

beetles, while not random, is certainly variable enough so that a single sample anywhere around the tree would give only a rough idea of the actual population there.

Kinghorn and Dyer (1960) reported considerable numbers of *T. lineatum* overwintering in tree bark. Beetles were found not only in thick, heavily fissured bark, but also in niches bored into the relatively thin, smooth bark of smaller trees. This, together with earlier findings concerning location of overwintering beetles, suggests that it is the physical nature of a location in offering small, protected crevices within a certain

general setting which influences a beetle to select its specific hibernating quarters. If this is so, then one would not expect differences in litter composition or appearance, even at the surface, to have much influence apart from the fact that most litter offers, at almost any point, relatively dark, moist, easily entered hiding places in abundance. The results of the present study are in agreement with this view and also indicate that it is factors other than those associated with obvious variations in litter itself which are of primary importance in determining location of overwintering beetles.

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ADDITIONS TO THE CHECK LIST OF MACROLEPIDOPTERA OF BRITISH COLUMBIA¹

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While investigating the cutworm species present in southern British Columbia the author used light traps at two localities to supplement data from field surveys. A trap was operated at Kamloops for 5 seasons from 1955 to 1959 and at Summerland for one season, 1956. Among the macrolepidoptera captured were thirty-two species not recorded for the Province by Llewellyn-Jones (1951), including

Laphygma exigua Hbn., the beet armyworm, not previously known to occur in Canada. A single new record was obtained from Summerland, that of a geometrid, *Cheteoscelis bistrifaria* Pack. Thirty species were recorded only at Kamloops. Adults of *L. exigua* were recorded at Kamlops in 1956 and 1958 and an adult recorded from southern Vancouver Island in 1958. The larvae of this species were also found during 1958 infesting crops of table beets and tomato at Ladner and tomato at Pavilion.

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The arrangement and numbering of species, locality and flight period, conforms with Llewellyn-Jones' list, which mainly follows that of McDunnough (1938) in his "Check List of Lepidoptera of Canada and the United States, Part I".

Family ARCTIIDAE

Subfamily ARCTIINAE

Apantesis Wlk.

- 1033 *virgo* L.
1. Kamloops.
2. July, August.

Family NOCTUIDAE

Subfamily NOCTUINAE

Euxoa Hbn.

- 1236 *dargo* Stkr. *rumatana* Sm.
1. Kamloops.
2. July, August, September.
1247 *olivalis* Grt. *mcDunnoughi* Cook.
1. Kamloops.
2. June, July, August, September.
near 1250 *maimes* Sm.
1. Kamloops.
2. August.
near 1371 *servita* Sm.
1. Kamloops.
2. July.

Agrotis Ochs.

- 1425 *venerabilis* Wlk. Dusky cutworm.
1. Kamloops.
2. August, September.

Amathes Hbn.

- 1518 *substrigata* Sm.
1. Kamloops.
2. August.

Anomogyna Staud.

- 1558 *imperita* Hbn.
a discincta Wlk. *arufa* Sm.
1. Kamloops.
2. August.

Subfamily HADENINAE

Trichoclea Grt.

- 1652 *fuscolutea* Sm.
1. Kamloops.
2. May.

Ceramica Gn.

- 1951 *pieta* Harr. *exusta* Gn. *contraria* Wlk.
Zebra caterpillar.
1. Kamloops.
2. July.

Subfamily CUCULLIINAE

Lathosea Grt.

- 2021 *pulla* Grt. *pullata* Grt.
1. Kamloops.
2. April.

Cucullia Schrank.

- 2038 *intermedia* Speyer.
a cinderella Sm.
1. Kamloops.
2. May, July, August, September.

Oncocnemis Led.

- 2090 *augustus* Harv.
1. Kamloops.
2. September.
2127 *riparia* Morr.
a aqualis Grt.
1. Kamloops.
2. July.

Homohadena Grt.

- 2150 *stabilis* Sm.
1. Kamloops.
2. July, August.

Brachyloimia Hamp.

- 2209 *discinigr*a Wlk.
1. Kamloops.
2. April, September.

Hillia Grt.

- 2211 *iris* Zett. *crasis* H.-S. *semisigna* Wlk.
erdmanni Moesch. *senescens* Grt.
1. Kamloops.
2. September.

Fishia Grt.

- 2279 *discors* Grt. *vincla* Sm.
1. Kamloops.
2. October.

Anathix Franc.

- 2319 *aggressa* Sm.
1. Kamloops.
2. August.

Subfamily AMPHIPYRINAE

Archanara Wlk.

- 2440 *subflava* Grt.
1. Kamloops.
2. July, August.

Hypocoena Hamp.

- 2451 *basistriga* McD.
1. Kamloops.
2. August.

Amphipoea

- 2459 *americana* Speyer.
a pacifica Sm.
1. Kamloops.
2. July, August.

Achyonix McD.

- near 2558 *praeacuta* Sm.
1. Kamloops.
2. August.

Platyperigea Sm.

- 2654 *camina* Sm.
1. Kamloops.
2. August.

Caradrina

- near 2660 *morpheus* Hufn.
1. Kamloops.
2. June, July.

Laphygma Gn.

- 2683 *exigua* Hbn. *flavimaculata* Harv. Beet
armyworm.
1. Vancouver Is., Ladner, Pavilion,
Kamloops.
2. July, August, September, October. A
migrant from the south.

Subfamily HELIOTHIINAE

Schinia Hbn.

- 2982 *walsinghamsi* Hy. Edw.
1. Kamloops.
2. August.

Subfamily PLUSIINAE

Chryaspidia

- 3273 putnami Grt.
 1. Kamloops.
 2. August.

Subfamily CATOCALINAE

- 3346 unijuga Wlk. *tucilla* Worth.
 1. Kamloops.
 2. September.
- 3352 faustina Stkr.
 1. Kamloops.
 2. September, October.

Family GEOMETRIDAE

Subfamily GEOMETRINAE

Cheteoscelis Prout.

- 4079 bistrisaria Pack. *udinaria* Stkr.
 1. Summerland.
 2. June.

Subfamily ENNOMINAE

Pero H.-S.

- 5072 honestarius Wlk. *stygiarius* Wlk. *dyari*
 C. & S.
 1. Kamloops.
 2. May.

ACKNOWLEDGMENT

The author is indebted to Dr. D. F. Hardwick, Entomology Research Institute, Canada Department of Agriculture, Ottawa, for identification of specimens and encouragement in publishing the appended list.

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**AN INCIDENT OF DESTRUCTION OF HONEYBEE COLONIES IN THE
 INTERIOR OF B.C. BY AN ANT, PROBABLY FORMICA INTEGRAL
 NYLANDER**

In a letter received on June 3, 1959, from Mr. J. C. Keswick of Osoyoos, B.C., he advises that a few of his honeybee colonies were moved from Osoyoos up into the Anarchist Mountain area as a safeguard against destruction by Sevin. Four days after moving, Mr. Keswick checked his colonies at which time a great deal of ant activity was noticed. Upon checking the first colony in line it was found to be empty; the only trace of bees being a little capped brood and about a quarter of an inch of wings on the bottom board of the hive. The second hive examined was found to be in the same condition and the third one was just being invaded.

According to Mr. Keswick it was an amazing thing to observe the ants attacking honeybees. Generally at least three ants would attack a bee, snip her in two at the join of the abdomen and thorax, snip off the wings and head, and carry the dis-

sected bee to their nest.

It would appear that as soon as the honeybee colony had been destroyed the ants then polished off any stores of honey, pollen or brood. The hive next in line had not been touched, neither were the remainder of the colonies.

Mr. Keswick carefully checked the area and at about forty feet from the colony a large nest of ants was discovered. This was destroyed after dark and specimens of the ants were sent to the author who in turn had them mailed to G. L. Ayre of Research Branch, Summerland, where they were identified as probably being *Formica integra* Nylander. This species is common in the Okanagan and because of its predacious habits is generally considered to be beneficial. It is very indiscriminate in its choice of food and will take anything handy.

—J. Corner, Provincial Apiarist, Vernon, B.C.