

A note on Stilt-legged Flies (Diptera: Micropezidae) with the First Record of *Mimegralla albimana* (Doleschall, 1856) from Sunderban Biosphere Reserve, India

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ABSTRACT

*This present communication reports *Mimegralla albimana* (Doleschall, 1856), a dipteran species under family Micropezidae, for first time from the Indian part of Sunderban and this species is also the first representative of the family Micropezidae from the Sunderban Mangrove ecosystem.*

INTRODUCTION

Stilt-legged flies are a group of insects from acalyprate dipteran family Micropezidae under Schizophora. A total of 583 species under 52 genera and five subfamilies of this family were reported Worldwide [1]. These species are mostly found in the tropical and sub-tropical zones.

For their characteristic long legs, they are commonly known as stilt-legged flies. The micropezid flies are usually black, slender bodied insect, small to large size (varies between 3-16 mm length), with thin long legs. Their forelegs are much smaller than the other pairs (mid & hind legs). Wings are narrow and patterned. The members of this group usually mimics wasps and in some cases ants (like *Badisis ambulans* McAlpine, 1990, which is without any wing and haltare) [2]. Adults are predaceous on small insects and also attracted to the decaying matters. These insects are usually found on leaves, flowers, decaying fruits, excrement, herbage etc.

Nine species under three genera of this micropezid flies were reported by Steyskal from India [3] in the Catalogue of Diptera of the Oriental Region, Vol. III. Dutta, Parui and Mukherjee reported another species of Micropezidae from West Bengal, India in the State Fauna Series of Zoological Survey of India: Fauna of West Bengal [4].

Sunderban Biosphere Reserve, the World Heritage site, is situated in the southern part of West Bengal, India and Bangladesh, have the largest mangrove ecosystem of the World. The Indian Sundarbans Delta is bounded by the Ichamati- Raimangal River in the east, by the Hoogly River in the west, by the Bay of Bengal in the south, and the Dampier-1 Hodges line drawn in 1829-1830 in the north. Several works on Diptera had been done from Indian part of Sunderban. Contributions of Mandal & Nandi [5], Roy & Choudhury [6], Majumder & Parui [7], Mitra et al. [8], Sinha & Nandi [9-14], Nandi & Sinha [15] were enriched the list of dipteran insects of Sunderban Biosphere Reserve.

Recently Mitra (2013) compiled a list of 125 dipteran species reported from Sunderban Biosphere Reserve under 21 families viz. Limoniidae, Psychodidae, Ceicidomyidae, Culicidae, Ceratopogonidae, Chironomidae, Tabanidae, Stratiomyidae, Asilidae, Syrphidae, Sepsidae, Dolycopodidae, Phoridae, Ephyridae, Tephritidae, Pipunculidae, Empididae, Muscidae, Calliphoridae, Rhiniidae and Sarcophagidae [16]. After that Mitra et al. reported four new records of Diptera from Sunderban islands [17].

This present communication reports *Mimegralla albimana* and the family Micropezidae for the first time from Sunderban Biosphere Reserve.

MATERIALS AND METHODS



Fig. 1a

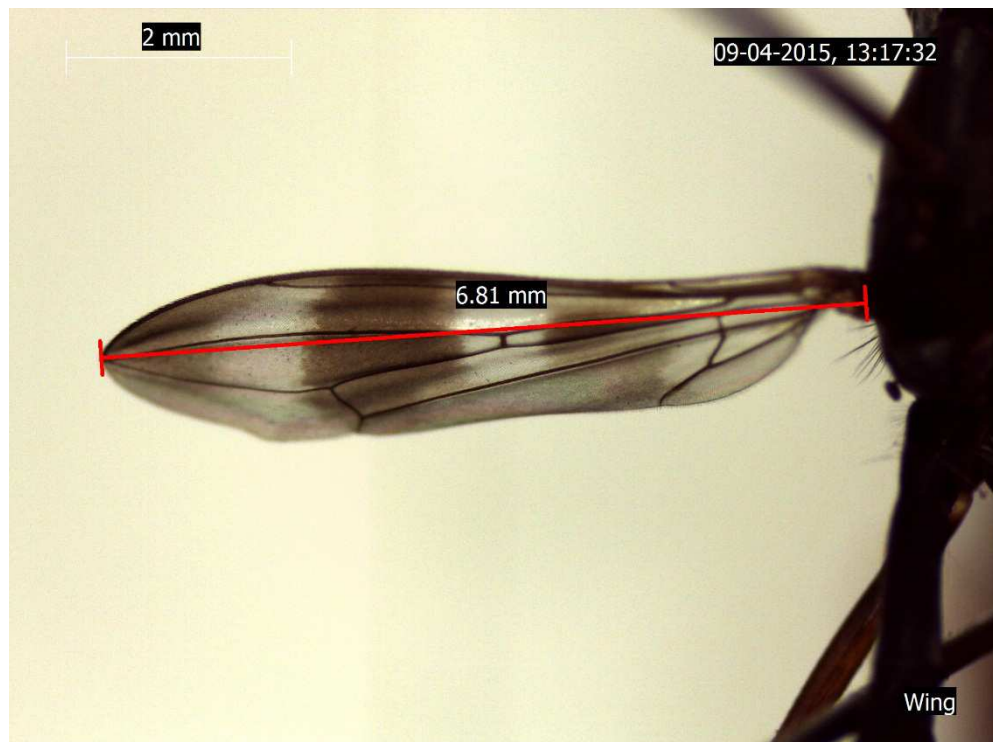


Fig. 1b

Fig. 1a: Stretched wing and haltare of *Mimegralla albimana* (Doleschall, 1856)
Fig. 1b: Morphometry of the wing of *Mimegralla albimana* (Doleschall, 1856)

The insect examples were collected by random sweeping in the mangrove ecosystem during the survey work at August, 2014 for the Sunderban Pollinator Project funded by MoEF & CC, Govt. of India. The collected examples were pinned, stretched and got identified at laboratory of Zoological Survey of India, Kolkata. After that,

photographs of wings, male and female genitalia of the species were taken in the laboratory and the examples were preserved in Zoological Survey of India, Kolkata.

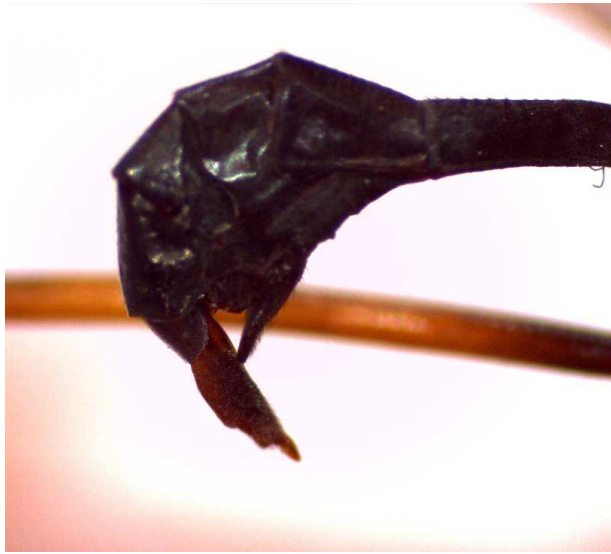


Fig. 2a



Fig. 2b



Fig. 3a



Fig.3b

Fig. 2a & 2b: Male genitalia of *Mimegralla albimana* (Doleschall, 1856)
 Fig. 3a & 3b: Female genitalia (ovipositor) of *Mimegralla albimana* (Doleschall, 1856)

RESULTS AND DISCUSSION

Two examples (one male and one female) of *Mimegralla albimana* were identified from the collections of Sunderban Survey, which is the first record from the Sunderban Biosphere Reserve. It was also the first representative of the family Micropezidae of order Diptera from Indian part of Sunderban Biosphere Reserve.

Mimegralla albimana (Doleschall) 1856. *Taenioptera albimana* Doleschall, Eerste bijdrage tot dekennis der dipterologische fauna van Nederlandsch Indie. Natuurkd.Tijdschr. Ned.-Indie 10: 403-414, 12 pls. [1856.10.21]

Type Locality: Indonesia. Java: Djokjakarta

Material examined: 1ex. (♀), 1ex. (♂), India: West Bengal: Sunderban Biosphere Reserve, Bali island, 28.viii.2014. coll. B. Mitra and party.

Diagnosis: Head dark blue, eyes reddish, white tomentose at base of antennae; antennae reddish-brown; thorax black, white tomentose; wings grey with two brown bands at about two-third length and the other at apex, one brown spot at subapex of first basal cell (Fig. 1a & 1b); Coxae black; fore femora and tibiae black, mid and hind femora yellow with three brown rings, their tibiae black; abdomen black, hind border of segments white; male genitalia black coloured (Fig. 2a & 2b) and ovipositor yellow (Fig. 3a & 3b).

Distribution: India (West Bengal), Indian Sunderbans (Present record); Java, Malaysia, Borneo, Japan, Belau, Guam, Micronesia, Northern Marianas, Papua New Guinea, Ryukus.

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