

SHORT COMMUNICATIONS

**THE LARVA OF *ORTHETRUM ROBUSTUM* BALINSKY, 1965,
A LOCALIZED SOUTHERN AFRICAN ENDEMIC
(ANISOPTERA: LIBELLULIDAE)**

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The last instar larva is described, illustrated and compared with the morphologically similar and occasionally sympatric *O. trinacria*.

INTRODUCTION

O. robustum is a libellulid relatively recently discovered (BALINSKY, 1965) endemic to the southern African region. It inhabits pools, swamps and slow streams, from Natal to Zambia and NW Botswana (PINHEY, 1985). This paper describes the larva and compares the larval morphology with that of *O. trinacria* which is sympatric at some localities.

MATERIAL AND METHODS

Two male larvae of *O. robustum*, small pools near to lake St. Lucia, Natal, South Africa, February 1990, Carchini & Samways leg. The larvae, both at the last instar, were field collected and reared in the laboratory through to emergence, in plastic floating cages. Species determinations were from the teneral imago. The exuviae were stored in 75% ethyl alcohol and then measured and drawn using a stereomicroscope and a camera lucida. The following measurements were made: Dorsal view - total length, anal pyramid length and width, cerci length. CORBET's (1953) terminology for the labium was used.

DESCRIPTION

Body length 25.0-25.8 mm; colour dark brown, setose massive (Fig. 1). Head

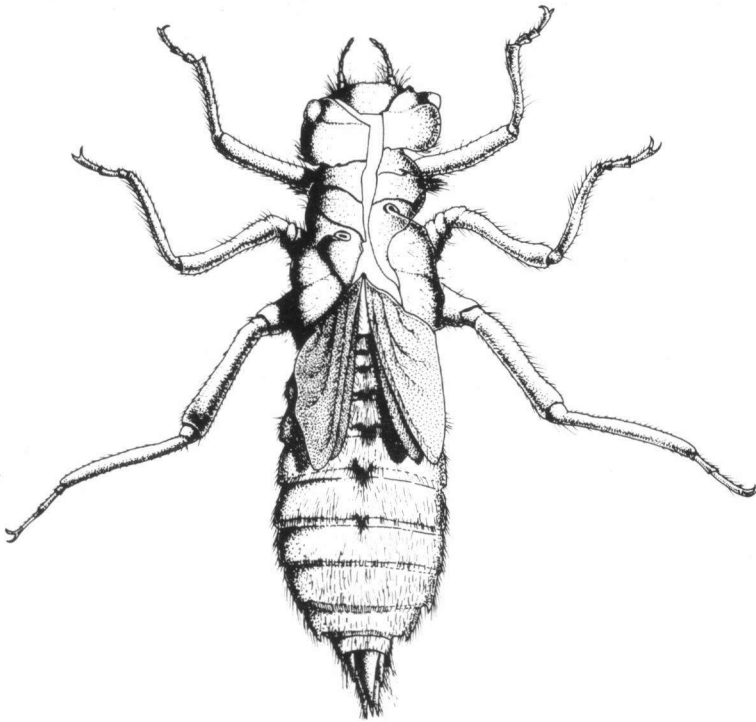


Fig. 1. *Orthetrum robustum* Balinsky: male exuviae.

as typical for the genus, with small eyes. Antennae 7-segmented, the third segment the longest. Distance between antennae insertions shorter than the antennae.

Mask massive, prementum clearly pointed. Two series of premental setae, each divided in two groups, a medial one of 15-20 setae, and a lateral one of three more massive and longer setae. The two series are separate. The distal margin of prementum bears 20-21 crenations interpolated with small spiniform setae (Fig. 2). Palpus as typical for the genus, with four palpal setae. The movable hook is not longer than the setae. The external surface of palpus is rich in hair-like setae. The distal margin of palpus has 9-10 crenations, interpolated with groups of 2-3 small spiniform setae (Fig. 3).

Abdomen ovoid, very setose, the sixth segment widest. The first six abdominal segments have dorsal spines, which are small and hidden by the wing-sheaths in the first three, and very stout in the following three segments (Fig. 4). The spine of the fifth segment is the largest. Lateral spines are present on the eighth and ninth abdominal segments.

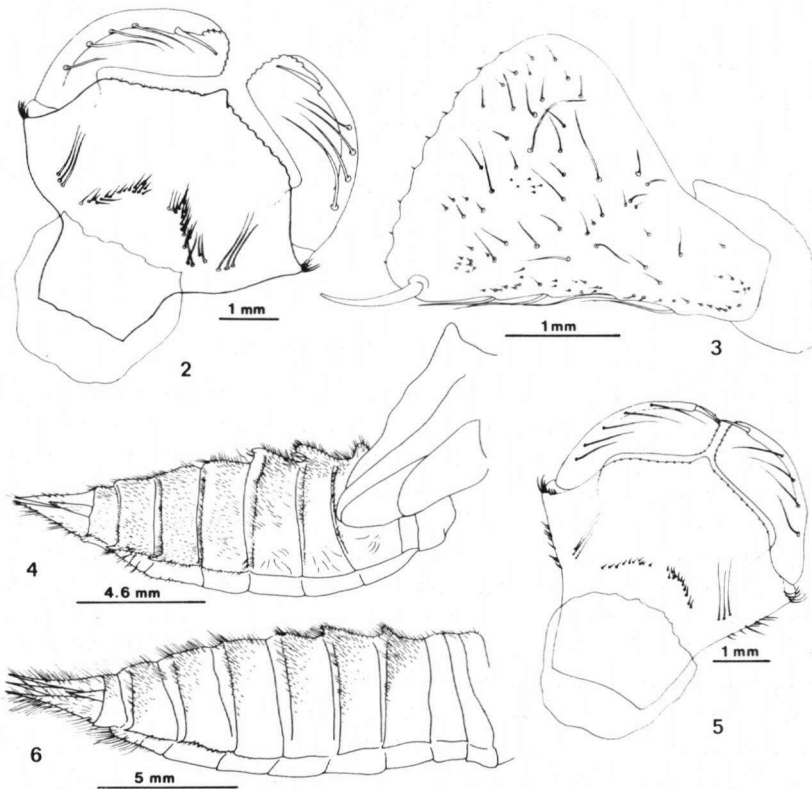
Anal pyramid length 3 mm, width 1.9-2.0 mm, with very long hair-like setae,

especially on the underside. Epiproct and paraprocts nearly equal in length, not curved, and with lateral margins straight. Cerci length 1.4-1.5 mm, about half the length of the anal pyramid.

DISCUSSION

O. robustum is in general appearance very similar to *O. trinacria*. Both *O. trinacria* and *O. robustum* are larger and their anal pyramid longer than other *Orthetrum* species already described, making them easily distinguishable from other congeners.

The larval morphology of *O. trinacria* was first described by DUMONT (1972) from specimens from Morocco, and other information and illustrations were given by CARCHINI (1983) and CONESA GARCIA (1990). We compared *O.*



Figs 2-6. *Orthetrum robustum* Balinsky (Figs 2-4) and *O. trinacria* (Sel.) (Figs 5-6): (2, 5) Last instar larval mask; - (3) Last instar larval palpus; - (4, 6) Abdomen of the exuviae, lateral view.

robustum with three specimens of *O. trinacria*, two from Sicily and one from Pietermaritzburg, South Africa. The prementum is more massive in *O. robustum*, and both the premental and the palpal setae are stouter in this species (cf. Figs 1, 2, 5). *O. trinacria* lacks a spine on the sixth abdominal segment (Fig. 6). The lateral spines on the eighth and ninth abdominal segments appear to be smaller in *O. trinacria* than in *O. robustum*. The *O. trinacria* anal pyramid is longer than in *O. robustum*, and the cerci proportionately shorter. Even though only two *O. robustum* larvae were obtained here, the characters are sufficiently distinctive for clear determination of the two species.

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