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## **The larva of *Gynacantha mocsaryi* FÖRSTER (Odonata: Aeshnidae)**

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**A b s t r a c t :** Morphological details presented by FRASER (1963) in the description of the larva of *Gynacantha mocsaryi* FÖRSTER are corrected, illustrated and discussed.

**K e y w o r d s :** *Gynacantha mocsaryi* FÖRSTER, larva, correction of earlier description.

### **Introduction**

FRASER (1963) was the first to describe the larva of *Gynacantha mocsaryi* FÖRSTER. In this paper he described and illustrated the cercoids (= now: cerci) of the larva as shortly conical. When preparing a key to the larvae of the Australian Aeshnidae, FRASER's (1963) paper puzzled me as all other *Gynacantha* larvae known from Australia (TILLYARD 1916, HAWKING 1993) have long cerci agreeing with the long anal appendages of the adults. As the character in question is of great significance, I searched for FRASER's material in the ANIC (Australian National Insect Collection, CSIRO, Canberra). Fortunately the material, or at least specimens most probably from the same series, was found for the present study.

### **Method**

From the available material, the larva of *G. mocsaryi* is described and illustrated anew in a style similar to the one used in a forthcoming study of the larvae of the primitive Australian Anisoptera (THEISCHINGER, in prep.). Particular emphasis is given to the length proportions of the element of the anal pyramid.

### **Description**

#### ***Gynacantha mocsaryi* FÖRSTER**

*Gynacantha mocsaryi* FÖRSTER 1898: 292; MARTIN 1909: 190; TILLYARD 1916: 72; FRASER 1960: 37; FRASER 1963: 23; HOUSTON & WATSON 1988: 88; WATSON et al. 1991: 189; WATSON & HOUSTON 1994: 27.

### Larva (Figs 1-7)

**Dimensions:** Total length 32.0-40.0 mm; width of head including eyes 7.2-7.6 mm; length of metafemur 6.0-6.6 mm; greatest width of abdomen 6.5-7.2 mm. Prementum: length 6.2-6.6 mm; width at distal end 4.6-5.0 mm, at base 1.6-1.9 mm.

**Colouration:** Largely greyish yellow to pale greyish brown with darker markings, most conspicuous on prothorax, legs and abdomen. Large median area of pronotum, base and apex of femora and tibiae, two rings each on femora and tibiae and apex of second and third tarsal segments dark. Ill-defined dark longitudinal patches particularly on abdominal terga 4-8.

**Morphology:** Length/width index of prementum 1.30-1.37; ligula with very distinct tooth each side of, and very close to, median cleft. Labial palps with row of approximately 5 longer setae and small group of shorter setae; some short setae also on prominent movable hook. Slightly pointed to right angle between angular prothoracic processes, the anterior process slightly forward directed; notal lobes small, slightly angulated. No mid-dorsal abdominal spines or processes; slim lateral spines on abdominal segments 6-9; all abdominal terga rather evenly arched. Female gonapophyses reaching end of segment 10. Epiproct almost as long as paraprocts, parallel sided for at least distal half, with a tiny tip each side of apex. Cerci of both sexes about  $\frac{4}{5}$  length of paraprocts. Basal projection of male about  $\frac{1}{2}$  length of epiproct, indication of basal projection of female slightly more than  $\frac{1}{4}$  length of epiproct.

**Material examined:** 1 final instar male larva, 2 final instar female exuviae, N. Queensland, Helenvale nr Cooktown, 25.i.57 (1 female em. 7.iii.57, 1 female em. 16.iii.57), R. Dobson (ANIC).

### Discussion

FRASER (1963) stated that the material he based his description of the larva of *Gynacantha mocsaryi* on were exuviae of larvae obtained at Helenvale near Cooktown, N. Queensland, and bred to the imaginal stage at Wahroonga, New South Wales, by R. Dobson; 25.i.51 to 7.iii.51. It appears quite possible that the discrepancies between FRASER's (1963) locality data and the locality data of the present material result from errors in the transcription of the labels.

It is, however, much more interesting and significant that all larvae and exuviae labelled as *Gynacantha mocsaryi* FÖRSTER and examined for this paper were found to have long cerci (Figs 6, 7) agreeing with the long anal appendages of the adults and disagreeing with FRASER's (1963) description.

On this evidence, FRASER's (1963) description and illustration of the anal pyramid of the larva of *Gynacantha mocsaryi* FÖRSTER are considered incorrect. The cerci of the final instar larva (both sexes) of *G. mocsaryi* are "long and slender with pointed tip" in strong contrast to FRASER's illustration and description as "shortly conical". From the available material, however, it cannot be detected how FRASER's data were obtained.

The larva of *G. mocsaryi* is readily separated from the larvae of *G. dobsoni* FRASER and *G. nourslangie* THEISCHINGER & WATSON by the distinct teeth on the premental ligula.

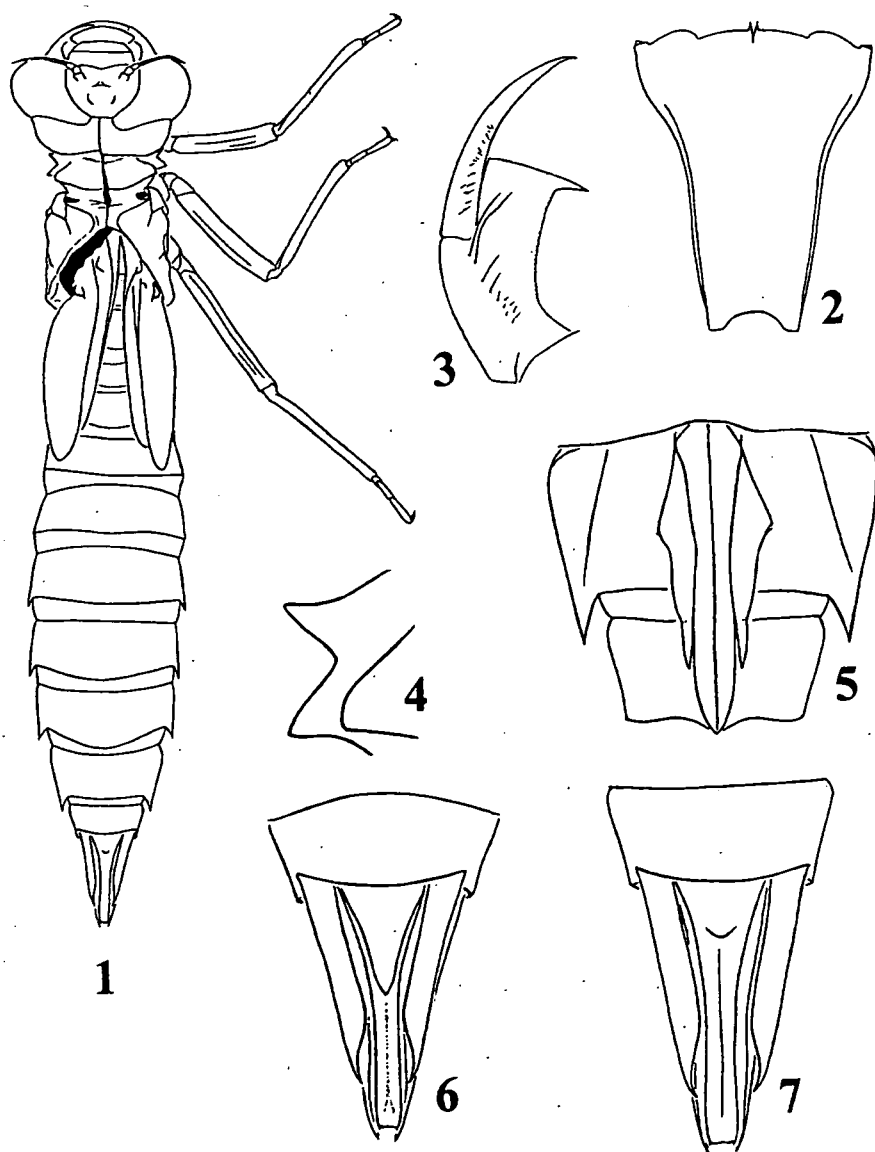
## Acknowledgments

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**Figs 1-7. *Gynacantha mocsaryi* FÖRSTER, final instar larva and exuviae: 1 – dorsal aspect; 2 – prementum, ventral aspect; 3 – left labial palp, dorsal aspect; 4 – left pronotal lobe and prothoracic processes, dorsal aspect; 5 – segments 9 and 10 and female gonapophyses, ventral aspect; 6, 7 – anal pyramid, dorsal aspect: 6 – male; 7 – female.**

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