

Discussion

This species superficially resembles *Scaptodrosophila paratriangulata* (Gupta, 1971) in having cross striped abdominal tergites, apically rounded wing, ocellar triangle brownish black, heel of the genital arch not pointed and the row of teeth of surstylus not convexed. However, this species distinctly differs from *S. paratriangulata* in having dark coloration, basal apodeme of aedeagus (usually long and broad basally), anterior gonapophyses (small with many sensilla) and white haltere. Since this species shows similarities in the main characteristic features of *Scaptodrosophila* and since it differs in many characters from the other species of the genus, it is diagnosed as new species of the genus *Scaptodrosophila*.

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

References: Gupta, J.P., 1971, Proc. of Zool. Soc. 22: 53-61; Gupta, J.P., 2005, J. Scientific Research 5: 1-252; Markow, T.A., and P.M. O' Grady 2006, *Drosophila: A Guide to Species Identification and Use*, Elsevier Academic Press, London.



***Scaptomyza jadavpuri* sp. Nov. is a new member of picture wing Drosophilidae of the *Scaptomyza* complex.**

Rakshit, Arpita, Piyali Chatterjee, and R.N. Chatterjee.* Genetics Research Unit, Department of Zoology, University of Calcutta, 35, Ballygunge Circular Road, Kolkata- 700019, India; *Author for Correspondence: chatterjee_rn@yahoo.co.in; chatterjeerncu@gmail.com

Introduction

Scaptomyza is a very complex and poorly studied taxon. Over 150 described species of this taxon are endemic to the Hawaiian archipelago. The remaining 100 described species of *Scaptomyza* are placed in nine groups and are found elsewhere. *Parascaptomyza* is a relatively large, widespread group with species found on most of the world's major land masses. We describe here *Scaptomyza* (*Parascaptomyza*) *jadavpuri*, sp. nov., as a new member of the subgenus *Parascaptomyza* of *Scaptomyza* genus of the family Drosophilidae.

Materials and Methods

The species were collected from the wild by using both trap-baits and net-sweeping methods in August, 2008. Fermenting fruits, banana and guava, were used as baits in the wet sand.

In the laboratory, the flies were anaesthetized, diagnosed, and categorized as per Markow and O' Grady (2006) protocol. 56 individuals were collected from the wild and were allowed to breed in open food vials containing standard laboratory food medium within a plastic jar containing wet sand. Cultures were maintained at 24 \pm 1 $^{\circ}$ C. However, the flies grow very poorly in the laboratory condition.

Results

Taxonomy

Scaptomyza (Parascaptomyza) jadavpuri sp. nov.

Diagnosis

This species superficially resembles *Scaptomyza (Parascaptomyza) adusta* (Loew, 1862). But many organs of the species are quite different, as shown in Figure 1, A-I.

Description

The morphological characters are described below. All specimens have been deposited at Genetics Research Unit, Department of Zoology, University of Calcutta, Kolkata, India.

Holotype

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

Paratype

10 ♂, 12 ♀ (1 ♀ designated as “allotype”) from Jadavpur, Kolkata, 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 Jadavpur areas, Kolkata, where it had been collected from fruits fallen on sand. This species is preserved in 70% ethanol and stored in the laboratory.

Etymology

This species is named as *Scaptomyza (Parascaptomyza) jadavpuri*, because it was only collected from Jadavpur, Kolkata, West Bengal, India.

Morphological Characteristics

Average body length: 4.9 mm (male) and 5.3 mm (female) (Figure 1, A and B).

Head

Arista with 8 dorsal and 2 ventral branches with terminal fork. Antennae with second segment yellowish. Frons including ocellar triangle brown. Orbital bristles in ratio 3:2:4. Vibrissae single and strong. Palpus brown with 8 marginal setae. Carina yellowish and narrow. Clypeus yellowish brown. Face and cheek yellow. Eyes were red.

Thorax

Acrostichal hairs in 4 regular rows between dorsocentrals, Anterior scutellars divergent but posterior scutellars convergent. Distance between anterior and posterior dorsocentrals 1/3rd the distance between two anterior dorsocentrals. Prescutellum well developed. Mesonotum and scutellum dark yellow with brownish lower portion. Dark stripes present on mesonotum. Sterno index 0.58.

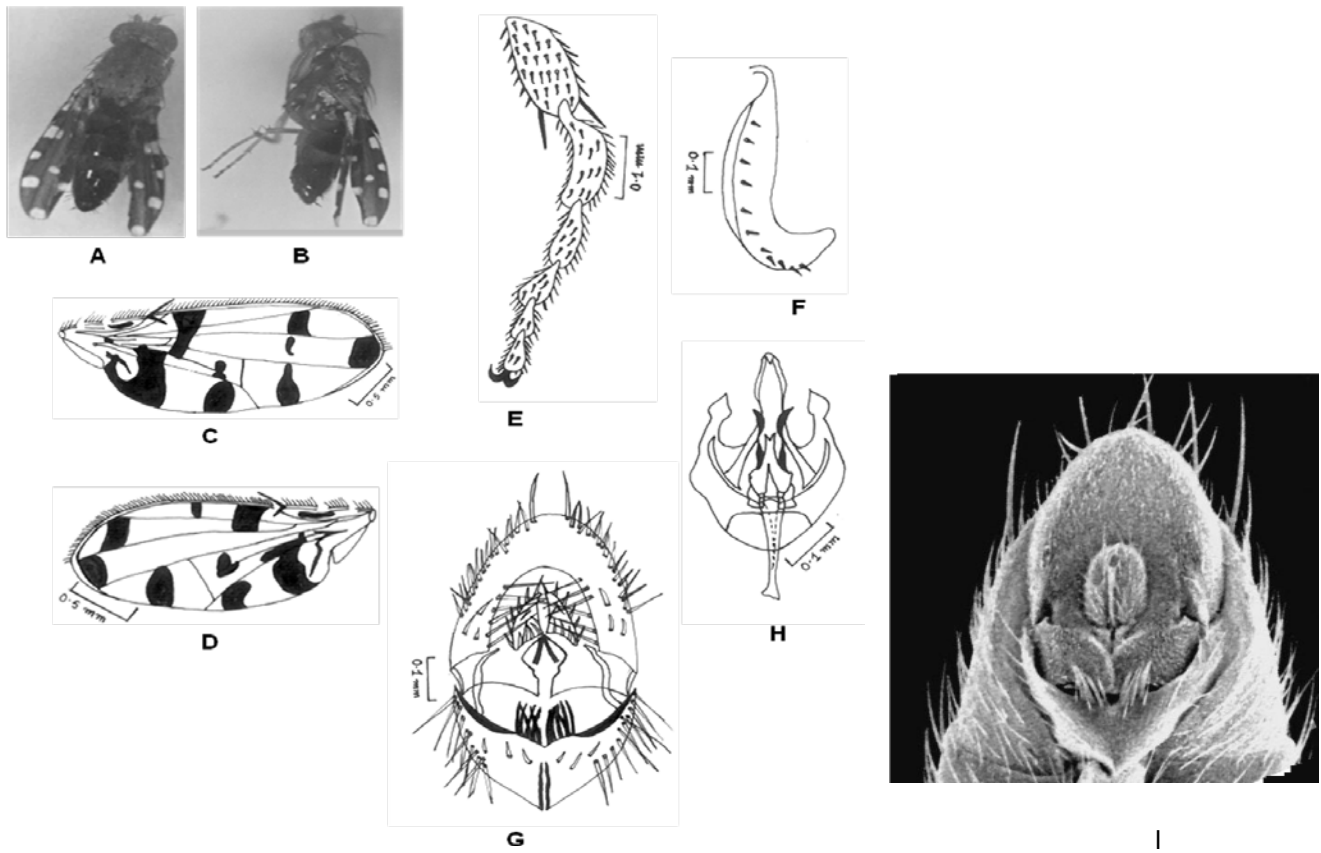


Figure 1. *Scaptomyza (Parascaptomyza) jadavpuri n.sp.*: Whole fly- dorsal view (A); side view (B); female wing (C); male wing (D); male fore leg (E), oviscrapt (F); periphallalic organ (G); phallic organ (H); SEM view of male terminalia (I).

Wings

Clear. Approximate wing-vein index: C index - 2.47; 4V- index 1.50; 4C- index 0.75; 5X- index 1.72. Halteres pale yellow. Wing length 2.8 mm. Wings were sexually dimorphic (Figure 1, C and D).

Legs

Yellow in color. Preapicals on all three tibiae; apical on first and second tibiae. No ornamentation like sex comb in males (Figure 1, E).

Abdomen

1T yellowish, 2T brown dorsally and yellowish ventrally, 3T-6T with complete black bands.

Periphallic Organs

Epandrium brownish black, narrow above and below and broad in the middle. Upper portion with about 24-28 setulae and lower portion with about 36-40 setulae. No setae on secondary clasper on anal plate. Surstylus large, flatter, with only two regions of prensistae, arched and fused to epandrium with about a row of 6 bristle like teeth present in lower margin of surstylus. A pair of brownish paralobes present just above the Cerci. Cerci dark brown, triangular with 10 setae.

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 periphallic 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*.**

Chatterjee, R.N*, and Mausumi Bhattacharyya. Genetics Research Unit, Department of Zoology, University of Calcutta, 35, Ballygunge Circular Road, Kolkata- 700019; India; *Author for Correspondence: chatterjee_rn@yahoo.co.in; chatterjeerncu@gmail.com

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.