



Streothrips jianshuiensis sp. n., a tropical addition to the Aeolothripidae fauna of China (Thysanoptera)

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Abstract

Streothrips jianshuiensis sp.n. is described from Yunnan, China, as the fourth species in this genus from the Oriental tropics. A key is provided to the five genera of Aeolothripidae recorded from China.

Key words: Asian-tropics, genus-key, wing-patterns, thrips

Introduction

The biogeography of China is complex, with the northern Provinces in the Palearctic Region but some southern Provinces in the Oriental Region, and this situation is reflected in the Aeolothripidae fauna. Of the 19 species in this family recorded from China (Mirab-balou 2011a, b), 13 species are members of the essentially Holarctic genus *Aeolothrips*, with five species members of two tropical or sub-tropical genera. The objective here is to describe a new species from southern China in a third tropical genus, *Streothrips*, that currently includes three species described from India (Bhatti 1971) Malaysia (Ng & Eow 2012) and Philippines (Reyes 1994). This new species is particularly interesting because the fore wings have longitudinal dark markings, in contrast to the usual transverse dark markings found in species of this genus and family. A key to the five genera of Aeolothripidae recorded from China is provided, also a key to the species of *Streothrips*.

Key to genera of Aeolothripidae in China

1. Fore wings racquet-shaped (Fig. 10); head and pronotum with long setae (Fig. 7); antennal segments moniliform (Fig. 11) *Mymarothrips*
- Fore wings not broadened distally (Fig. 14), sometimes micropterous; head and pronotum without long setae or with only 1 pair; at least antennal segments III–IV longer than wide 2
2. Antennal segments III–IV exceptionally long, III at least 8 times as long as wide (Fig. 13); metanotum smooth *Franklinothrips*
- Antennal segments III–IV not exceptionally long, III no more than 4 times as long as wide; metanotum with sculpture 3
3. Antennal segments III–IV each with transverse sensorium at apex; pronotum with 1 pair of long posteroangular setae; abdominal sternites with discal setae laterally *Rhipidothrips*
- Antennal segments III–IV each with sensorium linear (Fig. 12); pronotum without long setae; abdominal sternites without discal setae 4
4. Mesonotum with sparse striae, metanotum with equiangular reticulation (Fig. 9) *Aeolothrips*
- Meso and metanotum closely striate, metanotum with striae arched around anterior margin (Fig. 8) *Streothrips*

Streothrips Bhatti

Streothrips Bhatti, 1971: 89. Type species *Streothrips arorai* Bhatti

Although Bhatti erected this genus for a single species from central India, two further species have subsequently been described; *alaris* from Philippines (Reyes 1994) and *moundi* from Malaysia (Ng & Eow 2012). These species are similar to other Aeolothripidae in having 9-segmented antennae with linear sensoria on segments III and IV. They are also similar to *Aeolothrips* species in having the distal maxillary palp segment not subdivided, and in lacking discal setae on the sternites. Whereas *Aeolothrips* species have the metascutum more or less reticulate, *Streothrips* species have the meso- and metanotum bearing close striations. Members of this Oriental genus share this character state with species in the Neotropical genus *Ambaeolothrips*, but they have the pronotum smooth (Mound *et al.* 2016) in contrast to the striate pronotum of *Streothrips* species. Perhaps more closely related is *Aduncothrips* from India, but the species in that genus have the sensoria on antennal segments III–IV unusually long and with internal markings, and the abdominal sternites have discal setae (Ananthakrishnan 1963). One female of an unidentified species of *Aduncothrips* from Thailand has been studied, and sternites III–VII have between one and four pairs of discal setae placed anterolaterally close to the antecostal ridge.

Key to species of *Streothrips*

(adapted from Ng & Eow 2012)

1. Fore wing with longitudinal dark marking in addition to one transverse dark band (Figs 1, 14) *jianshuiensis* sp.n.
- Fore wing with only transverse dark markings 2
2. Fore wing largely dark, including wing apex. *alaris*
- Fore wing with transverse dark bands and apex pale. 3
3. Female antennal segment IV with sensorium wider apically, 0.6 times as long as segment; sternite VI with one pair of discal setae laterally *arorai*
- Female antennal segment IV with sensorium not wider apically, 0.4 times as long as segment; sternite VI without discal setae *moundi*

Streothrips jianshuiensis sp.n.

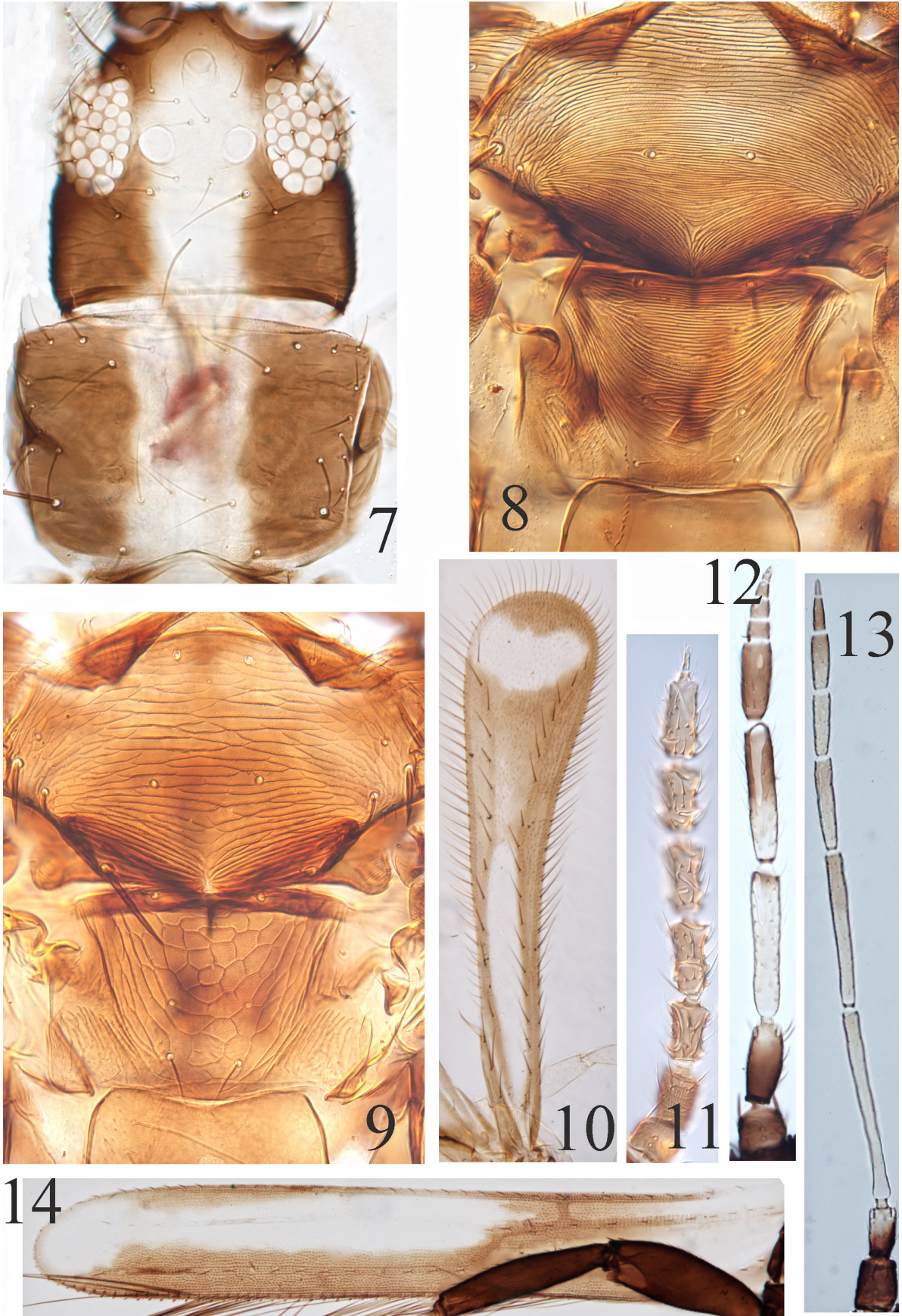
Female macroptera. Body dark brown (Fig. 1); legs wholly dark brown except fore and middle tarsi paler; antennal segments I–II dark brown, III pale except apex brown, distal half of IV, also V–IX dark brown (Fig. 12); fore wing pale at base, a transverse dark brown band close to base, with two longitudinal dark brown bands around wing margins, wider along posterior margin than anterior margin (Fig. 14); clavus brown on anterior half. Head wider than long, with transverse striae behind ocellar area, especially close medially; about 4 pairs of interocellar setae, one pair stout; about 30 setae on postocellar area (Fig. 4); frontoclypeus with at most 12 pairs of setae, including 2 long pairs and with 1 stout pair beside eyes. Maxillary palps 3-segmented, segment II not subdivided. Antennae 9-segmented, antennal segments III–IV with linear sensorium, without internal markings, on III about 0.3–0.5 times as long as segment, on IV about 0.6 times as long as segment and curved distally, broadened at apex (Fig. 12).

Anterior half of pronotum with transverse striae weak but posterior half clearly and closely striate, with about 80 discal setae and 3–4 pairs of posteromarginal setae (Fig. 5). Mesonotum closely striate (Fig. 8), campaniform sensilla (=CPS) absent. Metascutum with arcuate, close striae but transverse at anterior (Fig. 8), with pair of CPS medially, pair of small setae close to posterior. Abdominal tergite I broad, with transverse striae on anterior and sides, abdominal tergites II–VIII with transverse striae laterally; tergite I without CPS, II with pair of CPS behind median setae, III–VIII each with pair of CPS in front of median setae, IX with pair of CPS near posterior margin, X with pair of CPS far from posterior margin (Fig. 6). Sternites II–VII without discal setae, sternite II with 2 pairs of posteromarginal setae, III–IV with 3 pairs (Fig. 2), V–VII with 4 pairs (Fig. 3), VII with 2 pairs of accessory setae between S1 and S2.

Measurements (holotype in microns). Body length 1900. Head length 180; width 216. Pronotum 173; width 276. Fore wing length 878; median width 120. Antennal segments I–IX length (median width): 32(37); 57(27); 108(23); 106(22); 58(24); 13(18); 9(12); 11(7); 11(5).



FIGURES 1–6. *Streothrips jianshuiensis* sp.n. (1) Female; (2) Sternites III–IV; (3) Sternites V–VI; (4) Head; (5) Pronotum; (6) Tergites IX–X.



FIGURES 7–14. (7) *Mymarothrips garuda*. Head and pronotum; Meso and metanotum 8–9: (8) *Streothrips jianshuiensis* sp.n.; (9) *Aeolothrips* sp.; (10) Fore wing of *Mymarothrips garuda*. Antenna 11–13: (11) *Mymarothrips* sp.; (12) *Streothrips jianshuiensis* sp.n.; (13) *Franklinothrips tani*; (14) Fore wing of *Streothrips jianshuiensis* sp.n.

Male: unknown.

Specimens studied. Holotype female, **CHINA, Yunnan Province**, Jianshui County, Swallow Cave (23°63'84"N, 103°05'78"E), on flowers of *Buddleja officinalis* [Loganiaceae], 2.iv.2019 (Xie Yanlan), in collection of Yunnan Agricultural University, Kunming.

Paratypes: 1 female, same data as holotype; 1 female, same locality, on flowers of *Carissa spinarum* [Apocynaceae], 26.iv.2019 (Liu Hui).

Etymology. This species named after the collecting place.

Comments: This new species is distinguished from the other three species of *Streothrips* by the fore wings having longitudinal dark brown bands along the anterior and posterior margins, and antennal segments I–II as brown as the head. The three previously described species, *alaris*, *arorai* and *moundi* all have different markings on the fore wings, and the basal antennal segments pale (Ng & Eow 2012). The diversity of colour patterns on the fore wing among the members of this genus is interesting. Similar variation, including colouring of the wing margins, occurs amongst species of *Franklinothrips* (Mound & Reynaud 2005), whereas most of the 112 species of *Aeolothrips* have only transverse banding patterns (Alavi & Minaei 2018).

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