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LARVAE OF NEOTROPICAL COLEOPTERA. I: MYCTERIDAE, LACCONOTINAE

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ABSTRACT

Larvae of Eurypus muelleri Seidlitz, 1917 were collected from axils of palm leaves in São Paulo, Brazil; reared adults permitted the identification. A description of the larva is provided with illustrations. Biological notes on the immature phases are included. A quiescent, distinct morphological stage following the last larval instar and succeeded by a normal pupal instar has been disclosed and is herein considered as a pre-pupa.

INTRODUCTION

The family Mycteridae was re-established by Crowson, 1955, to include the tribes Mycterini and Lacconotini; one larva of *Eurypus rubens* Kirby, 1818 figured by Bondar, 1922 and 1940, was considered by Crowson as belonging to this family. Crowson and Viedma, 1964 redefined the family based on the larva of *Mycterus curculionoides*. Crowson discussed the relationships of Mycteridae and other Cucujoidea families; the present paper is a contribution to the understanding of these relationships.

Lawrence (in preparation) presents a broad study of the larvae of this family, describing those of *Hemipeplus*, *Lacconotus*, *Mycterus*, and provides a short description of *Eurypus* sp. based on preserved larvae from Pernambuco, Brazil.

In the present paper descriptions of, and biological notes on, the immature phases of *Eurypus muelleri* Seidlitz, 1917, are given.

It was observed in the course of the larval development an intermediate phase between the last larval instar and the pupa. This pre-pupa represents a distinct morphological stage, not equivalent to a pharate pupa. There seems to exist no identity of this particular phase and the so-called pre-pupa of Thysanoptera and of male Coccidae.

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LARVAL DEVELOPMENT

Several larvae collected by P. de Biasi at Engenheiro Marsilac, km 48, Estrada de Santo Amaro, São Paulo, Brazil, were received on April 15, 1967. They were found among dead palm leaves, and were kept in individual Petri dishes.

On May 2, 1967, from one of the larvae emerged a different, quiescent, immature form (fig. 12). Six days later (May 8), the pupa (fig. 13) emerged and it took nine days for the imago to appear (May 16).

In our collection we found several larvae, one pre-pupa and one pupa from Eldorado, São Paulo, Brazil, collected by P. C. Montouchet, March 27, 1967, from axils of palm leaves. This material was used for the preparation of the drawings and to confirm the intermediate phase, the pre-pupa.

DESCRIPTION OF LARVA

Body surface yellowish; mouthparts, antennae and ninth abdominal segment darker. Head and body dorso-ventrally compressed. Ninth abdominal segment more heavily sclerotized (figs. 8 and 10), with four small, lateral hairy tubercles; two apical pairs of very well developed tubercles: one lateral and one ventral medially placed, behind which there are two ventral pits; posterior region of dorsal margin crenulate; anterior ventral margin with a transverse row of small hairy tubercles (asperities).

Head (figs. 7 and 9) exserted, prognathous, broader than long. Epicranial stem and endocarina absent. Frontal arms lyriform, complete. Epicranial plates with a few setae. Ocelli dark pigmented, placed in rows of 3 (anterior) and 2 (posterior) on each side. Antennae (fig. 6) 3-segmented, first segment with one pair of setae; second with a few small apical setae; third, the smallest, with an apical tuft of thin hairs; sensory appendix very short. Nasale absent. Clypeus transverse and membranous. Gula elongate, broad posteriorly, strongly narrowed anteriorly, not fused to postmentum. Hypostomal rods distinct and divergent. Labrum (fig. 1) free, quadrate, anterior margin setose. Mandibles (figs. 4 and 5) movable, symmetrical, with three apical scoop-like teeth; molar area well developed and tuberculate; two lateral setae; retinaculum absent; articulatory areas formed by the ventral condyle and dorsal acceptabulum. Maxillae (fig. 2) well developed, mala broadly rounded, fused to stipes, uncus present; palpifer present; maxillary palpi 3-segmented, cardo well developed. Labium (fig. 3) with considerably elongate ligula (lig), which has setae at apex. Premetum divided into the first premetum (1 prmt) and the second premetum (2 prmt). Postmentum (pmt) separated from the second prementum by a transverse membranous area. Tentorial pits absent. Labial palpi 2 segmented.

Head and thorax (fig. 11) approximately of same width but narrower than abdomen. Legs with a few setae, not spinose. Coxae small and widely separated. Abdominal segments broader than thorax; asperities absent, except on anterior region of ninth ventral segment. Segment 8 approximately 1.5 times as long as segment 7, with typical muscular impressions. Segment 9 heavily sclerotized except for a

small, rectangular, dorsal area, which is responsible for the considerable dorso-ventral mobility; when the segment is in a vertical position this area is invaginated. Sternite 9 (fig. 10) partly enclosed by sternite 8, and with posterior margin finely crenulate and a well developed hairy tubercle on each lateral apical side. Segment 10 small, with two pairs of small hairy apical tubercles, the anal opening tranverse.

Pre-pupa (fig. 12). This is a distinct, quiescent, morphological stage, following the last larval instar and succeeded by a second quiescent pupal instar. General aspect shorter and broader. Eighth abdominal segment twice as long as segment 7. Ninth abdominal segment different from that of the last larval instar: apical tubercles more prominent, the ventral pits absent.

Pupa (fig. 13). Adectica, exarata, without gin-traps. The pre-pupa skin remains attached to the last pupal segment.

Pupal case formed with fibrous material of leaf palms.

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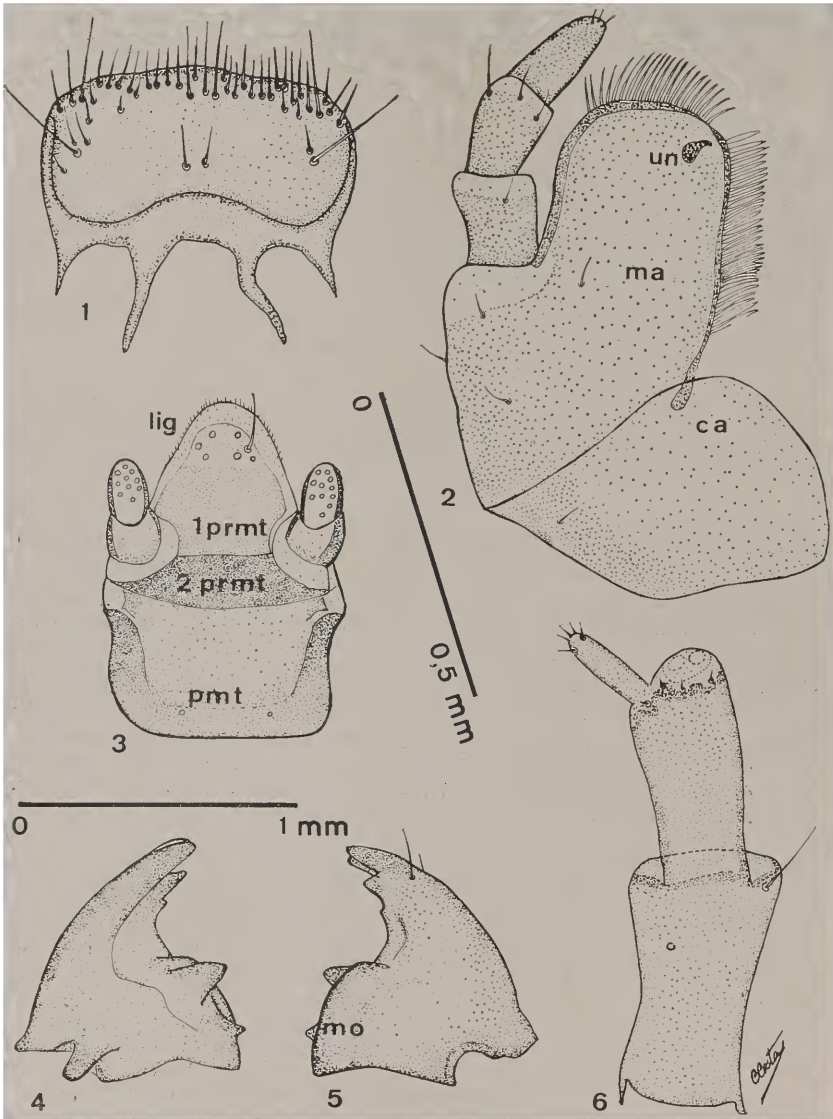


Fig. 1 Labrum. Fig. 2 Maxilla: mala (ma), cardo (ca), uncus (un). Fig. 3 Labium: ligula (lig), anterior prementum (1 prmt), posterior prementum (2 prmt), postmentum (pmt). Fig. 4 Mandible, ventral view: mola (mo). Fig. 5 Mandible, dorsal view. Fig. 6 Antenna.

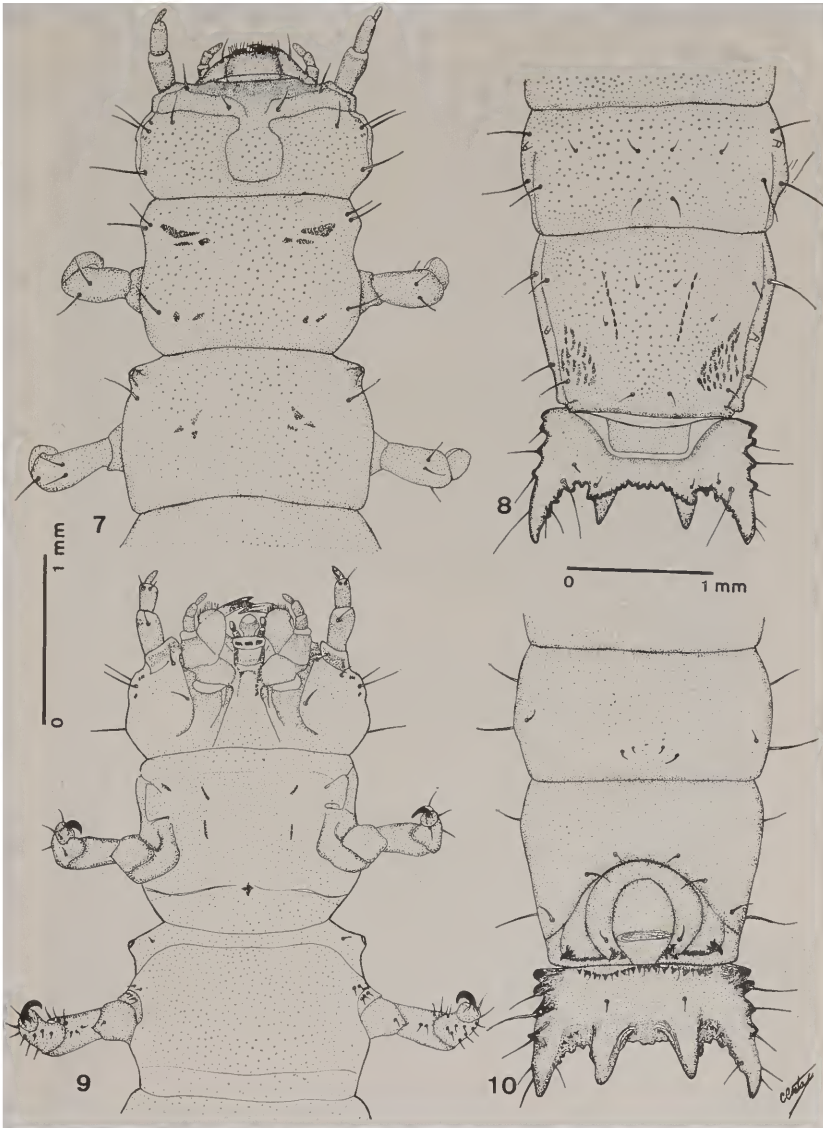


Fig. 7 Dorsal view of head and thoracic segments I and II. Fig. 8 Seventh, eighth and ninth tergites. Fig. 9 Ventral view of head and thoracic segments I and II. Fig. 10 Sternites 7, 8, 9 and segment 10.

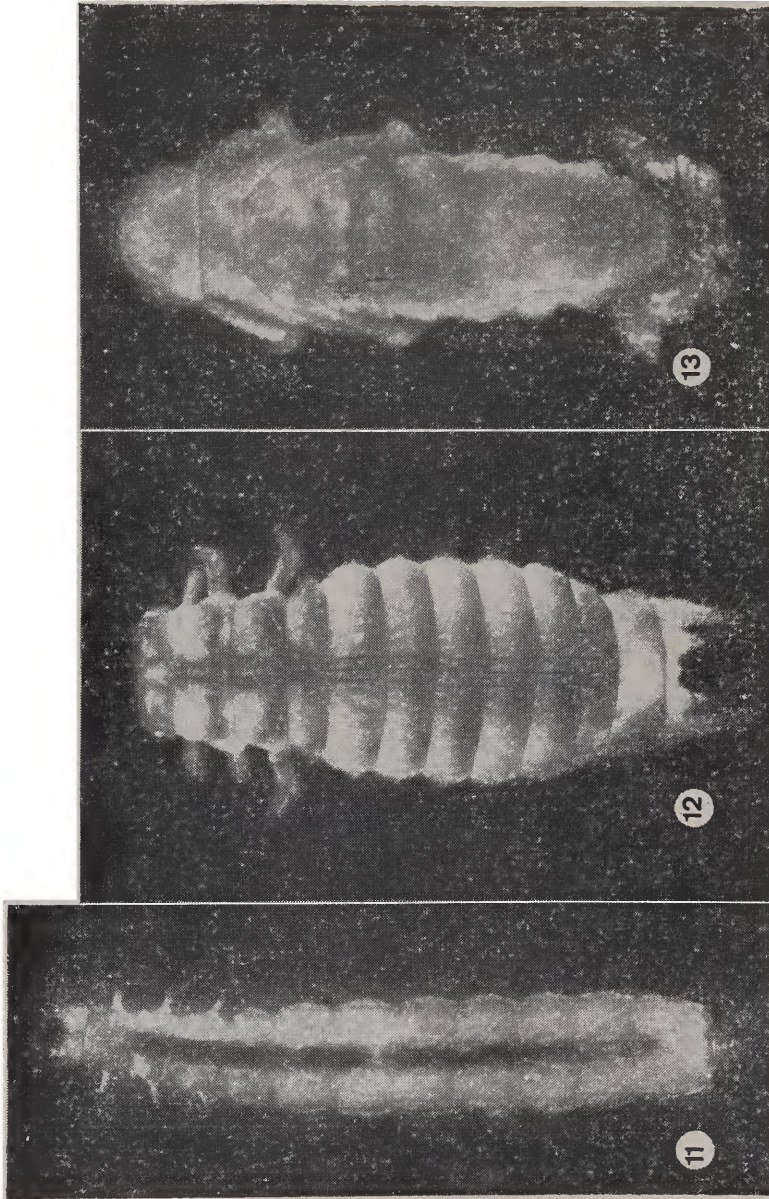


Fig. 11 General aspect of the larva. Fig. 12 Pre-pupa. Fig. 13 Pupa.