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THE MALE OF *ANTIPODOPHLEBIA ASTHENES* (TILLYARD, 1916) (ANISOPTERA: *AESHNIDAE*)

G. THEISCHINGER

Biologische Abteilung II, Oberoesterreichisches Landesmuseum, Museumstrasse 14, A-4010 Linz, Austria

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The ♂ (SE Queensland, Australia) is described and illustrated for the first time. A note on field observations is added, and the diagnostic characters and affinities of *Antipodophlebia* Fraser are briefly discussed.

INTRODUCTION

Telephlebia asthenes was described by TILLYARD (1916) from a single female from Killarney, Queensland, Australia. The type is in the British Museum (Nat. Hist.) (cf. KIMMINS, 1969; WATSON, 1969). TILLYARD (1916) also mentioned another immature and somewhat damaged female from Mount Tambourine, Queensland, lodged in the Queensland Museum, Brisbane. FRASER (1960) established *Antipodophlebia* for the single species *asthenes*. The statement of WATSON (1974) on the distribution of *A. asthenes* had still to be based on the two specimens mentioned, as no further material was obtained since then.

The capture of 13 males and 4 females in two different localities of southeastern Queensland in 1976 now provides the opportunity to present the following description of the male, a note on the insect in the field and to discuss the diagnosis and affinities of *Antipodophlebia* Fraser.

ANTIPODOPHLEBIA ASTHENES (TILLYARD)

Figures 1-5

Telephlebia asthenes Tillyard, 1916, p. 41 (Holotype ♀: Killarney; Brit. Mus. [Nat. Hist.]).

DESCRIPTION OF THE MALE

Material. – 1 ♂, Barker Creek in Bunya Mountains, Queensland, Australia, 3.XII. 1976, and 12 ♂, Mapleton Falls, Queensland, Australia, 5.XII.1976, L. Müller & G. Theisinger leg.

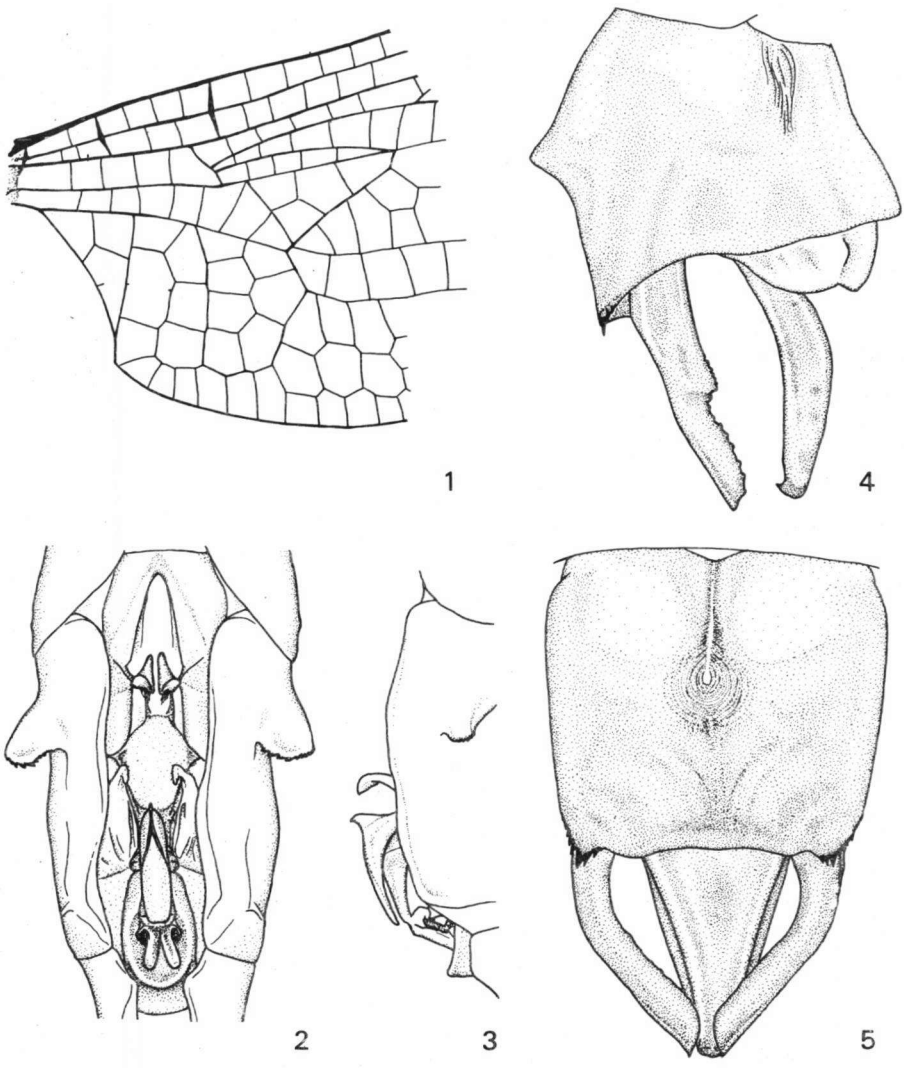
Dimensions. – Forewing 33-35 mm; hindwing 33,8-36 mm; abdomen with appendages 39-41 mm.

Head. – Labium, labrum, mandibles, postclypeus, anteclypeus, genae and compound-eyes greenish- to greyish-brown; frons darker brown except for anterior upper edge which is almost black; vertex black; antennae with brown scape and pedicel and black flagellum; occiput brown anteriorly, black posteriorly; inner margin of compound-eyes adjoining to occiput black; postgenae largely cream-coloured, dorsal portion black. Frons densely hirsute, not unusually broad or angulated anteriorly. Compound eyes very large, meeting for a long distance. Occiput unarmed, very small.

Cervix and prothorax. – Cervical sclerites yellowish-grey; pronotum largely yellowish-grey, a middorsal patch on median lobe and whole posterior lobe black; episternum, epimeron and coxa yellowish-grey; trochanter, femur, tibia, tarsi and claws brown.

Synthorax. – Spiracular dorsum, mesostigmatic lamina, collar, anterior (dorsal) portion of front of synthorax and antealar ridge and sinus black; dorsal carina dull yellow; posterior (lateral) portion of front of synthorax greyish-brown; mesepimeron brown with large yellow longitudinal patch; mesokatepisternum creme; metepisternum brown with dull yellow mark in dorsal third, continuing somehow the longitudinal patch on mesepisternum and thus forming an oblique synthoracic stripe; subalar ridge dark brown to almost black; metakatepisternum and metepimeron pale greenish-brown; metapostepimeron yellow; poststernum, coxae and postcoxae cream-coloured; trochantera, femora, tibiae, tarsi and claws brown; terga brown to black except for yellow mesoscutum and pale yellowish-grey metascutum.

Wings. – Venation corresponding well with the photograph presented by TILLYARD (1916) for the female, brown to black, costa with yellow median ray; membrane hyaline, brown at extreme base, suffused slightly with pale greyish-brown over whole wings in older specimens; antenodals 16-21/14-18; postnodals 11-15/13-17; thickened veins Ax_2 and Ax_5, Ax_6 or Ax_7 in both wings; subcosta prolonged beyond nodus for one cell; pterostigma 2,0-2,2 mm long, 0,8 mm wide, brownish-yellow in both wings; mostly 4 rarely 3 or 5 crossveins in median space, 6 or 7 in cubital space of both wings; forewing triangle narrow, 3-celled, hindwing triangle markedly wider, mostly 3- rarely 4-celled; anal loop elongate, about pentagonal, of 6-8 cells; anal triangle with distal side slightly longer than costal side, mostly of 3, rarely of 4 cells; anal angle obtuse; membranula obsolete in both wings.



Figs. 1-5. *Antipodophlebia asthenes* (Tillyard), male: (1) base of right hindwing; – (2) secondary genitalia, ventral view; – (3) secondary genitalia, lateral view; – (4) anal appendages, lateral view; – (5) anal appendages, dorsal view.

Abdomen. – Segment 1, 2 and anterior half of 3 swollen, from posterior half of 3 to 10 parallel-sided. Tergites 1-9 largely dark brown, in older specimens even black, a large dull brownish-yellow lateral patch surrounding and ventral to auricles over complete length of tergite 2 and a small ill-defined brownish-yellow

lateral mark at base of tergites 3-8; tergite 10 brown anteriorly, black posteriorly above, pale brown below, a small pointed cone at about its middle and serrated teeth just above bases of superior appendages; sternites 1 and 3-10, secondary genitalia and bipartite sternite 11 pale to dark brown.

Anal appendages. – Superior appendages short, thin, black, strongly convergent, strengthened ventrally in basal half, tips acute; inferior appendage almost as long as superiors, subtriangular, slightly arched, black.

NOTE ON THE INSECT IN THE FIELD

Both sexes of *A. asthenes* were observed on wing nearby headwaters of small mountain creeks in dense forest, but never before 6 and not after 7 p.m. The insects were not at all shy, flew not higher than one meter above the ground and appeared, due to their shooting flight and the darkness in the habitat, as large flies rather than dragonflies. This perhaps explains why *Antipodophlebia* had escaped notice for more than half a century.

DIAGNOSTIC CHARACTERS AND AFFINITIES OF *ANTIPODOPHLEBIA* FRASER

FRASER (1960), defining *Antipodophlebia*, wrote: "median space traversed by 5 to 7 veins; discoidal field of forewing with 2 rows of cells, abd. 38 mm, hw. 35 mm" and specified under *asthenes* "subcostal vein apparently prolonged into first cell distal to nodus". As the first character is at least partly incorrect, and as the second and third are of little use (because of individual variability), the genus should be defined as follows:

– A very small Australian brachytronine with median space traversed by 3 to 5, cubital space by 6 or 7 veins; subcosta prolonged into first cell distal to the nodus; pterostigma very short (about 2 mm); frons of normal width (about half as wide as head over the eyes), not strongly angulated anteriorly.

According to FRASER (1957) there are two other Australian genera of *Brachytroninae* with median space crossed, viz. *Dendroaeschna* Tillyard and *Telephlebia* Selys. Of these, *Dendroaeschna* has no prolonged subcosta, an opener venation, and a frons almost as wide as the head over the eyes, while *Telephlebia* has a much closer venation and a narrow, anteriorly angulated frons. *Telephlebia* has a prolonged subcosta and greatly resembles *Antipodophlebia* in both general and genital morphology. It is considered, therefore, the closest ally of *Antipodophlebia.*

ACKNOWLEDGEMENT

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REFERENCES

FRASER, F.C., 1957. A reclassification of the order Odonata. R. Zool. Soc. New South Wales, Sydney.

FRASER, F.C., 1960. A handbook of the dragonflies of Australasia. R. Zool. Soc. New South Wales, Sydney.

KIMMINS, D.E., 1969. A list of the type-specimens of Odonata in the British Museum (Natural History). Part II. *Bull. Br. Mus. nat. Hist. (Ent.)* 23: 289-314.

TILLYARD, R.J., 1916. Life-histories and descriptions of Australian Aeschninae; with a description of a new form of Telephlebia by Herbert Campion. *J. Linn. Soc.* (Zool.) 33 (222): 1-83.

WATSON, J.A.L., 1969. Australasian dragonflies described by R.J. Tillyard, with the location of types and the designation of lectotypes. *J. Aust. ent. Soc.* 8: 153-160.

WATSON, J.A.L., 1974. The distribution of the Australian dragonflies (Odonata). *J. Aust. ent. Soc.* 13: 137-149.