THYSANOPTERA FAUNA OF CHHATTISGARH INDIA

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INTRODUCTION
Order Thysanoptera include approximately 6000 species across the globe in which nearly 700 species are reported from India (Thrips Wiki 2013), accounting for about 10% of the total world fauna. In spite of excellent efforts on taxonomy to reveal the biodiversity of these tiny (1-2 mm), and economically important insect (as crop pest and vectors for tospoviruses) in India, we still have geographical regions which are practically unsurveyed for thrips biodiversity; Chhattisgarh is one of them along with Gujarat, Odisha and Sikkim etc. It is to mention that till date no thrips species have been reported from Chhattisgarh state of India and even the localities from where recent collection have been made were never been surveyed as per literature (Ananthakrishnan 1980 & Bhatti 1990). During the recent survey of Chhattisgarh, 7 species of thrips have been identified and are being reported here for the first time. All these new records are in two families of Suborder Terebrantia. The members of the family Aeolothripidae of suborder Terebrantia are predators on thrips and mites and presently represented by one species namely Frankliniorthrips vespiformis (Crawford). The members of the family Thripidae of suborder Terebrantia are very injurious to crop plants and represented by six species, namely, Franklinothrips schultzei (Trybom), Megalurothrips usitatus (Bagnall), Thrips flororum Schmutz, Thrips hawaiiensis (Morgan), Thrips palmi Karny, Thrips subnudula (Karny).

The objective of this paper is to report seven species of thrips from Chhattisgarh for the first time. Diagnostic features, distribution details, material studied, and registration number as recorded on each slide mounted specimen housed at Zoological Survey of India in National Zoological Collections (NZC), Kolkata are provided for new records.

Specimens collected by beating method were preserved in collecting fluid (9 parts 10% alcohol + 1 part glacial acetic acid + 1 ml Triton X-100 in 1000ml of the mixture) and mounted on to the glass slides in Canada balsam (Bhatti 1999). The photographs were taken through a Leica Trinocular Microscope (Leica DM-1000) and using Leica software application suite (LAS EZ 2.1.0).

All the species are listed with their valid names, authority and the year of description. Species are listed systematically and alphabetically. The classification adopted in the article is that of Mound, Heming and Palmer (1980).

Family AELOLTHRIPIDAE
Frankliniorthrips vespiformis (Crawford DL)

Diagnostic characters: Body bicoloured. Antennal segments yellow except IV dark. Fore wing with subapical pale area. Head rounded, basal abdominal segments narrow, appearing ant-like in females, not constricted in males. Maxillary palps 3-segmented. Antenna 9-segmented, long and thin, sense cones on segments III and IV extending along the whole length of segments. This species is widespread predator of thrips and mites.
**Material studied**: 3♀, Chhattisgarh, Dantewada, 2.ii.2013, from general vegetation, Girish Kumar.

**Distribution**: India: Chhattisgarh (new record), Karnataka, Maharashtra.

**Family THRIPIDAE**


**Diagnostic characters**: Body brown. Ocellar setae III close together to anterior margin of hind ocelli. Abdominal tergite VIII with posteromarginal comb represented by not more than 1 to 3 hairs. This species is a widespread pest, and is a vector of Tospovirus, Tomato spotted Wilt.


**Distribution**: India: Andaman Island, Chhattisgarh (new record), Delhi, Karnataka, Meghalaya, Tamil Nadu, Uttar Pradesh.


**Diagnostic characters**: Female body brown but male bicoloured with pale pronotum. Antennal segment III pale, VI brown. Fore wing banded. This species is very difficult to identify based on females as according to Palmer 1987.


**Distribution**: India: Andaman Island, Chhattisgarh (new record), Delhi, Karnataka, Meghalaya, Tamil Nadu, Uttar Pradesh.


**Diagnostic characters**: Female body bicoloured, male with body pale yellow. Fore wing clavus with 5 setae on anal vein, apical veinal seta shorter than subapical veinal seta and basal discal seta longer than apical veinal seta or subequal to it. Postocular setae No. 2 and 4 distinctly shorter than No. 1 and 3, which are subequal. Metanotum completely unsulptured near to anteromedian pair of comaniform sensilla. Tergite IX of male with S2 seta very slender, much thinner and shorter than S1, and inserted very close to it; sternites III-VII each with transversely elongate pore area.


**Distribution**: India: Andaman Island, Chhattisgarh (new record), Delhi, Karnataka, Punjab.


**Diagnostic characters**: Female body brown, male with body pale yellow. Fore wing clavus with 5 setae on anal vein, apical veinal seta shorter than subapical veinal seta and basal discal seta longer than apical veinal seta or subequal to it. Postocular setae No. 2 and 4 distinctly shorter than No. 1 and 3, which are subequal. Metanotum completely unsulptured near to anteromedian pair of comaniform sensilla. Tergite IX of male with S2 seta very slender, much thinner and shorter than S1, and inserted very close to it; sternites III-VII each with transversely elongate pore area.


**Distribution:** India: Andaman Island, Assam, Chhattisgarh (new record), Delhi, Karnataka, Meghalaya, Sikkim, West Bengal.

**Thrips palmi** Karny


**Diagnostic characters:** Body bright golden yellow including wings and legs. Antenna 7-segmented. Ocellar setae III outside ocellar triangle. Metanotum with longitudinal lines of sculpture and these lines converging mesad posteriorly and middle; median pair of setae inserted far back of anterior margin; companyiform sensilla present. Comb of posterior margin of tergite VIII complete. Abdominal sternites III-VII of male each with a transversely elongate pore area.

**Material studied:** 1♀, Chhattisgarh, Durg, 6.vi.2012, from *Lantana camara*, No. CHCAM 3625, coll. Angshuman Raha and Party.

**Distribution:** India: Chhattisgarh (new record), Delhi, Karnataka, Punjab.

**Thrips subnudula** (Karny)


**Diagnostic characters:** Body pale yellow. Antenna 7-segmented. Ocellar setae III inserted behind fore ocellus, with in ocellar triangle. Metanotal median pair of setae inserted far back of anterior margin. Abdominal sternites and laterotergites with accessory setae. Abdominal sternites with numerous posteromarginal setae.


**Distribution:** India: Andaman Island, Andhra Pradesh, Chhattisgarh (new record), Delhi, Haryana, Karnataka, Madhya Pradesh, Meghalaya, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh, West Bengal.

**Summary**

This is the first report of thrips species from Chhattisgarh so far. More extensive surveys need to be undertaken in Chhattisgarh, which may yield more species from this practically untouched area for thrips and well as other insect taxa.

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Manuscript received: 13-12-2013; Accepted: 15-01-2014
1. *Franklinothrips vespiformis* (Crawford)

2. *Frankliniella schultzei* (Trybom)

3. *Megalurothrips usitatus* (Bagnall)

4. *Thrips florum* (Schmutz)
5. *Thrips hawaiiensis* (Morgan)

6. *Thrips palmi* Karny

7. *Thrips subnudula* (Karny)