

A new genus and a new species of Neuroptera (fam.: Hemerobiidae) from India

S K GHOSH

Zoological Survey of India, Western Regional Station, Poona 411 005

MS received 2 June 1977

Abstract. *Mixomicromus lampus* Gen. et sp. nov. is described in this paper.

Keywords. *Mixomicromus lampus*; Neuroptera

1. Introduction

During the course of studies on Neuroptera, the present author came across several specimens of Hemerobiidae collected from Poona, Maharashtra, the morphological features of which are quite interesting. The specimens have shared the characters of the genera *Sympherobius* and *Eumicromus* which are unlike the basic morphological pattern of other known genera of the family. Therefore erection of a new genus is felt necessary.

2. *Mixomicromus* gen. nov.

Forewing: Rs with 4 branches; M_{3+4} and Cu_1 very close together near base but not fused; outer and inner gradate series of cross veins regularly arranged; outer series well inside the series of forks of radial branches; *Hindwing*: M_{3+4} and Cu_1 completely separated.

Male genitalia: Anal plate elongated with a long ventral projection; 9th sternite very much elongated, tubular and produced beyond the apex of the anal plate. 10th sternite with distal lobe over the base of unpaired, short aedeagus; wings of the 10th sternite elongated; parameres fused basally.

3. Type species: *Mixomicromus lampus* sp. nov.

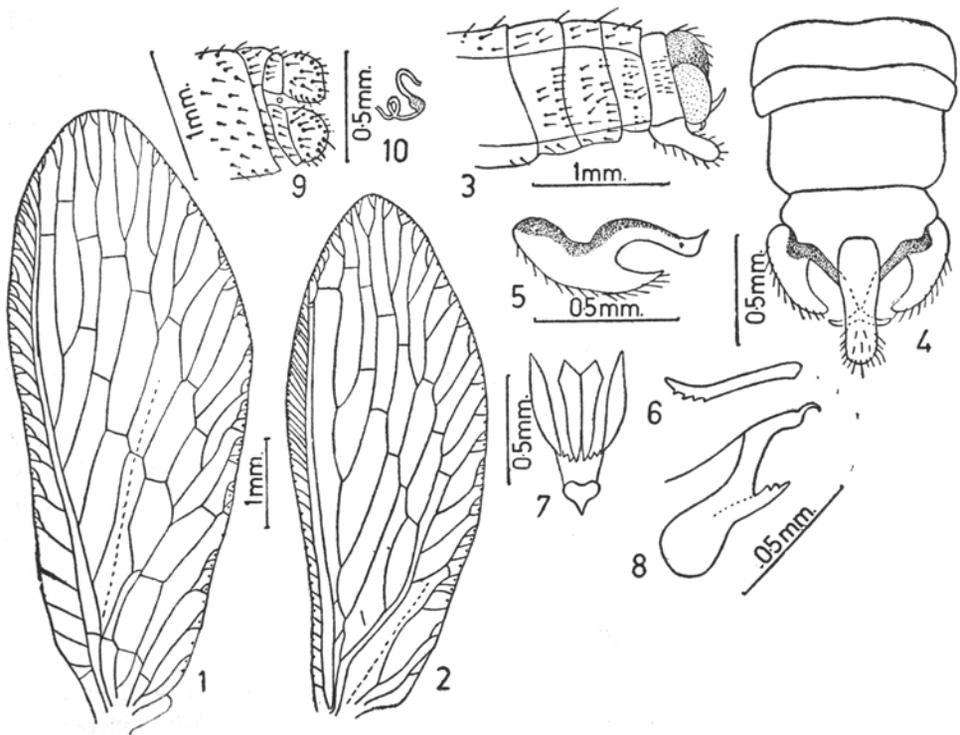
The new genus comes close to the genus *Sympherobius* (Banks 1904) in the presence of elongated tubular 9th sternite, unpaired aedeagus but can be easily differentiated from it by Rs with 4 branches; absence of recurrent humeral veinlet; by the complete outer gradate series of crossveins in the forewings and by the very elongated anal plate. The new genus agrees well with the genus *Eumicromus* Nakahara (1915 and 1960) in the wing characters viz. absence of recurrent humeral veinlet, the complete

gradate series of crossveins in the forewings and in the separation of M_{3+4} and Cu_1 in the hind wing, but the elongated, tubular 9th sternite in male produced beyond the apex of the anal plate and the shape of the male genitalia at once differentiate the new genus from *Eumicromus*.

However, Rs with 4 branches; two regularly arranged gradate crossveins, absence of recurrent humeral veinlets in the forewings, elongated anal plate with long ventral process, very elongated, tubular 9th sternite produced beyond the apex of the anal plate and the genitalia of the male are some unique features to distinguish it as a distinct genus.

3.1. Male

Clypeus and labrum shining brown; frons and genae creamy; mouth parts brown; vertex pale yellow with rather long, and dense pale hairiness; scape and pedicel yellow but the flagellum brown; pronotum yellow with a pair of lateral blackish brown stripes; meso- and metanotum blackish; legs pale yellow but tarsi brown; forewings (figure 1): elongated, oval; membrane pale with fuscous shadings in the posterior margin and in the outer and inner gradate series; all the crossveins dark brown; Rs with 4 branches; M_{3+4} and Cu_1 very close together near base but not fused; two regularly arranged gradate crossveins; outer series well inside the series of the radial



Figures 1-10. *Mixomicromus lampus* gen. et sp. nov. holotype, male. 1. forewing 2. hindwing 3. part of the abdomen, lateral 4. part of the abdomen, dorsal 5. anal plate, ventral 6. ventral process of the anal plate 7. 10th sternite, dorsal 8. aedeagus, lateral, allotype female 9. part of the abdomen, lateral 10. spermatheca.

forks; hindwing (figure 2): hyaline with pale venations and the brown crossveins; M_{3+4} and Cu_1 completely separated; abdomen (figures 3-8): brown, hairy; anal plate elongated, produced distally into oblong apex with long ventral process which is provided with 3-4 teeth at the apex and slightly incurved at the tip; 10th sternite with oblong lateral wings; dorso-distal lobe over the aedeagus relatively broad and slightly concave on the dorsal margin; aedeagus single, slightly expanded proximally with an acute apex; parameres fused basally, distally slightly separated; 9th sternite very much elongated, tubular, hairy at the tip and produced beyond the apex of the anal plate.

3.2 Female

Same as the male; the tip of the abdomen and spermatheca as in figures 9 and 10.

Holotype male India: Maharashtra, Sreeram lodge, Model Colony, Poona, 29.9.1976 Coll. R. H. Kamble. Allotype female and paratypes 1 male and 2 females: Collection data same as for the holotype. Types will in due course be deposited in the National Collection of Zoological Survey of India, Calcutta.

4. Notes

The specimens were captured at light in the evening. It is interesting to note that they are not available at night. At the time of collection the weather was quite pleasant and cool after the end of the rainy season and there are some small gardens with flowering plants, herbs, shrubs and trees nearby.

Acknowledgements

The author is indebted to B K Tikader, for providing necessary facilities to work and for his valuable suggestions and to R H Kamble, for the collection and providing the notes and to M Meinander, Universitetets Zoologiska Museum, N Jarnvagsgasgatan-13, Helsingfors, for kindly confirming the identity of the new taxa and going through the manuscript.

References

- Banks N 1904 A list of neuropteroid insects, exclusive of odonata, from the vicinity of Washington, D C; *Proc. Ent. Soc. Wash.* 6 201-217
Nakahara W 1915 On the Hemerobiinae of Japan; *Annot. Zool. Jpn* 9 11-48
Nakahara W 1960 Systematic studies on the Hemerobiidae; *Mushi* 34 1-69