

The preimaginal stages of *Othorene hodeva* (DRUCE, 1904)

(Lepidoptera: Saturniidae, Ceratocampinae)

by

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Abstract

The life cycle and morphology of the immature stages of *Othorene hodeva* (DRUCE, 1904) are here presented. The larvae feed on *Sclerolobium paniculatum* (Fabaceae: Mimosoideae).

Introduction

The genus *Othorene* BOISDUVAL, 1872 comprehends four species widespread from Mexico to SE Brazil.

Othorene hodeva. (DRUCE, 1904) is distributed in Venezuela, Trinidad, Guyana, French Guyana, Brazil, Ecuador and Peru. Its occurrence in Goiás and Mato Grosso do Sul (Brazil) does not allow to consider it a typical amazonian species as claimed by LEMAIRE (1988). It may be a very abundant species during its phenology in October to February in the Alto Rio Arinos area, Mato Grosso, where it has been studied. Also its natural feeding plant *Sclerolobium paniculatum* is widespread in the same area. STONE (1991) mentions also *Gleditsia triacanthos* (Fabaceae: Caesalpinioidea) as host-plants.

Data on the preimaginal instars of two others species of this genus, i. e. *O. purpurascens* (SCHAUS, 1905) and *O. verana* SCHAUS, 1900, were reported in the past by various authors (see TRAVASSOS & NORONHA, 1967; JANZEN, 1984; LEMAIRE, 1988).

Larvae are solitary along each instar. At the end of the last instar, the larva changes into pale colour and it hides underground. The total of the cycle spans 70 days, 43 for pupating and 27 of diapause.

Description of the immature stages

Ovum (fig. 1)

Ellipsoidal, flattened on both sides, the chorion is flat and pale green translucent. Length: 3.5 mm; width: 2.8 mm; thickness: 1.6 mm. There are two narrow yellowish lines that surround the whole smaller surface. Eclosure: 6 days.

Larva (figs 2–7, 11)

First instar (fig. 2): head capsule rounded and pale chestnut bright. Initially the tegument is pale chestnut, later on it becomes greenish. Spiracular fascia in A1–7, dark green. Five equal subdorsal scoli: one prothoracic, small; two meso and two metathoracic, long, dark chestnut but of a pale yellow colour in the distal third. The extremities rounded, flattened, with two spines at the apex of the bifid scoli. A8 with long dorsal scoli, approx. 1/3 of the length of the thoracic scoli, dark chestnut, slightly curved to the front. Three series of dark chestnut abdominal scoli are present, they are located in the subspiracular, supraspiracular and subdorsal areas in A1–8, all curved to the front. When emerging the larva measures 8 mm, later 15 mm. Duration: 7 days.

Second instar (fig. 3): Head with the same shape as in first instar, with green frontal area, while the subfrontal area shows a yellowish green wide stripe running from the superior part of the frons to the frontoclypeus. Laterally olive green with a large dark chestnut patch close to the cervix. Mouth parts

of pale chestnut coloration. The antennae are whitish. Short protothoracic scoli with spineform bifurcation; on the other thoracic segments, they are thicker at the base, long and spinous along every stern, dark chestnut, but greenish at the distal third of the stern. Thick scolus of A8, light brown, bristled with small dark spines. The scoli of the abdominal segments are dark chestnut, of three different sizes: the subdorsal are small, the supraspiracular smaller and the subspiracular even smaller. The junction of T2 with T3 is dark chestnut from the dorsum to the supraspiracular area. Two dark chestnut stripes: the first dorsal on each abdominal segment, the second supraspiracular from the metathoracic scolus up to A8. Spiracular fascia whitish from T3 to A8. True legs chestnut translucent; the abdominal and anal legs of the same colour of the integument and the lateral shield pale chestnut. The anal shield with small spines and it stains dark laterally. The integument is olive green, clearer in the ventral area. Length: 20 mm. Duration: 4 days.

Third instar (fig. 4). It differs from the second instar in the following details: the protothoracic scoli are smaller, as well as the subdorsal ones of the abdomen; the meso and metathoracic scoli are greenish chestnut along all their extension; the tegument is speckled with whitish dots, from the dorsum of the thorax to the subspiracular area, and from the subdorsal area to the subspiracular of the abdomen. Length: 33 mm. Duration: 4 days.

Fourth instar (fig. 5): The frontal and lateral areas of the head are green; adfrontal area yellowish, surrounded with black from the frontal superior part to the frontoclypeus, which is pale chestnut colored.

On the prothorax, dorsally and laterally, small pale chestnut spines are present. Thoracic scoli greenish with dark spines with whitish seta at the apex; scolus of A8 as in the 3rd instar but with the spines of the same colour of the stem and one clear seta at the apex. Abdominal scoli chestnut; the subdorsal scoli with spines and with setae at the apex; the supraspiracular very smaller and clearer, not very apparent, a little larger in A1 and A7 and transformed in verrucae in A8 and A9. Spiracular fascia violet from A1 to the middle of A8, yellowish in the subspiracular area from the base of the metathoracic scolus up to A8. Spiracles pale chestnut with darker peritreme. Tegument green with sparse white granulations from the dorsum to the spiracular fascia and dark green with white dots from spiracular to ventral area.

True legs greenish chestnut with clear lateral setae; the prolegs of the same color of the tegument, also with whitish lateral setae. Suranal plate triangular in the dorsum with black tonality in the center and light brown rugosities laterally. The shield of the anal prolegs of the same coloration of the tegument and in the ventrolateral area there are two stripes, one light brown, the other black. Violaceous stripe in the dorsum of A8–9. Length: 50 mm. Duration: 5 days.

Fifth instars (figs. 6, 7). It differs from the other instars in the following details: the adfrontal area of the head is pinkish surrounded with dark chestnut frontally, and dark green laterally. The meso and metathoracic scoli frontally are much shorter, almost smooth and with weak vestiges of the spines posteriorly, and are bright ochreous. The subdorsal, sub and supraspiracular scoli, are smooth, sharp and pinkish. The dorsal scolus of A8 is shorter, with shape and coloration like the anterior ones. The spiracular fascia begins in A1 and the yellow coloration is more evident in A7–9. The ventrolateral area of all segments and the ventral area of A1–2 with small spined appendices of the same shape and colour of the previous scoli. Suranal plate with the same shape as in 4th instar, dark green without the dots, the two sides are rugose, of the same colour of the scoli. Shield of the anal proleg with pinkish callosities with dark chestnut border in the anterior and posterior areas. A9 with pinkish verruca in the subspiracular area. Small spiniform pinkish verrucae in the ventral area of the thoracic segments in A1–A2 and A7–A9. These verrucae are present also in the dorsolateral area of the thorax, in A7–A9, and from the ventrolateral area to the spiracular fascia in the others abdominal segments. Such verrucae are more numerous and larger in the thorax and they form a serrate annulus in the prothorax close to the cervix.

The tegument of the thorax is strongly rugose as well as in every area below the spiracular fascia of the abdominal segments. The green coloration is darker from the spiracular stripe to the dorsal area

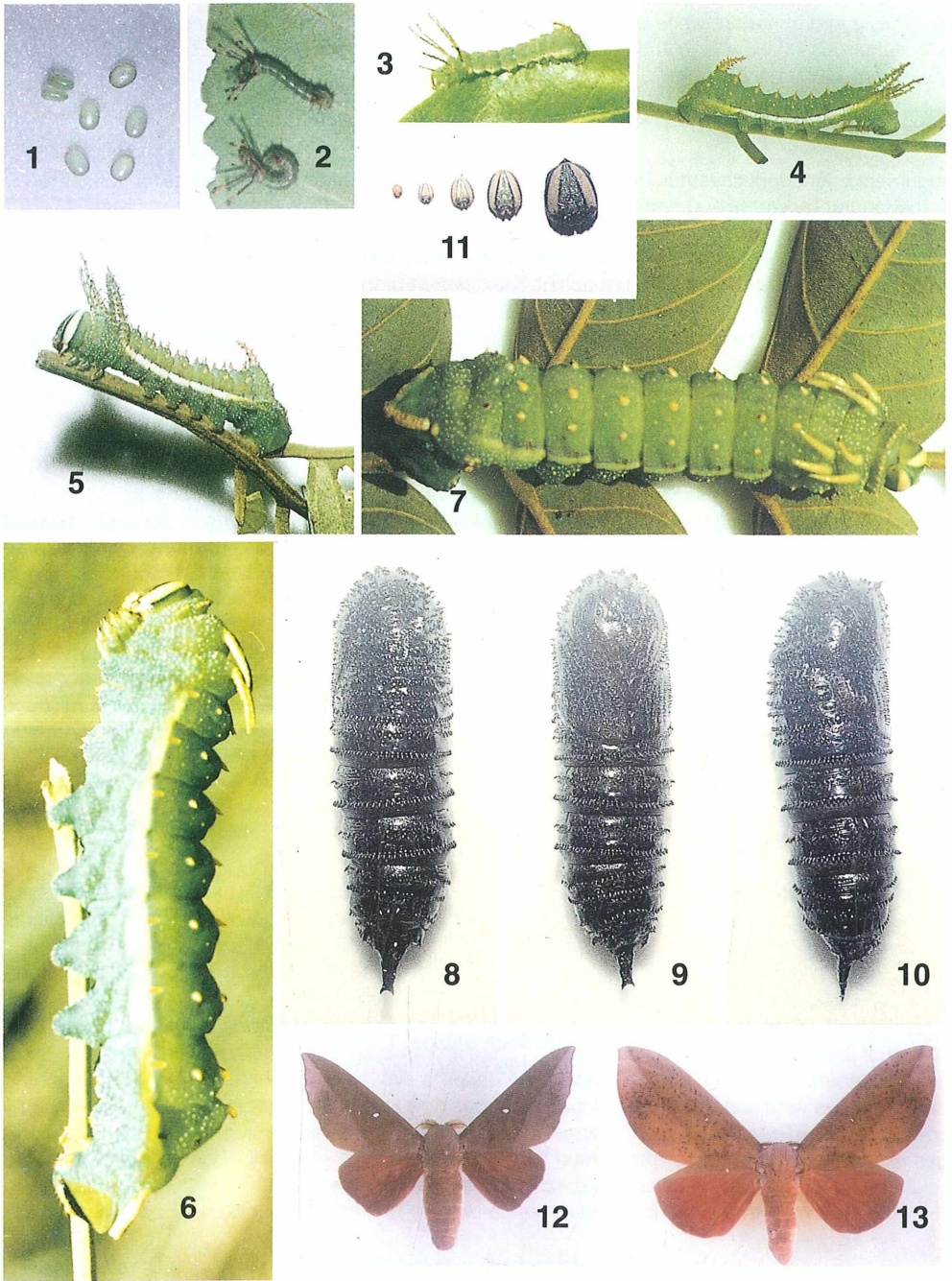


Fig. 1: Ovum. Fig. 2: First instar. Fig. 3: Second instar. Fig. 4: Third instar. Fig. 5: Fourth instar. Fig. 6: Fifth instar, lateral view. Fig. 7: Fifth instar, dorsal view. Fig. 8-10: Pupa. Fig. 11: Head capsules of all instars. Fig. 12: ♂ of *O. hodeva*. Fig. 13: ♀ of *O. hodeva*.

with larger and abundant white dots. True legs green, fading into bright, translucent chestnut colour, with numerous whitish setae; the abdominal and anal legs also green, with the same setae. Length: 65–80 mm. Duration 12–14 days.

Pupa (figs. 8–10)

Tegument bright dark chestnut. Part of the eye shaped as a comma-mark, ochreous for transparency of the tegument. Vertex and dorsolateral area of the thorax with strong protuberances; rugose metanotum with two rounded protuberances in the dorsum; cephalic area with two strong sharp processes; antennae, clypeus, labrum and legs, prominent and with very smaller rugosities. Wing veins strongly marked and salient for small points. Central area of the flat abdominal segments, as well as anterior and posterior annulus adorned with spinous protuberances which are serrate, smaller on A1–3, flat, and with no sharp point. A9 flat in the dorsum and strong protuberances in the junction with A10, which is triangular. Bifid cremaster in some specimens, flattened in others. Spiracles ellipsoid, depressed, peritreme darker than the tegument. Length: 56 mm; larger width: 15 mm; smaller width: 14 mm. Diapause 27 days.

References

- JANZEN, D. H. (1984): Two ways to be a tropical big moth: Santa Rosa saturniids and sphingids. – In: DAWKINS, R. & M. RIDLEY (eds), *Oxford surveys in Evolutionary Biology* **1**: 85–140.
- LEMAIRE, C. (1988): Les Saturniidae americains. The Saturniidae of America. Los Saturniidae americanos (= Attacidae). Ceratocampinae. – Museo Nacional de Costa Rica, San José, 480 pp, 64 pls.
- STONE, S. E. (1991): Foodplants of World Saturniidae. – *The Lepidopterists' Society Memoir* n. **4**, 1991, 186 pp.
- TRAVASSOS, L. & D. NORONHA (1967): Lista dos "Adelocephalidae" da coleção do Instituto Oswaldo Cruz, organizada por LAURO TRAVASSOS. I. – *Atas Soc. Biol. Rio de Janeiro*, **11** (2): 31–41

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