

XVIII NOTES ON ORIENTAL DRAGON-  
FLIES IN THE INDIAN  
MUSEUM, No. 2.

By F. F. LAIDLAW.

LIBELLULINAE.

Genus **Amphithemis**.

See Ris, *Monogr. Libell.*, pp. 88-91 in *Coll. Zoolog. Selys*, Fasc. IX, 1909.

Anal loop feebly developed, containing few cells. Arculus lying between the second and third antenodal nerve. Costal side of discoidal triangle of fore-wing relatively long, broken. Radial supplementary sector moderately developed, median supplement not at all. Proximal side of discoidal triangle of hind-wing a little distal to the arculus. Three or four median nerves on the hindwing. Discoidal triangle *followed by one or two rows of cells*, increasing.

Colouration black with yellow or brick-red markings; (adult male of *A. vacillans*, Selys, with pruinescence on basal segments of abdomen). Abdomen rather long, slender and cylindrical; segment 8 of female without dilatation. Legs long, the hairs on femora rudimentary.

The discovery of *A. mariae* necessitates a slight modification in the definition of the genus shown in the character italicized.

This interesting genus is confined to S. India and to the Indo-Chinese Peninsula so far as is at present known; the S. Indian species *A. mariae*, here described as new, being very distinct from its congeners. This distribution of a genus is somewhat unusual. Its nearest ally is *Pornothemis* from Sumatra and Borneo.

*A. mariae* is readily distinguished from the two remaining species by wing characters, the discoidal triangle in each wing being followed by a single row of cells, in *A. vacillans* and *A. curvistyla* by two rows. The Deccan species is moreover more brilliantly coloured, with bright yellow bands on the dorsum of the thorax.

The Burmese species are not so readily distinguished from one another. *A. curvistyla* is distinctly the smaller (hind-wing 18.22 mm. as opposed to 21.24 mm. in *A. vacillans*).

It has also much red on the abdomen, whilst *A. vacillans* has yellowish markings in the young male and female, its adult males having the body entirely black.

Males of these two species are well characterized by the anal appendages. In *A. vacillans* the upper pair are twice as long as the

lower appendage and end in a fine upturned point, in *A. curvistyla* the upper pair are about equal to the lower appendage, rather stout, curved downwards and divaricate from one another.

### *Amphithemis vacillans*, Selys.

2 ♂ ♂ 1 ♀  $\frac{4851}{20}$   $\frac{4852}{20}$   $\frac{4853}{20}$  Sibsagar, Assam.

These specimens were named by de Selys in whose handwriting are the labels. They are unfortunately in poor preservation, the best preserved specimen, an adult male, has the body entirely black. A male from the Abor Expedition collection, still more adult, has the second and third segments of the abdomen covered with bluish-white bloom.

*Distribution*: Burma, Assam.

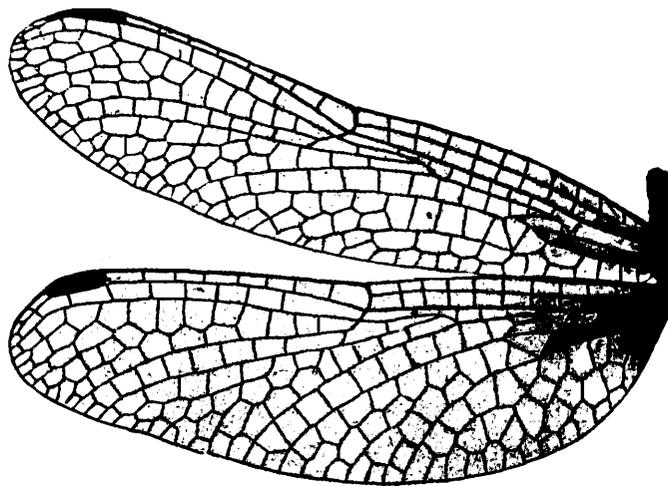


FIG. 1.—Wings of *Amphithemis mariae*, sp. n.

### *Amphithemis curvistyla*, Selys.

1 ♂ 1 ♀  $\frac{8254}{20}$   $\frac{246}{6}$  Sibsagar, Assam.<sup>1</sup>

As with the last species the specimens were named by de Selys. Their condition is too bad to admit of a satisfactory examination.

*Distribution*: Burma, Tonkin, Assam.

### *Amphithemis mariae*, sp. n.

4 ♂ 4 ♀ (in spirit.)  $\frac{8260}{20}$   $\frac{8259}{20}$   $\frac{8280}{20}$   $\frac{8279}{20}$   $\frac{8281}{20}$  Forest tramway, mile 29-30, 1600 ft.; Parambikulam, 1790-3200 ft., Cochin State, 16-24-ix-14 (*F. H. Gravely*).

(For the photograph reproduced in text-figure 1, I am much indebted to Messrs. H. and F. E. Campion).

*Types* ♂ ♀ in the Indian Museum.

<sup>1</sup> On several labels of specimens from this locality de Selys wrote "Palone." It is not clear what he means.

Abdomen ♂ 19 mm., ♀ 19 mm. Hind-wing ♂ 20 mm., ♀ 21 mm.

*Venation* characters (see text-fig.).

Wings relatively shorter and broader than in the other species of the genus. Triangles and supratrangles normally uncrossed. Cubito-anal (median) space of hind-wing with three cross-nerves. Discoidal triangles in both wings followed by a single row of cells; supplementary radial sector feebly developed. Base of wings tinged with yellow to level of discoidal triangles.

♂ Lower lip cream-colour edged with black. Upper lip, post- and anteclypeus and vertical part of frons also creamy-yellow; upper surface of frons, vertex, and occiput metallic green.

Prothorax black.

Thorax dorsal surface black with a broad greenish yellow humeral stripe on either side; inter-alar space brick-red. Lateral surface brownish yellow with two well-defined dark bands on either side, ventral surface yellow.

Abdomen. Segments 1, 2, 3 brick-red, the last with a narrow black terminal ring. The remaining segments black, 4-7 with a basal yellow ring, most marked laterally, and progressively smaller from before backward.

Legs black, first pair of femora with a yellow line on their posterior side.

Anal appendages black, rather short, upper pair regularly curved downwards, moderately stout. Lower appendage a little shorter than the upper pair. Resemble in general the appendages of *A. curvistyla*, Selys.

Genital structures on segment 2. Anterior lobe very small, hamulus on either side with a fine backwardly directed spur. Lobe of segment 2 small, triangular, curved a little forward.

♀ Head coloured as in the male.

Prothorax pale yellow.

Thorax brownish black anteriorly, with a pair of very wide pale yellow ante-humeral bands, much larger than those of the male and united above at the base of the wings. The rest of the thorax is pale yellow in colour.

Abdomen. Segments 1, 2, 3 pale yellow, 3 with a fine black terminal ring, 4-8 yellow at the base, the apical half of the segment (two-thirds in 8) black; the yellow ring divided dorsally by a fine black line along the mid-dorsal carina. Segments 9, 10 entirely black.

Legs as in the male, anal appendages black. Lateral margins of segment 8 not widened. Valvulae vulvae very small.

*Distribution* : Southern Peninsular India.

