

**THE FIRST RECORD OF *ORTALOTRYPETA ISSHIKII*  
(MATSUMURA) AND SUBFAMILY TACHINISCINAE (DIPTERA:  
TEPHRITIDAE) FROM INDIA, WITH REDESCRIPTION OF THE  
SPECIES**

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**Abstract**

*Ortalotrypeta isshikii* (Matsumura) and subfamily Tachiniscinae are recorded for the first time from India and the species redescribed.

**Introduction**

The Tachiniscinae is regarded as one of the most primitive subfamilies of Tephritidae (Korneyev 1999, Korneyev and Norrbom 2006). It is characterised by the presence of: (i) a short-pubescent arista; (ii) 1-3 (usually 2) postpronotal setae; (iii) 1-2 postsutural supra-alar setae; (iv) oviscape opened posterodorsally; (v) eversible membrane of the ovipositor devoid of taeniae but with basoventral area of dense, very dark, larger scales; and (vi) aculeus short and stiletto-like (Korneyev 1999). Members of this subfamily are represented in the Afrotropical, Oriental, Australasian, Palaeartic and Neotropical Regions of the world.

Two tribes, Tachiniscini Kertész and Ortalotrypetini Ito, are recognised, each with five genera. The Tribe Ortalotrypetini includes *Ortalotrypeta* Hendel and *Cyaforma* Wang from the Palaeartic and Oriental Regions, plus *Ischyropteron* Bigot, *Neortalotrypeta* Norrbom and *Agnitrena* Korneyev from the Neotropical Region (Norrbom 1994, Korneyev 1999, Korneyev and Norrbom 2006). The Tribe Tachiniscini comprises fossil *Protortalotrypeta* Norrbom and extant *Tachinisca* Kertész from the Neotropical Region, plus *Bibundia* Bischof and *Tachiniscidia* Malloch from the Afrotropical Region and *Aliasutra* Korneyev from Australia, the latter only recently described (Korneyev and Norrbom 2006, Korneyev 2012).

The only known biological record for the subfamily is of an undescribed species of *Bibundia* (tribe Tachiniscini) reared from pupae of two saturniid moths (Lepidoptera: Saturniidae) in Africa (Roberts 1969), although Korneyev (1999) noted that the form of the aculeus suggests that all members of the subfamily are parasitoids.

*Ortalotrypeta* includes yellow to orange-bodied flies with well developed chaetotaxy and a yellowish to milky-white wing with brown bands and spots (Wang 1998). Nine species are currently recorded from China, Taiwan, Japan, Nepal and Vietnam (Norrbom 1994, Wang 1998). *Ortalotrypeta isshikii* (Matsumura), the most widespread species known previously from China, Japan and Nepal, is recorded here for the first time from India.

### Material and methods

The specimen examined was in the Commonwealth Institute of Biological Control (CIBC) collection deposited in the University of Agricultural Sciences, Bangalore, India (UASB). The specimen was identified using the keys by Norrbom (1994) and Wang (1998). Images were captured using a Leica DFC 420 camera mounted on a Leica M205A stereozoom microscope; the images were stacked and combined to a single image using Combine ZP (Hadley 2011).

### Systematics

#### *Ortalotrypeta* Hendel, 1927

#### *Ortalotrypeta isshikii* (Matsumura, 1916)

(Figs 1-7)

*Material examined.* INDIA: 1♀, Sikkim, Lachung, vii.1960, resting on silver fir, CIBC coll. (UASB).

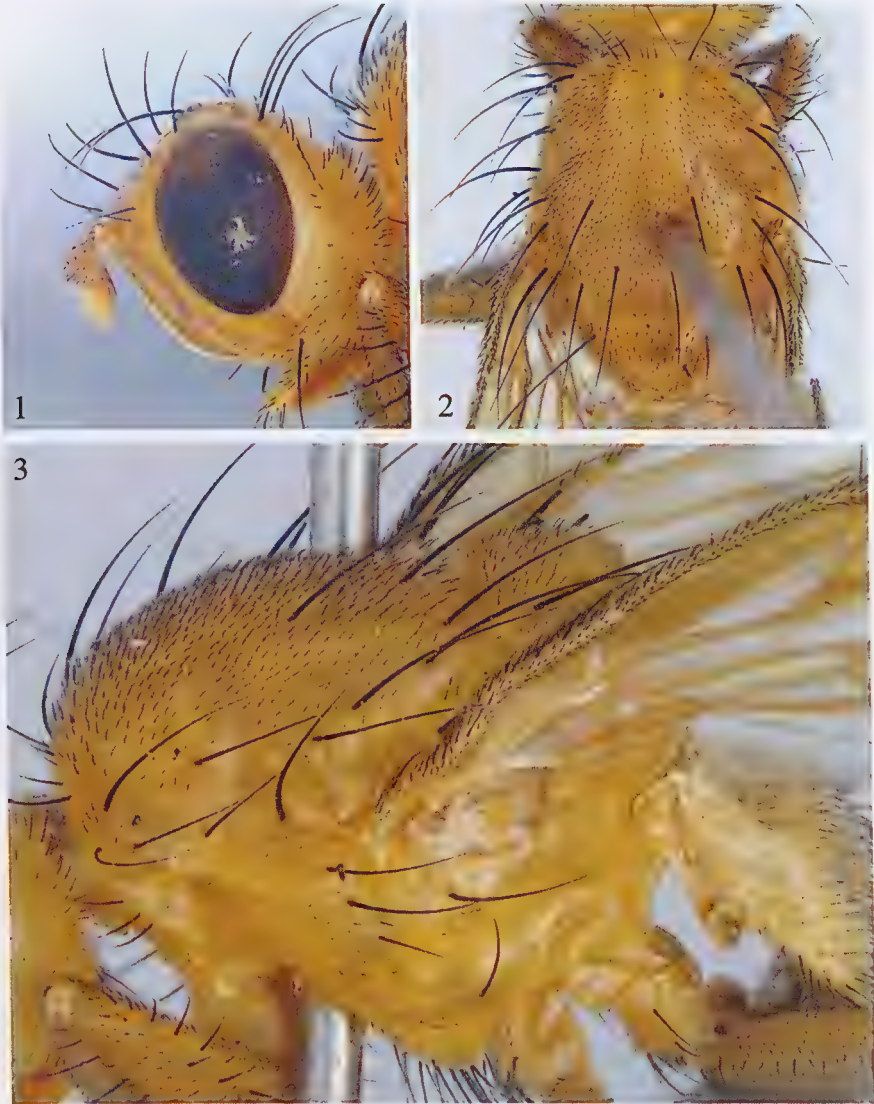
*Description.* Body orange-yellow in ground colour, 7.4 mm long. Head (Fig. 1) orange-yellow; anterior margin of face and parafacial strongly receded ventrally. Frons 1.6 times as broad as eye, with 3 pairs of frontal setae and 2 pairs of orbital setae. Frons setulose between the three pairs of frontal setae. Ocellar seta, medial and lateral vertical setae longer than posterior orbital seta, postocellar seta present, postocular row thin and black. Antenna shorter than face, arista short-pubescent. Gena and postgena broad, occiput swollen.

Thorax (Figs 2-3) with scutum 2.3 mm long, orange-yellow covered with black setulae. Chaetotaxy: 3 postpronotal, 1 anterior notopleural, 1 posterior notopleural, 1 presutural supra-alar, 2 postsutural supra-alar, 1 postalar, 1 intra-alar, 1 dorsocentral (aligned with anterior supra-alar seta) and 1 prescutellar acrostichal seta. Scutellum yellow with 3 pairs of scutellar setae. Proepisternum with three setae longer than postocular seta. Anepisternum setulose, with three setae anterior to anepisternal phragma; anepimeron and katepisternum each with single seta.

Legs (Fig. 6) yellow; forefemur setulose with two rows of long dorsal setae and a single row of ventral setae; mid and hindfemur with sub-dorsal setae. Foretibia devoid of setae; mid and hindtibia with 1 and 2 rows of dorsal setae respectively; midtibia with 2 large ventroapical spur-like setae.

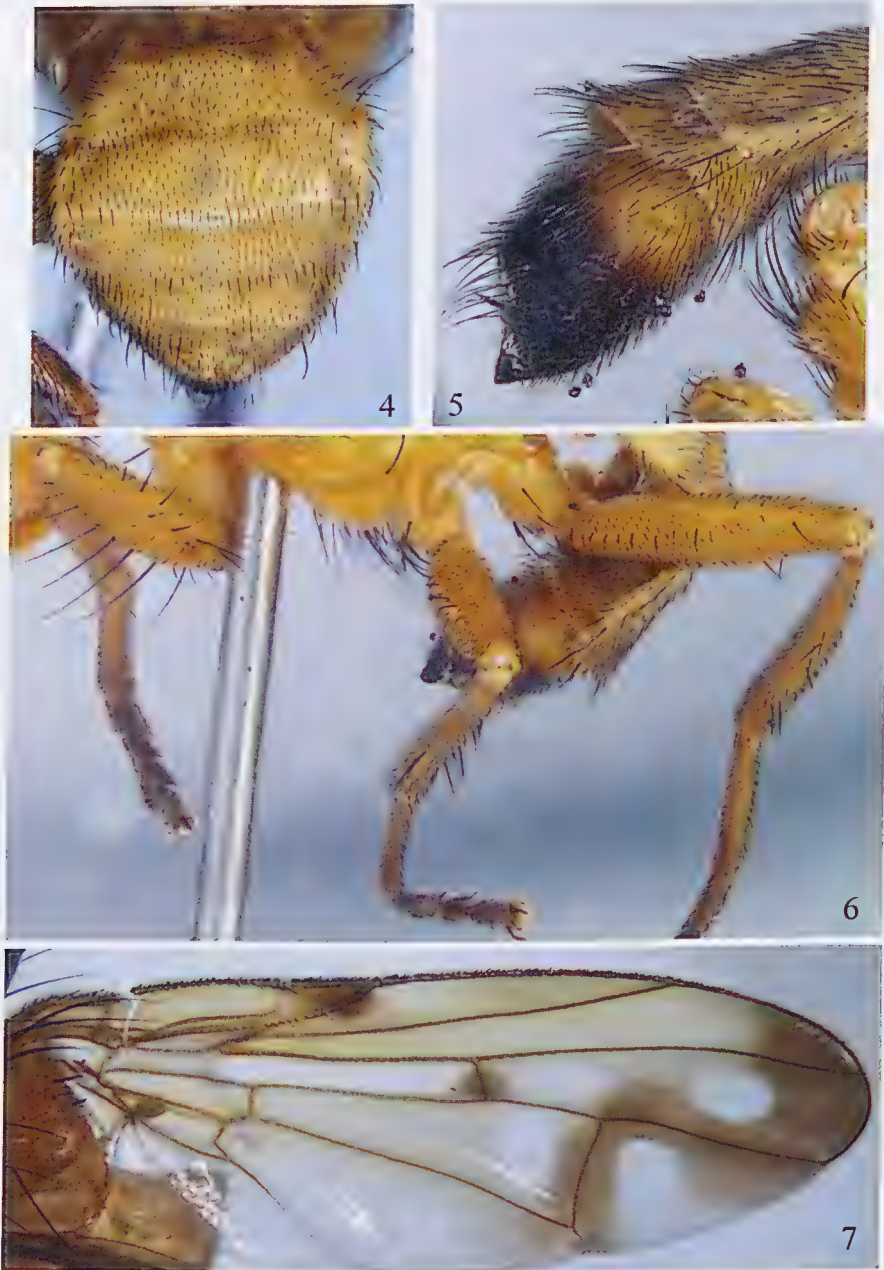
Wing (Fig. 7) 8.4 mm long; veins  $R_1$  and  $R_{4+5}$  with setulae throughout their entire length; predominantly hyaline to pale brown with dark brown spot in pterostigma which extends to cell  $r_1$ , isolated ovoid spot on crossvein R-M, dark apical mark including subapical band over DM-Cu and extending along apical section of vein M to wing apex then extending into cell  $r_{2+3}$ , large oval hyaline spot in distal half of cell  $r_{4+5}$ , hyaline indentation in cell m, subapical hyaline spot in cell dm, large subhyaline area in cell br.

Abdomen (Figs 4-5) with tergites yellow, black setulose. Oviscape yellow basally and black apically.



**Figs 1-3.** *Ortalotrypeta ishshikii*: (1) head; (2) thorax, dorsal view; (3) thorax, lateral view.





**Figs 4-7.** *Ortalotrypeta isshikii*: (4) abdomen, dorsal view; (5) abdomen, lateral view; (6) legs; (7) wing.

*Comments.* The above specimen, plus those recorded from Nepal by Norrbom (1994), differ from typical *O. isschikii* from Japan and China in having the brown spot in the pterostigma extending into cell  $r_1$ ; in typical specimens cell  $r_1$  is entirely yellowish. In the absence of further evidence this variation is regarded as infraspecific, although some possibility that the Indian and Nepalese specimens represent a separate species exists. Elsewhere, *O. isschikii* appears to be widespread, being recorded from Japan (Honshu, Shikoku, Kyushu) and the Chinese mainland (Hubei, Sichuan, Xizang [Tibet]) by Wang (1998).

This is the only species of *Ortalotrypeta* known with certainty to occur south of the Chinese or Tibetan borders. Records of *O. gigas* Hendel, 1927 and *O. idanina* Zia, 1963 from southern Vietnam, based on a single specimen of each from Ho Chi Minh City, collected in July 1939 (Wang 1998), are of uncertain provenance (no collector indicated) and are likely to have been mislabelled.

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