

DESCRIPTIONS OF LARVAE OF TWO EASTERN SPECIES OF
LYGRIS (GEOMETRIDAE)

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The larvae of seven Canadian species of *Lygris* were described by the writer (1958) in *Larvae of the Nearctic Larentiinae*. Since then two more species, *L. explanata* (Walker) and *L. molliculata* (Walker), have been reared. The descriptions of these appear here. One other, *L. serrataria* Barnes and McDunnough, remains to be studied. A key to known larvae of *Lygris* is presented.

Lygris explanata Walker*Cidaria explanata* Walker (1862, pp. 1422-1423).

Type locality unknown.

Range: Southern Labrador, Newfoundland, and Nova Scotia, west to Lake of the Woods and south, according to Forbes (1948), to Massachusetts and New York.

Host: *Vaccinium*.

Life History: Hibernates as egg; larva free-living (four instars), late May to July 18; pupal period 14 to 18 days; adult late July to August.

Description: I. Head brown; body light brown or yellow, with brown middorsal stripe; yellow line in upper, and brown line in lower, subdorsal region; wide brown midventral line. H.W., 0.38 mm; B.L., 3.6 mm; B.W., 0.4 mm. II. Head light brown with suggestion of brown streaks over lobes. Body light brown with dark brown middorsal stripe; fine brown line in subdorsal region; brown adventral line; dark brown midventral line. H.W., 0.54-0.58 mm; B.L., 8-13 mm; B.W., 0.6-0.7 mm. III. Head light yellow with fine rust-coloured spots arranged in herring-bone pattern on sides of head, along epicranial stem and on sides of clypeus. Body light brown; middorsal line dark grey, in an irregular grey stripe; rust line in subdorsal region; adventral line chocolate; midventral line dark brown. H.W., 0.98-1.00 mm; B.L., 14 mm; B.W., 1.0-1.1 mm. IV. Head light brown with brown specks arranged in herring-bone pattern along epicranial stem and over parietal lobes. Body light brown; markings dark grey to reddish brown (Fig. 1). Seta L1 on low tubercle, circled in dark grey. Thoracic plate concolorous; anal plate concolorous, with dark median furrow. Thoracic legs light brown; prolegs reddish brown. H.W., 1.67 mm; B.L., 27-35 mm; B.W., 2.0-2.4 mm.

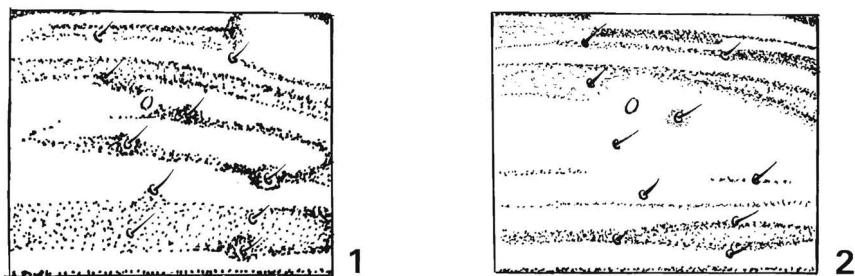
Remarks: Description based on larvae reared from eggs and collected from *Vaccinium* in vicinity of Laniel, Quebec.

Lygris molliculata Walker*Cidaria molliculata* Walker (1862, p. 1390).

Type Locality: St. Martin's Falls, Albany River, Ontario.

Range: Ontario, north and west to the type locality; western Quebec, east to Ste. Foy; and in the United States, according to Forbes (1948): Minnesota, Pennsylvania and New York.

Host: *Physocarpus opulifolius* (L.) Maxim.



Figs. 1 and 2. *Lygris* spp., mature larva, setal and colour patterns on third abdominal segment. 1. *L. explanata* (Walker); 2. *L. molliculata* (Walker).

Life History: Larva free-living (five instars), in June; pupal period 14 to 19 days; adult July.

Description: I. Head light brown; body light brown; middorsal, wide brown line; narrow brown line in subdorsal region; subventral line wide, brown. H.W., 0.34 mm; B.L., 5.5 mm; B.W., 0.4 mm. II. Head light brown with brown herring-bone pattern on lobes. Antenna brown. Body light brown; middorsal stripe grey-brown; brown line in subdorsal; lateral region greenish; fine grey line in each of subventral and adventral regions; midventral, very narrow grey line. Legs and plates concolorous. H.W., 0.48–0.50 mm; B.L., 8 mm; B.W., 0.4 mm. III. Head light grey with much blackish over lobes; white line over each lobe in line with white line in upper subdorsal region on thorax. Body light brown; lines grey: middorsal fine, broken; addorsal, as arc on each anterior abdominal segment; subdorsal, grey, with white line above; subventral, obscure; adventral, conspicuous; midventral, fine. H.W., 0.70–0.73 mm; B.L., 9–14 mm; B.W., 0.7–0.9 mm. IV. Head whitish, with brown herring-bone pattern on lobes; whitish on front of head. Antenna light brown, with lines as in last instar. Anal plate with black middorsal line; prothoracic plate concolorous; legs concolorous, anal with light stripe along it. H.W., 1.04–1.11 mm; B.L., 18–20 mm; B.W., 1.5 mm. V. Head light brown, with brown herring-bone pattern over lobes; clypeus often with brown spot in upper corner, sometimes one in each lower corner as well. Antenna light brown. Body swollen on mesothorax; light yellow-green to brown, with markings darker (Fig. 2). Both plates brownish with dark median line. Legs brown, anal leg with light line along it. H.W., 1.67–1.84 mm; B.L., 25–40 mm; B.W., 1.8–3.0 mm.

Remarks: Description based on larvae collected on west side of Bruce Peninsula, Ontario.

Apparently some species of *Lygris* have four-instar larvae (*L. explanata*) and some have five-instar larvae (*L. molliculata*). *L. testata* L., and *L. xylina* Hulst may, apparently, have four or five instars.

Key to Mature Larvae

1. Head horned (parietal lobes attenuate); on *Vitis*, *Parthenocissus*, and *Epilobium* 2
Head normal; larvae with other food plants 3
2. Larvae green *L. diversilineata* Hübner
Larvae brown *L. gracilineata* Guenée
3. Middorsal line partially connected to addorsal line by transverse bar or dark patch in vicinity of D setae 4
Middorsal line not connected to addorsal line 6

4. Dark oblique posterior to seta D2 5
 Dark patch posterior to seta D2 *L. xylinea* Hulst
5. Dark transverse bar between D2 setae (Fig. 1) *L. explanata* Walker
 No dark transverse bar between D2 setae *L. flavibrunneata* McDunnough
6. Setae D1 and D2 on same dark line 7
 Setae D1 and D2 not on same dark line 8
7. Middorsal line continuous *L. testata* Linnaeus
 Middorsal line not continuous (Fig. 2) *L. molliculata* Walker
8. Oblique dash anterior to seta D1; larvae on *Salix* and *Populus* 9
 No oblique dash anterior to seta D1; larvae on *Ribes* *L. propulsata* Walker
9. A continuous dark line through seta SV3 *L. destinata* Moeschler
 Little or no dark line through seta SV3 *L. flavibrunneata* McDunnough

Literature Cited

- FORBES, W. T. M. 1948. Lepidoptera of New York and neighboring states. Pt. 2. Cornell University Agric. Exp. Sta. Mem. 274.
- MCGUFFIN, W. C. 1958. Larvae of the Nearctic Larentiinae (Lepidoptera: Geometridae). Can. Ent. Suppl. 8.
- WALKER, F. 1862. List of the specimens of lepidopterous insects in the collection of the British Museum. Part 25—Geometrites. London.

ON THE GRAMMAR OF THE NAME *HELIOTHIS* OCHSENHEIMER (NOCTUIDAE)

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In recent works by Hardwick (1958, 1965, 1970), including extensive citation of literature, the subfamily name *Heliothidinae* is used. Investigation into the classical origin of the genus name *Heliothis*, upon which that subfamily name is based, reveals that it is an aorist passive participle of the Greek verb *hēlioō*, meaning to lie in the sun, to bask. This derivation is given by Treitschke (1826, p. 215) and is confirmed by Ochsenheimer's citation in parentheses after *Heliothis* of the plural nominative form "*Heliothentes* Hübn."

As a participle, one of the 2 kinds of verbal adjectives in Greek, there will be 3 gender forms. These forms and their form in the genitive case, from which family-group names are formed in the singular number and from which names of parasites and other associated organisms may be formed in the plural as well as the singular number, are as follows:

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