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DESCRIPTION OF THE LARVA OF *PERIAESCHNA MAGDALENA* MARTIN FROM TAIWAN (ANISOPTERA: AESHNIDAE)

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The ultimate instar larva of *P. magdalena* is described, figured, and compared with the larvae of the closely related genera, *Cephalaeschna* and *Planaeschna*.

INTRODUCTION

A female ultimate instar larva of *Periaeschna magdalena* was collected from Neisuanghsi of Taipei City, Taiwan and successfully reared to the adult stage. Its description is presented here. The larva is the first to be described for this genus, therefore the structural features distinguishing it from the closely related *Cephalaeschna* and *Planaeschna* are also briefly outlined.

DESCRIPTION

Material — Exuviae of 1 female, Neisuanghsi of Taipei City, Taiwan, 2 Apr. 1977, K. Matsuki leg.; adult emerged on 16 April, 1977.

Body length 37.2 mm, length of abdomen (including caudal appendages) 25.0 mm, maximum head width 7.6 mm, length of hind femur 6.0 mm.

Body surface without lustre, but almost smooth. Ground color brown, with light brown markings.

Head pentagonal in shape. Labrum and anteclypeus light brown in color. Mandible with light brown patches. Occiput except vertex light brown.

Antenna filiform, 5-segmented. Ratios of segment 1-5 5 : 9 : 15 : 7 : 11 (Fig. 2). Head large, with compound eyes forming antero-lateral angles. Lateral angles of occiput fairly angular but never forming projections as in *Planaeschna milnei*.

Prementum long, resembling that of *Cephalaeschna* or *Planaeschna*. Anterior margin of prementum projected forward in the form of chevron, its top carrying a pair of teeth (Fig. 4). Ratio of length to width of prementum 45 : 31 (Fig. 3). Median cleft at the anterior margin of prementum distinct, V-shaped. Labial palpus carrying no palpal setae. Labial palpus terminating in a squarish apex. End hook indistinct, resembling that of *Cephalaeschna* sp. of Asahina (1961).

A pair of processes at the lower margin of the prothoracic pleuron are as shown in Figure 5. Wing-cases almost parallel, anterior margin of both fore and hind wing-cases light brown. Hind wing-cases reaching near middle of 4th abdominal segment. Both femora and tibiae marked respectively with 3 light brown annules.

Abdominal segments 1-10 dorsocentrally marked with a broad light brown stripe, the marking on each segment subequal in width (Fig. 1). Lateral spines present on abdominal segments 5-9. Those on segment 5 small. When seen ventrally, the one on the right side incompletely developed (Fig. 7). Dorsal hooks absent. Inner half of paraproct, cercus and epiproct of the female exuviae light brown. Epiproct long, almost equal to paraproct in length. Tip of epiproct not bifurcated, pointed (Fig. 6). Ovipositor process of the female exuviae very long, reaching slightly beyond apex of 10th abdominal segment (Fig.7).

The larva was collected from gravelly bottom of a small stream of a low mountain. From the same site the larvae of *Macromia clio* were also collected. The adults have been collected in Taiwan during the months from April to August.

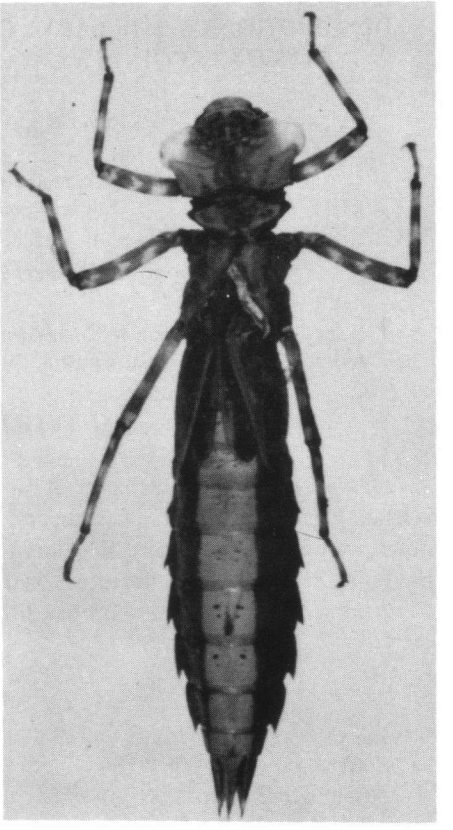

Fig. 1. *Periaeschna magdalena*, ♀ exuviae.

DISCUSSION

The larvae of the closely related genus *Cephalaeschna*, such as *C. orbifrons*

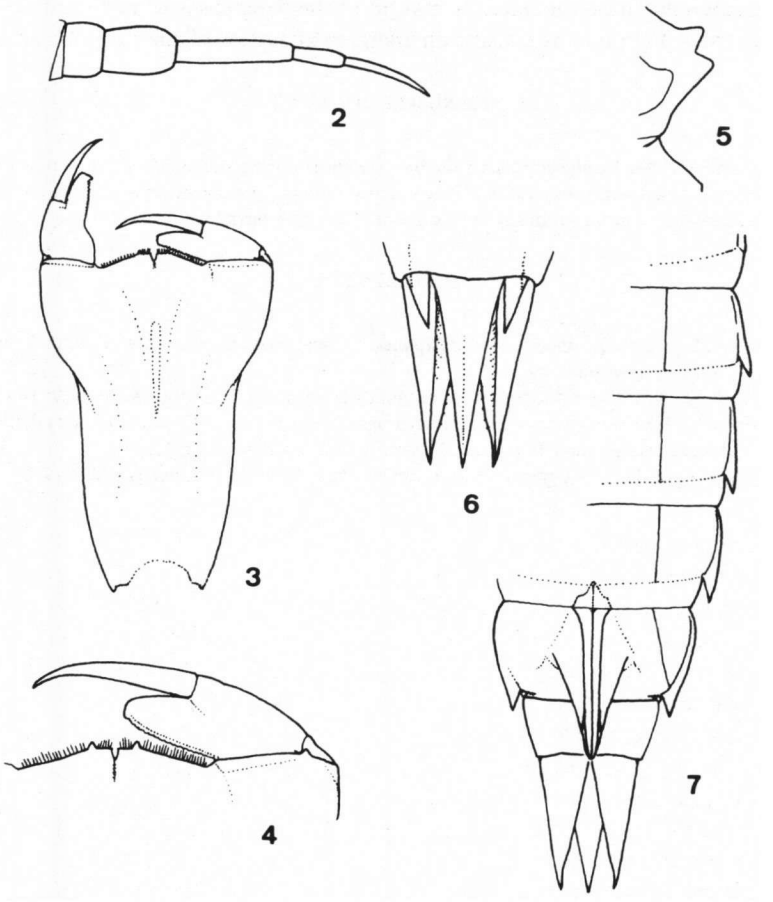

Fig. 2-7. *Periaeschna magdalena*, ♀ exuviae: (2) Left antenna; — (3) Labium, dorsal view; — (4) Anterior margin of labium, dorsal view; — (5) Thoracic pleural processes, dorsal view; — (6) Caudal appendages; — (7) Abdomen, ventral view.

(FRASER, 1943) and *Cephalaeschna* sp. (ASAHINA, 1961) have been described. *Periaeschna magdalena* can be differentiated from these taxa in having antennae 5-segmented and apices of cercus, epiproct and paraproct less sharply pointed and not darkened. As regards the genus *Planaeschna*, the larva of Japanese *P. milnei* (ASAHINA, 1957) has been described. From this taxon *P. magdalena* can be easily differentiated in that lateral angles of occiput do not form projections and also in having antennae 5-segmented, and end hook of labial palpus not developed.

The broad light brown stripe on the dorsocentral area of the abdomen and the

light brown patch on the anterior margin of the wing-cases seem to protect this species from predators by causing an interrupted pattern of color for camouflage.

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