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**A NEW SPECIES OF THE GENUS *LOBUS* MARTIN (DIPTERA:  
ASILIDAE) FROM WEST BENGAL, INDIA**

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**Summary.** *Lobus lineatus* Naskar, Banerjee et Parui, **sp. n.** is described and illustrated from Darjeeling district of West Bengal, India. New species is similar to *L. bandipurensis* Joseph et Parui, 1993 but differs from latter in bifurcated epandrium. A key to eight Indian species of the genus *Lobus* Martin, 1972 is provided also.

**Key words:** Diptera, Asilidae, Leptogasterinae, taxonomy, new species, key, Asia.

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**Новый вид рода *Lobus* Martin (Diptera: Asilidae) из Западной Бенгалии, Индия // Дальневосточный энтомолог. 2018. N 367. С. 21-25.**

**Резюме.** Из Дарджилинга (Индия: Западная Бенгалия) описан новый для науки вид *Lobus lineatus* Naskar, Banerjee et Parui, **sp. n.** Новый вид сходен с *L. bandipurensis* Joseph et Parui, 1993, но отличается от последнего раздвоенным гипандрием. Приведена определительная таблица 8 индийских видов рода *Lobus* Martin, 1972.

**INTRODUCTION**

*Lobus* Martin, 1972 currently includes 15 species (Pape & Thompson, 2018). Their distribution is mainly restricted to the Oriental and Ethiopian regions, except for *L. guineae* Martin, 1972, which is described from Australasian region. In the Oriental region, the genus comprises of seven species; all were recorded from India (Joseph & Parui, 1993): two species (*L. himalayae* and *L. keralae*) have been described by Martin (1972); other five species (*L. bandipurensis*, *L. evenhuisi*, *L. jairami*, *L. martini* and *L. pandai*) have been discovered by Joseph & Parui (1983; 1984; 1991; 1992; 1993; 1998). One new species of *Lobus* is described and illustrated in present paper.

**MATERIALS AND METHODS**

The material of the new species was originally collected from the then Darjeeling district of West Bengal, presently situated in Darjeeling district of West Bengal, India, representing an important part of Central Himalayan landscape. The specimen was studied under Leica

EZ4 HD stereo zoom microscope and photograph was taken under Leica M205A Stereo zoom microscope by using proprietary software of Leica application suite, V3.8.

For the present study classification scheme of Dikow (2009) was followed. Morphological terminology follows Cumming & Wood (2009). Body length was measured from the foremost protrusion of the face up to the apex of the terminalia. Wing length was measured from the articulated base up to its apex. The terminalia of male was removed and macerated in warm 10 % KOH solution and subsequently preserved in 70 % alcohol in microvials pinned with the respective specimens, after the genital structures were examined in glycerol.

The holotype and paratypes of the new species are deposited in the National Zoological collection of Zoological Survey of India (Head Quarters), Kolkata, West Bengal, India (NZC).

## DESCRIPTION OF NEW SPECIES

### Subfamily Leptogasterinae

### Tribe Leptogasterini

### Genus *Lobus* Martin, 1972

#### *Lobus lineatus* Naskar, Banerjee et Parui, sp. n.

Figs 1–10

TYPE MATERIAL. Holotype – male, **India**: West Bengal, Darjeeling, Sureil, 26.969° N, 88.354° E, h~5048.3 ft, 11.X–31.X 1917, coll. N. Annandale. & F.H. Gravely; deposited in NZC, Kolkata. Paratypes – 4 males, the same label as in holotype, deposited in NZC, Kolkata.

DESCRIPTION. Male holotype. Body length 14.4 mm; wing length 8.7 mm (Fig. 1).

Head (Fig. 2). Eyes in the middle below antennae as wide as flagellomere, then gradually broadening up to epistome bearing white tomentum; mystax brownish comprising of four macrosetae; frons and vertex golden tomentose; ocellar tubercle brown; occiput dark brown, bare. Antennae yellow, style as long as flagellomere I. Palpi linear, yellowish with concolourous macrosetae. Proboscis light brown.

Thorax uniformly light brown, sides paler with yellow tomentum (Fig. 3). Episternum and anepimeron golden pollinose, anepisternum brown pollinose; chaetotaxy: only intraalar I. Scutellum brown tomentose with a row of six thin setae on posterior margin).

Legs uniformly brownish yellow except coxae and trochanters darker and bare. Fore tibia with a row of fine macrosetae ventrally all over. Hind femur narrow at basal half, rest swollen (Fig. 4). Hind tibia bears a comb of macrosetae ventrally almost on apical half. All tarsal segments with a stout macrosetae except the apical one).

Wings (Fig. 5). Vein M1 narrowly sinuous; forking of the anterior branch of 3rd longitudinal veins (R4) which end below wing tip.

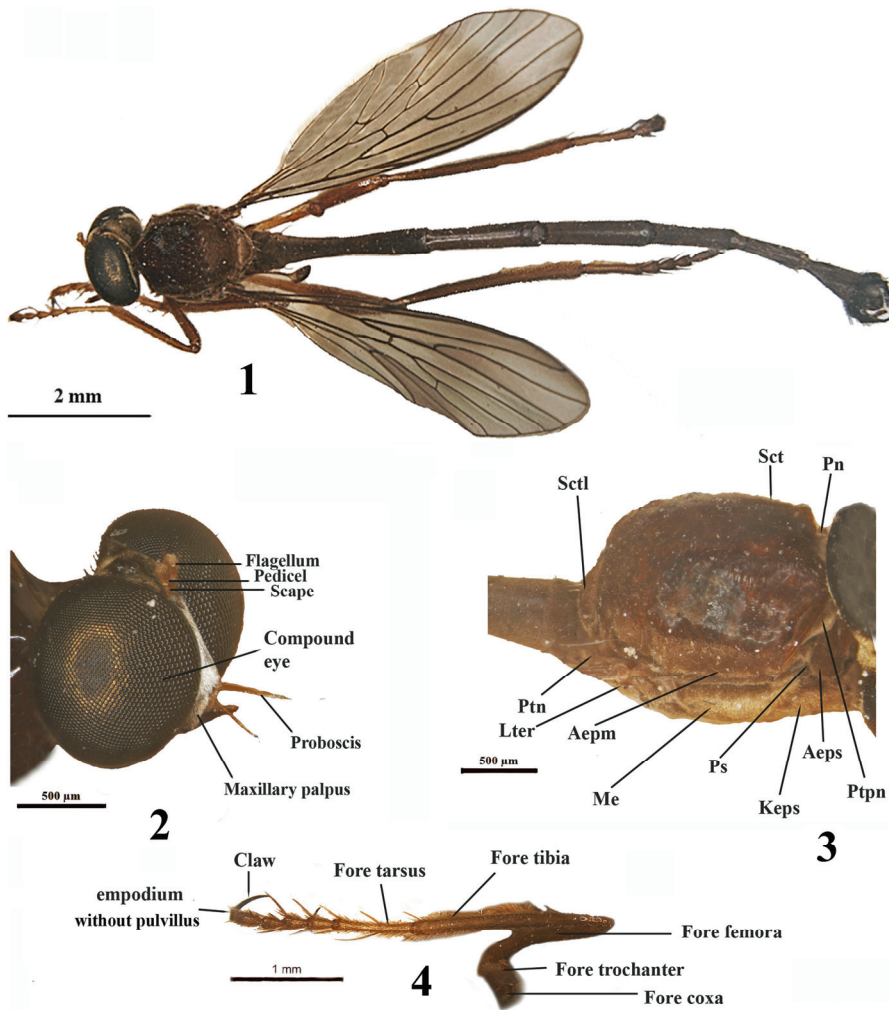
Abdomen linear, uniformly brown each segment on posterior margin and bears a few macrosetae laterally on posterior margin (Fig. 6).

Terminalia black with black setae. Epandrium bifurcate, upper arm curved and gradually tapered towards apex, lower arm thumb shaped, lobos cone shaped, hypandrial apodemes flat, proctiger broadened at apex (Figs 7–10).

DISTRIBUTION. India (West Bengal).

BIOLOGY. Unknown.

ETYMOLOGY. The new species is named after long cylindrical body, specifically with respect to its typical abdominal shape and length.

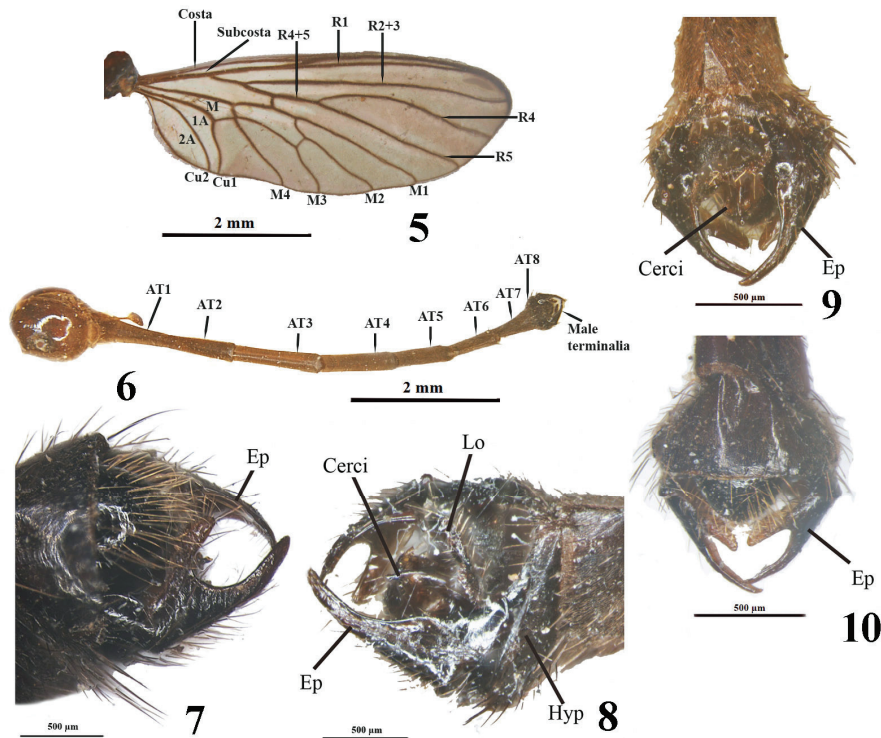


Figs. 1–4. Holotype male of *Lobus lineatus* sp. n. 1 – habitus; 2 – head, lateral view; 3 – thorax, lateral view; 4 – hind leg, dorsal view. Aepm – anepimeron; Aeps – anepisternum; Keps – katepisternum; Lter – laterotergite; Me – meron; Pn – pronotum; Ps – pleural suture; Ptn – postnotum; Ptpn – post pronotum; Sct – scutum; Sctl – scutellum.

DIAGNOSIS. New species fits with the genus *Lobus* in respect of the lobos, which is cone-shaped here; the shape of antenna bearing the style projected from dorsal surface of third antennal segments. Posterior margin of scutellum with weak setae and forking of the anterior branch of 3rd longitudinal veins (R4) which end below wing tip.

New species most similar to *L. bandipurensis* in the general shape of the male terminalia but distinctly differ from it in the details structures and also differs in other characters: large size, coloration of wing uniformly yellowish and not infuscated; fore tibia bears a row of fine

macrosetae ventrally wholly and hind tibia with a comb of macrosetae ventrally on apical half but absent in the latter; and with only one intra-alar and no other setae on thorax. A key to Indian species of *Lobus* modified and added after Joseph & Parui (1998) is given below.



Figs. 1–4. Holotype male of *Lobus lineatus* sp. n. 5 – wing; 6 – abdomen, lateral view; 7 – terminalia, dorso-lateral view (showing epandrium and proctiger); 8 – the same, lateral view (showing bifurcated epandrium and flat hypandrial apodeme); 9 – the same, dorsal view; 10 – the same, ventral view. 1A – first anal cell; 2A – second anal cell; 3A – third anal cell; AT1–AT8 – first–eight abdominal tergites; Cu2 – second branch of cubital vein; Ep – epandrium; Hyp – hypandrial apodemes; Lo – lobos; M – medial cell; M1–M4 – first–fourth medial veins; R1 – first radial vein; R2+3 – second and third radial vein joined together; R4 – fourth radial vein; R4+5 – fourth and fifth radial vein joined together; R5 – fifth radial vein.

#### Key to Indian species of *Lobus*

1. Anterior legs uniformly yellowish ..... 2
- Anterior legs differently coloured ..... 3
2. Hind femur reddish-brown at tip without any dark spot, hind tibia with a brown band at apex, epandrium with only a few setae at basal region. (India: Uttarakhand) .....  
..... *L. himalayae* Martin, 1972
- Hind femur with dark spot medially and basally, hind tibia without band, epandrium with bristly setae all over. (India: Kerala) ..... *L. keralae* Martin, 1972

3. Epandrium almost straight and truncate at apex. (India: Kerala) .....  
 ..... *L. jairami* Joseph et Parui, 1984  
 – Epandrium either boat shaped or bifurcated ..... 4
4. Epandrium boat shaped ..... 5  
 – Epandrium bifurcated. (India: West Bengal) ..... *L. lineatus* sp. n.
5. Wing with uniform infuscation ..... 6  
 – Wing without uniform infuscation ..... 7
6. Fore femur pale yellow with black apex, mid femur black with narrowly pale yellow base and sub apex, male terminalia yellowish-brown and black, proctiger dorsally straight and ventrally curved inward. (India: Karnataka) .....  
 ..... *L. bandipurensis* Joseph et Parui, 1993  
 – Fore and mid femora dark brown with basal and apical yellowish-brown marks, male terminalia black, proctiger conically formed. (India: Tamil Nadu) .....  
 ..... *L. evenhuisi* Joseph et Parui, 1991
7. Lobos gradually narrowing towards apex, wing pale brown basally and clear distally. (India: Telangana) ..... *L. pandai* Joseph et Parui, 1998  
 Lobos uniformly broad, wing brown tinged, anterior half darker than posterior half. (India: Andhra Pradesh, Kerala) ..... *L. martini* Joseph et Parui, 1983

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