

VI DESCRIPTION OF A NEW SPECIES  
OF THE GENUS *PSEUDOPHAEA* (= *EUPHAEA*, SELYS) FROM WESTERN  
INDIA WITH SOME REMARKS ON THE  
SECTION *DISPAR* OF THE GENUS

By F. F. LAIDLAW, M.A.

*Pseudophaea fraseri*, sp. n.

- <sup>1</sup> ♂ Talewadi, near Castle Rock, N. Kanara Dist., Oct. 3-10, 1916.  $\frac{43.00}{H\ I}$   
S. Kemp.
- <sup>5</sup> ♂♂ (One of these is the type ♂) Castle Rock, N. Kanara Dist.,  $\frac{43.74}{H\ I}$   
Oct. 1916. S. Kemp.
- <sup>1</sup> ♀ (Allotype) Castle Rock, N. Kanara Dist., Oct. 1916.  $\frac{43.50}{H\ I}$   
S. Kemp.

♂ *Wings* relatively long and narrow, the hinder-wing markedly shorter than the fore-wing, and with its apex very regularly rounded. That of fore wing by comparison more pointed (see text-fig.). Length of fore-wing 35 mm., greatest breadth 6.5 mm. at a point just mid-way between pterostigma and nodus.

Length of hinder-wing 32 mm., greatest breadth 6.5 mm. attained at level of proximal end of pterostigma, which is about 4 mm. long on both wings. Both pairs of wings have a yellowish tinge, deepest at the base of the hinder pair; most marked in the type ♂ which is apparently the most mature of the specimens.

The apical third or thereabouts of the hinder wing is opaque, brownish-black, with rather a violet reflex. The inner margin of the opaque area runs transversely straight across the wing at right angles to the long axis of the wing. The transition from the opaque to the transparent is almost abrupt, in the type there is a shading off of colour over a width of about 1 mm. The opaque area of the type is about 10 mm. long. In another specimen it is about 8.5 mm., and in this individual the total length of the hinder-wing is 31 mm.

Pterostigma 4 mm., nodal indicator  $\frac{1.8}{1.6} | \frac{3.3}{2.6}$ .

*Head*: Upper and posterior surfaces black, except the base of the labrum, genae and bases of the mandibles which are bluish-white. Labial structures white tipped with black.

*Prothorax*: Black with a pair of transversely oval, bluish-white spots on either side of the pronotum.

*Synthorax*: Mesepisterna and dorsal surface generally rich velvety black. On either side of the mid-dorsal carina is a bluish-

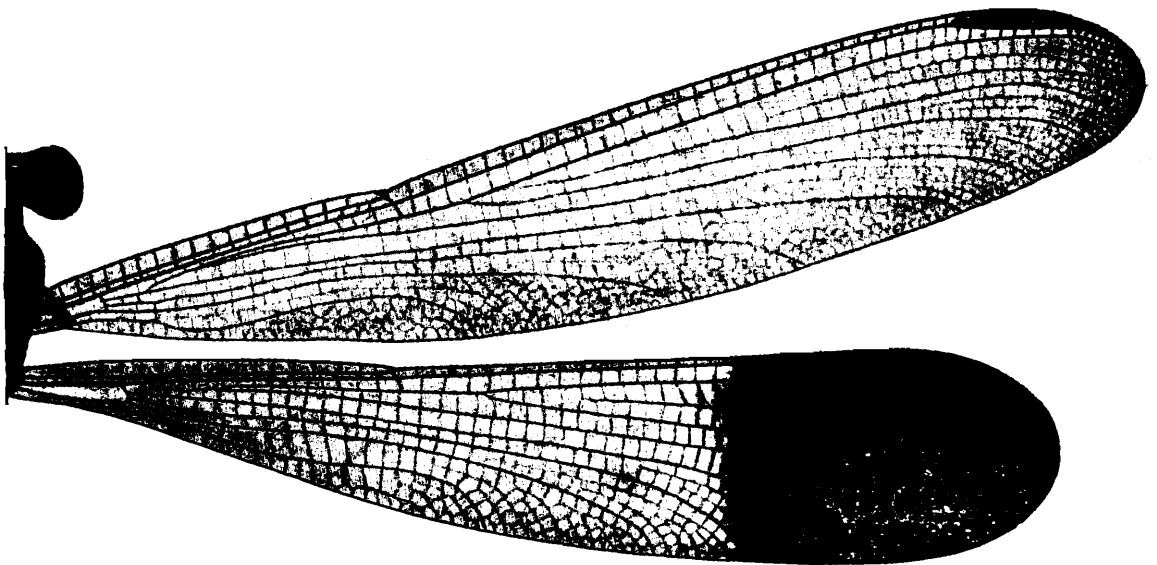
ERRATUM.

P. 25, line 12 from bottom, *for* Major F. C. Fraser, R.A.M.C.  
*read* Major F. C. Fraser, I.M.S.

white line, shaped like a long thin wedge, its base resting rather obliquely on the anterior margin of the synthorax. In addition there are traces of a second line of the same colour close in front of the humeral suture, most readily distinguished at its upper end. The mesepimeron, bordered with black along the humeral suture, is brown-orange in colour with a large oblong-oval island of black enclosed. The mesepisternum and metepimeron are also brown-orange, the suture between them marked with black at its upper end.

Ventral surface reddish-brown.

*Abdomen*: The first six segments are reddish-brown, the last four black. The anterior segments are darker above than on the ventral side, they deepen also in colour distally, 2, 3, 4 have a very fine longitudinal line of yellowish-green dorsally. The anterior



Wings of *Pseudophaea fraseri* sp. n. ♂ (type).

half of 7 is a very dark brown shading into black. The mid-dorsal carina of 10 is raised apically to form a small tubercle which projects beyond the distal margin of the segment. Length of abdomen 38 mm.

*Legs*: Anterior pair black, the two posterior pairs reddish-brown with black articulations, cilia and tarsi.

*Anal appendages*: Upper pair stout, about as long as the 10th segment of abdomen, divaricate with slight inward curve, in profile digitiform, superior pair about one-quarter the length of upper pair, closely approximated and parallel, distant from the upper pair, slightly curved upwards. Both pairs black.

♀ (Allotype). *Wings* unfortunately much frayed, so that it is impossible to give exact measurements. The length of the forewing is about 34 mm., and of the hinder-wing about 31 mm., the latter does not show the specialization in shape found in the male,

its greatest breadth, a little over 6 mm., appears to be mid-way between the nodus and pterostigma.

The wings are colourless, and the length of the pterostigma is 4 mm.

*Head* more extensively marked with bluish-white than is that of the male. The coloured area of the upper lip is broader, the mark on the genae ascends to the level of the anterior ocellus, and there is a bluish-white spot in the centre of the post-clypeus, and a small square mark on either side of the ocelli of the same colour.

*Prothorax*: As in the male, but the coloured spots a trifle smaller relatively than in that sex.

*Synthorax*: Mesepisterna and dorsal surface black, on either side of the mid-dorsal carina is a bluish-white line narrower than that seen in the male, a little widened anteriorly. Just in front of the humeral suture is a second line rather of a yellow hue, this anteriorly almost meets the more median line.

The mesepisternum is dull yellow, bordered with black along the humeral suture, the yellow colour enclosing a large oblong-oval island of black. The first and second lateral sutures are marked with black along their whole length; the rest of the side and the ventral surface of the synthorax is dull yellow in colour.

*Abdomen*: Shining black above and at the sides, ventrally dull yellowish brown. Segments 1-4 have a very fine, yellow line marking the dorsal, longitudinal carina; the line is present but barely perceptible on segment 5, and reappears on segments 8, 9.

Laterally segments 1 and 2 have a broad, pale-yellow band; a similar band occurs on segments 3-6, not quite reaching the distal border of the segment, but widened at the base of each to form an incomplete pale ring. On segment 7 the band is diminished, extending only one-half the length of the segment, and the basal widening is less marked. On segment 8 the band is reduced to a small postero-lateral spot, and on 9 to antero-lateral and postero-lateral spots.

*Legs*: Black, excepting the coxae and anterior surfaces of the femora which are yellow.

*Anal appendages* equal in length to segment 10, acute-conical.

This fine new species, which I have much pleasure in dedicating to Major F. C. Fraser, R.A.M.C., belongs to a small section of the genus *Pseudophaea*, which may be called the section *dispar*, after its first described species, named by Rambur.

One other species referable to the section has been described. This is *Pseudophaea impar*, Selys, from Malacca, with the race *inaequipar*, Selys, described by its author as a distinct species from Borneo. Krüger has reported *Pseudophaea impar* from Soekaranda, Sumatra (*Stett. Entomol. Zeit.* 1898, p. 78), but I do not know whether it differs to any extent from the Peninsular form or not.

*Pseudophaea fraseri* and *Pseudophaea dispar* are much more nearly related to each other than either of them is to *Pseudophaea*

*impar*. I have examples of the males of all the four forms before me. For the females I have seen only the allotype of *P. fraseri*, Selys description and wing-figure of *P. dispar* (*Mon. Calopt.*, p. 168, pl. v, fig. 3) and the same writer's very brief description of the female of *P. impar* (*Bull. Acad. Belg.* (2) VII, p. 441 (1859)).

I have been able to compare the males with those of a number of other species of the genus in my own collection. Of females, which are rare in collections, I have seen only two specimens of *P. brunnea*, Selys, from Burma, and a figure of the wing of *P. formosa*, Selys, given by Dr. Ris (*Supplementa Entomol.* 1, p. 53, fig 5). On the evidence before me I can say that whilst the males of the genus show very remarkable differences in colouring and wing shape as between species and species the females are all (so far as I know) very much alike. For example, the males of *P. fraseri*, *P. formosa*, and *P. brunnea* are so different in appearance that at first sight one would think them to belong to three different genera, whilst the females require a tolerably careful scrutiny for their separation.

Hence in defining the section *dispar* it is obvious that the male characters must be entirely relied on, and especially those of the hinder-wing.

When de Selys in his "Monographie des Caloptérygines" characterized the group *dispar* of his genus *Euphaea* he was not acquainted with either of the other species here included. So that I am able to offer a fuller definition of the group or section, at the same time removing from it his *E. decorata*, which as Ris (*loc. cit.*) has noted falls into a distinct group, *decorata-compar-formosa*.

I suggest then the following amended definition for the section *dispar* of the genus *Pesudophaea*.

The section comprises species of *Pesudophaea* in which the fore-wing of the male is entirely hyaline (save that mature specimens may have the apical margin outlined with brown beyond the pterostigma).

Hinder-wing gradually increasing in breadth almost to the level of the basal end of the pterostigma; its apex very regularly rounded.

Its greatest breadth bears the proportion to its greatest length of between 1 : 4 and 1 : 5.

Its apical part rather abruptly opaque, brown or black; the opacity covers from one-quarter to three-sevenths of the wing length and its inner margin lies transversely at right angles to the long axis of the wing. There is no metallic green or blue colouring on the wing.

The regular curving of the apex of the hinder-wing exists only in the males. Its character is well shown in the accompanying text-figure for which I am indebted to Messrs. H. and F. E. Champion.

The apex of the fore-wing is of the shape more usually seen and differs but little from that of allied genera such as *Bayadera* or *Anisopleura*.

The males of the section may be differentiated as follows:—

- A. Large species, hinder-wing exceeding 30 mm. in length ;  
its length bearing the ratio to its greatest breadth of  
about 5 : 1.
- a. Length of hinder-wing nearly 40 mm. Syntho-  
racic colour pattern similar to that of female.  
No longitudinal dorsal mark on segments 2-3  
of abdomen                   ...                   ...                   ... *P. dispar*,  
Ramb. Nilgiri  
Hills.
- b. Length of hinder-wing about 32 mm. Syntho-  
racic colour pattern shows specialization when  
compared with that of the female. A light  
longitudinal line on segments 2-3 of abdomen. *P. fraseri*, n. sp.  
W. Coast of  
India.
- B. Smaller form. Hinder-wing less than 25 mm. in length.  
Its length bearing the ratio 4 : 1 to its greatest breadth.  
Colour pattern of synthorax specialized<sup>1</sup>; black  
above, blue at the sides                   ...                   ...                   ... *P. impar*, Selys.
- a. Apical mark of hinder-wing about three-sevenths  
of wing-length                   ...                   ...                   ... Sub-sp. *impar*,  
Selys, Malacca.
- β. Apical mark of hinder-wing about two-fifths of  
wing-length                   ...                   ...                   ... Sub-sp. *inae-*  
*quipar*, Selys,  
Borneo.

Measurements of hinder-wings of species belonging to the  
section.

	Base of hinder- wing to nodus.	Nodus to apex.	Greatest breadth.
<i>P. dispar</i> , Ramb. ...	17.5 mm.	22.5 mm.	8 mm.
<i>P. fraseri</i> , n. sp. ...	12 mm.	20 mm.	6.5 mm.
<i>P. impar</i> , Selys ...	10 mm.	14 mm.	6 mm.

<sup>1</sup> The colour pattern of the synthorax of the females of the two species I have examined is, as will have been inferred, very much alike. It resembles also that found in *Bayadera*. I regard this pattern as probably primitive for the genus.