

SHORT COMMUNICATIONS

PAULIANAGRION PLATYSTICTOIDES FRASER AND PSEUDAGRION RISI SCHMIDT (ZYGOPTERA: COENAGRIONIDAE)

R.M. GAMBLES

Windings, Whitchurch Hill, Reading, RG8 7NU, United Kingdom

Received and Accepted May 3, 1979

Examination of the unique type of Fraser's "*Paulianagrion platystictoides*" shows that this is *Pseudagrion risi* Schmidt. The latter species is distinct from Pinhey's *P. rufocinctum*, a perfectly valid species which was later sunk by its author as a synonym or subspecies of *risi*. The two are here distinguished, and the unknown female of *risi* described.

INTRODUCTION

The genus *Paulianagrion* FRASER, 1941 was erected for a new species from near Dschang, Cameroun, *P. platystictoides*, which has not to my knowledge been recorded since, although the original record has been quoted in the literature.

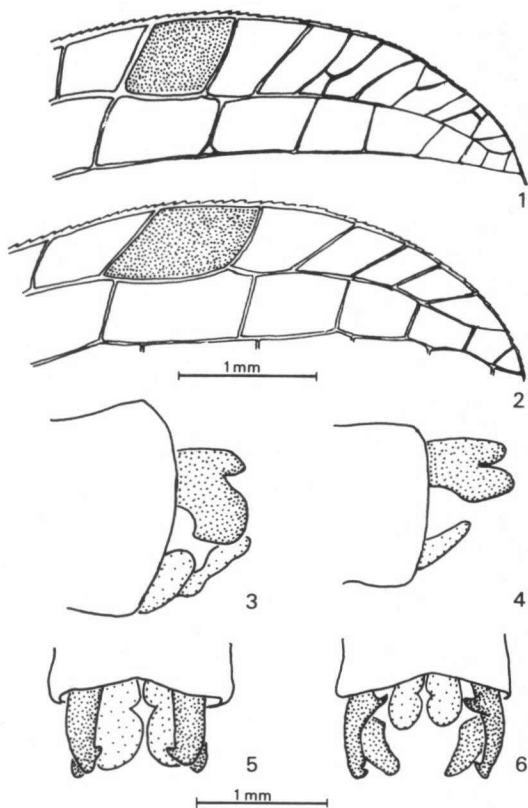
The original specimen, a single male, was placed in the Platycnemididae, but Fraser's figure of the penis has always struck me as more like that of a *Pseudagrion*, and the description and figure of the venation show a quadrilateral with an acute distal angle more like that of a coenagrionid than of a platycnemidid. The length of the pterostigma in the genus *Pseudagrion* is variable, and that of *P. risi* Schmidt, in RIS, 1936 reaches an extreme of shortness matched exactly by that figured for *Paulianagrion*. Also *P. risi* usually has a number of the post-pterostigmal cells doubled, often a complete double row, which is unusual in this genus (sometimes in *bicoerulans* and *spernatum*, however), but is mentioned as a characteristic of *Paulianagrion*. On the other hand, synonymy appeared ruled out by the figure of the lateral view of the appendages of *P. platystictoides*, which were shown as very different from those of *P. risi*.

EXAMINATION OF TYPES

In the course of general correspondence about the Platycnemididae with Dr J. Legrand of the Paris Museum, I asked for the loan of the type of *P. platystictoides*, which he very kindly sent immediately. This was a teneral male of *P. risi*, and the superior appendages had become rolled up during drying. The right superior had rolled itself into a structure with the exact shape given to it in Fraser's figure of *Paulianagrion*. There can now be no question of the status of *P. platystictoides*, which must be sunk as a synonym of *Pseudagrion risi* Schmidt in Ris, 1936 (syn. nov.).

P. risi was also described and figured from a single male specimen from Dschang, Cameroun, in Ris's MSS paper on the African *Pseudagrion* species, which was completed and edited after his death by Schmidt (RIS, 1936). The female is still undescribed. No further records of the true *risi* have been published.

PINHEY (1964), revising the African species of *Pseudagrion*, sinks his own *P. rufocinctum* (PINHEY, 1956) from Uganda as a mere subspecies of *risi*, which he redescribes and figures from new material of his own from Zaire. However, his description, and reexamination of the type in the BMNH make it quite clear that it was not the Ris-Schmidt species that he was dealing with, so his *rufocinctum* is vindicated. I have collected further material of Schmidt's *risi* from the high grasslands of the Bamenda Plateau, Cameroun, and



Figs. 1-6. *Pseudagrion risi* Schmidt in Ris, 1936 (♂, near Bambui, Cameroon, 27.XII.1957, RMG, in BMNH) (Figs 1, 3, 5) and *P. rufocinctum* Pinhey, 1956 (holotype ♂, Uganda, in BMNH) (Figs 2, 4, 6): (1-2) Tip of forewing; — (3-4) Anal appendages, lateral view; — (5-6) Anal appendages, dorsal view.

have seen others from the Mambilla and Tiba Plateaux along the Eastern border of Nigeria. It appears to be mainly, if not entirely, an upland species.

I have not compared my material with the type of *risi*, since Pinhey's types of *rufocinctum* in the BMNH show that there is no question of the two species being synonymous, and Ris's careful description and figures exactly fit my material from Cameroun, the terra typica of the species. No other species are at all similar.

Of *Paulianagrion platystictoides* nothing further need be said.

TABLE OF DIFFERENCES BETWEEN *P. RISI* AND *P. RUFOCINCTUM*

<i>P. risi</i>	<i>P. rufocinctum</i>
Pterostigma shorter (as long as wide) (Fig. 1).	Pterostigma longer than wide (Fig. 2).
Several post-pterostigmal cells doubled (Fig. 1), — sometimes a double row, especially in female.	Single row of cells after pterostigma (Fig. 2).
Lower branch of superior appendage of ♂ wider (Fig. 3), but mostly concealed in dorsal view (Fig. 5).	Lower branch not so wide (Fig. 4), but projecting medially, so clearly visible in ventral view (Fig. 6).
Inferior appendage longer, projecting full length of superior; basal half with a lateral lobe, giving it a two-jointed appearance in lateral view (Figs 3, 5).	Inferior shorter and projecting only half length of superior; no two-jointed appearance, (Figs 4, 6).
No inner basal tooth to superior appendage (Fig. 5).	Inner basal tooth present (Fig. 6).
Female prothorax without stylets, merely notches on posterior border (Fig. 7).	Female prothorax with distinct stylets covering half length of middle lobe (Fig. 8).
Female without epaulettes.	Epaulettes present on mesinfracpisternum of female.
Postocular spots open medially, and confluent with pale transverse stripe on hind part of occiput.	Postocular spots closed, and narrowly separated from transverse stripe.

DESCRIPTION OF THE FEMALE *PSEUDAGRION RISI* SCHMIDT
IN RIS, 1936

Specimen in BMNH, taken near Government Farm, Bambui, Bamenda, Cameroun, 27.XII.1957 (RMG).

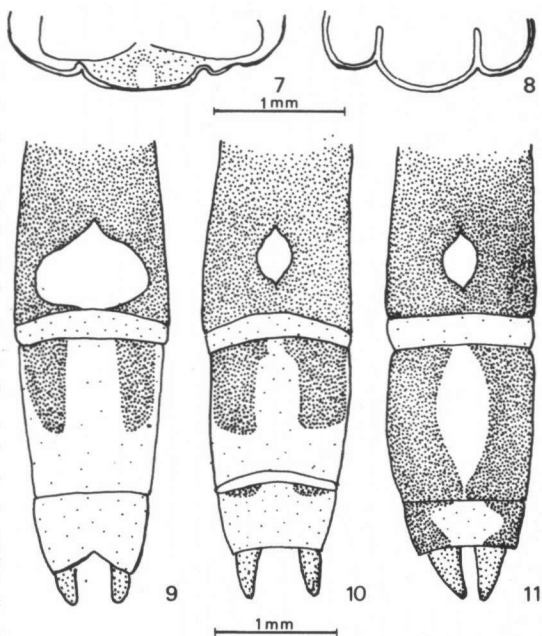
Head: labium, labrum, anteclypeus, and anterior part of frons pale

yellowish brown; postclypeus blackish brown with two pale spots; vertex and occiput blackish, apart from pale postoccipital spots which are open and confluent with pale transverse occipital stripe.

Thorax: prothorax yellowish brown, heavily patterned with black; stylets represented by mere notches on the posterior border; pterothorax similarly pale patterned with black or brown; mesostigmal lamina with anterior angles curved slightly forward; no trace of epaulettes on mesinfraepisternum; median stripe broad, black, bisected longitudinally by central carina which forms a fine line of pale yellowish brown; pale antehumeral stripes moderately broad; humeral stripes narrower, dark; very slender dark stripe along the dorso-posterior half of the first lateral structure, and a much shorter but wider stripe, almost an oval spot, at the dorso-posterior end of the second lateral; wing sclerites bluish grey.

Abdomen: blackish brown dorsally with metallic shine, yellowish brown ventrally; seg. 1 with central black mark divided basally into two lobes by a longitudinal yellow stripe; 2-7 wholly dark dorsally, apart from a narrow basal annulus; dorsum of 8 with a yellow spot in the posterior third (rather larger in this specimen than in most others examined, and obcordate where the others are citron-shaped, Figs. 9-11), and with intersegmental membrane conspicuously pale; 9 with pair of black streaks from basal margin extending over half length of segment (in some specimens these may reach end of segment, or even reach on to part or all of 10, and may meet posteriorly, enclosing central pale longitudinal area).

Wings P: 15 px in forewings, 13 in hind; origin of R_3 at 6th px in fww, 5th in



Figs. 7-11. *Pseudagrion risi* Schmidt in Ris, 1936 (Figs 7, 9-11) and *P. rufocinctum* Pinhey, 1956 (Fig. 8): (7) Posterior margin of ♀ thorax, dorsal view (same locality and date as ♂ in Fig. 1, BMNH); — (8) Posterior margin of ♀ thorax, dorsal view (♀ paratype, Uganda, in BMNH); — (9) Same ♀ as in Fig. 7, pattern of abdominal segments 8-10; — (10-11) Same view of other ♀♀ *P. risi*, same approximate locality and date (author's collection), to show variation in abdominal pattern.

hww, and of IR₂ at 9th in fww, 8th in hww; pterostigma rhomboidal, distal border rather curved, so costal border shorter than caudal, especially in hww; several cells in the post-pterostigmal series doubled.

Length of hw 20 mm; abdomen excluding appendages, 33.5 mm.

REFERENCES

- FRASER, F.C., 1941. Results of the mission of P. Lepesmee, R. Paulian and A. Villiers in the Cameroons. Order Odonata. *Proc. R. ent. Soc. Lond.* (B) 10 (3): 35-42.
- PINHEY, E.C.G., 1956. Some dragonflies of East and Central Africa and a rarity from Mauritius. *Occ. Pap. Corydon meml Mus.* 4: 17-41.
- PINHEY, E.C.G., 1964. A revision of the African members of the genus *Pseudagrion* Selys (Odonata). *Revta Ent. Moçamb.* 7 (1): 5-196.
- RIS, F., 1936. Die *Pseudagrion*-Arten des kontinentalen Afrika (Insecta, Odonata). Mit Bemerkungen von Erich Schmidt. *Bonn. Abh. senckenberg. naturf. Ges.* 433: 1-68. — [For a note on the authorship of this paper cf. E. PINHEY, 1973, *Odonatologica* 2: 318, footnote].