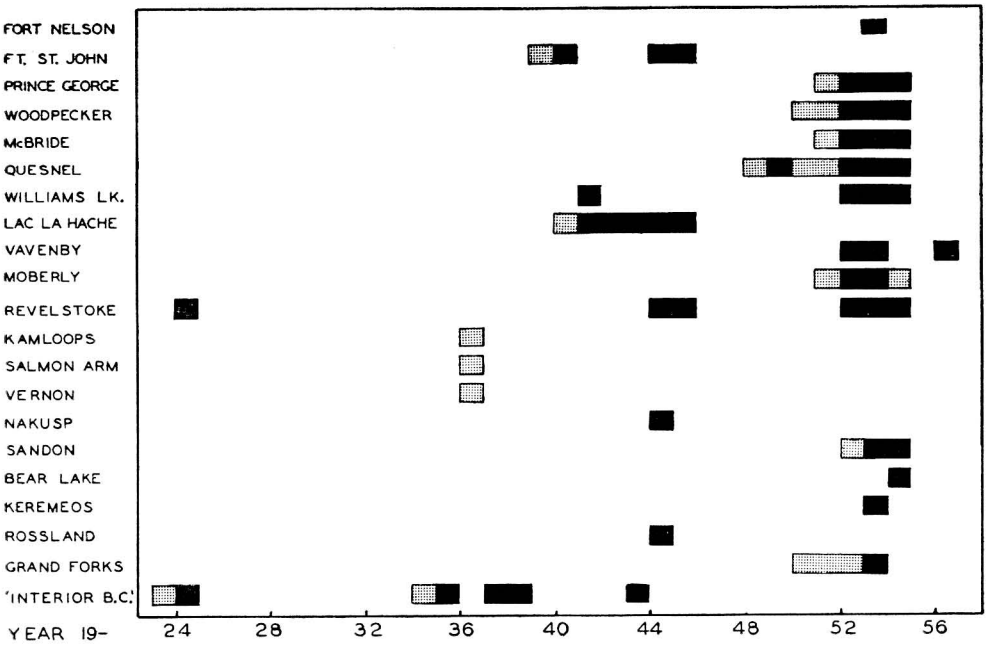

Fig. 1.—Records of occurrence of *Malacosoma disstria* infestations in interior British Columbia from 1923 to 1956. Dotted bars show medium infestation; black bars indicate heavy infestation.

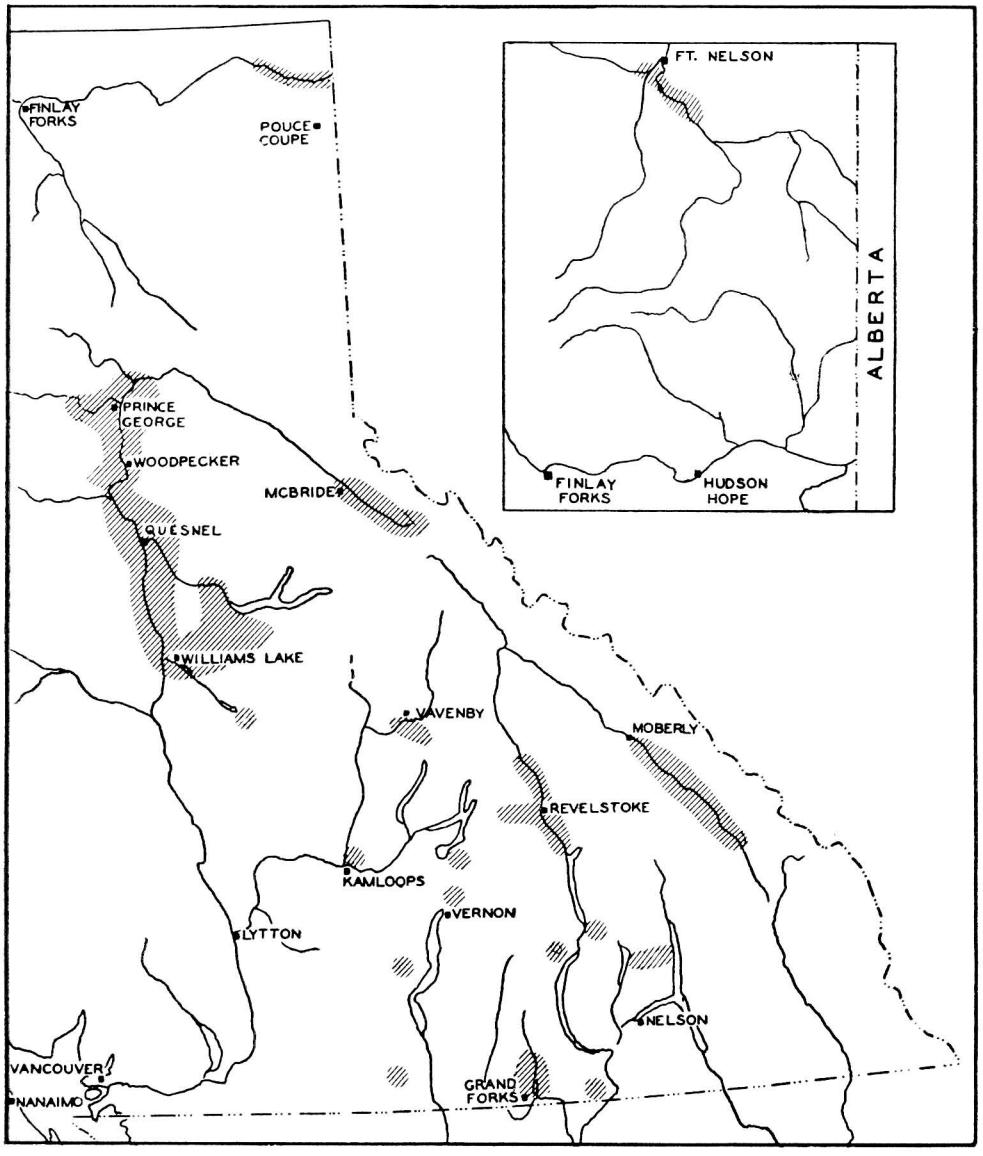

Fig. 2.—Distribution of *Malacosoma disstria* infestations in interior British Columbia, 1924-1956.

occurred at Woodpecker and Grand Forks. During 1951 and 1952 infestations began at Prince George, McBride to Swiftwater, Williams Lake, Vavenby, Moberly to Radium Junction, Revelstoke, and Sandon. By 1953 the caterpillar populations in these areas increased tremendously and spread; infestations at Woodpecker coalesced with those of Quesnel. In 1954 the infestations remained at a high level and continued to spread and coalesce so that a continuous line of infestation occurred

from Salmon Valley north of Prince George, to Williams Lake; the Vavenby and Grand Forks infestations disappeared. Infestations were discovered at Fort Nelson and Keremeos in 1953 and at Bear Lake (near Kelowna) in 1954, but these subsided. In 1955 no infestations or traces of *M. disstria* were found except at Summit Lake near Nakusp where larvae were present until they succumbed to disease. Only a single infestation was discovered in 1956 near Vavenby in a previously inaccessible area (see Figures 1 and 2).

M. disstria populations undergo extreme fluctuations as is suggested by the chart in Fig. 1. Baird (1920) mentions that records (1790-1920) for *M. disstria* in North America indicate "years of abundance followed by years of scarcity".

It is difficult at this time to isolate factors responsible for past population collapses. Sufficient evidence is not available to determine the role of parasites in the past collapses. Observations in the field in some instances have shown that disease can be an important natural control factor.

References

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PLANS TO ERADICATE ORIENTAL FRUIT MOTH IN THE OKANAGAN VALLEY, B.C.

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In late September of 1956 cannery peaches in Summerland, B.C., were found to contain live insect larvae. These peaches had been imported from the Yakima area of Washington State, U.S.A. Specimens presented to Provincial and Federal authorities were subsequently identified by G. G. Dustan, Officer-in-Charge, Fruit Insect Laboratory, Vineland, Ontario, as oriental fruit moth, *Grapholitha molesta* (Busck.).

Infestations reported to be as high as 30% were noted in some boxes of fruit. Local cannery practices consisted of spreading cannery waste by manure spreader throughout an adjoining orchard. This was stopped and all future waste was buried in a pit. In view of the fact that little of the imported crop of peaches was left for processing, canning was allowed to continue, but all further importations of cannery fruit were prohibited. It would appear that the infestation occurred only in a small portion of the imports, as further examination failed to reveal any larvae.

Cannery boxes in which the shipments had been made were ordered returned to the U.S.A. There was some delay in action which finally took place on the threat of burning.

Import records at the Canadian Customs port of Osoyoos were reviewed. All loads of fruit received were covered by certificates indicating that adequate fumigation measures had been taken from the standpoint of temperature, time, and dosage. No explanation for the failure of fumigation has been provided.

Enquiries were made on the exact origin of the specific load of fruit first found to be heavily infested. The

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