A bamboo-inhabiting species *Stenchaetothrips banhong-ensis* sp. nov. (Thysanoptera: Thripidae) from Southwestern China

Qingling HU[1, 2, 3], Jinian FENG[1①]

1. *Key Laboratory of Plant Protection Resources and Pest Management of the Ministry of Education, Entomological Museum, Northwest A&F University, Yangling, Shaanxi 712100, China*

2. *Key Laboratory for Ecology and Environment of River Wetlands in Shaanxi Province, Weinan, Shaanxi 714000, China*

3. *College of Chemistry and Environment, Weinan Normal University, Weinan, Shaanxi 714000, China*

Abstract: A formerly unknown bamboo-inhabiting species in the genus *Stenchaetothrips* Bagnall is described and illustrated from Southwestern China.

Key words: Thripinae, *Stenchaetothrips*, taxonomy

中国西南部一竹栖蓟马新种——班洪直鬃蓟马（缨翅目：蓟马科）

胡庆玲[1, 2, 3]，冯纪年[1①]

1. 植保资源与病虫害防治教育部重点实验室，西北农林科技大学昆虫博物馆，陕西 杨凌 712100；2. 陕西省河流湿地生态与环境重点实验室，陕西 渭南 714000；3. 渭南师范学院化学与环境学院，陕西 渭南 714000

摘要：记述采自中国西南部的竹栖蓟马 1 新种：班洪直鬃蓟马 *Stenchaetothrips banhongensis* sp. nov.。

关键词：蓟马亚科；直鬃蓟马属；分类

Introduction

The genus *Stenchaetothrips* was erected by Bagnall in 1926 with *S. melanurus* as type species. It is a member of the *Thrips* genus-group (Mound & Palmer 1981), but can be readily distinguished from other genera within this group. Species in this genus live on grasses and bamboos, breeding mainly on the leaves rather than in the flowers (Tyagi & Kumar 2008). Among these known species, *S. biformis* is a widespread pest of rice and generally called “rice thrips”. Infested seedlings always show silver streaks typical of the damage caused by *S. biformis* (White 2000).

The genus *Stenchaetothrips* includes 38 species worldwide (Thrips Wiki 2016), of which 18 species are reported from China. Keys are available for the identification of species in the genus from several parts of the world (Bhatti 1982; Zhang & Tong 1990; Wang 2000; Mound & Marullo 1996; Reyes 1994). The objective of this paper is to describe this new species from

Received 31 October 2016. Published 25 December 2016. Published online 20 December 2016.

① Corresponding author, E-mail: jinianf@nwsuaf.edu.cn

Southwestern China.

Material and methods

In this study, thrips were collected from the leaves of bamboo in Banhong, Yunnan Province during May and June in 2011. Slides were prepared for identification by the methods described by Zhang *et al*. (2006). Specimens were examined with the help of an EVOS digital inverted microscope. The photographs were taken through a Nikon Y-IDT microscope with a Q-image CCD and using Synoptic Automontage software.

Abbreviations. CPS—campaniform sensilla, MCS—metascutal campaniform sensilla.

Type specimens of this new species are deposited in the Entomological Museum of Northwest A&F University (NWAFU), Yangling, Shaanxi, China.

Taxonomy

Stenchaetothrips Bagnall, 1926

Stenchaetothrips Bagnall, 1926: 107. Type species *Stenchaetothrips melanurus* Bagnall, by original designation and monotypy.

Stenchaetothrips banhongensis sp. nov. (Figs. 1–19)

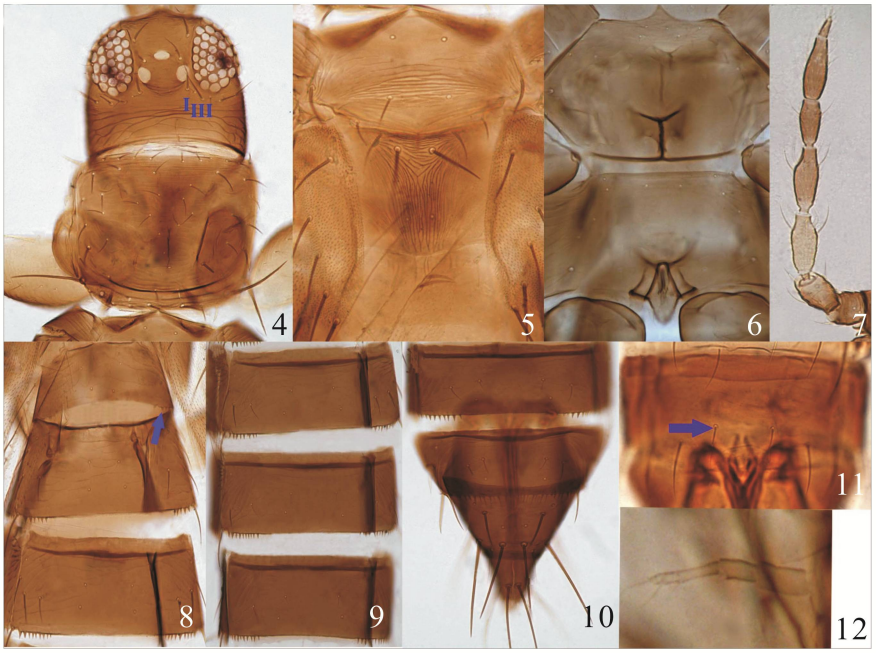
Female macroptera. Body color brown to dark brown (Fig. 1). All tarsi, fore tibiae, apex of fore femur, antennal segment III and extreme base of antennal segment IV yellow. Other segments of antenna brown. Fore wing pale brown, with basal fourth paler (Fig. 3).

Figures 1–3. *Stenchaetothrips banhongensis* sp. nov. 1. Female; 2. Male; 3. Fore wing of female.

Head. Head wider than long (Fig. 4), only two pairs of ocellar setae present, pair II longer than pair III, pair III situated just outside of ocellar triangle, postocular setae I subequal to III, II subequal to IV, and much shorter than I and III. Maxillary palpi 3-segmented (Fig. 12). Antennae 7-segmented, segment I without dorsal apical setae; segments III and IV each with

forked sense cones (Fig. 7); segments III–VI with rows of microtrichia dorsally and ventrally.

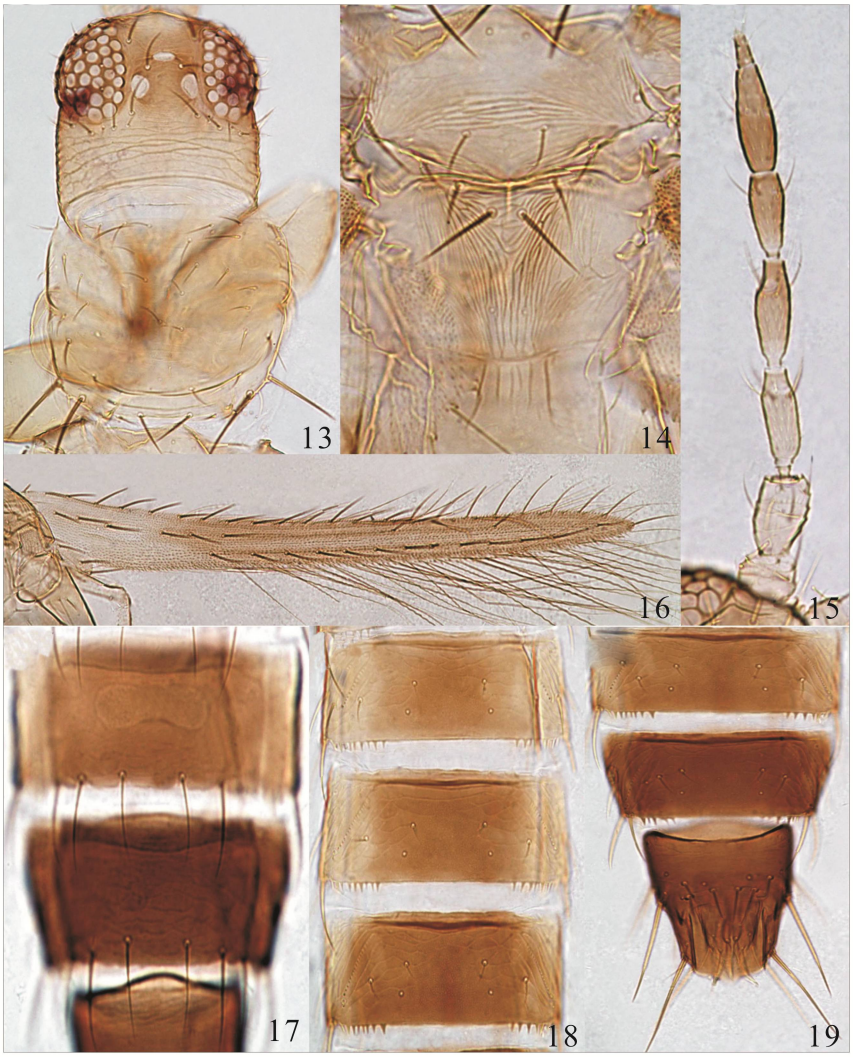
Thorax. Pronotum wider than long (Fig. 4), with two pairs of posteroangular setae, inner pair longer than outer pair. Ferna undivided. Mesosternopleural sutures present. Mesonotum sculptured, with one pair of CPS antero-medially; median setae situated ahead of posterior margin. Metascutum sculptured with close longitudinal lines, median setae situated behind anterior margin, but not very far, MCS present. Spinula present on mesosternum only (Fig. 6). Fore wing first vein with 3 distal setae, second vein with 12–14 setae.



Figures 4–12. *Stenchaetothrips banhongensis* sp. nov. ♀. 4. Head and pronotum; 5. Meso- and metanotum; 6. Meso- and metasternum; 7. Antenna; 8. Abdominal tergites I–III; 9. Abdominal tergites IV–VI; 10. Abdominal tergites VII–X; 11. Abdominal sternite VII; 12. Maxillary palpi.

Abdomen. Abdominal tergite I with transversely anastomosing sculpture; S1 setae on tergites I–VII smaller than S2, and with a variable number of teeth on lateral sides, posterior margin of tergite I with 4 to 6, II with 10, III–VII with 16–22 teeth. Comb on posterior margin of tergite VIII complete. Tergite IX with two pairs of CPS; tergite X split longitudinally. Sternite VII with median setae in front of the posterior margin.

Male macroptera. Body bicolored (Fig. 2). Head, thorax, and abdominal segment I yellow; antennal segments I–III, basal fourth of segment IV, and extreme base of V yellow, remaining segments brown (Figs. 13–16). Abdominal segments II to VII brown, VII dark brown. Each of sternites III–VII with a large dumbbell-shaped pore area (Fig. 17). Posterior margin of abdominal tergite VIII without comb, but with teeth on lateral sides of posterior margin (Figs. 18, 19). Tergite IX without thorn-like setae (Fig. 19). Abdominal sternite VII with median setae at posterior margin, sternite VIII with median setae ahead of posterior margin.



Figures 13–19. *Stenchaetothrips banhongensis* sp. nov. ♂. 13. Head and pronotum; 14. Meso- and metanotum; 15. Antenna; 16. Fore wing; 17. Abdominal sternites VII–VIII; 18. Abdominal tergites V–VII; 19. Abdominal tergites VII–X.

Measurements. Holotype female: length (width). Body length 2264; head 203 (232), ocellar setae pair II 43, III 39; postocular setae I 37, II 14, III 38, IV 17, V 36, VI 36; pronotum 245 (262), posteroangular setae (outer) 91, inner setae 103; fore wing 1272 (83); antennal segments I to VII as follows: I 33 (45), II 48 (49), III 89 (28), IV 85 (28), V 63 (23), VI 82 (27), VII 27; maxillary palpi I–III 31, 20, 38.

Male. Length (width). Body length 1670; head 165 (178), ocellar setae pair II 40，III 37; Postocular setae I 34, II 13, III 32, IV 11, V 30, VI 30; pronotum 188 (220), posteroangular setae (outer) 73, inner setae 84; fore wing 995 (63); antennal segments I to VII as follows: I 30 (36), II 46 (33), III 72 (23), IV 70 (23), V 54 (21), VI 68 (27), VII 23; maxillary palpi I–III 17, 11, 20.

Holotype. ♀, **China**, Banhong, Yunnan, alt. ca 1176 m, on bamboo, Qingling HU, 27-V-2011 (in NWAFU). **Paratype.** 1♂, collected with holotype (in NWAFU).

Remarks. According to the key of Indian species (Bhatti 1982) the female of this new species is very similar to *S. caulis* and sharing the colour of the body. It can be distinguished by the direction of the teeth on posterior margin of abdominal tergites: posterior margin of abdominal tergites II–VII each with posteriorly directed teeth (laterally directed in *S. caulis*). The male of this new species is very similar to *S. bicolor* and sharing the colour of antennal segment VI and position of the median metanotal setae but can be distinguished by following characters: posterior margin of abdominal tergite VIII without comb (posterior margin of abdominal tergite VIII with comb in *S. bicolor*), abdominal sternites III–VII each with dumbbell-shaped pore areas (abdominal sternites III–VII each with small and rounded pore areas in *S. bicolor*).

Acknowledgements

The project was supported by the National Natural Science Foundation of China (30570205), the Young Talent Support Program from the Association for Science and Technology of Colleges in Shaanxi Province (20160235), the Special Foundation for Young Scientists of Weinan Normal University in 2015 (15ZRRC03), and the Feature Disciplines of Weinan Normal University (14TSXK04, 14TSXK05).

References

Bagnall RS. 1926. Brief descriptions of new Thysanoptera XV. *Annals and Magazine of Natural History*, Series 9, 18: 98–114.

Bhatti JS. 1982. Revision of the Indian species of *Stenchaetothrips* Bagnall (Thysanoptera: Thripidae). *Oriental Insects*, 16(4): 385–417.

Thrips Wiki. 2016. Thysanoptera (Thrips) of the World — a Checklist. Available from: http://thrips.info/wiki/Stenchaetothrips (Accessed August 2016).

Mound LA & Marullo R. 1996. The thrips of Central and South America: an introduction. *Memoirs of the American Entomological Institute*, 6: 195–196.

Mound LA & Palmer JM. 1981. Phylogenetic relationships between some genera of Thripidae (Thysanoptera). *Entomologica Scandinavica*, 15: 153–170.

Reyes CP. 1994. Thysanoptera (Hexapoda) of the Philippine Islands. *Raffles Bulletin of Zoology*, 42: 107–507.

Tyagi K & Kumar V. 2008. Two new species of *Stenchaetothrips* (Thysanoptera: Thripidae) from Indian. *Zootaxa*, 1851: 58–64.

Wang CL. 2000. The genus *Stenchaetothrips* Bagnall (Thysanoptera: Thripidae) from Taiwan. *Chinese Journal of Entomology*, 20: 243–253.

White G. 2000. First record of rice thrips (Thysanoptera: Thripidae) in Trinidad, West Indies. *Florida Entomologist*, 83(2): 188.

Zhang HR, Okajima S & Mound LA. 2006. Collecting and slide preparation methods of thrips. *Chinese Bulletin of Entomology*, 43: 725–728.

Zhang WQ & Tong XL. 1990. The Chinese *Stenchaetothrips* Bagnall with descriptions of two new species. *Entomotaxonomia*, 12(2): 103–108.