

A NEW SPECIES OF PSEUDAGRION (ODONATA) FROM THE OKAVANGO SWAMPS, BECHUANALAND

by

B. I. Balinsky

(Department of Zoology, University of the Witwatersrand,
Johannesburg, South Africa)

Novos taxa entomológicos, publicados como suplemento à *Revista de Entomologia de Moçambique*, destinam-se à publicação de descrições de novos taxa de Entomologia, principalmente dos territórios de África ao sul do Sahara.

Novos taxa entomológicos constituem uma publicação seriada, incluindo artigos curtos, que são publicados logo que os manuscritos são recebidos.

As condições de composição, impressão e publicação de artigos a incluir em *Novos taxa entomológicos* são iguais às referentes à *Revista de Entomologia de Moçambique*.

• • •

Novos taxa entomológicos, published as a supplement of the *Revista de Entomologia de Moçambique*, is devoted to the publication of the descriptions of new entomological taxa mainly of those species found in Africa south of the Sahara.

Novos taxa entomológicos will be a series of publications, without a definite date of release, and will include short articles published as soon as the manuscripts are received.

The conditions for the composition, printing and publication of the articles in *Novos taxa entomológicos* will be the same as those used in the *Revista de Entomologia de Moçambique*.

Amongst the dragonflies collected during a recent expedition to the Okavango swamps I have found 5 ♂ specimens of *Pseudagrion* which appear to represent a new hitherto undescribed species. The new form belongs to the group of predominantly blue species of the genus and superficially resembles *P. nubicum* SELYS and *P. coelestis* LONGFIELD but differs in wing venation, in the structure of anal appendages and in details of the colouration pattern. I name the species after my daughter, who assisted me in collecting the *Odonata* during the Okavango expedition.

* * *

PSEUDAGRION HELENÆ, spec. nov.

Mature male. Labrum, anteclypeus, clypeus and genae greenish blue with the following black spots: a tiny black spot at the base of the labrum, postclypeus either with one small black spot at the base, or with three small spots, one median and two lateral ones. Frons olive green, a small black spot below the median ocellus, two transversely elongated rhomboidal spots at the level of the median ocellus and a broad irregular black transverse band across the paired ocelli, connecting the compound eyes. Post-ocular spots blue, pear-shaped, very large, connected to each other by an olive green line on upper edge of occiput. Compound eyes an intense bluish-green.

Pronotum blue with black markings: a V-shaped spot anteriorly and a pair of triangular spots, connected to each other across the middle by a narrow black line, posteriorly (fig. 1 e). Synthorax mainly sky blue, the black pattern very much reduced (fig. 1 e). The median black line

at most is only about $\frac{1}{6}$ of the breadth of the mesepisternae, but in some specimens is represented only by a narrow line. The humeral suture with two black spots, which may be completely isolated from one another or connected only by an extremely thin black line. Sides of synthorax blue, with a small rounded spot on the 1st lateral suture about $\frac{1}{3}$ from posterior end, and an elongated black spot near posterior end of the second lateral suture. Underside of synthorax whitish and somewhat pruinose. Legs yellow or with a slight bluish shade with broad black bands along the dorsal surface of the femora, and intensely black spines on femora and tibiae.

Wings hyaline. In the fore wings the origin of the anal vein (A') is proximal to the anal cross vein (Ac), by a distance which may exceed the length of Ac . In the hind wing the origin of A' is at the Ac or only slightly proximal to it (fig. 1 c). The pterostigma is fawn between black veins, the distal edge is slightly more convex than the proximal edge (fig. 1 d). 9-10 postnodal crossveins between costa and subcosta in fore wings.

The abdomen is mainly sky blue with black markings dorsally. Segm. 1 bears bilobed black spot proximally and sometimes a narrow black line before posterior edge. Segm. 2 bears dorsally a black spot somewhat resembling the letter M, with the proximal apices of the letter elongated in various degrees (fig. 1 f, g, h). There is also a small black spot proximally, and a broad black band at posterior edge. The M-shaped figure is *not* connected to the posterior black band. Segments 3-7 bear a broad black longitudinal line which is narrowed and again expanded before the posterior end. Segments 8 and 9 are pure blue. Segm. 10 is black dorsally and blue laterally.

Superior anal appendages slightly longer than inferior, dark brown, bifid at the end (fig. 1 a, b). The branch which corresponds to the upper branch of the superior anal appendages of other species bears a strongly sclerotized tooth on the inner surface near the tip, and on the tip there are 1-3 long sharp spines. The branch corresponding to the lower branch of the superior anal appendages of other species is slightly longer, rounded and not sclerotized at the tip and bears a pointed sclerotized tooth on its inner edge about $\frac{1}{3}$ distance from the tip. In the present species the two branches lie, however, practically in the same plane, so that the incision between the two can only be seen from above and from below, and not at all from the side. The lower anal appendages light brown, more or less spoon-shaped with a strongly sclerotized protuberance on latero-ventral

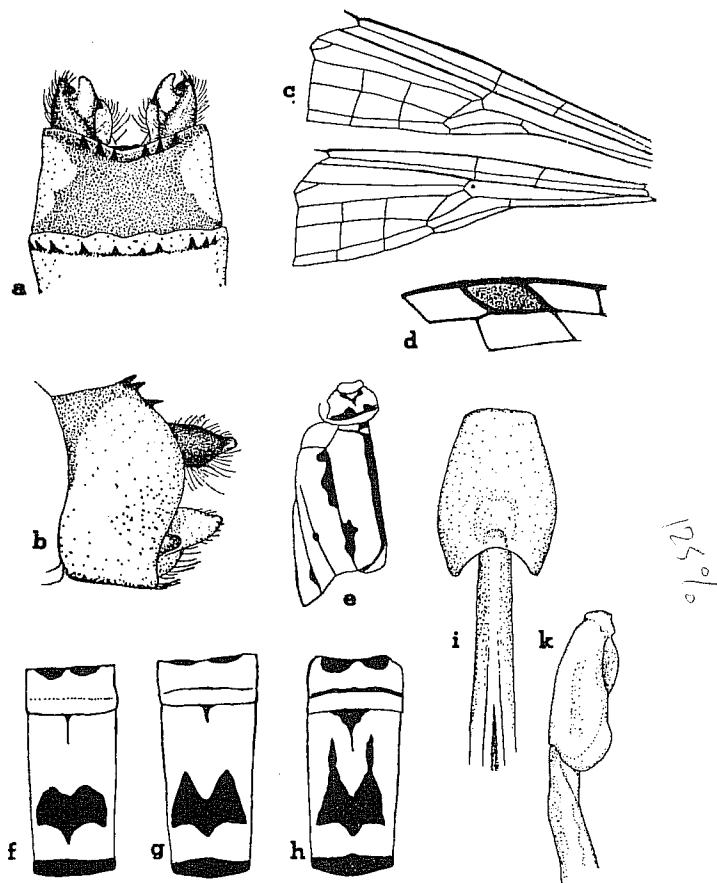


Fig. 1 — *Pseudagrion helenae* spec. nov.: a, anal appendages in dorsal view; b, anal appendages, view from left side; c, venation at base of left pair of wings; d, pterostigma of left front wing; e, pattern on thorax; f, g, h, range of variation of pattern on 1-2 abdominal segments; i, penis, ventral view; k, penis, view from left side.

surface. The penis (fig. 1 i, k) with a more or less oval «head» broadly but shallowly incised, the lateral flaps rounded; this is best seen in lateral view (fig. 1 h).

Abdomen 26.5–27.0 mm.

Hind wing 17–18 mm.

No ♀♀ could be associated with certainty with the males as described above.

Holotype: ♂, Ngamiland Game Reserve, 29-XII-1963.

Paratypes: 2 ♂♂, Ngamiland Game Reserve, 30-XII-1963 and 1-I-1964; 2 ♂♂, Maun, 3-I-1964.

The holotype will be deposited in the Transvaal Museum.

In colouration and general appearance the present species resembles most *P. nubicum* SELYS and *P. coelestis* LONGFIELD.

It is best distinguished by the two branches of the superior anal appendages lying at the same level, so that the incision between them is not visible from the side. Also the black spot on the 2nd abdominal segment, though somewhat like that in *P. nubicum* and *P. coelestis*, is not connected to the black band at the posterior edge of the segment as in the two named species (see BALINSKY 1963). The pattern on the 2nd abdominal segment of the present species resembles most that of *P. glaucoideum* RIS and *P. glaucescens* SELYS. With *P. glaucescens* RIS the present species also has in common the shape of the penis (see SCHMIDT, 1949). The relation of the point of origin of *A'* to *Ac* in the present species, somewhat atypical for the genus *Pseudagrion*, occurs likewise in *P. glaucoideum* RIS. However both *P. glaucescens* and *P. glaucoideum* are larger species, with longer and more slender abdomens, and the structure of the anal appendages is distinctly different: in both the incision between the two branches of the superior anal appendages is visible from the side, and *P. glaucoideum* lacks the tooth on the inner side of the lower branch where it is to be found in the present species.

REFERENCES

BALINSKY, B. I.

- 1963 A contribution towards the systematics of dragonflies of Southern Africa (*Odonata*). *J. Ent. Soc. S. Africa*, 26: 228–255.

SCHMIDT, E.

- 1949 Libellen aus Portugiesisch Guinea mit Bemerkungen ueber andere aethiopische Odonata. *Arquivos do Museu Bocage*, 20: 125–200.