

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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orchard from which this fruit originated was said to be in the fringe area of the known infested area in Yakima. This orchard had not been trapped but traps in adjoining orchards had caught no moths in the past two seasons. There had been no local reports of infested fruit from this orchard and the only possible sign of trouble might be associated with twig flagging, a symptom not unusual with twig borer damage.

It was learned that two canneries in the Okanagan, the York Cannery at Osoyoos and Barkwills at Summerland, had received fruit from the same area, Yakima, while a third cannery, Rowcliffe at Kelowna, had received peaches only from the Wenatchee area. The Osoyoos cannery had completed operations but the personnel had not seen any infested fruit. The Kelowna cannery was still in operation; a careful check of the stock on hand did not reveal any larvae. It was concluded that the Summerland area would have to be considered infested, as larvae had been found; the Osoyoos area possibly infested as peaches had been obtained from the same source; but the Kelowna area could be considered as not infested, as the fruit used was from another source and no infestation was found on investigation.

Federal and Provincial officials, alarmed at the finding of oriental fruit moth larvae in Summerland, decided that definite action must be taken in an endeavour to prevent this insect from becoming established in the Okanagan Valley. Consultations were held with

U. S. authorities versed in oriental fruit moth and fumigation procedures. Canadian authorities concerned themselves with methods to be used in an attempt to eradicate this potential pest.

It was decided that before the 1957 growing season commenced the canneries at Osoyoos and Summerland would be completely covered with tarpaulins and fumigated with methyl bromide. The orchard adjacent to the Summerland property would be removed and burned and the land fumigated with methyl bromide. The same fumigant would be used on the fruit dump at Osoyoos and the hillside adjoining the cannery at Summerland. The ripening rooms of both canneries would receive a fall fumigation. Spring and summer spraying of host plants of the oriental fruit moth would be undertaken in the areas adjacent to the canneries, and compensation would be arranged for fruit unfit for human consumption due to excessive DDT residue. Insect traps would be placed on the fumigated buildings and in an area beyond a one-mile radius, as well as spot trapping from the International Boundary to Summerland.

It is hoped that this combined Provincial-Federal action will forestall the establishment of oriental fruit moth in the Okanagan Valley. Should this insect become established and prove to be of economic importance, it could cost the tree fruit industry some \$200,000.00 a year. An estimated investment of \$65,000.00 attempting eradication was considered well worth while.

### Royal Jelly, the New Elixir

Last winter the School of Domestic Science asked me where a supply of royal jelly could be obtained. Apparently the School of Physical Education was seeking it to feed to the basketball team to enable them to win games. I applied to Hugh B. Leech of the California Academy of Sciences who sent me the addresses of two firms who supply royal jelly in retail or wholesale lots.

Fabulous claims are made for it. For a mere \$60.00 you can obtain a month's supply to enable you to accomplish almost anything, physically or mentally. As might be expected, the amounts required for these miracles, are very small indeed. The latest use for it is in cosmetics; as a skin food, one application will remove wrinkles for 24 hours and for a mere \$10.00 one can become young again.—*G. J. Spencer, Dept of Zoology, University of British Columbia.*