

A SECOND SPECIES OF *EPISYNLESTES* KENNEDY (ODONATA: CHLOROESTIDAE) FROM NORTH QUEENSLAND

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Abstract

Episynlestes cristatus sp. n. is described from northern Queensland.

Introduction

Kennedy (1920) described the genus *Episynlestes* to include the single Australian species *Synlestes albicauda* Tillyard, distinguished from other species of *Synlestes* Selys by its short, broad quadrilateral cell. Recent collections of Odonata from northern Queensland have included a second species of *Episynlestes*, readily distinguishable from *E. albicauda*; a description of the new species follows.

Episynlestes cristatus sp. n. (Figs 1-4)

Episynlestes sp. "c" Watson, 1974: 142.

Types.—*Holotype* ♂, *allotype* ♀: "N. Queensland Paluma (Mt Spec) 2900' 6-11.i.1968 R. Dobson", in *copula* (ANIC Type No. 9865) (in Australian National Insect Collection, CSIRO, Canberra). *Paratypes*: QUEENSLAND: 4 ♂♂, 5 ♀♀, McLeod River near junction with Spurgeon Creek, 23.xii.1974, M. S. Moulds (Australian Museum); 1 ♂, Mt Misery W of Mossman, 22.xii.1974, M. S. Moulds (Australian Museum); 1 ♂, 8-13 km Mt Lewis road off Mossman—Mt Molloy road, 22.iv.1967, D. H. Colless (ANIC); 1 ♂, Henrietta Creek, Palmerston National Park, 23.iv.1970, S. R. Curtis (ANIC); 1 ♀, Mt Spec, 1.i.1958, C. Vallis (ANIC); 16 ♂♂, 1 ♀, data as for holotype (ANIC); 1 ♀, Paluma, 6.i.1969, J. G. Brooks and E. E. Adams (ANIC).

Male

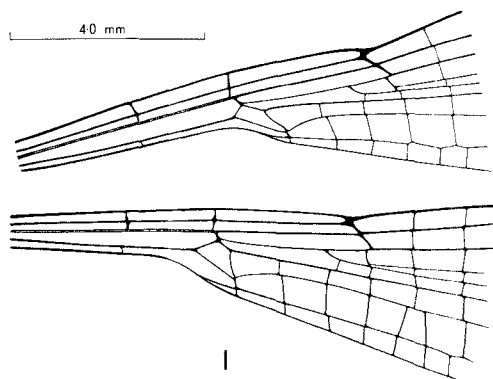
Colour pattern closely similar to that of *Episynlestes albicauda*.

Head.—Labium yellowish; labrum metallic greenish brown with pale anterior spot in midline; clypeus brown with dark metallic green reflections; frons dark reddish brown with traces of metallic green; antennae pale yellow basally, distal half of second segment and flagellum dark brown, cuticle surrounding antennal insertion yellowish; vertex dark metallic green; occiput dull, dark grey with yellowish diagonal band across postocular lobe towards occipital margin; back of head yellowish.

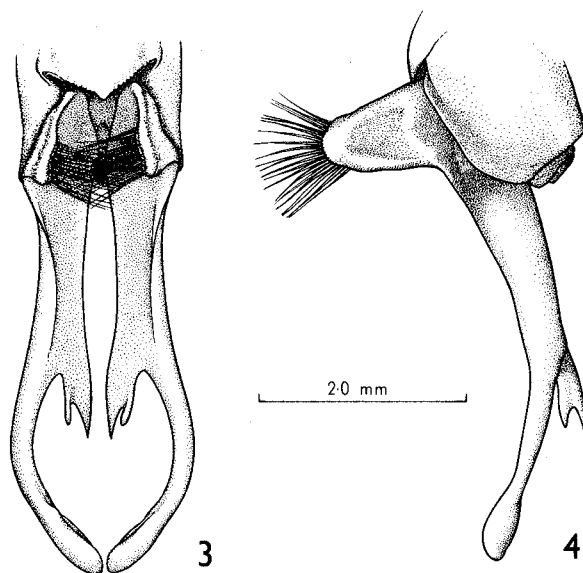
Prothorax yellow with brownish green dorsal band, darkest on posterior lobe and centre of median lobe; pleuron black with slight metallic reflections.

Synthorax yellow; mesepisternum dark metallic green above; dorsal carina almost black; lateral dark metallic greenish black band extending diagonally from propleuron to base of hind wing, finely broken along interpleural suture.

Legs yellow, shaded darker on inner surfaces, spines and tibial comb dark brown; blackish spot at femoro-tibial articulation; tarsal segments and claws reddish brown.



FIGS 1, 2.—Venation of male *Episynlestes cristatus* sp. n., paratypes, Paluma: (1) base of fore and hind wings; (2) region of pterostigma.



Figs 3, 4—Anal appendages of male *Episynlestes cristatus* sp. n., paratype, Paluma: (3) dorsal view; (4) right lateral view.

Wings (Figs 1, 2).—Average length of hind wing 27.3 mm (range 26.1–28.8 mm), hyaline, veins black; venation generally similar to that of *Episynlestes albicauda*; pterostigma dark brown, short, its costal side averaging 1.52 mm (range 1.38–1.60 mm) in fore wing, 1.77 mm (range 1.56–1.90 mm) in hind wing; variable brown spot obscuring two to three small cells between R_1 and R_2 behind pterostigma (Fig. 2), larger in fore wing than in hind wing, sometimes much reduced or absent in hind wing; quadrilateral cell normal in fore wing, but much shortened and broadened in hind wing, associated with abrupt broadening of hind wing just beyond level of basal antenodal, and corresponding increase in length of anal vein (Fig. 1).

Abdomen dark brownish black; anterior half of segment 1 pale yellow above; segments 1 and 2 yellow below; segments 3–7 with narrow pale yellow basal band expanded ventrally and broken by black mid-dorsal line, yellow of segment 7 duller and less distinct than that of segments 3–6; anterior segment 8 partly yellowish below; segments 9 and 10 black, distal margin of segment 10 deeply excised to accommodate expanded bases of superior appendages (Fig. 3).

Anal appendages (Figs. 3, 4).—Superior appendages highly modified, with heavy, upwardly-directed basal black process, and long, slender, trifurcate whitish to yellow lower branch; upper black branches rising approximately 1 mm above dorsal surface of segment 10, their apices converging towards midline, each bearing crest of black setae approximately 0.8 mm long, the crests interlocking at their bases; lower branches approximately 3.5 mm long, outer member of each longer than inner member, with apex slightly swollen, converging towards midline; bifurcate inner members shorter, approaching midline, inner, lower fork sharply pointed, longer than outer, upper, blunter fork. Inferior appendages vestigial.

Female

Colour pattern of head and thorax generally similar to that of male, but with dark metallic green of mesepisternum greatly reduced, forming isolated greenish patch on each side, surrounded by brownish yellow margin; pterostigmata slightly larger and yellowish-brown, much paler than in male, average costal length in fore wing 1.62 mm (range 1.56–1.64 mm) and in hind wing 1.89 mm (range 1.84–1.92 mm), lacking the adjoining dark spots and associated small cells; mean length of hind wing 29.5 mm (range 28.8–30.2 mm); quadrilateral cell of hind wing similar to that of fore wing, the petiolation of hind wing commencing at level of arculus; segment 10 of abdomen white.

Episynlestes albicauda (Tillyard)

Synlestes albicauda Tillyard, 1913: 238–241 [♂, ♀, Mt Tambourine (= Tamborine Mt), Queensland].

Episynlestes albicauda: Kennedy, 1920: 84 (*recte albicauda*).

Material examined.—QUEENSLAND: 1 ♂, Bouldercombe, Rockhampton, xi.1955, C. Vallis; 6 ♂♂, St Mary's Falls, near Rockhampton, 26.xi.1956, C. Vallis; 2 ♂♂, 1 ♀, same locality and collector, i.1957; 1 ♂, Baldwin Swamp, Bundaberg, 14.x.1972, H. Frauca; 1 ♀, Water Filly Gorge, Bluff Range, Biggenden, 21.x.1972, H. Frauca; 1 ♀, Bluff Range 7 km Biggenden, 10–12.v.1974, H. Frauca; 1 ♂, Rocky Gully 5 km Kenilworth, 15.iii.1975, R. A. Barrett; 1 ♂, Mapleton Falls, Blackall Range, 25.ix.1955, R. Dobson; 2 ♂♂, 1 ♀, Tamborine Mt, 28.xii.1912–3.i.1913, R. J. Tillyard (*paralectotypes*); 1 ♀, same locality, 29.xii.1954, R. Dobson. (All in ANIC).

Measurements

Hind wing.—Average length, male, 29.8 mm (range 28.1-31.5 mm); female, 31.5 mm (range 29.9-33.1 mm).

Pterostigma.—Average length, male, fore wing 1.88 mm (range 1.70-2.06 mm), hind wing 2.14 mm (range 1.98-2.30 mm); female, fore wing 1.96 mm (range 1.86-2.10 mm), hind wing 2.23 mm (range 2.08-2.48 mm).

Comparisons between the two species of *Episynlestes*

Diagnosis

E. cristatus is significantly smaller than *E. albicauda*. The males of *E. cristatus* can be distinguished in addition by the dissimilar quadrilaterals of the fore and hind wing, the more proximal petiolation of the hind wing, the subdivision of the radial field behind the pterostigma into small, pigmented cells and the substantial, crested upper branch of the superior appendage. The females of the two species resemble one another closely, but the smaller pterostigmata of *E. cristatus* appear to be diagnostic.

Habitats

The habitats of the two species appear to be very similar. Tillyard (1913) described the habitat of *E. albicauda* in the rain forest on Tamborine Mt, a densely shaded area in which the sombre coloration of the insects provided an extremely effective camouflage. *E. cristatus* is similarly associated with small streams in rain forest, although it may occur in shaded situations along more open watercourses, as along the McLeod River. Like *E. albicauda*, it is well camouflaged, both perched and in flight; as is common among chlorolestids, flight may be rapid, but is rarely sustained, and specimens can be gathered by hand.

Acknowledgment

We wish to thank Mrs E. Rankin, who drew Figs 1, 3 and 4.

References

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