

## 1946 ORIENTAL FRUIT MOTH SURVEY IN THE SOUTHERN OKANAGAN VALLEY, B.C.

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At the 1945 Annual Meeting a paper was presented showing the extent of the Oriental Fruit Moth *Grapholitha molesta* (Busck.) in the United States and Canada. With the exception of California, which conducted its own, surveys were supervised by the United States Bureau of Entomology and Plant Quarantine and came immediately under the direction of the Domestic Plant Quarantines.

With the results of the 1945 survey known, the Bureau of Entomology felt that sufficient data had been obtained, and should any further surveys be required, they should be assumed by the States concerned.

Horticultural officials in the State of Washington communicated with our Division and informed us that they required further information relative to the spread of this insect within the State, and asked for the co-operation of our Division in determining if the insects were present in the southern portion of the Okanagan Valley in British Columbia.

Arrangements were made, therefore, whereby the Washington State Department of Agriculture would conduct surveys north and south of the town of Wenatchee, while our Division would conduct similar investigations in British Columbia. The area surveyed in British Columbia was all that portion north of the International Boundary from Osoyoos to Penticton, a distance of approximately fifty miles, thence westward to take in the Cawston-Keremeos district. Most of the traps were concentrated along the International Boundary at Osoyoos and in the peach orchards long the main highways.

Any moths collected which came within the size and colour range of *Grapholitha molesta* (Busck.) were submitted to Dr.

James Marshall for identification. None of these interceptions proved to be the Oriental Fruit Moth.

Surveys in the State of Washington and British Columbia will continue during 1947, as it is important not only to know the annual spread of this pest in that State but should an incipient outbreak occur in British Columbia, it should be made known as soon as possible.

### PREPARATION OF ORIENTAL FRUIT MOTH BAIT

At the rate of one quart per trap five gallons of bait will fill 20 traps. This quantity is prepared by adding 4 pounds of sugar to 9 quarts of water, stirring until dissolved, then adding 1/3 ounce of terpinyl acetate and 1/5 ounce of saponin powder, and making up to 5 gallons with water. After the sugar has been dissolved, add 10 cc. or about 1/3 liquid ounce of terpinyl acetate, and then add saponin powder. Care should be taken in handling saponin as it is a very light powder and will be blown away if opened in a strong breeze or dropped into the solution from too great a distance above the surface. The plastic screw cap on a two ounce bottle can be used as a measure. In making up 5 gallon quantities 3 level caps are added, pour the dissolved materials into a large can, and then add water to make up five gallons. In the event that it may be desirable to make smaller quantities of bait, the following proportions are for one quart which is the quantity for one trap:

Water.....	472 cc.
Sugar.....	3.2 ounces
Terpinyl acetate.....	0.5 cc.
Saponin.....	0.25 grams
Water to make total..	944 cc.

### PRECAUTIONARY MEASURES

All Customs officials at boundary ports and importers, as well as United States Department of Agriculture officials in the

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State of Washington, have been advised that all fresh host fruits from known infested areas must be certified at shipping points, showing that such fruits have been fumigated with methyl bromide, with stated dosage, length of exposure, and temperature. Host fruits from free areas must be so certified—certificates to be signed by an officer of the State or Federal De-

partment of Agriculture.

Railway companies co-operated with our Division in taking special care in cleaning cars which had previously carried host fruits of the Oriental Fruit Moth from the United States, particularly if such cars were intended to be re-allocated and sent to the Okanagan Valley for re-loading.

## AN ANNOTATED LIST OF COLEOPTERA TAKEN AT OR NEAR TERRACE, BRITISH COLUMBIA. PART I.

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Terrace is adjacent to the northern coast of British Columbia, on the Skeena River, at an elevation of 225 feet above sea level (latitude 54° N., longitude 128° W.). All species here listed were taken at or near Terrace, except for the following localities: Thornhill Mountain is at the head of Thornhill Creek, and most specimens were collected at about 5,000 feet elevation; Lake Lakelse, some 5 miles long, is south of Terrace; Prince Rupert is the northwestern terminus of the Canadian National Railway, on the coast 95 miles west of Terrace.

A few of the species were mentioned in my previous paper (Mrs. W. W. Hippiisley, 1922. Notes on Northern British Columbia Coleoptera. *Canad. Ent.* **54** (3):63-66). The fauna is undoubtedly far richer than the present list indicates, for my collecting has suffered from my having the use of but one arm. The beetles were taken as a side issue to the work about the ranch, or when I was on the way to town, for I never had the opportunity to make purely collecting trips.

I am very greatly indebted to Mr. C. A. Frost, of Framingham, Mass., for encouragement over the years. Except for a few lots sent direct to Col. T. L. Casey, all species listed here have been through his hands. The majority he identified, but many were sent to specialists for verification or naming, and their comments were forwarded to me with the returned insects.

<sup>1</sup> Mrs. A. H. Clark, formerly Mrs. W. W. Hippiisley.

### CICINDELIDAE

- Cicindela longilabris* Say.—Identified with the comment that it was true to type. Scarce, found on lodgepole pine flats on the 4th of June, 1920. I do not remember finding it elsewhere.
- Cicindela oregona* LeC.—Taken on the occasion of a walk up Green's Hill, at the back of Terrace, scarce; June, 1919.
- Cicindela oslari* var. *terraccensis* Csy.
- Cicindela repanda* Dej.—Returned with the remark that it was a new record for the north and west.
- Cicindela 12-guttata* Dej. (= *edmontonensis* Carr)—Also a new record for the west; verified by W. Horn and H. C. Fall.

### CARABIDAE

- Trachypachus inermis* Mots.—Returned to me marked "rare."
- Brennus angusticollis* Fisch. — Commonly found under loose bark in the fall of the year.
- Brennus marginatus* var. *fallax* Roesch.—Scarce, in rotten wood and stumps; checked by A. J. Kistler.
- Brennus marginatus* var. *confusor* Csy.—Examined by Kistler.
- Brennus marginatus* var. *fulleri* Horn—Seen by Kistler and P. J. Darlington.
- Brennus gracilis* Gehin—So identified by T. Casey, but called *fulleri* by Kistler; rare.
- Carabus granulatus* L.—Taken on a cinder walk above the fire hall in Prince Rupert. Also Terrace, 1932.
- Carabus taedatus* Fab.—Some typical, others non-typical, as to color; seen by Darlington. Taken on Thornhill Mountain by Fred Michaud, who kindly collected for me while pursuing his duties as a fire warden on the above mountain in 1939. He told me some were taken under loose flakes of rock, but mostly on patches of snow. I received the notice of Mr. Michaud's death on the 11th of November, of a stroke complicated by pneumonia. He was something over 70, a great personal friend and I think the quietest, kindest gentleman I ever knew.