Linzer biol. Beitr.	35/1	657-660	30.6.2003

The larva of *Choristhemis olivei* (TILLYARD) (Odonata: Synthemistidae)

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A b s t r a c t : The supposed larva of *Choristhemis olivei* (TILLYARD) is described from north-eastern Queensland, Australia, and compared with other Australian species of Synthemistidae.

K e y w o r d s : *Choris themis olivei,* larva, description.

Introduction

A comprehensive treatment of the larvae of the Australian Synthemistidae was given by Theischinger (2001). Larval material of *Choristhemis olivei* was then not available. This was not surprising as *C. olivei* was known only from the type series (2 males) collected in 1908 (Tillyard 1909) and 1 other male 90 years later (THEISCHINGER 1999). More recently, however, Graham S. Vick and Steven G. Butler found a population of *C. olivei* near Thornton Peak on Cape Tribulation. G.S. Vick also collected larval material which he identified by association with adults. Via S.G. Butler I was sent a well preserved exuvia which also in my opinion belongs to *C. olivei.* The description of the larva of *C. olivei* is based on this specimen.

Description

Choristhemis olivei (TILLYARD)

Synthemis olivei TILLYARD 1909: 747.
Choristhemis olivei (TILLYARD); TILLYARD 1910: 371; WATSON et al. 1991: 230; THEISCHINGER 1999: 373; THEISCHINGER 2001: 42.

F i n a l i n s t a r e x u v i a (Figs 1-3, photos)

D i m e n s i o n s : Total length 17.5 mm; width of head across eyes 4.1 mm; greatest width of prementum 3.1 mm; length of metafemur 3.4 mm; length of abdomen 12.1 mm, greatest width 4.7 mm.

C o l o u r a t i o n : Greyish brown.

M o r p h o l o g y : Frontal plate short, not reaching beyond segment 2 of the antennae, trapezoidal, with moderatly long, apically significantly widened, setal structures

along margins. Prementum widened rather abruptly from narrow base; 6 pairs of primary and 8-9 pairs of secondary setae; ligula with very prominent but rather narrow median lobe (Fig. 1); labial palps with 6/7 dentations (Fig. 2); 6 palpal setae; postmentum narrow and with distinct median notch. Fringe along posterior eye margin consisting of scale-like setal structures and rather prominent. Postocular lobe rounded, its margin with short, distally strongly widened, fan-like setal structures (Fig. 3). Pronotal lobes with long, prominent setae. Abdominal terga without any processes, hairy

Material examined: 1 final instar exuvia, Australia, Queensland, Cape Tribulation, nr Thornton Peak, Deep Forest Lodge, on seepage, near road (16°11'08"S/145°24'46"E), 25.12.1998, G.S. Vick (GTAD = Günther Theischinger Collection).

Discussion

The larva of *Choristhemis olivei* - as described in this paper – can be distinguished from all other synthemistid larvae by the combination of characters given in the description above. It appears that it can be separated from the possibly sympatric (WATSON et al. 1991) *Choristhemis flavoterminata* (MARTIN) particularly by smaller size, a more prominent median lobe of the prementum, a smaller number of palpal dentations and fan-like setal structures on the postocular lobe.

Acknowledgements

For giving me the opportunity to describe the larva of *Choristhemis olivei* (TILLYARD) I wish to thank Graham S. Vick (Crossfields, Little London, Tadley, Hants, United Kingdom) and Steven G. Butler (Red Willow, All Stretton, Shropshire, United Kingdom).

Zusammenfassung

Die Larve von *Choristhemis olivei* (TILLYARD) (determiniert per exclusionem) von Nordost-Queensland, Australien, wird beschrieben. Sie kann von den bekannten Larven aller anderen australischen Synthemistiden durch die in der Beschreibung gegebene Mermalskombination unterschieden werden. Von der potentiell sympatrischen *Choristhemis flavoterminata* (MARTIN) unterscheiden sie wohl vor allem geringere Grösse, ein stärker ausgeprägter Mittellappen des Prementum, weniger Palpenzähne und fächerformige Borsten in der Postocularregion.

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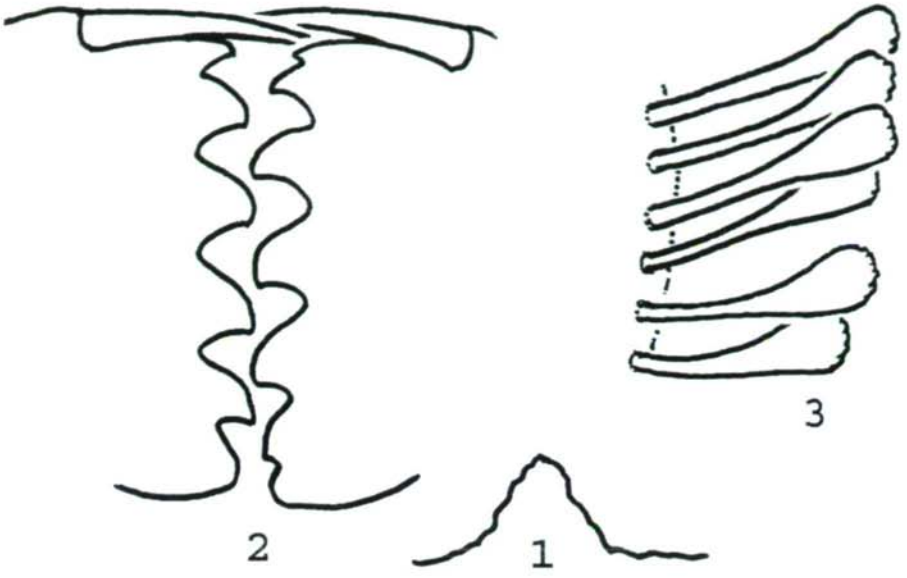

Figs 1-3. *Choristhemis olivei* (TILLYARD), final instar exuvia: **(1)** median lobe of premental ligula, ventral aspect; **(2)** distal margins of labial palps, frontal aspect; **(3)** fan-like setae on postocular lobe, dorsal aspect.

Photos: *Choristhemis olivei* (TILLYARD), final instar exuvia: **(left)** dorsal; **(right)** ventral.