ASILIDAE (DIPTERA) FROM GOA, KARNATAKA AND TAMIL NADU

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INTRODUCTION

Since asilid fauna of Goa is poorly known, it was intensively surveyed by us in November 1989. On our way from Madras to Goa by road, localities near our camps in Tamil Nadu and Karnataka were also surveyed. The collections made during this survey and one specimen of Clephydroneura wilcoxii Joseph & Parui collected by Sri K. Ilango from Madras are reported in the paper. The arrangement of genera followed in this paper is according to 'A Review of the Asilidae (Diptera) from India' by Joseph & Parui (1990).

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

Genus Lobus Martin


Type species: Leptogaster pallipes Janssens; original designation.

1. Lobus bandipurensis n. sp. (Fig. 1)

A slender black fly with black, pale yellow and yellowish-brown legs, and infuscated wings. Male: length 11 mm, wing 7 mm; female: length 12 mm, wing 8 mm.

Male: Head black with sparse grey and greyish-yellow tomentum; mystax white, postcranium with pale yellow setae, postgena with white setae. Antenna dark brown with black bristles on scape and pedicel, scape about two-thirds length of pedicel, first flagellomere elongate, style nearly as long as first flagellomere and gradually thickened distally. Palpus and proboscis black, former with black and latter with white setae.

Thorax black with greyish-yellow and grey tomentum; scutum with a faint medio-longitudinal black stripe extending from anterior border to near hind border, the stripe anteriorly divided by a still fainter narrow, greyish-yellow stripe; chaetotaxy:
1 notopleural, 1 postalar (weak), 1 supra-alar; vestiture pale yellow, bristles black and pale yellow; scutellar border with about 3 rows of pale yellow setae, disc with a few setae basally; pleura with dense, greyish-white tomentum, anepisternum and katepisternum anteriorly bearing white setae. Haltere pale yellow, with stalk lighter coloured

Legs black, pale yellow and yellowish-brown; coxa and trochanter black; fore femur pale yellow with black apex, tibia pale yellow with black anteriorly and apically, basitarsus pale yellow for two-thirds distance from base and remained black, remaining tarsal segments black; mid femur black with base narrowly pale yellow and subapex narrowly yellowish-brown, mid tibia similar to that of fore tibia but black colour occupies more area, tarsus similar to that of fore tarsus; hind femur similar to that of mid femur but the median black area less extended, tibia less than one-fourth pale yellow basally and the rest black, tarsus similar to that of mid tarsus but basitarsus
pale yellow only for about one-third distance; fore tibia and basitarsus ventrally and hind tibia and basitarsus posteroventrally with mat of golden yellow pubescence; vestiture white and black, bristles black and pale yellow.

Wing infuscated.

Abdomen black, tergum 1 with a basal, transverse row of black and pale yellow bristles, and a few, long pale yellow setae laterally, vestiture white and black. Male genitalia (Fig. 1) yellowish-brown and black with white setae.

Female: Quite similar but with the following differences: postcranium and pleura of thorax predominantly greyish-yellow tomentose; abdominal terga 4-7 with grey tomentum both on anterior and posterior borders. Female genitalia black with white setae, sternum 8 apically with a median, shallow depression, proctiger narrowed from middle to apex.


Lobus bandipurensis n. sp. is similar to L. martini Joseph & Parui, in the presence of more than two rows of setae on the border of scutellum, but is recognised by its larger size and differences in the structural details of the male genitalia.

Genus Nusa Walker


Type species: Nusa aequalis Walker; designated by Hermann (1912 : 243).

2. Nusa shevaroyensis n. sp. (Fig. 2)

A medium black species with grey and greyish-yellow tomentum, black legs, dark brown wings, and distinctive male genitalia. Male: length 13 mm, wing 7 mm.

Male: Head broader than thorax, black with sparse grey tomentum; mystax white with a few black bristles below on either side, fronto-orbital setae and ocellar bristles black, postgena with dense white setae, postocular bristles consist of 3 long ones and a row of comparatively shorter ones. Antenna black, scape and pedicel bear white and black bristles, pedicel slightly shorter than scape, first flagellomere short. Palpus and proboscis black with white setae.

Thorax black, grey tomentose; pronotum with a transverse row of black bristles medially and a few pale yellow setae laterally; scutum with a mediolongitudinal black stripe extending from anterior border to slightly beyond transverse suture, the stripe dividing it absent, sides with two black, contiguous spots; chaetotaxy: 2 notopleurals, 2 postalars, 3 supra-alars; scutellum with hind border bearing a row of 8 bristles, disc
with sparse, short, black setae; katatergite with a bunch of long, white, and two or three black, bristly setae. Haltere yellowish-brown.

Legs black, hind femur with 3 white bristles posteriorly, fore and mid tibiae with dense, elongate, white bristly setae, vestiture white and black, the former predominant in fore and mid legs and the latter in hind leg, bristles black and white, fore tibia and tarsal segments ventrally and hind tibia at apex ventrally and on tarsal segments ventrally with mat of golden yellow setae.

Wing dark brown; R₅ and M₁ united well before the border.

Abdomen black, tergum 1 with three, tergum 2 with two, and terga from 3-5 with one white bristles laterally, vestiture pale yellow. Male genitalia (Fig. 2) black with black setae.


It is distinguished from all the other known Indian species by the distinctive male genitalia. According to our key (1987) to species of *Nusa* from India and adjoining countries it runs to couplet 4. Of the two species under it, *N. aequalis* Walker and *N. elva* (Walker), it is closer to the former from which it differs in the black scape and legs, dark brown wing and in the absence of lateral grey spots on abdomen. The male genitalia of *N. aequalis* Walker is not known to us for comparison.

Genus *Michotamia* Macquart


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

3. *Michotamia aurata* (Fabricius)

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


*Distribution*: This species has been recorded from Andhra Pradesh, Bihar, Delhi, Karnataka, Kerala, Madhya Pradesh, Orissa, Pondicherry, Rajasthan and West Bengal. Here it is recorded for the first time from Goa. The species was described from "East India".

4. *Michotamia fuscifemorata* Joseph & Parui


**Distribution:** This species has been recorded from Andhra Pradesh, Karnataka and Kerala in India, and from Bangladesh and Nepal. Here it is recorded for the first time from Goa.

**Genus Stichopogon Loew**


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

5. *Stichopogon inaequalis* (Loew)


*Distribution:* It has been recorded from the following localities in India: Andaman Islands, Andhra Pradesh, Bihar, Maharashtra, Rajasthan and Tamil Nadu. Here it is recorded for the first time from Goa. The species was described from the Palaearctic Region.

6. *Stichopogon meridionalis* Oldroyd


*Distribution:* It has been reported from the following localities in India: Andhra Pradesh, Gujarat, Karnataka, Kerala, Rajasthan, Tamil Nadu and West Bengal. It is recorded for the first time from Goa. The species was described from Tamil Nadu and Sri Lanka.

**Genus Clephydroneura Becker**


*Type species:* *Asilus xanthopus* Wiedemann; designated by Oldroyd (1938 ; 450).
7. **Clephydroneura nelsoni** Joseph & Parui


*Distribution*: The species has so far been recorded only from Tamil Nadu. Here it is recorded for the first time from Karnataka.

8. **Clephydroneura pulla** Oldroyd


*Distribution*: The species was described from Andhra Pradesh, subsequently it has been recorded from Karnataka and Tamil Nadu.

9. **Clephydroneura wilcoxi** Joseph & Parui


*Distribution*: The species has been reported from Andhra Pradesh, Karnataka and Tamil Nadu. Here it is recorded for the first time from Goa.

Genus **Machimus** Loew


*Type species*: *Asilus chloris* Meigen; designated by Coquillett, 1910.

10. **Machimus parvus** Ricardo


*Distribution*: The species has so far been recorded from Kerala and Tamil Nadu. Here it is recorded for the first time from Karnataka.
Genus Philodicus Loew


*Type species*: *Asilus javanus* Wiedemann, 1819 : 4 ; original designation.

11. Philodicus femoralis Ricardo


*Distribution*: In India this species has been recorded from Assam, Arunachal Pradesh, Bihar, Goa, Gujarat, Himachal Pradesh, Karnataka, Kerala, Meghalaya, Orissa, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal. It was described from Burma.

12. Philodicus javanus (Wiedemann)


*Distribution*: It has been reported from Assam, Arunachal Pradesh, Bihar, Himachal Pradesh, Karnataka, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal. The species was described from Goa.

13. Philodicus pruthii Bromley


*Distribution*: It is known from Andhra Pradesh, Karnataka, Kerala, Rajasthan and Tamil Nadu. The species was described from Tamil Nadu.

Genus Promachus Loew


14. Promachus duvaucelii (Macquart)


Distribution: It is known from Andhra Pradesh, Delhi, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal. It is recorded here for the first time from Goa.

SUMMARY

The paper deals with 14 species of 8 genera from Goa, Karnataka and Tamil Nadu. Of these 2 species, Lobs bandipurensis and Nusa shevaroyensis, are new; 6 species, Michotamia aurata (Fabricius), M. fuscifemorata Joseph & Parui, Stichopogon inaequalis (Loew), S. meridionalis Oldroyd, Clephydronoeura wilcoxi Joseph & Parui and Promachus duvaucelii (Macquart), are recorded for the first time from Goa; and yet Clephydronoeura nelsoni Joseph and Parui and Machimus parvus Ricardo, are new reports from Karnataka.

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Abbreviations: Ae, aedeagus; Ep, epandrium; Go, gonocoxite; Lo, lobs; Pr, proctiger.

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