Description of the preimaginal stages of *Schausiella spitzi* TRAVASSOS, 1958

(Lepidoptera: Saturniidae, Ceratocampinae)

by

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Abstract

Data are presented on the life cycle and morphology of the immature stages of *Schausiella spitzi*. The larvae were reared to maturity on *Hymenaea coubaril* L. (Leguminosae, Caesalpiniaceae).

Introduction

The genus *Schausiella* BOUVIER, 1930 comprehends 11 species which are widespread from Costa Rica to Paraguay and SE Brazil (JANZEN, 1986; LEMAIRE, 1988, 1996).
Schausiella spitzi TRAVASSOS, 1958 is an endemic species of the Cerrado area in the states of Mato Grosso, Goias and Distrito Federal rather than exclusive of the Planalto Goiano as reported by LEMAIRE (1988). It is not rare in the northern part of Mato Grosso, near Alto Rio Arinos and in the amazonian plains in a transitional area among forest, cerrado and campo (FURTADO, 1984). This species was collected using a mercury vapor-lamp from October through March. While females are rare in nature, the sex ratio is in equilibrium in laboratory. This species was reared on *Hymenaea courbaril* L. (Leguminosae, Caesalpiniaceae) which is the same plant exploited also by the costarican *Schausiella santarosensis* LEMAIRE, 1982 as reported by JANZEN (1984, 1986) and LEMAIRE (1988), and by the amazonian *Schausiella subochreata* (SCHAUS, 1904) (FURTADO pers. obs.). The brazilian *Schausiella arpi* (SCHAUS, 1892) was bred on *Hymenaea altissima* (see LEMAIRE, 1988).

Immature stages

Egg

Ellipsoidal and flattened, 2.6 mm long and 2.3 mm wide. Micropylar area slightly flattened. Chorion smooth, translucent yellow. Eclosure: 8 days.

Larva

First instar: the head capsule is rounded and brilliant light brown. Mouth parts black. Body: Integument dorso-laterally black, lighter on the ventral part. Thoracic scoli black, spine-shaped, long, with triangular apex on the subdorsal area, five on each side. Dorsal scolus on 8th abdominal segment (A8) is similar. Other abdominal segments with short black scoli in the subdorsal area bent cephalad. Subsequently, the general coloration of the integument turns to dark brownish. The thoracic segments and that on A8 increase in size, with laterodorsal humps or processes on the thoracic segments, and dorsal on the abdominal ones, where are located the scoli.
Larva 6 mm long at emergence, 14 mm at the end of first instar which lasts three days.

Second instar: Colour and shape as in the first instar. Length 20 mm. Duration 4 days.

Third instar: Similar to the second instar but with whitish blue dots on the dorsal part of all segments, and dark brownish coloration in the ventral surface from A4 to A10. In some larvae the integument is dark reddish chestnut in the subdorsal area of the thoracic segments and of the A1–A7, and in the dorsal area of A8–A10. Length 30 mm. Duration 4 days.

Fourth instar: the head capsule is black. Thoracic scoli are larger at the base and gradually thinner, black annulated with clearer tonality starting from the middle of the scoli to the apex which is serrated. The whole stem is bristled with small spines. There are in the abdomen three series of short black scoli, bristled with small spines, as follows: the first series in the subdorsal area of A1–A7, shorter than the other ones which are placed on the sub and supraspiracular surface of A1–A10. Segment A8 humped and with a thick conical scolus with stout spines at the base and gradually thinner along the stem.
The dorsal scolus on A9 is larger than the lateral ones. Anal shield serrated, black with white dots. Spiracles reddish chestnut. True legs black, the prolegs and the anal leg are dark chestnut with small piliform black spines in the lateral shields. Integument reddish chestnut, darker on the dorsum and on the spiracular area and the ventral surface. The coloration is clearer from A3 to A6 and in the anal segment.
Length: 35 mm. Duration: 4 days.

Fifth instar (colour plate, fig. 1): Head capsule black striped with yellowish green adfrontal of the superior part of the antennae, where the colour is clearer. Antennae black with a whitish seta at the apex; epicranium sulcate; superior area and cervical shield yellowish green. Integument with puntiform whitish granulations to all its extent, more prominent in the anal shield. The colour is reddish chestnut from the dorsal to the spiracular area, and greenish from here to the ventral surface.
The dorsal area is clearer in comparison with previous instars, especially on the thoracic segments and mainly on A7–A9. Black coloration around the spiracles, clearer around T1. Thoracic scoli and that in A8 smaller and conical. Stem with small spines, dark chestnut at the base and black at the end. Abdominal scoli short, spineform, translucent bright chestnut, bent backwards. Ochreous spiracles with their peritremes a little darker. True legs black, prolegs and anal leg of the same colour of the integument, without the granulations in the internal part, shields black with small spines at its base. Anal shield triangular, basal half whitish and black from here to the vertex. The general coloration of the integument is variable, having intergrading, yellow, greenish and ochreous coloration of the larvae. Length 60 mm. Duration: 10 days.

Pupa (colour plate, fig. 3)

Integument reddish chestnut, darker in the cephalic area, metanotum and A10, which is almost black, and around the spiracles. Surface rough, constituted by minute rugosity on all extent, stronger wrinkles in the cephalic area and on the suture of the wings, which are grooved longitudinally.
Metanotum with two flat, bright transverse surfaces. Vertex strongly wrinkled with spineform appendages. Antennae, mouth pieces and legs are prominent. Eyes slightly depressed and flat. Spiracles ellipsoidal, irregular, salient outlying area. Bright flat dorsal area in A10, ventral surface dull and slightly depressed. Cremaster long and forked. Length 35 mm, larger width 11.5 mm. Diapause: 29 days.

Behaviour and conclusion

Larvae are solitary along each instar and feed during the night. At the end of the last instar, the larva changes its colour into pale and it hides under ground. The total length of the cycle spans 62 days, 33 for pupating and 29 of diapause.

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Explanation of the colour plate

Fig. 1. Fifth instar larva. Left: lateral view; right: dorsal view.
Fig. 2. Head capsules of all the instars.
Fig. 3. Pupa. Ventral, dorsal and lateral views.
Fig. 4. Imago, ♂, dorsal view.
Fig. 5. Imago, ♂, dorsal view.

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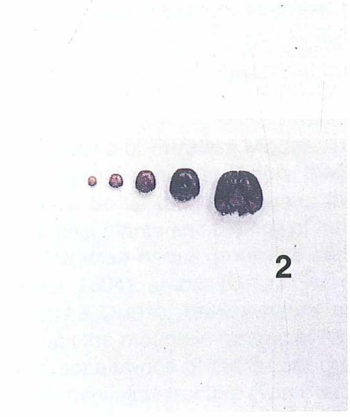

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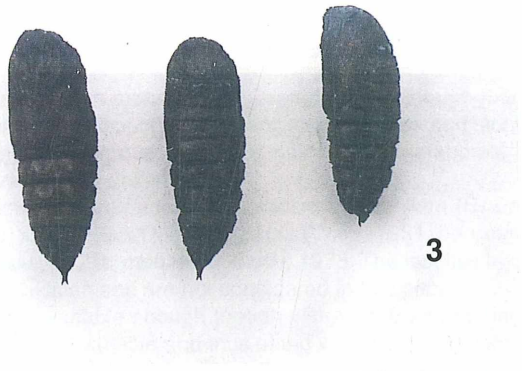

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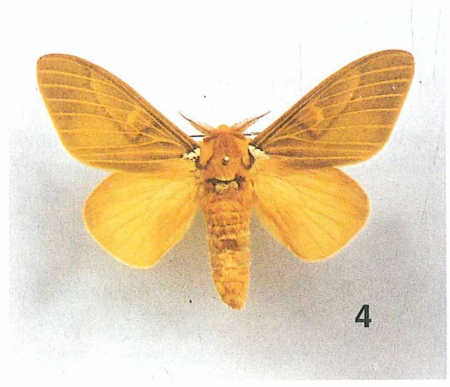

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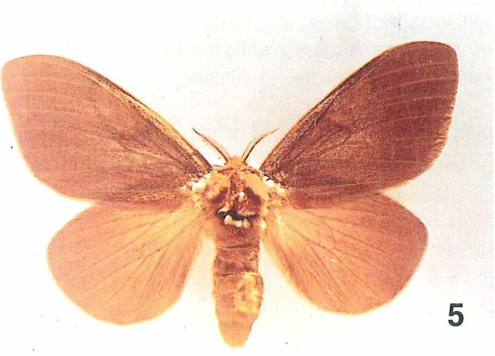

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