

ASILIDAE (DIPTERA) FROM UTTAR PRADESH, INDIA

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INTRODUCTION

During May—June 1989 Dr. M. S. Shishodia and Sri P. Parui surveyed Western and Northern Uttar Pradesh for grasshoppers and robberflies. The asilids collected by this party and from time to time by other colleagues : Dr. R. K. Varshney, Dr. S. K. Gupta, and Dr. R. K. Ghosh, from the Zoological Survey of India, Calcutta, are reported in this paper. The generic arrangement followed is according to 'A Review of Asilidae (Diptera) from India' by Joseph and Parui (1990).

The types are deposited in the National Zoological Collections, Zoological Survey of India, Calcutta.

Genus *Michotamia* Macquart

1838. *Michotamia* Macquart, *Dipt. exot.* 1 (2) : 75.

Type species : *Michotamia analis* Macquart, 1838 : 72 ; monotypic.

1. *Michotamia aurata* (Fabricius)

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

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

Material examined : 2 ♀, Uttar Pradesh : Ghaziabad Dist. : Rangunathpur, 5.vi.1989, Coll. M. S. Shishodia.

Distribution : The species has been recorded from Andhra Pradesh, Bihar, Delhi, Goa, Karnataka, Kerala, Madhya Pradesh, Orissa, Pondicherry, Rajasthan and West Bengal. Here it is recorded for the first time from Uttar Pradesh.

Genus *Ommatius* Wiedemann

1821. *Ommatius* Wiedemann, *Dipt. exot.* 1 : 213.

Type species : *Asilus marginellus* Fabricius ; designated by Coquillett (1910 : 579).

2. *Ommatius shishodiai* n. sp. (Fig.)

A small black species with black and yellowish-brown legs, wings entirely hyaline or only anterior border yellow, and a clavate abdomen. Male : length 4-6 mm, wing 3-4 mm ; female : length 5-6 mm, wing 4-5 mm.

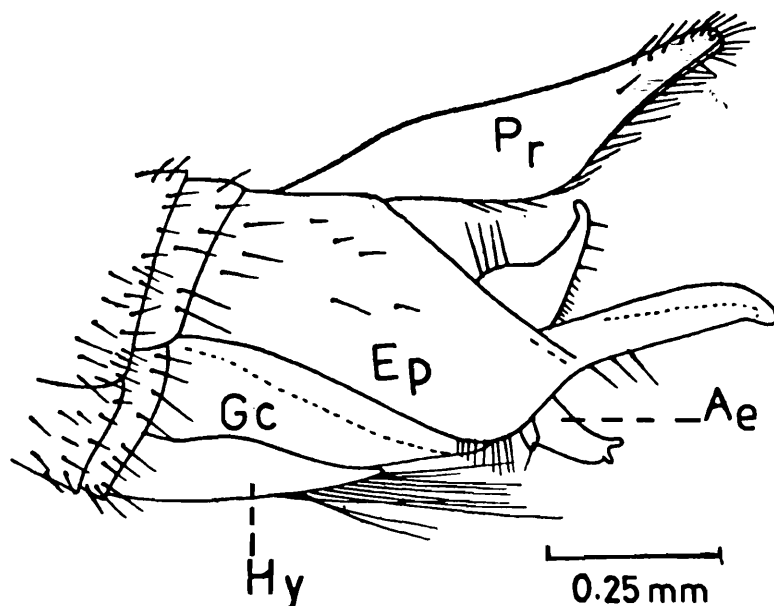


Fig. 1. Lateral view of male genitalia of *Ommatius shishodiai* n. sp.

Male : *Head* black, grey tomentose ; mystax wholly white or white with one or more upper bristles being black ; fronto-orbital setae white, ocellar bristles white or white and black, postocular bristles white, postoccipt almost bare, postgena with a few white setae. Antenna black, scape and pedicel with black or black and white bristles, length of scape variable from half to subequal to the length of pedicel, first flagellomere slightly longer than pedicel. Palpus and proboscis black with white setae.

Thorax black, sparsely grey tomentose ; pronotum with a pair of pale yellow bristles and sparse white setae ; scutum with the mediolongitudinal stripe usually indistinct, sometimes faintly discernible ; chaetotaxy : 2 notopleurals, 1 postalar, 2 supra-alars, 2 (rarely 3) dorsocentrals ; vestiture almost absent, bristles white and black ; scutellum inflated with shallow subapical groove, scutellar border with 2 short bristles, disc with scarce white setae ; katatergite with a few elongate, bristly white setae. Haltere pale yellow or yellowish-brown.

Legs largely black and yellowish-brown, sometimes the latter colour lighter, pale yellow ; coxa and trochanter black ; femur black except hind femur narrowly yellowish-brown at base, in a few examples fore and mid femora black dorsally and pale yellow ventrally with increased yellow area at base of hind femur ; tibia usually pale yellow with black apex, the extent of colour variable, basitarsus yellowish-brown with its apex and remaining segments black, hind basitarsus often more extensively black ; vestiture white and black, latter predominant, bristles black, femur ventrally with bristly white setae, which in hind femur form ventral and posteroventral rows.

Wing hyaline, or hyaline with anterior border yellow tinged.

Abdomen weakly clavate, black with hind border of each tergum narrowly pale yellow, tergum 1 laterally with a cluster of long, white setae, tergum 2 with similar but fewer bristles, vestiture otherwise white or black or both intermingled. Male genitalia (Fig.) black and yellowish-brown, setae white and black.

Female : Similar with the following differences : upper side of mystax usually with more black bristles, ocellar bristles usually wholly black ; chaetotaxy : 2-3 dorso-centrals ; legs more extensively yellowish-brown. Genitalia black, proctiger lighter coloured with dense grey tomentum and apex obtuse, sternum 8 truncate at apex, on either side with an elongate, bristly seta.

Holotype ♂, Reg. 7716/H6, Uttar Pradesh : Bulandshahr : Gulawthi, 2.vi.1989, Coll. M. S. Shishodia. *Paratypes* 1 ♀, Reg. No. 7717/H6. 4.v.1989, rest of details as in holotype ; 2 ♂, 3 ♀, Rsg. No. 7718/H6 to 7722/H6, 26.v.1989, rest of data as in holotype ; 11 ♂, 3 ♀, Reg. No. 7723/H6, remaining data as in holotype.

Ommatius andamanensis Joseph and Parui, *O. nilgiriensis* Joseph and Parui and *O. shishodiai* n. sp. are closely similar, all of which can be separated by the details of male genitalia. Furthermore *O. shishodiai* n. sp. has black femur. It is named in honour of our esteemed colleague Dr M. S. Shishodia, who has helped us in our several field trips.

Genus *Stichopogon* Loew

1847. *Stichopogon* Loew, *Linn. Ent.* 2 : 499.

Type species : *Dasypogon elegantulus* Wiedemann, 1820 ; original designation.

3. *Stichopogon inaequalis* (Loew)

1847. *Dasypogon inaequalis* Loew, *Linn. Ent.* 2 : 505.

1975. *Stichopogon inaequalis* : Oldroyd, *A Catalog of Diptera of the Oriental Region*, 2 : 129.

Material examined : 1 ♀, Uttar Pradesh : Balanshahr Dist. : Gulawthi, 2.v.1989, Coll. M. S. Shishodia.

Distribution : It has already been reported from Andaman Islands, Andhra Pradesh, Bihar, Goa, Maharashtra, Rajasthan and Tamil Nadu. Here it is reported for the first time from Uttar Pradesh.

4. *Stichopogon meridionalis* Oldroyd

1948. *Stichopogon meridionalis* Oldroyd, *Entomologist's mon. Mag.* 84 : 261.

1990. *Stichopogon meridionalis* : Joseph & Parui, *Rec. zool. Surv. India*, Occ. Paper No. 113 : 42.

Material examined : 1 ♂, 2 ♀, Uttar Pradesh : Meerut Dist. : Baghpet, 23.v.1989 ;

2♂, 1♀, Meerut Dist. : Modi Nagar, 24.v.1989 ; 3♀, Bulandshahr Dist. : Bulandshahr : Gulawthi, 2.vi.1989, all Coll. M. S. Shishodia.

Distribution : It is already recorded from Andhra Pradesh, Gujarat, Karnataka, Kerala, Rajasthan, Tamil Nadu and West Bengal. It is the first report of the species from Uttar Pradesh.

5. *Stichopogon tomentosus* Oldroyd

1948. *Stichopogon tomentosus* Oldroyd, *Entomologist's mon. Mag.* **84** : 263.

1990. *Stichopogon tomentosus* : Joseph & Parui, *Rec. zool. Surv. India*, Occ. Paper No. 113 : 42.

Material examined : 2♂, 2♀, Uttar Pradesh : Meerut Dist. : Baghpet, 23.v.1989, Coll. M. S. Shisodia.

Distribution : It has been recorded from Andaman Islands, Bihar, Karnataka, Rajasthan and West Bengal. Here it is recorded for the first time from Uttar Pradesh.

Genus *Clephroneura* Becker

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

Type species : *Asilus xanthopus* Wiedemann ; designated by Oldroyd (1938 : 450).

6. *Clephroneura nelsoni* Joseph & Parui

1979. *Clephroneura nelsoni* Joseph & Parui, *Ent. Scand.* **10** (1) : 33.

Material examined : 4♂, 1♀, Uttar Pradesh : Ghaziabad Dist. : Raghunathpur, 5.vi.1989, Coll. M. S. Shishodia.

Distribution : It has been reported from Bangalore and Tamil Nadu. Here it is recorded for the first time from Uttar Pradesh.

Genus *Machimus* Loew

1849. *Machimus* Loew, *Linn. Ent.* **4** : 1.

Type species : *Asilus chrystis* Meigen : designated by Coquillett (1910).

7. *Machimus angularis* (Ricardo)

1922. *Tolmerus angularis* Ricardo, *Ann. Mag. nat. Hist.* (9) **10** : 64.

1975. *Machimus angularis* : Oldroyd, *A Catalog of Diptera of the Oriental Region*, **2** : 144.

Material examined : 1♂, Uttar Pradesh : Mussorie, 24.ix.1989, Coll. R. K. Ghosh.

Distribution : It has been recorded from Himachal Pradesh, Uttar Pradesh and West Bengal.

8. *Machimus indicus* Joseph & Parui

1986. *Machimus indicus* Joseph & Parui, *Rec. zool. Surv. India*, Occ. Paper No. 96 : 27.

Material examined : 4 ♂, 2 ♀, Uttar Pradesh : Mussorie Municipal Garden, 2000 m. 3.vii.1978, Coll. R. K. Varshney and party ; 1 ♂, Uttar Pradesh : Uttar Kashi Dist. : Nakwi, 2.xi.1989, Coll. S. K. Gupta.

Distribution : The species was described from Uttar Pradesh.

9. *Machimus subgenitalis* Bromley

1939. *Machimus subgenitalis* Bromley, *Rec. Indian Mus.* 37 : 221.

1983. *Machimus subgenitalis* : Joseph & Parui, *Oriental Ins.* 17 : 356.

Material examined : 1 ♂, Uttar Pradesh : Uttar Kashi, 3.xi.1989, Coll. S. K. Gupta.

Distribution : It has been reported only from Himachal Pradesh and West Bengal. Here it is reported for the first time from Uttar Pradesh.

Genus *Philodicus* Loew

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

Type species : *Asilus javanus* Wiedemann, 9 ; original designation.

10. *Philodicus femoralis* Ricardo

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

1990. *Philodicus femoralis* : Joseph & Parui, *Rec. zool. Surv. India*, Occ. Paper No. 113 : 61.

Material examined : 2 ♂, Uttar Pradesh : Meerut Dist. : Pratappur, 2.vi.1989 ; 2 ♂, Meerut Dist., 23.vi.1989 ; 1 ♂, 1 ♀, Meerut Dist. : Baghpet, 25.vi.1989 ; 4 ♂, 3 ♀, Bulandshahr Dist. : Sikandrabad, 31.v.1989 ; 2 ♂, 3 ♀, Bulandshahr Dist. : Khurja, 1.vi.1989 ; 2 ♂, 3 ♀, Ghaziabad Dist. : Raghunathpur, 5.vi.1989 ; Ghaziabad Dist. : Raghunathpur, 5.vi.1989 ; 2 ♂, Ghaziabad Dist. : Salarpur Kalan, 6.vi.1989 ; 7 ♂, 2 ♀, Ghaziabad Dist. : Noida, 1.vi.1989, all Coll. M. S. Shishodia.

Distribution : It is a widely distributed species. It has been recorded from Assam, Arunachal Pradesh, Bihar, Goa, Gujarat, Himachal Pradesh, Karnataka, Kerala, Meghalaya, Orissa, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal.

11. *Philodicus javanus* (Wiedemann)

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

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

Material examined : 1 ♂, Uttar Pradesh : Uttar Kashi Dist. ; Nakuri, 2.xi.1989, Coll. S. K. Gupta.

Distribution : It has been reported from Assam, Arunachal Pradesh, Bihar, Himachal Pradesh, Karnataka, Rajasthan, Sikkim, Tamil Nadu, Uttar Pradesh and West Bengal.

Genus *Trichomachimus* Engel

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

Type species : *Machimus pubescens* Ricardo ; original designation.

12. *Trichomachimus pubescens* (Ricardo)

1922. *Machimus pubescens* Ricardo, *Ann. Mag. nat. Hist.* (9) 10 : 67.

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

Material examined : 1 ♂, Uttar Pradesh : Uttar Kashi Dist. : Nakuri, 2.xi.1989, Coll. S. K. Gupta.

Distribution : It has been recorded from Arunachal Pradesh, Sikkim and West Bengal. Here it is reported for the first time from Uttar Pradesh.

SUMMARY

Twelve species of asilids are reported from Uttar Pradesh. Of these one, *Ommatius shishodiai*, is a new species, and seven species, *Stichopogon inaequalis* Loew, *S. meridionalis* Oldroyd, *S. tomentosus* Oldroyd, *Michotamia aurata* Fabricius, *Clephydroneura nelsoni* Joseph & Parui, *Machimus subgenitalis* Bromley and *Trichomachimus pubescens* (Ricardo), are new records to Uttar Pradesh.

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ABBREVIATIONS

Ae, aedeagus ; Ep, epandrium ; Gc, gonocoxite ; Hy, hypandrium ; Pr, proctiger

REFERENCES

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- Joseph, A. N. T. and Parui, P. 1989. On some Asilidae (Diptera) from India present in the Smithsonian Institution II. *Oriental Ins.* 23 : 193-203.