

ON NEW AND LITTLE KNOWN SPECIES OF *STENARES* HAGEN
(MYRMELEONTIDAE : NEUROPTERA) FROM INDIA

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INTRODUCTION

Stenares Hagen is one of the derivatives of the highly composite genus *Myrmeleon* Linn. *Stenares hyaena* (Dalman) and *S. improbus* (Walker) were described under the genus *Myrmeleon* Linn. while *S. harpyia* (Gerstaecker) was described under *Palpares* Rambur. Banks (1913) referred to seven species of *Stenares* Hagen from different regions of the world of which *S. hyaena* (Dalman), *S. improbus* (Walker) and *S. harpyia* (Gerstaecker) are known to occur in India. Later, he (1931) described one more species, *S. frazeri* from Coorg, Karnataka. The author, while studying different species of *Stenares* Hagen from the old and recent survey collections lying at Zoological Survey of India, encountered a new species from Andhra Pradesh which has been described in the paper. Besides, a key to four Indian species examined along with illustrations, a literature review of a species and the suitable references have also been incorporated. Altogether five species including the new one are reported in the paper.

Key to Indian species of the genus *Stenares*

1. Hindwing unspotted with only distinct grey cloud at apex and apical half of hind margin.....*acutus*, sp. nov.
Hind wing spotted with distinct mark at apex and apical half of hind margin.....2
2. Hind wing with a black streak along outer edge just before pterostigma and the streak not extending across*hyaena* (Dalman)
Hind wing with a brown spot before pterostigma and the spot reaching across half of the wing3
3. Larger in size, forewing measuring about 68-72 mm in length; apical mark of hindwing in the form of two streaks.....*improbus* (Walker)
Smaller in size, forewing measuring about 62-65 mm in length; apical mark of hindwing entire or partly broken.....*harpyia* (Gerstaecker)

Stenares acutus, sp. nov.

♂ : Labrum, clypeus and frons; yellow and the first one with a row of golden brown hairs; palpi : shiny black; vertex : dark brown, black-spotted and the spots

variable in size; antenna : brown; pronotum : brownish-yellow, with a median, black, longitudinal stripe and a small, rounded black spot on either side; lateral margin black; with long black hairs; mesonotum : brownish-yellow; black patches in the convex areas and on wing roots; with greyish wooly hairs; metanotum : concolorous with mesonotum and covered with wooly hairs; wings (Fig. 12) : whitish and membranous; R with brown bands specially in forewing; all other veins and crossveins pale brownish; pterostigma indistinct, whitish; greyish cloud continuing from apex to half of the hind margin in hindwing; leg; hind coxa black; femur brown; tibia yellow; tarsi black; spur of hind tibia about as long as 3 basal tarsal segments taken together; claws black; with black hairs and bristles; abdomen : brown with short white hairs; tip of abdomen as in Figs. 1-3; ectoproct (Figs. 1-2) : elongated, apex acute, with a row of black bristles on the inner and long black hairs on the outer side in addition to several rows of small hairs all throughout; aedeagus (Figs. 1 & 3) : on ventral view deeply invaginated at middle forming two lobes and with a bunch of small black hairs at middle; laterally slightly curved about middle and apex subacute.

Measurements : ♂ : Length of body (with ectoproct), 45 mm; forewing, 62 mm; hindwing, 58 mm; ectoproct, 10 mm.

Material examined : 2 ♂♂ (holotype, Reg. No. 1181/H12 Paratype, 1 ♂, Reg. No. 1182/H12), India, Andhra Pradesh, Anantagiri, 20. v. 1984, Coll. S. S. Saha.

Distribution : India, Andhra Pradesh.

Remarks : The species differs from all other Indian species by the wing markings.

Stenares hyaena clara Navas

Stenares hyaena clara Navas, 1932, *Mem. Acad. Nuovi Lineei*, (11) 16 : 951.

Remarks : The subspecies has already been redescribed by Ghosh (in press) from Orissa Survey material along with the diagrams of head, pronotum and tip of abdomen in female. So, to avoid repetition all other data concerning locality, Measurements, distribution etc. have not been referred to here. However, the photograph (Fig. 15) of both wings which has not been given in the aforesaid paper has been included here for the sake of comparison with other Indian species.

Stenares improbus (Walker)

Myrmeleon improbus Walker, 1853, *Cat. Brit. Mus. Neur.*, p. 326.

Stenares improbus, MacLachlan, 1868, *J. Linn. Soc.*, 9 : 276; Needham, 1909, *Rec. Indian Mus.*, 3 : 200; Banks, 1913, *Ann. ent. Soc. Amer.*, 6 : 190; Ghosh & Sen, 1977 *Rec. zool. Surv. India*, 73 : 317.

Measurements : 1 ♂ : length of forewing, 72 mm.; hindwing, 67 mm.; 10 ♀♀ : length of forewing, 68-72 mm.; hindwing, 65-67 mm.

Material examined : 11 exs. (♂, ♀♀) : India, Karnataka : 2 exs., Coorg, Mercara,

10. iii. 1914; 1 ex., Coorg, v. 1913; 3 exs., Coorg, 10. iii. 1914; 1 ex., Coorg, date-nil; coll. Hannington. 1 ex., Karnataka, Bangalore, date-nil, coll. Cameron. 1 ex., Maharashtra Satara : Mahabaleswar, 4200 ft., 13-14. iv. 1912; 2 exs., Satara, Medha, Yenna valley, 2300 ft., 17-23. iv. 1912; coll. F. H. Gravely.

Distribution : India : "North India", Maharashtra, Karnataka.

Remarks : Since the description of the species by Walker (1853) it has been studied by the subsequent workers but the male and female genitalia have not been taken into account. Therefore an attempt has been made to provide the male genitalic structure by the illustrations of the ventral view of the tip of abdomen (Fig. 11) and the female genitalic structures represented by the shape of spermatheca as in Fig. 10 and also tip of female abdomen as in fig. 9. Besides, the photograph of fore-and hind wings (Fig. 13) has been included. The species hitherto reported from "North India" and Karnataka is for the first time recorded for Maharashtra.

Stenares harpyia (Gerstaecker)

Palpares harpyia Gerstaecker, 1863, *Stettin. ent. ztg.*, p. 180.

Stenares harpyia, Hagen, 1866, *Ibid.*, p. 456; Banks, 1913, *Ann. ent. Soc. Am.*, 6 : 190; Ghosh & Sen, 1977, *Rec. zool. Surv. India*, 73 : 317.

Measurements : 2 ♂♂ : length of forewing, 60 mm; hindwing, 55 mm; 2 ♀♀ : length of forewing, 62-65 mm; hindwing, 59-60 mm.

Material examined : 4 exs. (♂♂, ♀♀) : India, Andhra Pradesh, Anantagiri, 20. v. 1984, coll. S. S. Saha.

Distribution : India : Tamil Nadu and Andhra Pradesh.

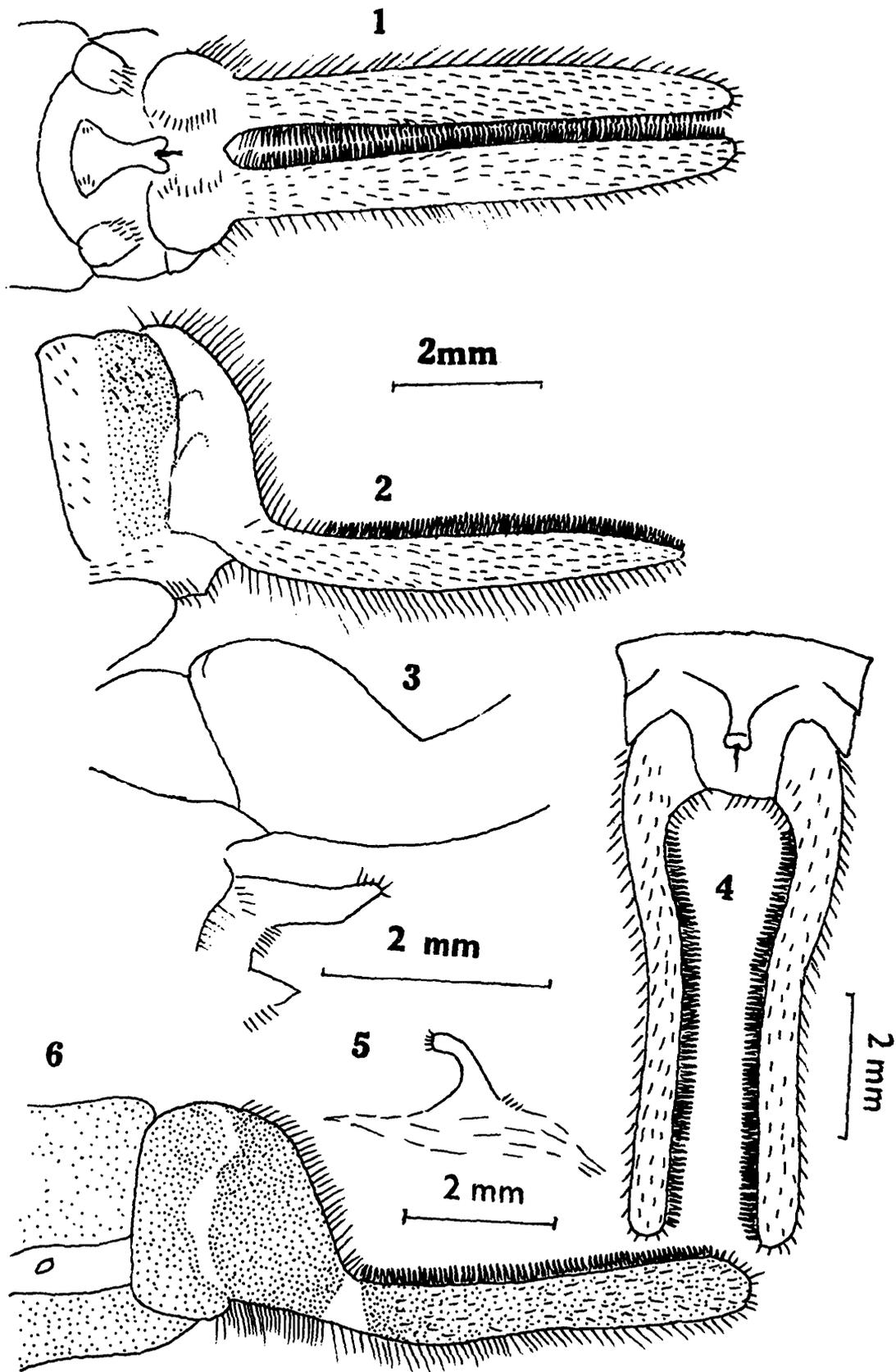
Remarks : The male and female genitalia of the species have been studied and the illustrations dealing with the genitalia in male (Fig. 5), spermatheca in female (Fig. 8) and tip of abdomen in both sexes (♂, Fig. 4 & 6, ♀♀, Fig. 7) have been provided. Besides, the photograph of fore and hind wings (Fig. 14) has been included. The species hitherto recorded from Tamil Nadu, is for the first time reported from Andhra Pradesh.

Stenares frazeri Banks

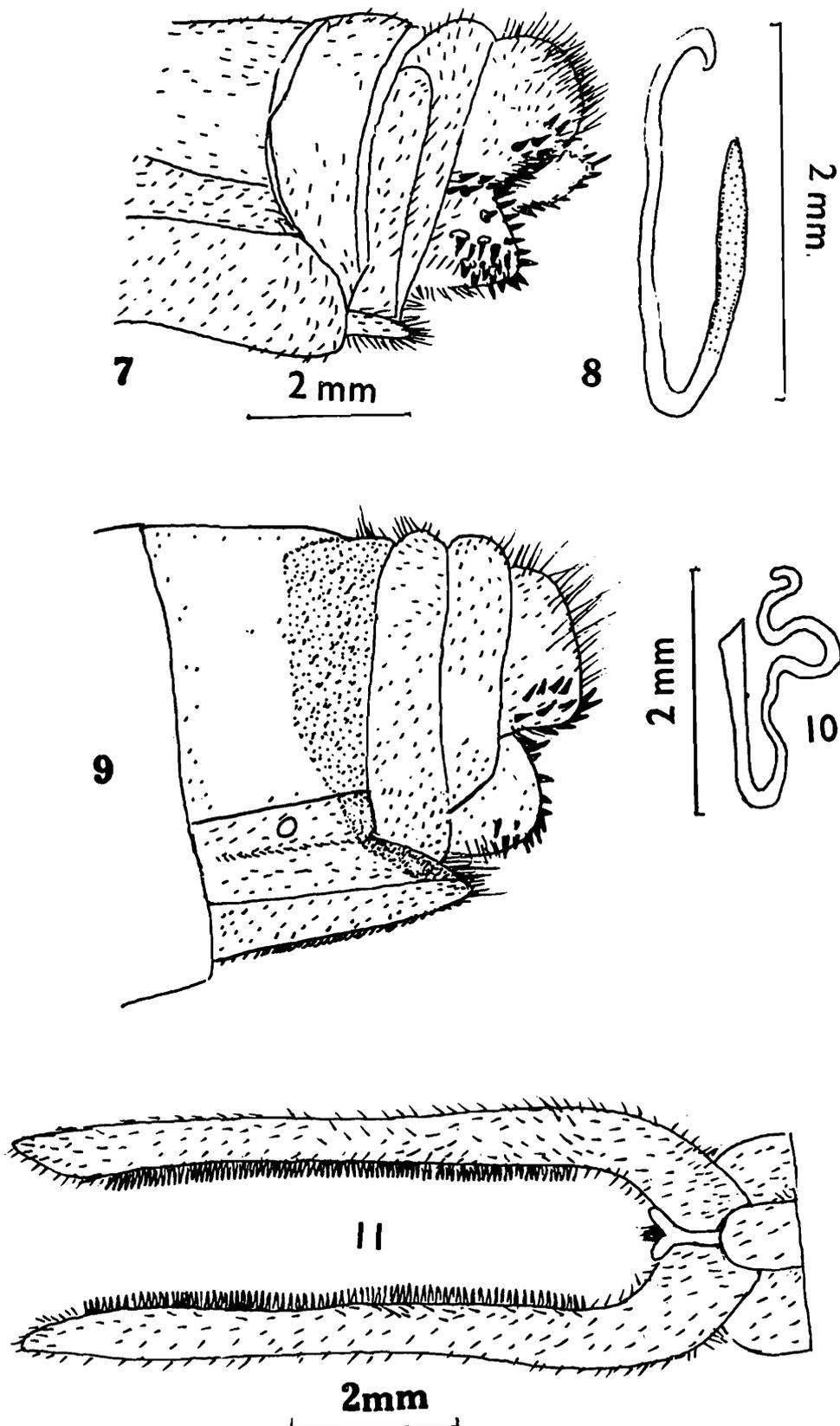
Stenares frazeri Banks, 1931, *Psyche*, 38 : 58; Ghosh & Sen, 1977, *Rec. zool. Surv. India*, 73 : 317.

Distribution : India : Karnataka.

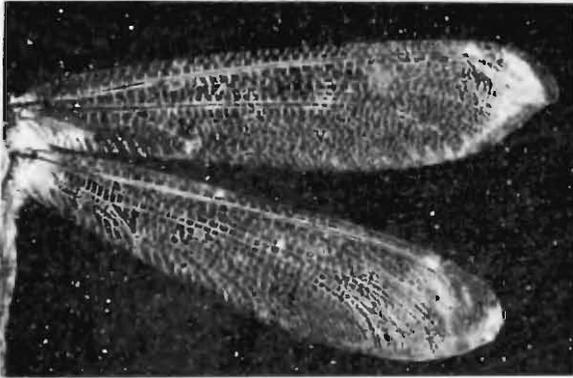
Remarks : Due to dearth of the material it has not been possible by the author to examine the species. However, it has been reviewed from literature. Banks (1931) described the species from Coorg, Karnataka. Though the species is very close to *S. improbus* (Walker) but the markings on pronotum, namely, a longitudinal median black stripe, lateral black mark on either side together with a dark dot above each at once distinguish the species from *S. improbus* (Walker).



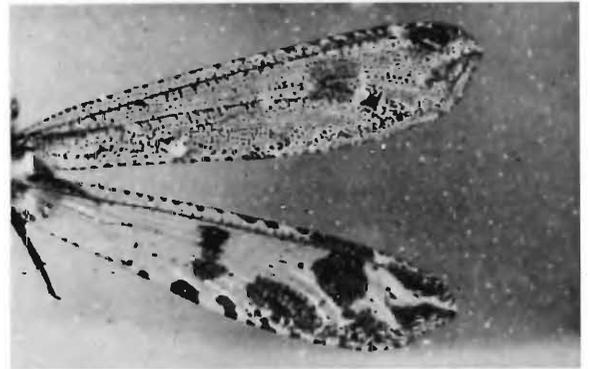
Figs. 1-6. *Stenares acutus*, sp. nov., male (1) tip of abdomen, ventral; (2) tip of abdomen, lateral; (3) tip of abdomen, lateral (magnified) showing aedeagus. *Stenares harpyia* (Gerstaecker) (4) tip of abdomen, male, ventral; (5) tip of aedeagus, lateral; (6) tip of abdomen, male, lateral.



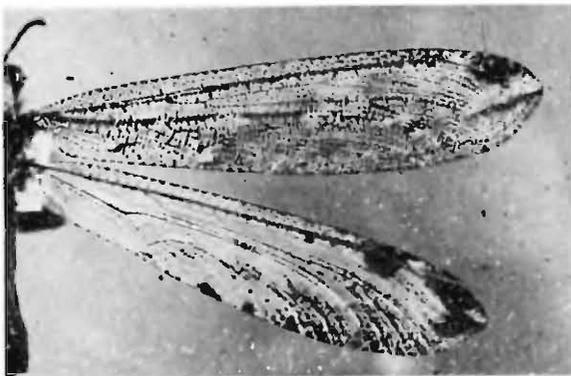
Figs. 7-11. *Stenares harpiya* (Gerstaedd) (7) tip of abdomen, female, lateral; (8) spermatheca, dorsal. *Stenares improbus* (Walker) (9) tip of abdomen, female, lateral; (10) Spermatheca, dorsal; (11) tip of abdomen, male, ventral.



12



13



14



15

Figs. 12-15. (12) *Stenares acutus*, sp. nov., fore-and hind wing; (13) *Stenares improbus* (Walker), fore-and hind wing; (14) *Stenares harpyia* (Gerstaecker), fore and hind wing; (15) *Stenares hyaena clara* Navas, fore-and hind wing.

SUMMARY

Five species including one new species of *Stenares* Hagen from India have been dealt with of which one has been reviewed from literature. A key to the species of the examined material together with a couple of new records has also been provided.

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