

Phallic Organs

Aedeagus elongated, pale yellow, apparently bifid, pubescent ventro-apically and slightly curved dorsally at tip (Figure 1, H). Anterior gonapophyses long, apically narrowly pointed and curved. Posterior gonapophyses dorsally dilated and proximally with a small conical process. Novasternum with lateral processes, median processes very small with a pair of submedian spines. Ventral fragma triangular, broader than long.

Oviscrapt

Lobe pale brown in color, rounded apically, robust with about 11 marginal ovisensillum (1F); no discal teeth present; basal isthmus short.

Discussion

This species superficially resembles *Scaptomyza* (*Parascaptomyza*) *adusta* (Loew, 1862) in having four rows of acrostichal setulae between antero dorsocentral setulae, presence of picture wing, presence of paralobes in periphallid organ, surstylus flatter, with only two regions of prensistae. However, this species distinctly differs from *S. adusta* in dark coloration of the body, spots in wings in males and females, and absence of setae on secondary clasper on anal plate. For these reasons, it is diagnosed as distinct to other species of the genus *Scaptomyza*.

Acknowledgments: This work is financially supported by WB DST project 289 (Sanc.) ST/P/S & T/2G-30/2011 to RNC.

References: Loew, H, 1862, Berliner Entomologische Zeitschrift. 6: 185-232; Markow, T.A., and P.M. O' Grady, 2006, *A Guide to Species Identification and Use*, Elsevier/AP: 1-259.



***Samoaia bengalensis* sp. nov., is a new member of the picture wing Drosophilidae of the genus *Samoaia*.**

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Introduction

Picture wing Drosophilidae are mainly reported from Hawaiian islands. Wing pigment spots occur in highly reproducible, species-specific, two dimensional patterns, and their genetics and development are beginning to be understood. Therefore, *Drosophila* wing is an attractive target for evolutionary biologist. *Samoaia* is a small genus of seven described species endemic to the islands of Samoa. In this report, we diagnosed and describe *Samoaia bengalensis* sp. nov., as a new member of the genus *Samoaia* of the family Drosophilidae from West Bengal, India.

Materials and Methods

The species were collected from the wild by using net-sweeping methods in September, 2012. In the laboratory, the flies were anaesthetized, diagnosed, and categorized as per Markow and O'Grady (2006) protocol. 36 individuals were collected from the wild. However, we were not able to culture in the laboratory condition.

Results

Taxonomy

Samoaia bengalensis sp. nov.

Diagnosis

This species superficially resembles *Samoaia leonensis*, but many organs of the species and body coloration are quite different, as shown in Figure 1, a-d. The detailed description will be communicated elsewhere. All specimens have been deposited at Genetics Research Unit, Department of Zoology, University of Calcutta, Kolkata, India.

Holotype

♂; Uttarpara, Hooghly, West Bengal, India, deposited at the GRU, Department of Zoology, University of Calcutta, Kolkata, India.

Paratype

14 ♂, 16 ♀ (1 ♀ designated as "allotype") from Uttarpara, Hooghly, West Bengal, India. Deposited at the GRU, Department of Zoology, University of Calcutta, Kolkata, India.

Distribution and Ecology

This species is so far known from only Uttarpara and Tarakeswar areas, Hooghly, where it had been collected from bushy areas. This species is preserved in 70% ethanol and stored in the laboratory.

Etymology

This species is named *Samoaia bengalensis*, because it was only collected from Hooghly, West Bengal, India.

Morphological Characteristics

Average body length: 5.1 mm (male) and 5.3 mm (female) (Figure 1, a-d).

Wings and thorax

Wings and thorax with distinct pattern of tan, gray, and white (Figure 1a-d). Wings are sexually dimorphic.

Legs

Yellow in color, not banded. No ornamentation like sex comb in males.

Abdomen

1T – 7T dorsally yellowish with distinct pattern of tan, gray, and white, and yellowish ventrally (Figure 1, b-d). The detail description will be communicated elsewhere.

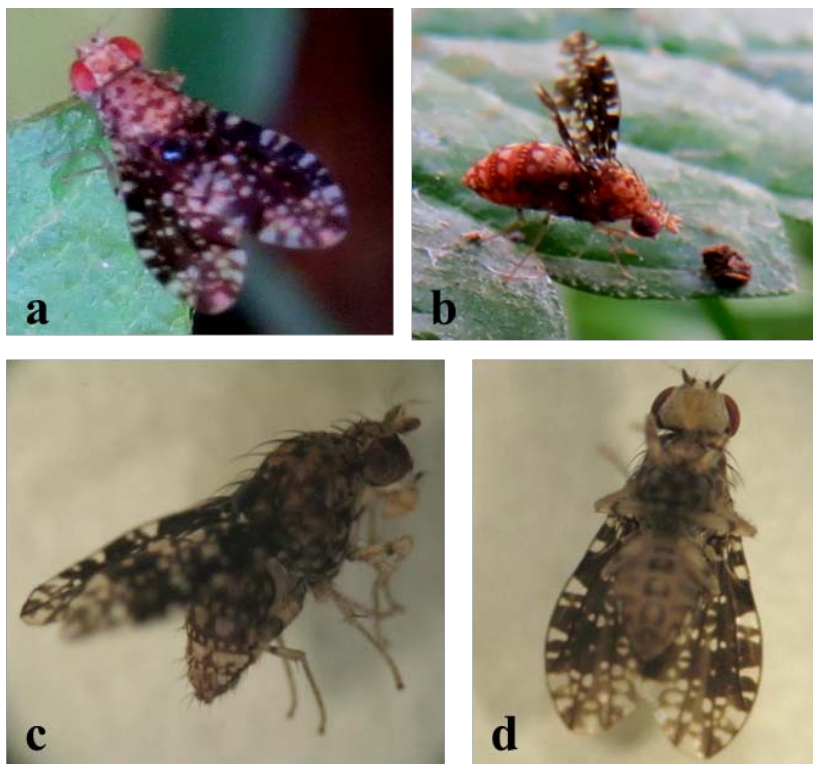


Figure 1. *Samoaia bengalensis* n.sp.: (a) A fly resting in a leaf; (b) one fly chasing for food in a leaf; (c) fly- side view; and (d) ventral view of a female fly.

Discussion

This species superficially resembles *Samoaia leonensis* with distinct pattern of tan, gray, and black spot. However, this species distinctly differs from *Samoaia leonensis* with coloration of the body, spots in wings in males and females, and other characters. For

these reasons, it is diagnosed as distinct to other species of the genus *Samoaia*.

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