

ON A SMALL COLLECTION OF ASILIDAE (DIPTERA)
FROM ORISSA, INDIA

By

A. N. T. JOSEPH¹ & P. PARUI
Zoological Survey of India, Calcutta

ABSTRACT

This paper deals with 13 species of robberflies from Orissa, of which 3 species, viz., *Ommatius pseudokempi*, *Promachus obscurus* and *P. lehri*, are new. Out of the remaining 10 species, 9 are recorded for the first time from Orissa.

INTRODUCTION

During August 1983, one of us (P. Parui) undertook a survey of robberflies from Orissa State, the result of which is included in this paper. We have also included in it a few species which are present in the National Zoological Collection, Calcutta, and one example which belongs to a new species (*Promachus lehri*) is from Bihar. The species are arranged according to 'A Catalog of the Diptera of the Oriental Region' by Oldroyd (1975).

Types are deposited in the National Collection of the Zoological Survey of India, Calcutta.

Cophinopoda Hull

Cophinopoda Hull, 1958, *Proc. ent. Soc. Wash.* 60 : 251.

1. ***Cophinopoda chinensis*** (Fabricius)

Asilus chinensis Fabricius, 1794, *Ent. Syst.* 4 : 383.

Cophinopoda chinensis : Oldroyd, 1975, *A Catalog of Diptera of the Oriental Region*, 2 : 129.

Material examined : 1 ♂, 14.vi.1973, 2 ♂, 15.vi.1973 and 1 ♂, 17.vi.1973, all from Raimona, Coll. S. K. Gupta.

Remarks : This is a cosmopolitan species. It is the first record from Orissa.

***Michotamia* Macquart**

Michotamia Macquart, 1838, *Dipt. exot.* 1(2) : 72.

2. ***Michotamia aurata*** (Fabricius)

Asilus aurata Fabricius, 1794, *Ent. Syst.* 4 : 387.

Michotamia aurata : Oldroyd, 1975, *A Catalog of Diptera of the Oriental Region*, 2 : 130.

Material examined : 1 ♀, Mayurbhanj District : Baripada : Balidiya, 9.viii.1983 ; 3 ♂, 4 ♀, Sundargarh, 16.viii.1983 ; 1 ♂, 1 ♀, Sundargarh District : Sagbahal, 18.viii.1983 ; 8 ♂, 3 ♀, Sambalpur District : Rangli, 21.viii.1983 ; 1 ♂, Sambalpur District : Jhuripara, 23.viii.1983 ; 2 ♂, 2 ♀, Sambalpur District : Rangli B.D.O. Office compound, 24.viii.1983 ; 1 ♀, Dhenkanal District :

1. Marine Biological Station, Madras

Kapilas Deer Park, 28.viii.1983, all collected by P. Parui.

Remarks: This species is common in South India.

Ommatius Weidemann

Ommatius Wiedemann, 1821, *Dipt. exot.*: 213.

3. *Ommatius pseudokempi* sp. nov.

(Fig. 1)

A small black species with yellowish-brown legs, femora marked with a small black spot anteriorly and wings wholly hyaline or apically pale brownish. Male: length 9 mm., wing 6 mm.; female: length 10-11 mm., wing 7 mm.

♂: *Head* black with sparse grey tomentum; *mystax* black and pale yellow coloured, *fronto-orbital* bristles pale yellow and that of *ocellarium* black, *postcranium* sparsely

grey tomentose, hairs pale yellow, *postocular* bristles pale yellow and black. *Antenna* black, bristles of basal two segments black, 1 and 2 nearly equal in length, 3 much longer than the others. *Palpi* and *proboscis* black, the former with black hairs while the latter pale yellow haired.

Thorax black with grey and greyish-yellow tomentum; *pronotum* pale yellow haired with one black bristle on either side; *mesonotum* without *mediolongitudinal* stripe, tomentum though sparse covering most of *tergum*, bristles black and pale yellow; *pleuron* black with sparse grey tomentum, *scutellum* scarcely grey tomentose, sparse pale yellow hairs on disc and a pair of black bristles on the border; *metapleuron* with pale yellow bristles. *Halteres* pale yellow with brownish marking.

Legs predominantly yellowish-brown, remaining segments yellowish-brown with apex of tarsal segments dark brown, apex

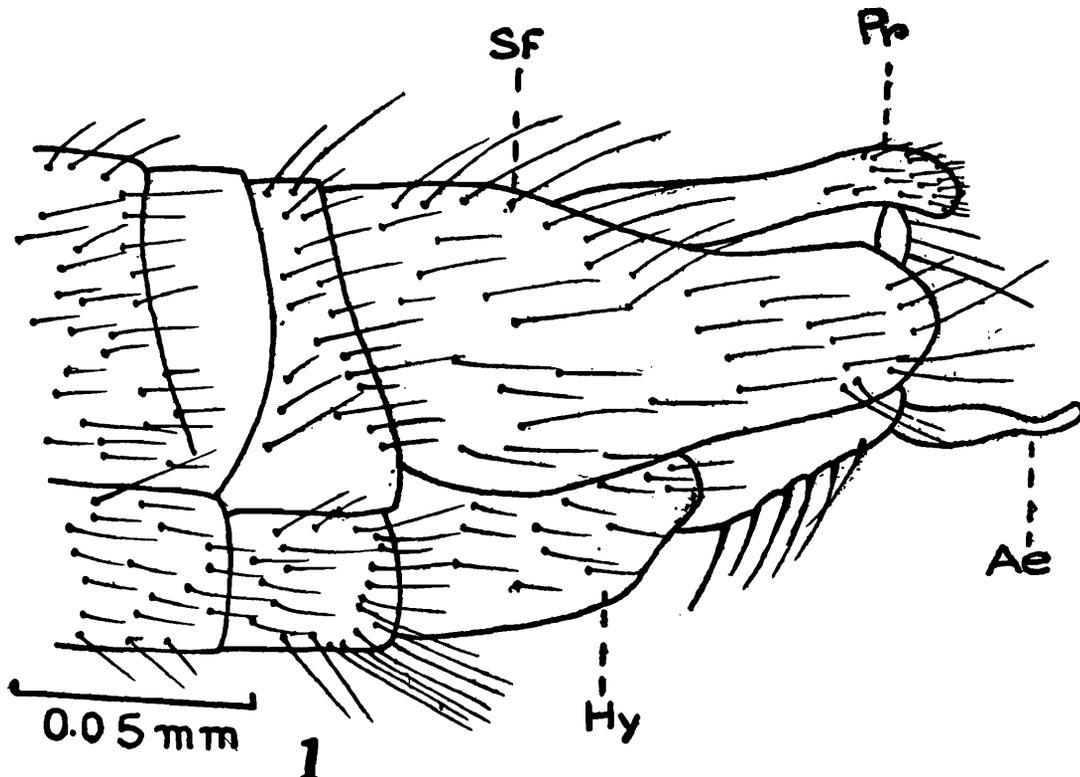


Fig. 1. Lateral view of male genitalia of *Ommatius pseudokempi* sp. nov.

of femur anteriorly with a black spot ; vestiture and bristles black and pale yellow.

Wings hyaline but apically pale brownish.

Abdomen black, sides of tergite 1 with pale yellow hairs and bristles, 2 and 3 with lesser number of pale yellow hairs, vestiture pale yellow and black. Male genitalia (Fig. 1) yellowish-brown with pale yellow and some black hairs.

♀ : Similar but with the following differences : head greyish-yellow and pale yellow tomentose or completely pale yellow tomentose ; postocular bristles pale yellow and black or wholly pale yellow ; scutellar bristles black and pale yellow ; wings wholly hyaline. Female genitalia black, tergite 9 hidden by tergite 8 and only slightly projected out laterally, cerci broad, gradually narrowed at apex and projected upwards with abundant black hairs.

The superior forceps of male genitalia in the species under consideration possesses an upper projection like that of *Ommatius kempfi* Joseph and Parui but otherwise a quite distinct species with mixed coloured mystax and details of male genitalia.

Holotype ♂, Reg. No. 7239/H6, Sambalpur District : Jhuripara, 23.viii.1983, Coll. P. Parui, *Paratypes* 2 ♀ Reg. No. 7240/H6 and 7241/H6, rest of details as in holotype.

4. *Ommatius jabalpurensis* Joseph and Parui

Ommatius jabalpurensis Joseph and Parui, 1983, *Ent. Scand.* 14 : 90.

Material examined : 1 ♂, Sundargarh District : Panderipani, 17.viii.1983, Coll. P. Parui.

Remarks : So far this species is recorded

only from Madhya Pradesh, this is the first record from Orissa.

Clephidroneura Becker

Clephidroneura Becker, 1925, *Ent. Mitt.* 14 : 68.

5. *Clephidroneura wilcoxi* Joseph and Parui

Clephidroneura wilcoxi Joseph and Parui, 1979, *Ent. Scand.* 10(1) : 35.

Material examined : 3 ♂, Sambalpur District : Rangli B.D.O. Office compound, 24.viii.1983, Coll. P. Parui.

Remarks : The species is so far recorded from South India, it is the first record from Orissa.

Philodicus Loew

Philodicus Loew, 1848, *Linn. Ent.* 3 : 391.

6. *Philodicus femoralis* Ricardo

Philodicus femoralis Ricardo, 1921, *Ann. Mag. nat. Hist.* (9) 8 : 190.

Material examined : 2 ♂, Sambalpur District : Rangli B.D.O. Office compound, 24.viii.1983, Coll. P. Parui.

Remarks : This species has been reported from West Bengal, Meghalaya, Uttar Pradesh, Bihar and Goa. It is recorded here for the first time from Orissa.

7. *Philodicus javanus* (Wiedemann)

Asilus javanus Wiedemann, 1819, *Zool. Mag.* (Wied.) 1(3) : 4.

Philodicus javanus : Oldroyd, 1975, *A Catalog of Diptera of the Oriental Region*, 2 : 149.

Material examined : 2 ♂, Keonjhar District : Ghat Gaon, 28.iii.1973, Coll. S.K. Mitra.

Remarks : Though it is the most common species in India, it is recorded for the first time from Orissa,

Promachus Loew

Promachus Loew, 1848, *Linn. Ent.* 3 : 390.

8. ***Promachus lehri*** sp. nov.

(Fig. 2)

A medium, black species with black legs, brownish wings with a smoky stripe in the marginal and first submarginal cells and well developed eighth sternite. Male : length 19-21 mm, wing 12-14 mm.

♂. *Head* as wide or wider than thorax, black, covered with greyish-yellow tomentum ;

Thorax black with greyish-yellow and grey tomentum ; pronotum pale yellow and black haired with a transverse row of black bristles ; mesonotum with a black medio-longitudinal stripe divided by a broad grey stripe, the stripe extending the entire length, sides with two black spots, vestiture black with some pale yellow hairs anterolaterally and posterolaterally, bristles predominantly black with a few pale yellow ones ; scutellum grey tomentose, disc pale yellow haired with a row of pale yellow bristles ; pleura greyish-yellow and grey tomentose with pale yellow, golden yellow and black hairs. Halteres with dark brown heads and yellowish-brown stalks.

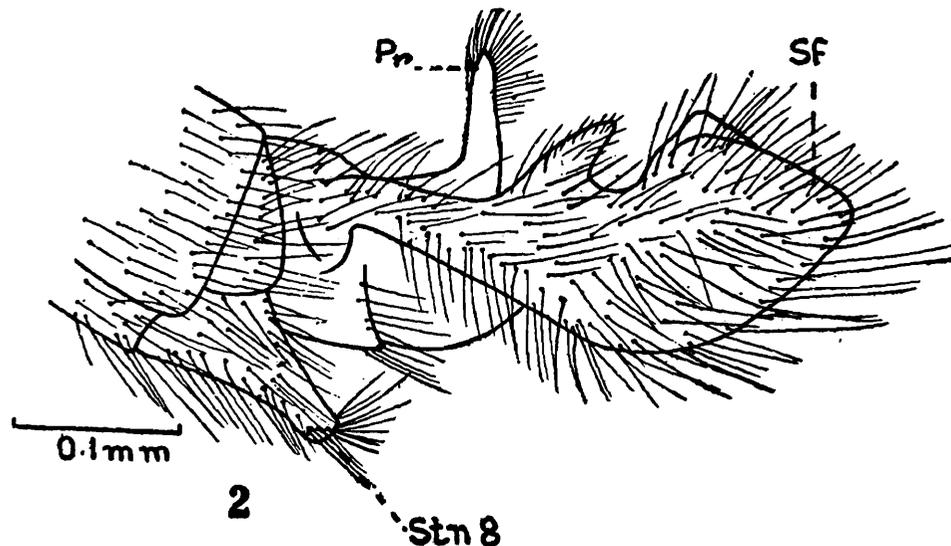


Fig. 2. Lateral view of male genitalia of *Promachus lehri* sp. nov.

mystax golden yellow, fronto-orbital hairs and ocellar bristles black ; postcranium pale yellow haired, postocular bristles black. Antennae dark brown, segment 1 with black and pale yellow bristles, 2 with black bristles, segment 2 slightly longer than half of 1, segments 3 and 1 nearly equal in length, style longer than segment 3. Palpi and proboscis black, the former golden yellow haired while the latter pale yellow haired.

Legs black, in fore and mid legs pale yellow and black hairs ventrally on the basal half, in hind legs the hairs wholly black, vestiture pale yellow and black, bristles black.

Wings brownish with a smoky stripe in the marginal and first submarginal cells.

Abdomen black with dense golden yellow hairs, density of hairs decreasing from the anterior to the posterior segments so such so

segment 7 devoid of yellow hairs, sides of tergite 2 onwards with black hairs which increase in posterior tergites and becoming wholly black in segment 7. Male genitalia (Fig. 2) black with black hairs, eighth sternite well developed, the dorsal tuft of white hairs absent.

Of the various known species, *Promachus lehri* sp. nov. is similar to *P. duvaucelii* (Macquart) differing from which in the robust size and stout male genitalia with a superior forceps inflated apically. It is named in honour of Dr. P.A. Lehr, Academy of Sciences, Vladivostak, USSR, who is a well known worker on Palaearctic Asilidae.

Holotype ♂, Reg. No. 7236/H6, Baripada District : Balidiya, 9.viii.1983, Coll. P. Parui. *Paratypes*. 1 ♂, Reg. No. 7237/H6, rest of details as in holotype ; 1 ♂, Res. No. 7238/H6, Bihar : Nalanda : Rajgir, 20.ix.1983, Coll. P. Parui.

9. *Promachus obscurus* sp. nov.

(Fig. 3)

A medium, black species with black legs, smoky brown wings and well developed

eighth sternite. Male : length 18 mm, wing 13 mm.

♂ *Head* as broad as thorax, black, sparsely grey tomentose ; mystax black, fronto-orbital bristles and ocellar bristles black ; postcranium black haired above and pale yellow haired below, postocular bristles black. Antennae black, segments 1 and 2 bearing black bristles, segment 2 slightly longer than half of 1, segments 3 and 1 nearly equal in length, style much longer than segment 3. Palpi and proboscis black, the former with black bristles while the latter pale yellow haired.

Thorax black with greyish-yellow tomentum ; pronotum black haired with a transverse row of black bristles ; mesonotum with a mediolongitudinal black stripe whose extent cannot be ascertained being greasy, laterally with two black spots, vestiture and bristles black ; scutellum on the disc with black hairs and four black bristles posteriorly, hind border with a row of black bristles ; pleura grey tomentose with black hairs. Halteres brown with the stalks lighter coloured.

Legs uniformly black, vestiture predomi-

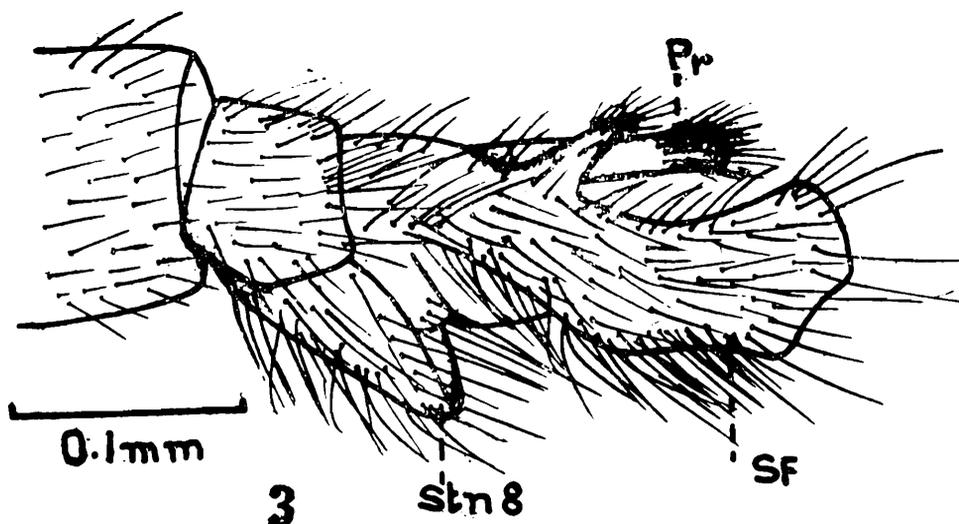


Fig. 3. Lateral view of male genitalia of *Promachus obscurus* sp. nov.

nantly black with some pale yellow hairs, bristles black.

Wings uniformly smoky-brown.

Abdomen black, sides of tergites 1 with a bunch of black hairs and bristles, segment 2 and to some extent 3 with a bunch of black hairs, vestiture black. Male genitalia (Fig. 3) black, eighth sternite well developed, hairs black but for the pale yellow ones on proctiger, the dorsal tuft of white hairs absent.

It is quite close to *Promachus genitalis* Joseph and Parui in male genitalia but differs in the entirely black mystax, occipital hairs and bristles, scutellar hairs and bristles and hairs of basal abdominal tergites. Besides wing is uniformly smoky-brown.

Holotype ♂, Reg. No. 7235/H6, Orissa : Sundargarh District : Panderipani, 17. viii. 1983, Coll, P. Parui.

10. *Promachus duvaucelii* (Macquart)

Trupanea duvaucelii Macquart, 1838, *Dipt. exct.* 1(2) : 97.

Promachus duvaucelii : Oldroyd, 1975, *A Catalog of Diptera of the Oriental Region*, 2 : 152.

Material examined : 1 ♂, Sundargarh District : Panderipani, 17. viii. 1983, Coll. P. Parui, 1 ♂, Sambalpur District : Rangli B. D. O. Office compound, 24. viii. 1983, Coll. P. Parui.

Remarks : It is the first record of the species from Orissa, though it is widely distributed.

11. *Promachus genitalis* Joseph and Parui

Promachus genitalis Joseph and Parui, *Bull. zool. Surv. India* (in press).

Material examined : 2 ♂, Sambalpur

District : Rangly B. D. O. Office compound, 24. viii. 1983, Coll. P. Parui.

Remarks : This species is described from Madhya Pradesh ; this is the second record of it.

12. *Promachus yerburiensis* Ricardo

Promachus yerburiensis Ricardo, 1920, *Ann. Mag. nat. Hist.* (9) 5 : 220.

Material examined : 1 ♂, Keonjhar District : Ghat Gaon village, 28. iii. 1973, Coll. S. K. Gupta and Party ; 2 ♂, 1. iv. 1973, other details as in preceding.

Remarks : This species is so far recorded from Kerala, Tamil Nadu and Karnataka. It is the first report from Orissa.

Trichomachimus Engel

Trichomachimus Engel, 1933, *Ark. Zool.* (A) 25(22) : 10.

13. *Trichomachimus orientalis* (Ricardo)

Asilus orientalis Ricardo, 1922, *Ann. Mag. nat. Hist.* (9) 10 : 46.

Trichomachimus orientalis : Oldroyd, 1975, *A Catalog of Diptera of the Oriental Region*, 2 : 156.

Material examined : 1 ♀, Dhenkanal District : Kapilas Deer Park, 28. viii. 1983, Coll. P. Parui.

Remarks : It is so far reported only from Assam. National Zoological Collection, Calcutta, contain specimens from Uttar Pradesh, Kashmir, and Delhi. This is the first record from Orissa.

ACKNOWLEDGEMENTS

We are indebted to Dr. B. K. Tikader, Director, Zoological Survey of India, Calcutta, for encouragements and facilities of work.

Abbreviation used in text-fig.

Ae, aedeagus ; Hy, hypandrium ; Pr, proctiger ; Sf, superior forceps (epandrium) ; Stn, eighth sternite.

REFERENCES

DOVER, C. 1921. The Dipterous insects of Barkuda Island, *Rec. Indian Mus.*, 22 : 393-396.

JOSEPH, A. N. T. and PARUI, P. 1983. New and little-known Indian Asilidae (Diptera) VI. Key to Indian *Ommatius* Wiedemann with descriptions of fourteen new species. *Ent. Scand.*, 14 : 85-97.

JOSEPH, A. N. T. and PARUI, P. On some Asilidae (Diptera) present in the B. P. Bishop Museum, Honolulu I. *Bull. zool. Surv. India* (in press).

MACQUART, P. J. M. 1838. Dipteres exotiques nouveaux ou peu connus. *Mem. Soc. Sci. Agric. et. Arts Lille*, 1 (2) : 5-207.

OLDROYD, H. 1975. A Catalog of the Diptera of the Oriental Region, 2, suborder Brachycera through Division Aschiza, suborder Cyclorrhapha, 459 pp. *Univ. of Hawaii Press*, Honolulu.

