

DESCRIPTIONS OF THE LARVÆ OF SOME MEXICAN  
LEPIDOPTERA.

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The larvæ of the tropical American Lepidoptera have been almost wholly neglected. The crude early figures of Sepp and Cramer are available, but the figures of Cramer are improperly associated with the adults. Some of the Brazilian butterflies have been ably dealt with by Fritz Müller, and there exist some scattered descriptions. The condition seems to warrant any contribution to the subject, however slight, and as the Department of Agriculture has come into the possession of several species of inflated larvæ prepared by Mr. W. Gugelmann, brief descriptions of them are herewith presented. The specimens are deposited in the National Museum.

## FAMILY PAPILIONIDÆ.

**Papilio polydamas** Linnæus.

*Larva*.—Head rounded, bilobed, dull black with short black secondary hairs, a pale line in the median suture. Body enlarged a little at joints 4-5, and tapering on the thorax; a subdorsal row of short papillose processes and a lateral row on joints 2 to 5, 11 and 12, the laterals on 2 and 11 longer than the others. Purplish, with oblique black lines, about four on each segment, short, separated and a little curved, more oblique on the sides than on the dorsum, finally forming a nearly straight series of lines above the bases of the feet. Bases of the feet blackish; feet black; papillose processes black.

**Papilio anchisiades idæus** Fabricius.

*Larva*.—Head rounded, bilobed, yellow-brown, paler behind and flecked with pale on the vertex; numerous secondary hairs whitish. Body cylindrical, a little enlarged at joints 3-5, with a subdorsal row of short conical tubercles. Colors mottled brown and creamy white; general color brown, the white prevailing laterally on joint 7 and to a less extent on 11-12; surface finely dotted with creamy, ring-shaped markings of this color posteriorly on the segments; a waved and broken subdorsal line; several irregular light bands along the bases of the feet, reducing the ground color to a series of spots; tubercles more rich brown than the general color, marked with small creamy crescents.

Feeds on Citrus.

## FAMILY PIERIDÆ.

**Pereute charops** Boisduval.

*Larva*.—Head rounded, higher than wide, dull black. Body cylindrical, uniform, clothed with rather long and coarse white secondary hair, from white tubercles, the hairs scattered sparsely and in groups; general color uniform purplish brown. Thoracic feet black; abdominal ones and anal shield dark brown.

Feeds on *Anona* and other plants.

## FAMILY DANIDÆ.

**Lycorea atergatis** Doubleday & Hewitson.

*Larva*.—Head rounded, higher than wide, shining black, labrum whitish. Body cylindrical, with a pair of long, fleshy black processes subdorsally on joint 3. Colors yellowish white and deep black, transversely banded; anterior halves of the segments black above, venter entirely black; joint 2 is all white; on 3 and 4 the black bands run evenly to join the ventral color; on the abdomen the bands divide, the posterior limb is short and covers the spiracle, the anterior one joins the ventral color; on joint 12 the band is narrow and interrupted laterally; on 13 it runs evenly across, covering the anal shield. Feet all black.

## FAMILY NYMPHALIDÆ.

**Synchloe janais** Drury.

*Larva*.—Head somewhat squarely angled, distinctly bilobed, rounded, without processes, covered with coarse secondary hairs from distinct tubercles; orange red, the lower half black. Body cylindrical, uniform, with rows of spine-like processes bearing stiff hairs; dorsal row single, on joints 5 to 12, there being two processes on joint 12; subdorsal row on joints 3 to 13, two on 13; lateral row on joints 2 to 12; substigmatal row on joints 2 to 12; subventral row on 2 to 12, double on the segments with feet. Color whitish with transverse black bands joining the processes; a dorsal black line, broadly broken in the incisures; a lateral black band, narrowly broken; subventral region less distinctly white.

**Synchloe lacania** Geyer.

*Larva*.—Head rounded, bilobed, with coarse black setæ from distinct tubercles; black, the apices of the lobes slightly pale. Body cylindrical, with short black spines with stiff hairs; joint 2 with a dorsal shield, a spine below the spiracle and a subventral one; a single dorsal row on joints 5 to 12, two on joint 12, all arranged as in the preceding species. Body red-brown, marked transversely with black lines, two on each segment behind the spines; subventral region irregularly and indistinctly marked with black. Feet and leg shields black. There are a few scattered secondary hairs on the body.

## FAMILY LITHOSIIDÆ.

**Cisthene menea** Druce.

*Larva*.—Head rounded, flat before with a slight notch at vertex; pale reddish brown, the sutures paler. Body cylindrical, tapering a little before and somewhat flattened; pale yellow, marked with crimson. Irregular crimson transverse bands, four or five to a segment, partly confluent and with indented edges, the broadest one in the incisure, all becoming irregularly confluent subventrally; venter pale with a crimson tint spreading from the subventral area. Warts small, with very long spreading and curving pale yellow hairs; one wart above the stigmatal wart on joints 3 and 4; wart i of the abdomen two-haired; wart iv single-haired, placed directly below the spiracle. Feet normal, pale.

## FAMILY ARCTIIDÆ.

**Ammalo helops** Cramer.

*Larva*.—Head rounded, about as wide as high, considerably larger than joint 2; shining mahogany red, the sutures paler. Body dull reddish without markings, densely clothed with thick tufts of rather short stiff black hairs. Thoracic feet pale brown; abdominal ones vinous. Two warts above the stigmatal wart on joints 3 and 4; wart iv of the abdomen above and behind the spiracle, a little smaller than the others.

**Euchætias albicosta** Walker.

*Larva*.—Head rounded, shining black with the sutures pale. Body dull purplish with irregular light markings stigmatally, densely clothed with tufts of hairs. The general hair covering is black, including long slender black pencils subdorsally from joints 4 and 12; long white pencils from warts ii and iii on joints 5 and 11; a series of alternating white and orange short tufts subdorsally on joints 6 to 11. Warts rather small, normal. Hairs finely, shortly feathered, especially the plumed subdorsal white and orange ones.

The larva is much like that of *Euchætias egle* Drury.

## FAMILY HYP SIDÆ (PERICOPIDÆ).

**Pericopis leucophæa** Walker.

*Larva*.—Head rounded, flat before, as large as joint 2, shining black with a pale line down the median suture to clypeus. Body cylindrical, joint 12 slightly enlarged; warts large, with numerous hairs, but these fine and thin, not obscuring the body. Pale straw color, with dorsal, lateral, pedal, and ventral lines of purple brown, dotted and powdery; traces of subdorsal and stigmatal similar lines,

broad blotched transverse deep purple bands on joints 3, 5, 11 and 13, with a lateral blotch on joint 6. Feet all black. Warts dull orange; one wart about the stigmatal wart on joints 3 and 4; wart iv of the abdomen smaller than the others, situated behind the spiracle. Hairs black, some on joints 3 and 4 longer than the others; those on 12 and 13 also longer.

**Phaloesia saucia** Walker.

*Larva*.—Head rounded, nearly as large as joint 2, shining blue-black, the bases of antennæ and epistoma pale. Body cylindrical, joint 12 scarcely enlarged; warts low-conical rather than high, but proportionately large, approximating each other, the pair i on each side contiguous, appressed, almost consolidated, showing only a central groove in a single dorsal wart; one wart above the stigmatal wart on joints 3 and 4; wart iv of the abdomen small, contiguous to iii and appressed against it. Body dull ocher, the warts shining blue-black, forming transverse bands; double transverse black streaks in the segmental incisures and small irregular lateral spots; a continuous subventral stripe; feet and leg plates shining blue-black. Hairs thin, black; a single longer white one from the subdorsal wart on joints 3 and 4, and from wart iii on joint 12.

*Cocoon*.—An open network of yellowish silk, somewhat irregular in shape, higher in front, roomy, containing the cast skin.

*Pupa*.—Light brown, with numerous blue-black spottings and streaks on the wing cases.

These two larvæ are entirely normal for the Pericopidæ, as exemplified by the North American species known to us.

**Doa raspa** Druce.

*Cyenia* (?) *raspa* Druce, Ann. Mag. Nat. Hist. (6), XIII, 354. 1894.

*Cyenia* (?) *raspa* Druce, Biol. Cent. Am., Lep. Het., II, 393. 1897.

This species was placed by Druce doubtfully in the Arctiidæ. It has been till now at the National Museum in the Liparidæ, in the genus *Trochuda*, where I put it according to lists that Mr. Schaus had prepared at the British Museum. I presume, therefore, that it is in the Liparidæ at the British Museum; but this is certainly wrong. The species belongs to the genus *Doa* Neum. & Dyar in the Hyspidæ.

*Larva*.—Head rather small, rounded, slightly notched at the vertex behind, flat in front, pale reddish brown. Body with the thorax slightly swollen, joint 12 also a little enlarged; yellow, with transverse black bands. There are three bands on each segment, the anterior one rather broad, the others linear; the subventral ends of the bands are bent laterally or joined to short longitudinal lines; feet pale; venter unmarked, except on the legless segments, where the anterior band runs across. Tubercles and setæ minute, indistinguishable.

*Cocoon* double, an open mesh of pale brown silk, within a similar, larger outer envelope. The pair come together at the anterior end where the adult emerges.

*Pupa* pale with transverse black lines on the abdomen and black lines on the veins of the wing-cases.

#### FAMILY NOCTUIDÆ.

##### *Erebus odora* Linnæus.

Mr. Gugelmann has sent three stages of the larva, presumably the last three. The small larva is pale yellow with broad black transverse bands on the anterior thirds of the segments; a continuous black shade below the subventral fold; head, feet, and shields dull red. A long black subdorsal filament, or "horn" on joints 3 and 4, and a single dorsal one on joint 12.

The next stage is colored like the fully grown larva, though the secondary hairs and granular markings are less conspicuous. The five black horns are present.

*Last stage.*—Head rounded, wider than high, flat across the mouth, shining dark brown, covered with short coarse pale secondary hairs. Body cylindrical, uniform, without a trace of the black "horns" of the previous stages. Anterior thirds of the segments dorsally black, middle thirds red-brown, posterior thirds yellowish, the coloration consisting of dense, flat, secondary granules; these cover the sides, except for large black spots at the middle of the abdominal clasp; thoracic feet and their bases black, anal shield and leg shield red-brown. The granules are crinkled, annular and subconfluent. Skin densely covered with short pale secondary hairs, evenly throughout all the markings.

This large and conspicuous larva has a structure resembling that of the *Ceratocampidæ* in its younger stages. It would be interesting to get the first stage of this larva and observe the relations of these filamentous horns to the primary tubercles.

#### FAMILY NOTODONTIDÆ.

##### *Dicentria laciniosa* Hy. Edwards.

*Larva.*—Head high, tapering a little above, with a small vertical notch, much higher than joint 2; shining, creamy white with black spots at the tubercles; the black forms a patch at vertex, a bilobed mark across the face, a band above the mouth and a ring-spot on the side. Body cylindrical, the anal feet small and apparently not used. General color ocher yellow; a short bright red prominence on joint 5,

bearing tubercles i; slightly elevated red dorsal areas on joints 6 to 9 and on 12, the latter the most prominent; dorsal and subdorsal black lines, broken into spots and angles, shaded across with blackish on joints 9-10; entirely confused on joints 11 to 13 and filled in nearly to a broad band on joints 2 to 4; two lateral black lines, more nearly continuous, especially centrally; a broad stigmatal band composed of three confused lines; bases of all the feet broadly vinous red; feet and shields blackish. Tubercles black, prominent, tubercles i on joints 5 to 12 elongated into short cones; setæ distinct, single, pale; tubercle iv below and behind the spiracle, close to it.

This larva resembles the North American *Schizura concinna* Smith and Abbot, but is less specialized. There is a hint of the usual *Schizura* white V-mark in the dark shade on joint 10. The white head is peculiar.

#### NOTES ON APANTESIS FIGURATA DRURY.

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In April, 1911, I was out hunting larvæ of *Apantesis anna* and among the lot that I found I noticed several of the larvæ that were a little smaller than the *anna* and different. One kind of them was black with a stripe the length of the back; so I kept this kind by itself. When the larvæ pupated the pupa was much smaller than the *anna*, reddish in color, frosted the same as *anna*. In eighteen days one of them came out *excelsa* female, with the upper wing marked with two cross lines converging below and a complete W-mark; the other one came out *excelsa* male, the upper wing marked same as female. The lower wing is marked a little different from the type *figurata*. It has a dot in the red, also a black dash. The third one, all that I had at that time, came out male *figurata*, with the lower wing black and yellow. I am going to name this form *Apantesis figurata* var. *preciosa* Nixon. In a few days I found some more larvæ of *figurata* and they pupated and came out as follows: first was male and female typical *figurata*; next female type, and the last two came out male and female var. *excelsa*, only the markings on the upper wing were marked with two parallel bars, the outer one irregular and no W-mark, same as *figurata*. The first pair of *excelsa* had the red dot in the lower wing in a large irregular square, while in the other female *excelsa* the mark was small, rounded. The larva is about one and one half inches long, varying in color from coal black to rusty brown. It feeds on any plant in the locality where it is to be found, generally on hillsides where there is plenty of undergrowth. Some larvæ have a lemon stripe on the back.