

**THE LARVA OF *DICTERIAS COTHURNATA* (FOERSTER, 1906)
(ZYGOPTERA: DICTERIASTIDAE)**

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The ultimate instar is described and figured from the exuviae collected in a small creek nr Zanderij, Surinam. This is the first member of the family the larval stage of which has become known. Morphologically it resembles closely that of *Hetaerina* (Calopterygidae).

INTRODUCTION

Six specimens, in different ages, of *Dicterias cothurnata* were detected in a small bush-creek in the savannah area near the airport of Zanderij, Surinam, on May 25, 1943 (D.C.G. leg.). The description and figures are based on a female exuviae, which was found on the water surface, among water plants with fine divided leaves. The identification could be ascertained by inspection of the wing venation in the wing pads of a penultimate female larva, encountered at the same spot.

DESCRIPTION

An extremely long-legged, stalky larva, with very long caudal lamellae, triangular in cross-section.

Head longer than broad, antennae seven-jointed, the second one the longest; ratio of segments: 4:45:22:15:14:4:2; second joint only thrifty coated. Eyes on the

* The Author suddenly deceased on September 27, 1985.

protruding sides of head of moderate size, on top of head between the composed eyes two small tubercles present, hind lobes of head slightly enlarged, hind margin concave.

Mouthparts with long triangular mentum (mask), prementum narrowed to half the size of mentum. Median lobe in middle split to $3/4$ of its length, underside roundly widened; on each side of the cleft a small notch (no seta). Lateral lobes of mentum (labial palps) on distal margin divided in three long teeth, on each side covered by a much longer labial palpus (movable hook). Underneath the base of labial palpus two small setae are present.

Maxilla of right side has on the outside the end tooth with three small basal teeth and three large curved teeth on the inner side; maxilla of left side shows two large teeth and three large curved teeth on the inner side.

Mandibles stout, two-branched, in right mandible with six unequally sized teeth (5 and 6 fused together) in left mandible with five such teeth. Inner branch of right mandible at apex truncate with five crenations and a larger end tooth, inner branch of left mandible also with five crenations and the end tooth blunt at apex.

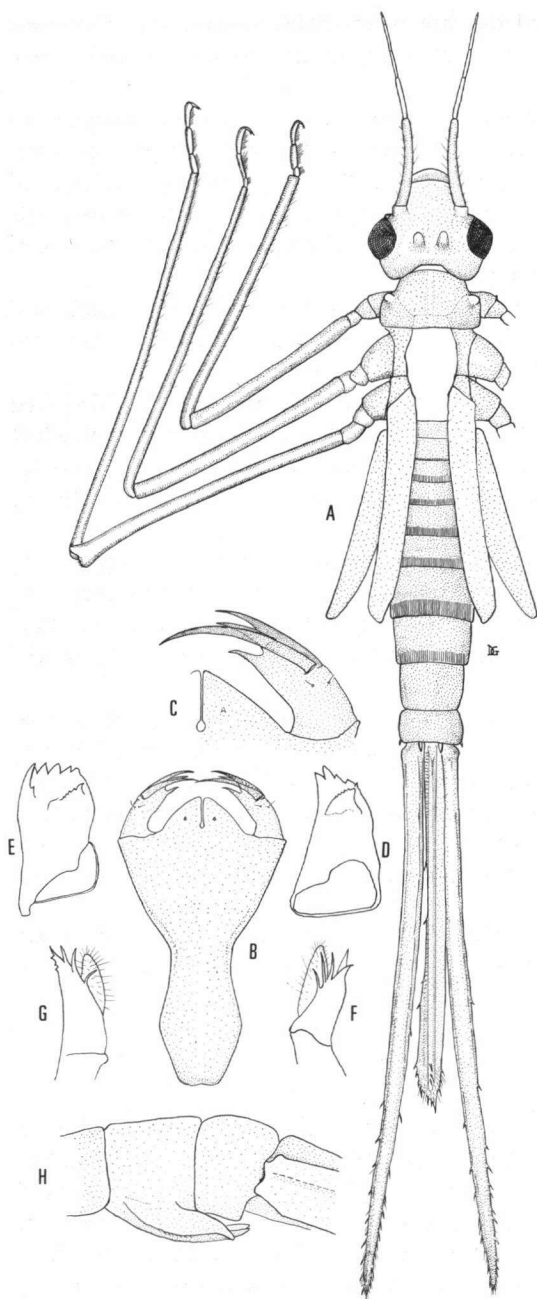
Prothorax small, quadrangular with a small tubercle at the upper side corners. Legs of pro- and mesothorax extremely long in the femora and in the tibiae especially, tarsus three-jointed, first joint the smallest, second and third joint of nearly equal size, underside of the three joints beset with a row of stiff hairs.

Abdomen long, segments 1-7 gradually broadened and longer, the last three segments tapering to the end, without lateral spines. The caudal lamellae as long as the body, the middorsal lamella shorter in ratio of 185: 285; in cross-section the lamellae triangular, with spiny ends. The female valvae at the underside of abd. segment 9 pointed, extending backward to nearly the end of abd. segment 10, the gonapophysae longer than the valvae, protruding to base of lateral caudal lamellae.

Total length inclusive caudal lamellae 32.5 mm, lateral caudal lamellae 16 mm, middorsal caudal lamella 11 mm, femur of hind legs 9 mm, tibia of hind legs 12 mm, tarsus 2 mm. Length of mentum 5 mm, of antenna 6 mm.

DISCUSSION

This is the first larva known of a species belonging to the Dicteriastidae, a somewhat exclusive group of neotropical dragonflies (Brazil, Bolivia, Colombia, Venezuela, the Guyanas). With the long second joint of antenna, the long legs and the triangular caudal gills, it shows a close relation to the larvae of *Hetaerina* of the Calopterygidae, although the cleft in the median lobe of the mentum is here much narrower than in that of *Hetaerina*. On the other hand, the two-branched mandibles resemble those in the larvae of Megapodagrionidae (e.g. *Oxystigma*),



in which the triangular gills are represented in a modified form. In general, the *Dicterias* larva is characterized by a combination of primitive elements in its mouth parts, with specialisations in the antennae, the legs and in the caudal lamellae.

D. cothurnata was described by FOERSTER (1906), after two males from Surinam, and placed in his genus *Neocharis*. In 1918 RIS pointed out that *Neocharis* is a synonym of *Dicterias* SELYS, 1853. The female of this species was described by CALVERT (1948) from Bartica in (Br.) Guyana. In the interior of Surinam the species is wide-spread, occurring from the savannah area in the North, to the southern border with Brazil in the far South. It does not occur in the coastal belt. Isolated imagines are met with along slow flowing bush-creeks, where they are sitting in the shadow on vines and stems of water

Fig. 1. Larva of *Dicterias cothurnata* (Foerster): (A) dorsal view of female exuvia; — (B) mentum inner side; — (C) right lateral lobe of mentum; — (D) left mandible inner side; — (E) right mandible inner side; — (F) left maxilla inner side; — (G) right maxilla inner side; — (H) end of female abdomen left lateral view.

plants, the wings half spread. They do not rise quickly.

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