

Macromia chaiyaphumensis sp. n. (Odonata, Corduliidae) from northeast Thailand

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Macromia chaiyaphumensis sp. n. (holotype male from Phu Khieo Wildlife Sanctuary, Chaiyaphum province, Thailand) is described, illustrated and compared with the related *M. urania* Ris.

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The dragonfly material which I collected in Chaiyaphum province, northeast Thailand, in June 1984 contains a male specimen of *Macromia*. Superficially, it resembles *M. urania* Ris, described from Tonkin (Ris 1916), but some structural differences suggest that it belongs to a distinct new species.

Macromia chaiyaphumensis sp. n.

Holotype: ♂ from Phu Khieo Wildlife Sanctuary, Chaiyaphum province, Thailand, 10.6.1984, M. Hämäläinen leg. Deposited in the Zoological Museum, University of Helsinki.

Male

Head: Breadth across the eyes 7.3 mm. Eyes deep green. Labium yellowish-brown, base of mentum and squames yellow. Mandibles glossy brown with large yellow patch in basal portion. Labrum glossy brown with three yellowish spots at base. Anteclypeus brown. Postclypeus yellow, its anterior margin and ventrolateral edges brownish. Frons with the anterior surface black, lateral sides brownish and anterolateral corners yellowish. Posteriomedial slopes of the pyramidal processes in frons yellow. Pyramidal processes acutely pointed, with inner surface rugosely striatopunctate and sides smoother. Vertex black, in frontal view with raised tubercles as in *M. urania*. Rear of head shining black.

Thorax: Synthorax dark metallic green with sharply defined yellow bands as follows: antehumeral band extending 2/3 up mesepisternum and continuing downwards on mesinfraepisternum almost to ventral border of the latter; broad band on the thoracic side crossing the spiracle (1.1 mm broad at level of spiracle); narrower band on posterior edge of metepimeron. Antealar sinus yellow. Synthorax underneath blackish with sutures broadly yellow; poststernum brown.

Legs: Long and slender, black or blackish brown. Coxae anteriorly pale brown, laterally dark brown and with flexor surface yellow. Lower surface of first trochanter and lower side of base of first femur yellowish. Tibial keels whitish, extending along distal half of first pair and almost full length of third pair; absent from mid-tibia.

Wings: Hyaline. Venation black, with a very narrow yellow line in costa. Pterostigma black, 2.4–2.6 mm long.

Membranula greyish brown. Nodal index $\frac{5.14}{7.9} | \frac{14.6}{19.8}$,

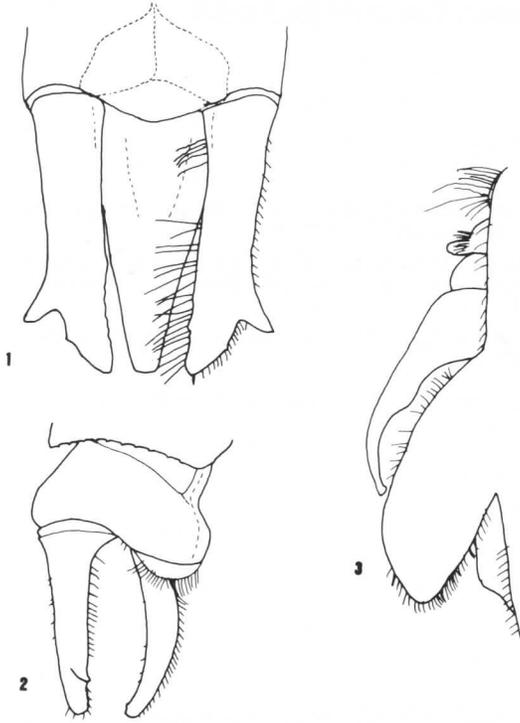
hypertrigones $\frac{4}{3} | \frac{3}{3}$, cubito-anal-crossveins $\frac{5}{4} | \frac{4}{4}$. Only one

large basal cell between anal triangle and anal loop. Anal loop made up of 6 cells, without central cell. Two cell rows between loop and lower border of hind wing. Anal angle slightly concave; outer side of anal triangle curved outwards at level of crossvein (Fig. 6).

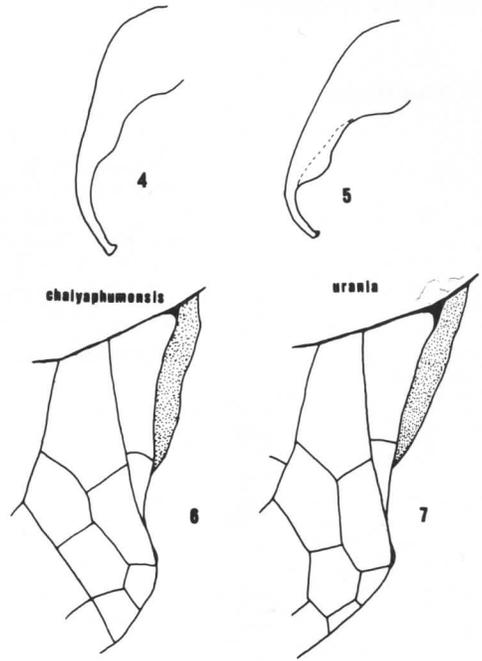
Abdomen: Slender, shaped similarly to that in *M. urania*. First segment brownish; other segments black, marked with yellow as follows: segment 2 with complete broad ring occupying the basal half on sides (including the auricles) but slightly narrowed dorsally and covering the middle 2/5 of dorsum. Segments 3–6 each with small rounded spots just in front of the transverse carina. The spots becoming progressively smaller posteriorly. In segments 3–4 they are deeply indented with black anteriorly in the median line; in segments 5–6 they are completely divided by black and in 6 the dots are very small. Segment 7 with a broad dorsolateral patch occupying anterior 1/3, extending a little farther apical in middle. Segment 8 with a narrow basal triangular spot on dorsum and with a lateroventral patch extending from base to half of length of segment. Segment 9 with a small drop-like lateral spot in posterior part, and a smaller lateroventral dot at base. Segment 10 black, shaped as in Fig. 2.

Superior anal appendages black, inferior appendage dark brown. Superior appendages each with robust, laterally directed sub-apical tooth (Figs. 1–2).

External genitalia shaped as in Fig. 3; hamules black and



Figs. 1–3. *Macromia chalyphumensis* sp. n., holotype ♂. (1) Anal appendages, dorsal view; (2) anal appendages, lateral view; (3) external genitalia, lateral view.



Figs. 4–7. Comparison of *Macromia chalyphumensis* sp. n. holotype ♂ and *Macromia urania* Ris holotype ♂. (4–5) Shape of the posterior hamule; (6–7) part of base of hind wing.

lobe blackish brown.

Measurements. — Abdomen (incl. appendages) 42 mm, hind wing 34 mm. Female unknown.

Discussion

The new species was compared with the holotype of *M. urania* from Tonkin and with further *M. urania* material from Tonkin and China. The two species differ markedly in the shape of the posterior hamule, which in *M. chalyphumensis* is more slender (Figs. 4–5). The external genitalia and appendages of *M. urania* are well illustrated by Lieftinck (1950: 687–8). In *M. chalyphumensis* the tip of the robust lateral tooth in the superior appendage is situated slightly more apically (Fig. 2). The base of the hind wing is also different in the two species. In *M. urania* the

anal angle is less concave and the outer side of the anal triangle is evenly curved (Figs. 6–7). Furthermore, there are differences in the colouration of the two species.

M. chalyphumensis was found in a shaded opening in the forested bank of a stream flooded by heavy rain. *M. urania* is also a stream dweller; its known range covers Vietnam, SE mainland China, Hainan and Taiwan (Lieftinck et al. 1984). The females listed as *urania* from Ishikagi Island by Asahina (1964) do not seem to belong to *M. urania*.

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