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A new species of thrips (Thysanoptera) of the genus *Holurothrips* Bagnall from Manipur, NE India

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ABSTRACT: Fungal spore feeding idolothripine, *Holurothrips manipurensis* sp. nov. (Phlaeothripidae : Tubulifera : Thysanoptera), collected from the oak leaf litter habitat of Manipur is described. Occurrence of this genus in India is known only through this species.

KEYWORDS: Mycophagous thrips, Thysanoptera, oak leaf litter, *Holurothrips manipurensis*

INTRODUCTION

The genus *Holurothrips* of the subfamily Idolothripinae includes spore feeding thrips that inhabit leaf litters. *Holurothrips* is related to the Ethiopian genus *Hystricothrips* Karny and therefore it is placed in the Hystricothripina (Mound, 1974). It also shows resemblance with the Oriental genera *Neatractothrips* and *Paractinothrips* (Mound and Palmer, 1983). Three species are known under the genus *Holurothrips* from Indonesia, Japan and Queensland and they are *H. ornatus* Bagnall, *H. morikawai* Kurosawa and *H. collessi* Mound respectively. But the occurrence of *Holurothrips* is not known so far from the Indian subcontinent (Ananthakrishnan and Sen, 1980) and hence, the present report is first of its kind. The following account gives the description of *Holurothrips manipurensis* sp. nov collected from Manipur.

Genus *Holurothrips* Bagnall

1914. *Holurothrips* Bagnall, *Ann. Mag. nat. Hist.*, (8) **14**: 375–381.
(Type–species *H. ornatus* Bagnall, by monotypy). (Source: Mound, 1974)

Head projection in front of eyes as long as or longer than dorsal length of eyes; eyes prolonged ventrally almost to posterior margin of head; 2 pairs of interocellar setae, 1 pair of postocellars, and 2 pairs of postoculars behind inner margin of eyes; cheeks

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with stout setae. Fore femora with 2 or more stout setae on exterior margin; fore tarsus unarmed, forewings with double fringes. Metanotum with a pair of strong setae; pelta broad, trilobed. Tube longer than head.

Holurothrips manipurensis sp. nov. (Fig. 1)

Macropterous female

Head dark brown, rest of the body yellowish brown, antennal segment-I dark brown, II yellowish brown, III yellow, IV and V yellow at basal third faintly shaded at apex, VI–VIII yellowish brown to dark brown. Major setae on head, thorax and leg not so brown but with broadly expanded apices. Forewing faintly shaded at apex.

Head longer than wide, dorsal surface of head largely obscured due to dense pigment, eyes prolonged little ventrally at posterior margin of head; maxillary stylets broad 'V' shaped. Pronotal anteroangular setae longer than anteromarginals and midlaterals, mesoeusternum with about 40 pairs of setae, metanotum with a pair of well developed setae (90–135 long), fore femora with 2 or more stout setae (96 long) on exterior margin, fore tarsus unarmed. Forewing with 21 double fringes; pelta broad, trilobed with apex pointed. Tergite II with a pair of sigmoid setae, III–VII with 3 pairs of wing retaining setae, VIII and IX with reticulated dorsal surface sculpture. Tube 6 times as long as tergite IX and more than twice as long as head; tube with a few weak setae.

Body measurements

Head: 632–703 long, 280–307 wide across eyes, 271–298 across cheeks, 252–289 at base. Head projection 289–315 long; 115–140 wide. Eyes 110–126 long. Ocellar setae 85–130, postocular 95.

Antennal segments length (width)

I: 94–105(68–74); II: 63–85(47–58); III: 577–610(31–42); IV: 304–336(31–36); V: 262–294(31–42); VI: 168–189(26–31); VII: 105–126(21); VIII: 105–126(21).

Antennal segments I and II with stout dorsal setae (50–80 long), IV with 2 sense cones 70–90 long, Mouth cone broad, 105–199 long, 252 wide at base, 105 at apex.

Prothorax 262–283 long, 262 wide across anterior margin, 420–462 at middle, 273–315 across posterior margin; Prothoracic setae: anteroangulars 78–105, antero-marginals 21–42, midlaterals 52, post angulars 52–63, epimerals 78–105 long. Mesothorax 105–189 long, 525–703 wide. Metathorax 315–430 long, 630–756 wide. Fore femora 388–420 long, 105–126 wide at base. Forewings 1900–1921 long, 105 wide at middle, 73–84 at base and 42–52 at apex; sub-basal setae 52–68, 130, 250–280.

Abdomen tergite IX: 579–778 wide at base; 560–832 at middle, 250–300 long. B1, B2 and B3 setae of tergite IX 190–250; 108 and 90 long respectively. Tube 1600–2000 long, 84–105 wide at base, 52–94 at middle, 52–73 at apex; 110–1260 long. (All measurements in μ.)

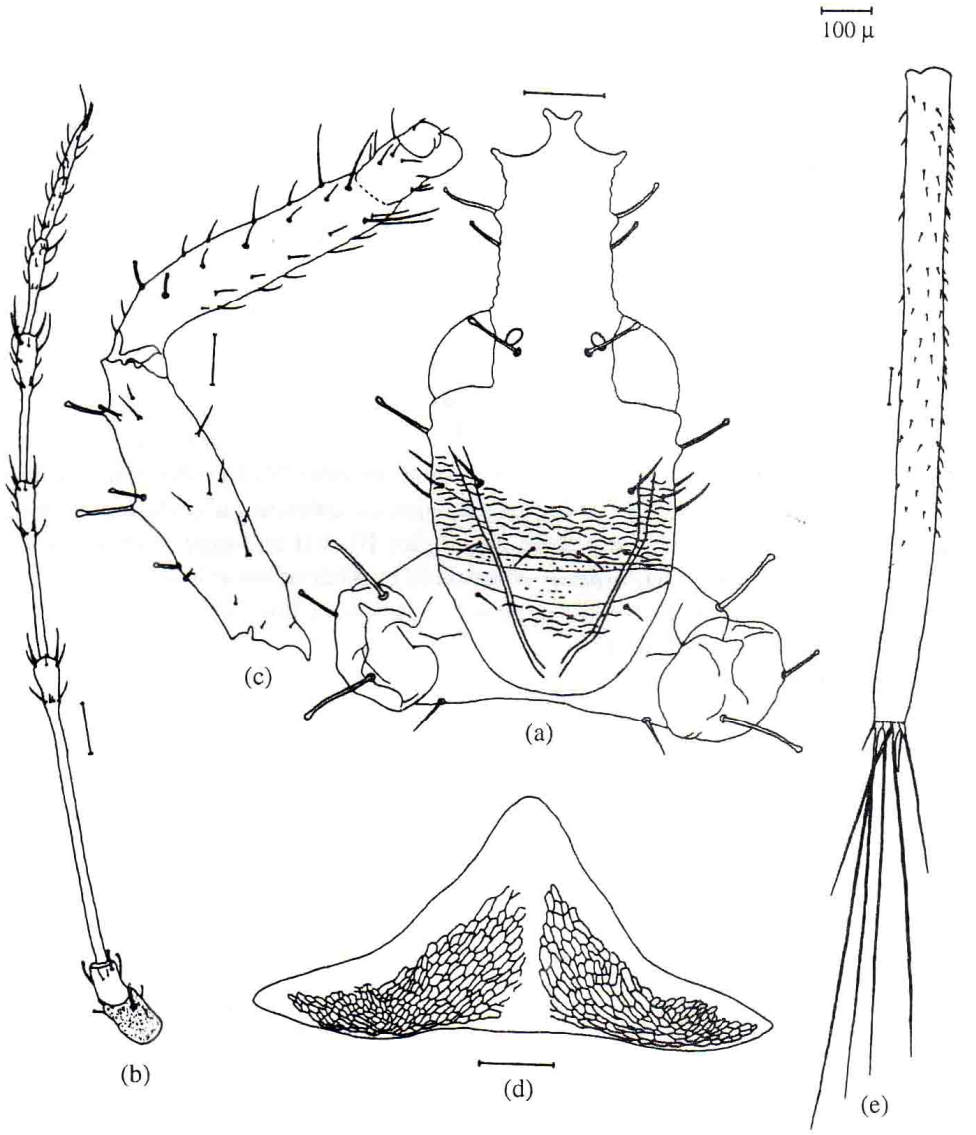

FIGURE 1. *Holurothrips manipurensis* sp. nov. (a) Head and Pronotum; (b) Antenna; (c) Fore leg; (d) Pelta; (e) Tube.

Total body length: 5.22–6.45 mm

Holotype ♀ (alate), M.U. Insect Collection Record No. 34H, Litan, Ukhrul District, Manipur State, 1500 m MSL, Ex. Oak leaf litter, 17.xi.2000, Coll. R. Varatharajan.

Paratype

2♀♀ (alate & apterous-one each), M.U. Insect Collection Record No. 34P. Rest of the data same as holotype.

Other collections (a) 2♀♀ (alate & apterous-one each), 1♂, M.U. Insect Collection Record No. 35, Tamenglong District, Manipur State, 1250 m MSL, Ex. Oak and Bamboo leaf litter, 15.x.2001.

(b) 1♀ (alate form), M.U. Insect Collection Record No. 36, Senapati District, Manipur State, 950 m MSL. Ex. Oak leaf litter, 10.xii.2001.

Etymology

As this new species has been collected from at least three different districts of Manipur, it is named as *Holurothrips manipurensis*.

Remarks

The new species *H. manipurensis* is similar to *H. ornatus* for the characters such as body colour, stout setae on head with expanded apices, anteroangulars longer than mid laterals, 3 pairs of wing retaining setae on tergites III–VII and tube < twice as long as head, but different from *H. ornatus* in terms of number of setae in mesoeusternum, length of dorsal setae in antennal segment I, position of interocellar setae and tube length in comparison to tergite IX.

H. manipurensis also exhibits similarity with *H. collessi* in terms of antennal colouration, presence of sigmoid setae on tergite II, 3 pairs of wing retaining setae on tergites III–VII and broad mesopraesternum. However, *H. collessi* is easily distinguishable from *H. manipurensis* by having short anteroangular setae and 4 sense cones on antennal segment IV, 46 double fringes, besides tube ¡ twice as long as head. In short, the long tube and about 40 pairs of setae in mesoeusternum distinctly differentiate *H. manipurensis* from other species of *Holurothrips*. The description of the Japanese species, *H. morikawai* has not been referred and compared in the present study. But Mound and Palmer (1983) distinguished *H. ornatus* from *H. morikawai* on the basis of difference in number of wing retaining setae on tergites IV–VI. The following key further substantiates the morphological variations observed among the 4 species.

KEY TO THE SPECIES OF *HOLUROTHRIPS*

1. Two pairs of wing retaining setae on tergites IV–VI ..... *morikawai* Kurosawa, 1968
– 3 or > 3 pairs of wing retaining setae on tergites IV–VI 2
2. Antennal segment IV with 4 sense cones; pronotal anteroangular setae longer than midlaterals, mesoeusternum with 30 pairs of setae, tube 1.5 times as long as head ..... *collessi* Mound (1974).
– Antennal segment IV with 2 sense cones; pronotal anteroangular setae shorter than midlaterals, mesoeusternum with > 30 pairs of setae, tube more than twice as long as head 3

3. Dorsal setae in antennal segment I short, 2 pairs of interocellar setae on head projection placed almost in the same line. Width ratio of head projection, head & pronotum 1:2:3, mesoeusternum with > 60 pairs of setae. Tube 3 times longer than tergite IX ..... *ornatus* Bagnall, 1914
- Dorsal setae in antennal segment I long, 2 pairs of interocellar setae on head projection placed wide apart. Width ratio of head projection, head and pronotum 1 : 3 : 4, mesoeusternum with about 40 pairs of setae. Tube 6 times longer than tergite IX ..... *manipurensis* sp. nov.

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