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Three new species and three new records of the genus *Bamboosiella* from China (Thysanoptera: Phlaeothripidae)

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Abstract

Bamboosiella caudibruna sp. n., *B. rugata* sp. n. and *B. sculpta* sp. n. are described and illustrated from China. In addition, *B. brevis* Okajima, *B. lewisi* (Bagnall) and *B. xiphophora* Okajima are newly recorded from this country. A key for identification of seventeen Chinese *Bamboosiella* species is provided.

Key words: Phlaeothripinae, *Bamboosiella*, bamboo, new species

Introduction

Bamboosiella is a Poaceae-inhabited genus of Phlaeothripinae with 31 species recognized in the world (ThripsWiki, 2018). Most members of the genus are associated with bamboos (ThripsWiki 2018). Bamboos are plants belonging to the subfamily Bambusoideae of Poaceae, comprising approximately 1439 described species in 116 genera worldwide (Bamboo Phylogeny Group 2012). Most species of bamboos are native to Asia (Li *et al.* 2003). China is a country with abundant bamboo biodiversity, where 43 genera and 861 species of Bambusoideae are recorded (Liu *et al.* 2018). Although the Chinese bamboo-inhabiting species of Thysanoptera have not been investigated comprehensively, it seems likely that the bamboo-associated genus *Bamboosiella* has high species diversity in this country. Recently, Dang & Qiao (2016) discussed the generic relationships of *Bamboosiella* within the Phlaeothripinae, and reviewed the eleven *Bamboosiella* species which were known from China. The aim of this paper is to record from China six further species of this genus. Three of these are new species and three newly recorded as a result our surveys of Poaceae-associated thrips in southern China.

Materials and methods

The thrips were collected by (1) stripping off sheaths or tender leaves of bamboo; (2) beating living leaves of bamboo or grasses over a white plastic tray using a small stick; (3) extracted by using Tullgren funnels from bamboo leaf-litter. Examined specimens were mounted into Canada balsam. Abbreviations for names of pronotal setae are as follows: am (anteromarginal), aa (anteroangular), ml (midlateral), epim (epimeral) and pa (posteroangular). All type materials are deposited in the Insect Collection, South China Agricultural University (SCAU).

Key to *Bamboosiella* species from China

1. Head at least more than 1.4 times as long as wide; antennal segment IV at least 2.0 times as long as wide; fore tarsal tooth present in both sexes 2
- Head almost as long as wide, sometimes wider than long; antennal segment IV less than 2.0 times as long as wide; fore tarsal tooth present or absent 6

2. Body uniformly brown (Figs 41, 42); antennal segments I–VIII brown except III yellow and IV–VI bicoloured; pronotal am reduced to minute setae, other major setae developed with blunt apex; sub-basal wing setae S1 and S2 weakly blunt, S3 pointed apically *lewisi*
- Body bicoloured (Fig. 11) 3
3. Fore tibiae with a sub-apical tubercle (Figs 29, 30); abdominal segments II–IX uniformly yellow (Figs 43, 44) *xiphophora*
- Fore tibiae without a sub-apical tubercle; abdominal segments II–IX bicoloured?brown and yellow 4
4. Postocular setae longer than eye, pointed apically; antennal segments IV–VI brown with basal half yellow; sub-basal wing setae S1–S3 pointed apically *magnus*
- Postocular setae distinctly short than eye, expended apically; antennal segments IV–VI uniformly yellow; sub-basal wing setae S1–S3 expanded apically 5
5. Abdominal segments brown except II–III yellow (Figs 39, 40) *fasciata*
- Abdominal segments brown except II–VI yellow *bicoloripes*
6. Pronotal am reduced to minute setae and pointed apically 7
- Pronotal am well-developed and expanded apically 11
7. Postocular setae expanded at apex 8
- Postocular setae pointed apically 9
8. Antennal segments IV–VIII brown except IV with basal 1/3 and V with basal 1/4 yellow (Fig. 8); abdominal segments uniformly yellow except the tube *caudibruna* sp. n.
- Antennal segment V yellow, IV and VI brown with basal 1/4 yellow, VII–VIII brown; abdominal segments yellow except for III–IV each with a pale brown marking laterally *antennatus*
9. Pronotum much paler than brown head and pterothorax; abdominal segments III–VII each with a pale brown marking anteromedially; anal setae about 2.0 times longer than the tube *longisetis*
- Head and thorax brown; anal setae slightly longer than the tube, much less than 2.0 times as long as tube 10
10. Abdominal segments III–V each with a pale brown marking anteromedially; pronotal aa, ml and pa well-developed and expanded apically; fore tarsal tooth absent in both sexes *exastis*
- Abdominal segments III–VI each with a pale brown marking anteromedially; pronotal aa, ml and pa setae reduced to short and pointed apically; fore tarsal tooth present in male *brevis*
11. Body uniformly brown 12
- Body bicoloured 13
12. Antennal segments I–VIII brown except segment III yellow; pronotum almost smooth; metanotum with polygonal reticulation *varia*
- Antennal segments I–VIII brown except segment III yellow at basal half; pronotum covered with irregular sculpture entirely (Fig. 21); metanotum with narrow spaced longitudinal anastomosing striae (Fig. 23) *sculpta* sp. n.
13. Fore wings without duplicated cilia; abdominal tergite IX setae S1 pointed apically *cingulata*
- Fore wings with duplicated cilia; abdominal tergite IX setae S1 expanded apically 14
14. Head dark brown, thorax yellowish brown, much paler than head; all legs yellow *semiflava*
- Head brown concolorous with thorax; not all legs yellow 15
15. Antennal segments I–VIII brown except III yellow; abdominal segments I–II yellow, other segments light brown to brown *nayari*
- Antennal segments I–VIII brown except III yellow and IV–VI bicoloured; Abdominal segments I–VIII uniformly yellow, IX light brown with yellow markings at anterior half 16
16. Head covered with reticulation entirely; pronotal am as long as aa; abdominal segments III–VIII each with pale brown anteromedian marking *rugata* sp. n.
- Dorsal surface of head smooth medially; pronotal am much longer than aa; abdominal segments III–VIII without pale brown anteromedian marking *flavescens*

Bamboosiella brevis Okajima, 1995

(Figs 1, 2, 37, 38)

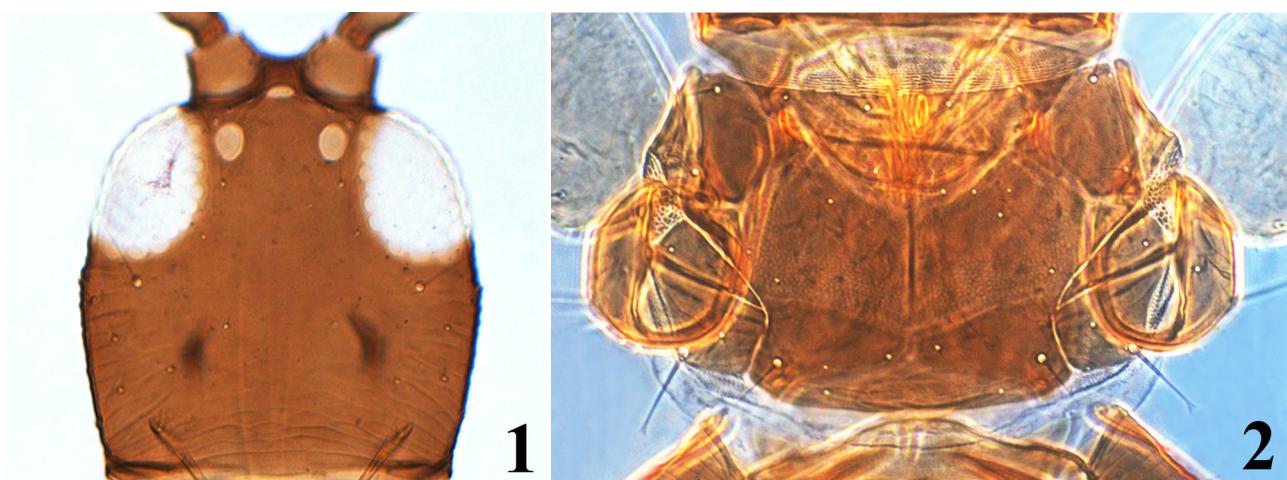
Bamboosiella brevis Okajima, 1995a: 307.

Described originally from Thailand (Okajima 1995a), this species is recorded here for the first time from China. According to the collection information below, this species is widely distributed from southwestern to southern China. The feeding habit of this species is unsure. Presumably it is predacious because it could be found from different parts of bamboo, such as the dry sheaths, tender or older leaves and even the leaf litter. This species is somewhat similar to *B. exastis*, but can be distinguished from the latter by the key above.

Material examined. CHINA, Yunnan: Pu'er City, Lancang County, Fazhanhe Town (22°19'N, 100°11'E, alt. 1500m), 1 female, dry sheaths of bamboo, 29.x.2016 (Chao Zhao); Pu'er City, Lancang County, Donghui Town (22°23'N, 99°40'E, alt. 1510m), 1 male, on living leaves of *Lophatherum gracile*, 30.x.2016 (Chao Zhao). Guangdong: Zhaoqing City, Guangning County, Bamboo Park (23°34'N, 112°24'E), 1 female and 1 male, in leaf

litter of bamboo, 20.xi.2010 (Tao Song); Shaoguan City, Wengyuan County, Xinjiang Town, Liangqiao ($24^{\circ}30'21''N$, $113^{\circ}44'43''E$), 1 female and 3 males, on tender leaves of *Phyllostachys* sp., 29.x.2011 (Tao Song); Conghua City, Liangkou Town, Lingtouqiao ($23^{\circ}41'N$, $113^{\circ}44'E$), 1 female and 1 male, on tender leaves of *Phyllostachys* sp., 30.x.2011 (Tao Song); Yingde City, Shimentai Nature Reserve ($24^{\circ}24'N$, $113^{\circ}18'E$), 1 female and 1 male, on living leaves of *Phyllostachys* sp., 5.xi.2011 (Shulan Yang); Conghua City, Liuxihe National Forest Park ($23^{\circ}43'N$, $113^{\circ}48'E$), 3 females and 1 male, on living leaves of bamboo, 16.v.2012 (Shulan Yang); Guangzhou, South China Botanical Garden ($23^{\circ}11'01''N$, $113^{\circ}22'04''E$), 3 females and 2 males, in bamboo leaf-litter, 9.viii.2014 (Chao Zhao); Guangzhou, The Arboretum of South China Agricultural University ($23^{\circ}09'22''N$, $113^{\circ}21'15''E$), 1 female and 2 males, from dry sheaths of bamboo, 10.x.2014 (Chao Zhao); Maoming City, Maoming Forest Park ($21^{\circ}37'44''N$, $110^{\circ}49'13''E$, alt. 30m), 1 female, from sheaths of bamboo, 1.xii.2017 (Zhaohong Wang). **Hainan:** Danzhou City, Danzhou Tropical Botanical Garden ($19^{\circ}30'48''N$, $109^{\circ}30'12''E$), 2 females, from dry sheaths of bamboo, 22.x.2017 (Chao Zhao).

Distribution. China (Yunnan, Guangdong, Hainan), Thailand.



FIGURES 1–2. *Bamboosiella brevis*: (1) head; (2) pronotum.

Bamboosiella caudibruna sp. n.

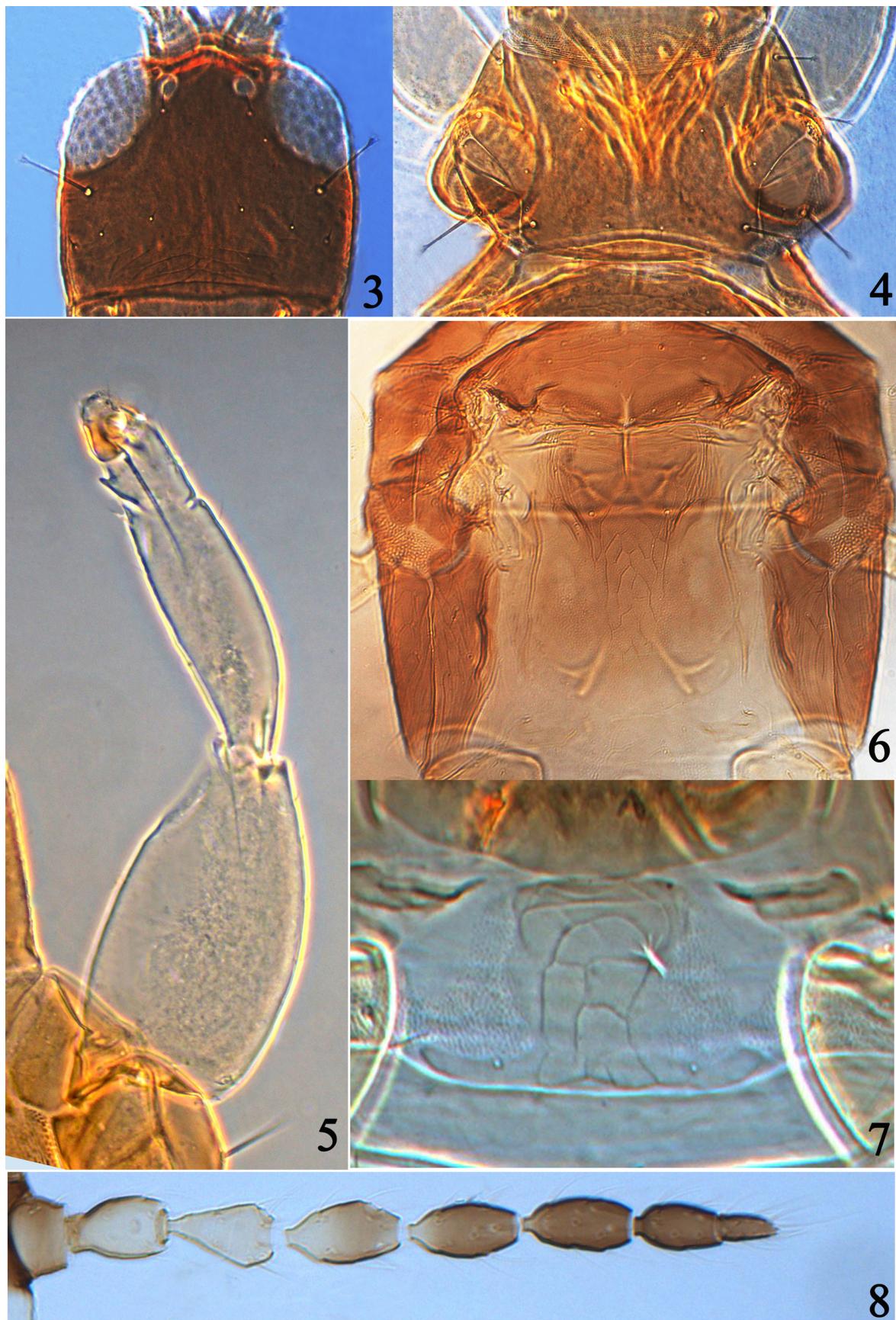
(Figs 3–8, 31, 32)

Female macroptera (Fig. 31). Body bicolored; head, thorax and abdominal tube brown with extreme base paler; antennal segments (Fig. 8) I–III yellow with I–II faintly shaded, IV–VIII brown except IV with basal 1/3 and V with basal 1/4 yellow; all legs yellow except for fore femora tinged with light brown on basal half; abdominal segments I–IX yellow; wings transparent.

Head (Fig. 3) approximately 0.8 times as long as broad, dorsal surface smooth but sculptured posteriorly; ocelli and eyes developed, postocellar setae minute and pointed apically, slightly longer than diameter of hind ocellus; cheeks weakly constricted towards base; postocular setae shorter than eyes, expanded at apex. Antennae 8-segmented (Fig. 8), approximately 2.5 times as long as head; segments III and IV with 1+1 and 1+2 sense cones respectively, segment VIII without pedicel broadly joined to VII.

Pronotum surface smooth, pronotal am setae reduced to minute, other 4 major setae well developed with expanded apically (Fig. 4), notopleural sutures complete. Basantra absent; mesopresternum complete and boat-shaped, narrowed at middle. Metanotum weakly sculptured with polygonal reticulation (Fig. 6). Fore tarsal tooth absent; fore wing slightly constricted at middle, with 4–5 duplicated cilia, subbasal wing setae well developed, S1 as long as S2, expanded apically, S3 the longest with blunt apex, approximately 2.0 times as long as S1.

Pelta (Fig. 7) hat-shaped and eroded laterally, with slender lateral lobes and a pair of campaniform sensilla; abdominal tergites II–VII each with two pairs of wing retaining setae; tergite IX setae S1 expanded at apex and shorter than S2, S2 subequal to S3 in length and both blunt apically; tube shorter than head and slightly longer than S2 and S3; anal setae slightly shorter than tube.



FIGURES 3–8. *Bamboosiella caudibruna* sp. n. (3) head; (4) pronotum; (5) fore leg of male; (6) metanotum; (7) pelta; (8) antenna.

Measurements (holotype female in microns). Distended body length 1420. Head length 150, width 165; eyes length 65; postocular setae length 40; diameter of hind ocellus 15; postocellar setae length 10. Antennae length 300, segments I–VIII length (width) as follows: 23(30); 40(25); 44(25); 46(25); 44(23); 44(23); 35(20); 24(11). Pronotum median length 220, width across median part 110; length of major setae: am 10, aa 24, ml 32, pa 32, epim 41. Fore wing length 570, sub-basal setae S1–S3 length: 24, 25, 45. Metanotum median setae 20. Abdominal tergite IX S1 setae length 80, S2 and S3 setae length 95. Tube length 106, width at base 54, at apex 27; anal setae length 100.

Male macroptera (Fig. 32). Similar in colour and structure to female, but body smaller, all legs yellow, fore tarsus with a tooth (Fig. 5), tergite IX setae S2 short and stout, approximately 1/2 of S1, setae S3 longest, slightly longer than tube.

Measurements (paratype male in microns). Distended body length 1280. Head length 145, width 155; eyes length 65; postocular setae length 40; diameter of hind ocellus 15; postocellar setae length 7. Antennae length 280, segments I–VIII length (width) as follows: 20(30); 33(25); 41(23); 43(24); 40(21); 40(20); 31(17); 24(10). Pronotum median length 200, width across median part 120; length of major setae: am 5, aa 20, ml 25, pa 25, epim 30. Fore wing length 520, sub-basal setae S1–S3 length: 20, 20, 38. Metanotum median setae 10. Abdominal tergite IX S1 setae length 65, S2 setae 30, S3 setae 110. Tube length 95, width at base 46, at apex 25; anal setae length 115.

Material examined. Holotype female, **Guangdong:** Guangning County, Bamboo Park ($23^{\circ}34'N$, $112^{\circ}24'E$), in leaf litter of bamboo, 21.xi.2010 (Tao Song).

Paratypes. 1 female and 3 males, collected with holotype. **Guangdong:** Guangzhou City, Longdong Forest Park ($23^{\circ}14'N$, $113^{\circ}24'E$), 1 female, in bamboo leaf-litter, 17.iv.2015 (Zhaohong Wang). **Jiangxi:** Chongyi County, Yangling National Forest Park ($25^{\circ}37'50''N$, $114^{\circ}18'16''E$, alt. 940m), 2 females, on living leaves of bamboo, 22.viii.2015 (Chao Zhao).

Etymology. The specific epithet, *caudibruna*, is derived from two Latin words, *caud-* meaning tail and *brunus* meaning brown, in reference to the new species with brown tube.

Distribution. China (Jiangxi, Guangdong).

Remarks. This new species is most closely related to *B. graminella* by sharing the following characters: short head, colour pattern, reduced pronotal am and tergite IX S1 setae expanded apically (Pitkin 1976), but it can be readily distinguished from the latter by the following combination of characters: (1) in the species, antennal segment I light yellowish brown, segment II yellow, segments V–VIII uniformly brown, while in *graminella*, antennal segments I–II pale brown, V–VI yellow tinged with pale brown in apical 1/2 to 2/3; (2) abdominal segments VIII–IX yellow, while those in *graminella* are brown; (3) fore tarsal tooth present in male, but it is absent in both sexes of *graminella*.

Bamboosiella lewisi (Bagnall, 1921)

(Figs 9–12, 41, 42)

Mesothrips lewisi Bagnall, 1921: 366.

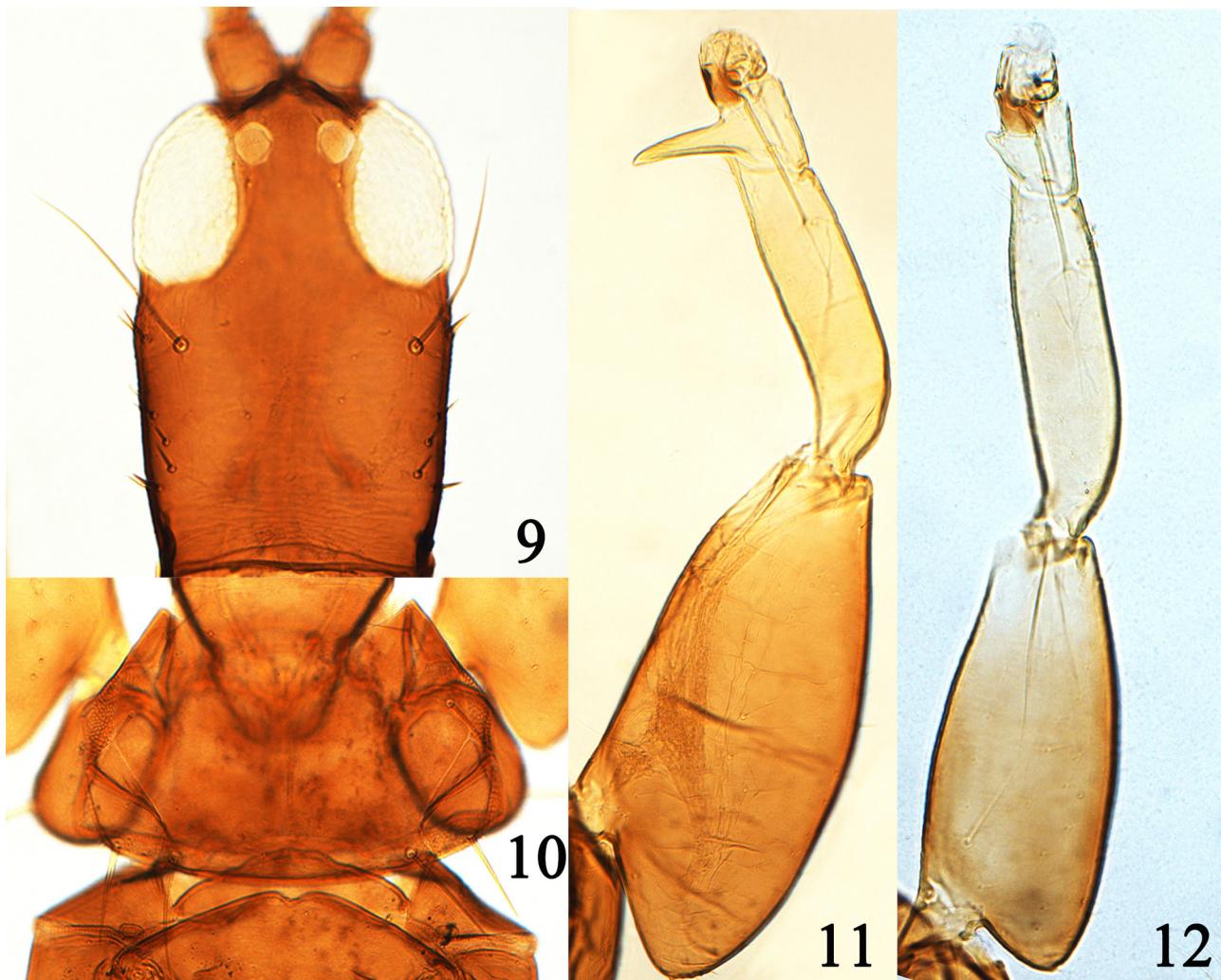
Bamboosiella lewisi (Bagnall): Okajima, 1995a: 317.

Previously this species was known only from Japan (Okajima 2006), although it was described originally as a species of the genus *Mesothrips*. In this study, *B. lewisi* is recorded from China for the first time and all specimens were collected from the living leaves of bamboo. It belongs to the large-body group of the genus *Bamboosiella*. It is easily distinguished from its congeners by the following characteristics: (1) body uniformly brown except bicoloured antennae in both sexes (Figs 41, 42); (2) head elongated and blunt postocular setae longer than eye (Fig. 9); (3) pronotum surface smooth, am reduced to minute setae and other 4 major setae well developed with blunt apex (Fig. 10) and (4) the fore femora slightly enlarged and tarsal tooth of female stronger than those in male (Figs 11, 12).

Material examined. CHINA, Jiangxi: Anfu County, Taishan Town, Mt. Wugongshan, Yangshimu Valley ($27^{\circ}31'N$, $114^{\circ}15'E$), 3 females, 1 male, on living leaves of bamboo, 12.viii.2016 (Zhaohong Wang). **Guangdong:** Nanling National Nature Reserve, Xiaohuangshan ($24^{\circ}53'43''N$, $113^{\circ}01'10''E$), 4 females, on living leaves of bamboo, 24.viii.2010 (Tao Song); Shenzhen City, Mt. Wutongshan ($24^{\circ}24'N$, $113^{\circ}17'E$), 2 females, on living leaves

of bamboo, 30.v.2014 (Zhaohong Wang). **Hainan:** Xinglong Tropical Botanical Garden ($18^{\circ}42'35''N$, $110^{\circ}15'E$), 3 females, on living leaves of bamboo, 15.x.2014 (Zhaohong Wang).

Distribution. China (Jiangxi, Guangdong, Hainan), Japan.



FIGURES 9–12. *Bamboosiella lewisi*: (9) head; (10) pronotum; (11) fore leg of female; (12) fore leg of male.

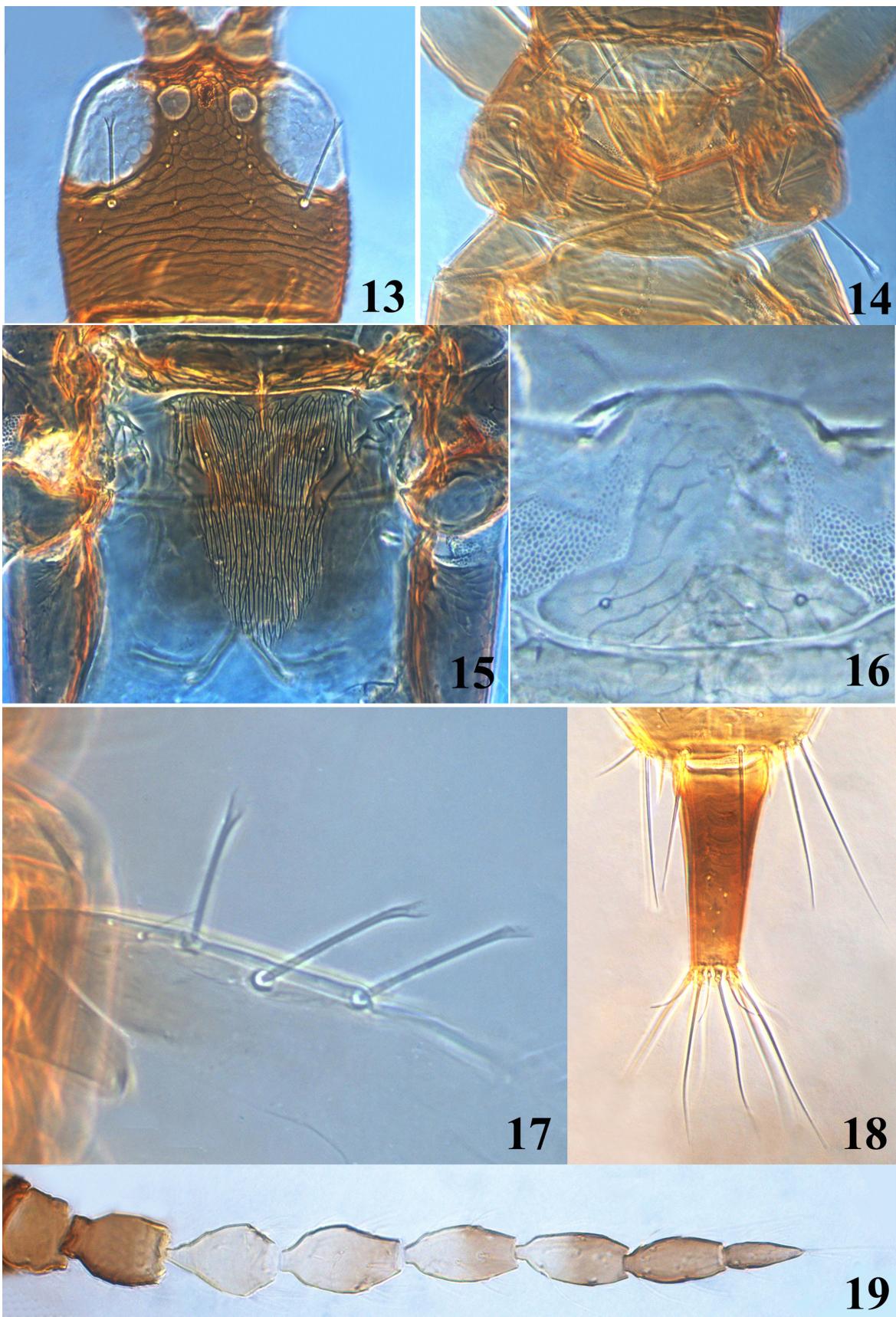
***Bamboosiella rugata* sp. n.**

(Figs 13–19, 33, 34)

Female macroptera (Fig. 33). Body bicolored yellow and brown; head and thorax brown; abdominal segments I–IX yellow except for IX tinged with pale brown on basal half, III–VIII each with a pale brown marking anteromedially (Fig. 33), tube brown with extreme base paler; fore and mid femora brown with yellow apices, hind femora yellow; all tibiae and tarsi yellow; antennal segments (Fig. 19) I–II brown and concolorous with head, III yellow, IV–VI pale brown with yellow at basal half, VII–VIII brown; wings weakly shaded with grey medially.

Head (Fig. 13) almost as long as broad; dorsal surface with distinct transverse sculpture, with polygonal reticulation between eyes; cheeks weakly convex; eyes large, approximately half of head length; postocular setae well developed with expanded apex, but distinctly shorter than eyes; ocelli developed; postocellar setae minute, much shorter than diameter of hind ocellus, pointed apically. Antennae 8-segmented (Fig. 19), approximately 2 times as long as head; segments III and IV with 1+1 and 1+2 sense cones respectively; segment VIII constricted at base.

Pronotum (Fig. 14) dorsal surface weakly sculptured laterally and posteriorly, notopleural sutures complete; five pairs of major setae well developed and expanded apically, am as long as aa. Mesonotum sculptured with



FIGURES 13–19. *Bamboosiella rugata* sp. n.: (13) head; (14) pronotum; (15) metanotum; (16) pelta; (17) sub-basal setae; (18) tube; (19) antenna.

distinctly transverse reticulation, and a pair of long lateral setae with expanded apically. Metanotum (Fig. 15) sculptured with closely set longitudinal reticulation, median setae short and acute. Basantra weakly developed; mesopresternum complete and boat-shaped, narrowed at middle. Fore tarsal tooth absent. Fore wing slightly constricted at middle, with 4–5 duplicated cilia; three pairs of sub-basal setae well developed and expanded at apex, S1 slightly shorter than S2, S2 and S3 subequal in length (Fig. 17).

Pelta (Fig. 16) hat-shaped with irregular sculpture and podgy lateral lobes, a pair of campaniform sensilla present; abdominal tergites II–VII each with two pairs of sigmoid wing retaining setae, anterior pair weaker than posterior pair; tergite IX setae S1 slightly shorter than S2, but both shorter than tube and blunt at apex, S3 longest (Fig. 18). Tube approximately 0.8 times of head length; anal setae shorter than tube.

Measurements (holotype female in microns). Distended body length 1530. Head length 160, width 165; eyes length 72; postocular setae length 50; diameter of anterior (posterior) ocelli 18; postocellar setae length 11. Antennae length 303, segments I–VIII length (width) as follows: 23(30); 36(27); 40(28); 49(25); 44(22); 42(19); 37(18); 32(10). Pronotum median length 105, width across median part 220; length of major setae: am 40, aa 40, ml 45, pa 45, epim 55. Fore wing length 645, sub-basal setae S1–S3 length: 42, 46, 46. Metanotum median setae 10. Abdominal tergite IX S1 setae length 72, S2 setae length 90, S3 setae length 110. Tube length 130, width at base 53, at apex 26; anal setae length 90.

Male macroptera (Fig. 34). Similar in colour and structure to female, but smaller, abdominal tergite IX setae S2 much shorter than S1 and S3.

Measurements (paratype male in microns). Distended body length 1380. Head length 145, width 145; eyes length 68; postocular setae length 41; diameter of anterior (posterior) ocelli 18; postocellar setae length 11. Antennae length 272, segments I–VIII length (width) as follows: 21(27); 30(25); 37(25); 40(24); 40(20); 38(18); 36(16); 30(10). Pronotum median length 90, width across median part 195; length of major setae: am 38, aa 36, ml 38, pa 40, epim 46. Fore wing length 570, sub-basal setae S1–S3 length: 36, 40, 40. Metanotum median setae 9. Abdominal tergite IX S1 setae length 67, S2 setae length 43, S3 setae length 95. Tube length 110, width at base 50, at apex 24; anal setae length 90.

Material examined. Holotype female, CHINA, Guangdong: Guangzhou City, Conghua, Liangkou Town, Lingtouqiao (23°13'18"N, 113°12'39"E), on tender leaves of bamboo, 30.x.2011 (Tao Song).

Paratypes. 2 females and 2 males, collected with holotype.

Etymology. Specific epithet from Latin word *rugatus* means wrinkled, referring to the dorsal surface of head covered with reticulated wrinkles entirely in the new species.

Distribution. China (Guangdong).

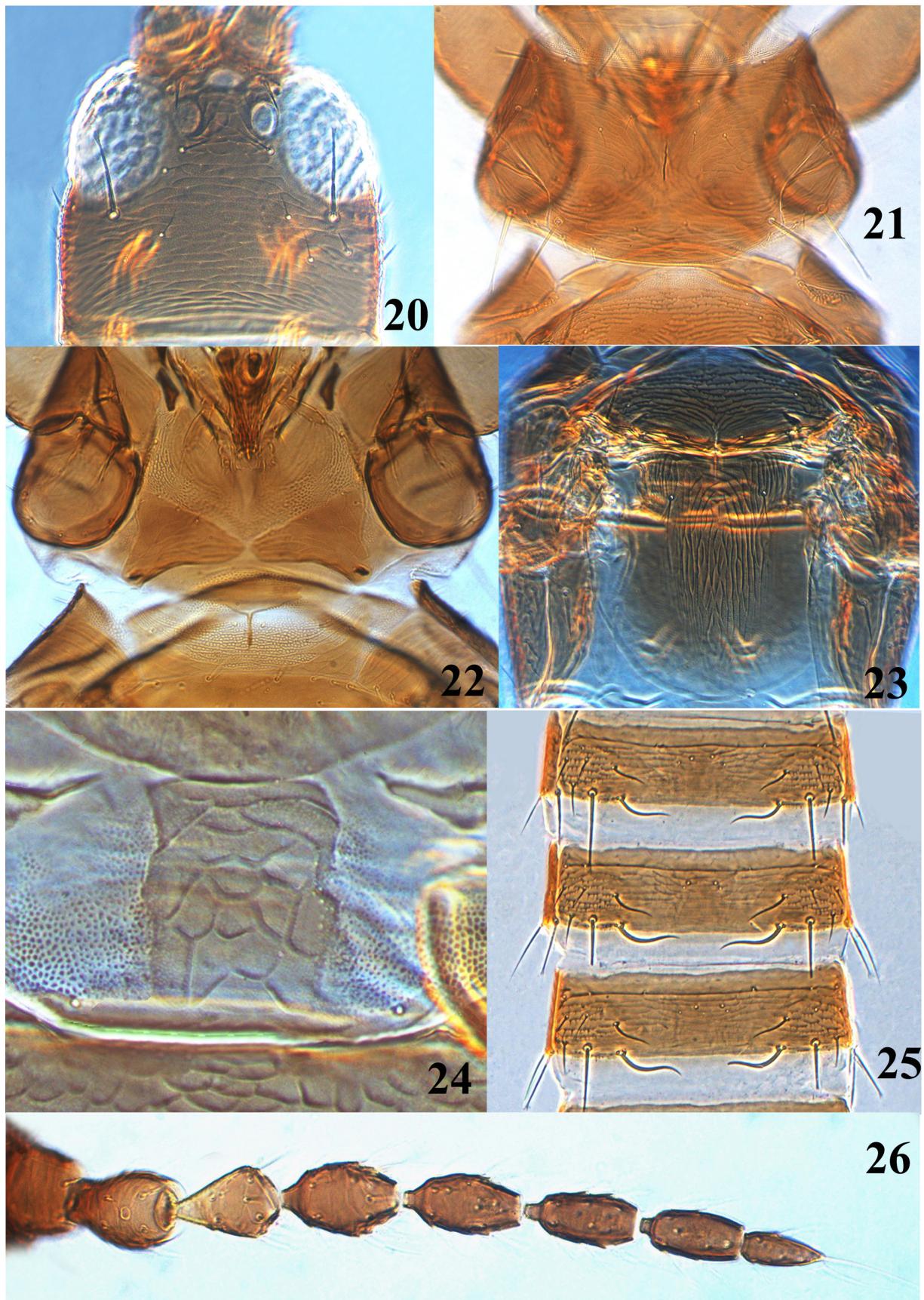
Remarks. This new species is very similar to *B. flavesiensis* Okajima, but it can be distinguished from the latter by the following characters: (1) dorsal surface of head with reticulation entirely, while the dorsal surface of head smooth medially in *flavesiensis*; (2) pronotal am as long as aa, in contrast to the am much longer than aa in *flavesiensis*; (3) sub-basal wing setae S2 and S3 sub equal in length, while in *flavesiensis*, the S2 much shorter, about half of S3 length; (4) abdominal segments III–VIII each with a pale brown marking anteromedially (Figs 33, 34), but *flavesiensis* has no such brown markings on segments III–VIII.

***Bamboosiella sculpta* sp. n.**

(Figs 20–26, 35, 36)

Female macroptera (Fig. 35). Head and thorax dark brown; abdominal segments I–VIII pale brown, IX brown, tube dark brown with extreme base paler; all femora brown, tibiae and tarsi yellow; antennal segments I–III brown except for segment III yellow at basal half, segments IV–VIII dark brown; wings slightly shaded grey.

Head (Fig. 20) approximately 0.85 times as long as broad; dorsal surface with transverse anastomosing striae except for polygonal reticulation in ocellar region; cheeks with 3–4 pairs of setae and weakly widened towards base; eyes approximately half of head length; postocular setae distinctly shorter than eyes, expanded apically; ocelli well developed, interocellar setae as long as postocellar setae and both pointed apically; postocellar setae as long as diameter of hind ocellus. Antennae 8-segmented (Fig. 26), approximately 2.5 times as long as head; segments II–V sculptured; segments III and IV with 1+1 and 1+2⁺¹ sense cones respectively; segment VIII constricted at base. Mouth-cone short and pointed.



FIGURES 20–26. *Bamboosiella sculpta* sp. n.: (20) head; (21) pronotum; (22) ventral view of prothorax; (23) metanotum; (24) pelta; (25) abdominal tergites III–V; (26) antenna.

Pronotum (Fig. 21) dorsal surface covered with irregular sculpture entirely, notopleural sutures complete; five pairs of major setae well developed and expanded apically, am as long as aa. Mesonotum with transverse anastomosing striae, anterior half with transverse sculpture lines bearing short microtrichia (Fig. 23). Metanotum with narrow spaced longitudinal anastomosing striae (Fig. 23), median setae moderately long and acute. Basantra present; mesopresternum eroded medially and divided into two lateral triangles with transverse sculpture (Fig. 22). Fore tarsal tooth absent. Fore wing slightly constricted at middle, usually with 6 duplicated cilia; subbasal wing setae well developed and expanded apically, S1 slightly shorter than S2, S3 longest and more than 2.5 times as long as S2.

Pelta hat-shaped (Fig. 24) with reticulation and slender lateral lobes, a pair of campaniform sensilla present laterally; abdominal tergites with ciliate microtrichia on lines of sculpture laterally and transversely reticulate medially (Fig. 25); tergites II–VII each with two pairs of sigmoid wing retaining setae, anterior pair weaker than posterior pair; tergite IX setae S1 slightly longer than S2, with apices blunt, S3 longest, almost as long as tube. Tube slightly shorter than head; anal setae subequal to tube in length.

Measurements (holotype female in microns). Distended body length 1510. Head length 145, width 153; eyes length 70; postocular setae length 42; diameter of anterior (posterior) ocelli 15; postocellar setae length 15. Antennae length 295, segments I–VIII length (width) as follows: 26 (32); 33 (28); 40 (25); 42 (26); 45 (22); 41 (18); 38 (16); 30 (12). Pronotum median length 120, width across median part 220; length of major setae: am 24, aa 23, ml 39, pa 42, epim 51. Fore wing length 585, sub-basal setae S1–S3 length: 34, 38, 100. Metanotum median setae 24. Abdominal tergite IX S1setae length 60, S2 setae length 50, S3 setae length 113. Tube length 110, width at base 55, at apex 24; anal setae length 120.

Male. Macroptera (Fig. 36). Similar in colour and structure to female, but smaller, abdominal tergite IX setae S2 approximately 2.5 times as long as S1, pointed apically.

Measurements (paratype male in microns). Distended body length 1400. Head length 145, width 148; eyes length 68; postocular setae length 45; diameter of anterior (posterior) ocelli 14; postocellar setae length 14. Antennae length 277, segments I–VIII length (width) as follows: 23 (33); 31 (30); 38 (31); 41 (27); 44 (22); 38 (18); 33 (18); 29 (11). Pronotum median length 120, width across median part 210; length of major setae: am 25, aa 24, ml 38, pa 43, epim 55. Fore wing length 540, sub-basal setae S1–S3 length: 30, 35, 85. Metanotum median setae 27. Abdominal tergite IX S1setae length 65, S2 setae length 26, S3 setae length 120. Tube length 100, width at base 50, at apex 25; anal setae length approximately 100.

Material examined. Holotype female, CHINA, Hainan: Danzhou City, Danzhou Tropical Botanical Garden (19°30'48"N, 109°30'12"E), from dry sheaths of bamboo, 22.x.2017 (Chao Zhao).

Paratypes. 11 females and 5 males, collected with holotype.

Etymology. Specific epithet from Latin “sculpta” which means sculptured, and refers to the body surface of new species is covered with various sculpture.

Distribution. China (Hainan).

Remarks. This new species is similar to *B. varia* in appearance and body colour, but it can be readily distinguished from the latter by the following diagnostic characters: (1) antennal segments I–VIII brown except segment III yellow at basal half, while segment III clear yellow in *B. varia*; (2) pronotum with irregular sculpture entirely (vs. pronotum almost smooth in *B. varia*); (3) metanotum with narrow spaced longitudinal anastomosing striae (vs. metanotum with polygonal reticulation in *B. varia*); (4) abdominal tergites with transversely reticulate medially (vs. tergites with smooth medially in *B. varia*).

***Bamboosiella xiphophora* Okajima, 1995**

(Figs 27–30, 43, 44)

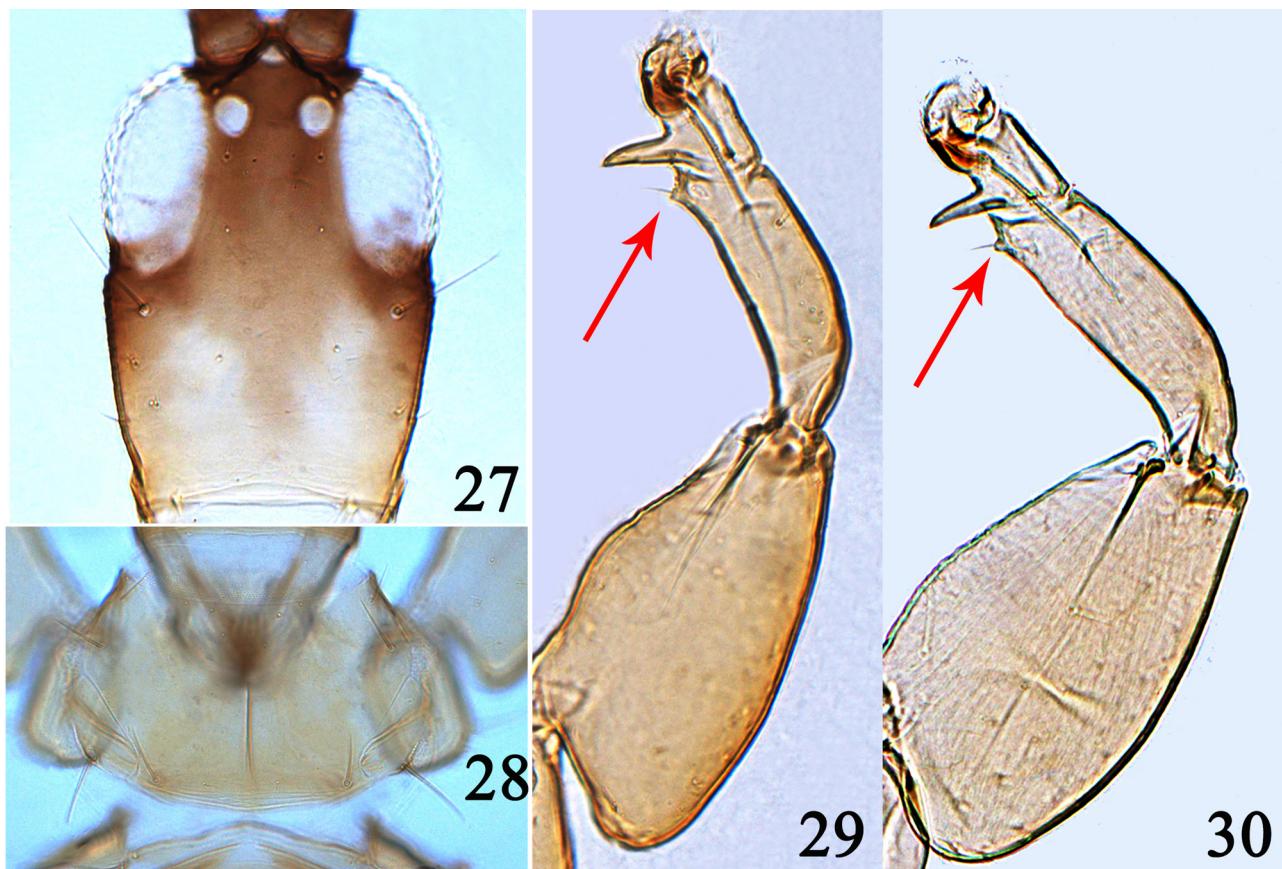
Bamboosiella xiphophora Okajima, 1995b: 479.

This species belongs to the large-body group of *Bamboosiella*. Described originally from Thailand (Okajima 1995b), *B. xiphophora* is here newly recorded from China, in Yunnan and Guangdong. This species can be distinguished from other members of the genus by: (1) head distinctly longer than wide (Fig. 27) and elongated

antennae bicoloured (Figs 43, 4); (2) fore femora enlarged, particularly in the female; (3) fore tibiae with a sub-apical tubercle and fore tarsus with a stout tooth in both sexes (Figs 29, 30).

Material examined. CHINA, Yunnan: Jinghong City, 2 females, leaf litter, collect date and collector unknown. Guangdong: Guangzhou City, Dafushan Forest Park ($22^{\circ}57'N$, $113^{\circ}18'E$), 8 females and 2 males, on living leaves of bamboo, 23.xi.2017 (Liangxin Liu).

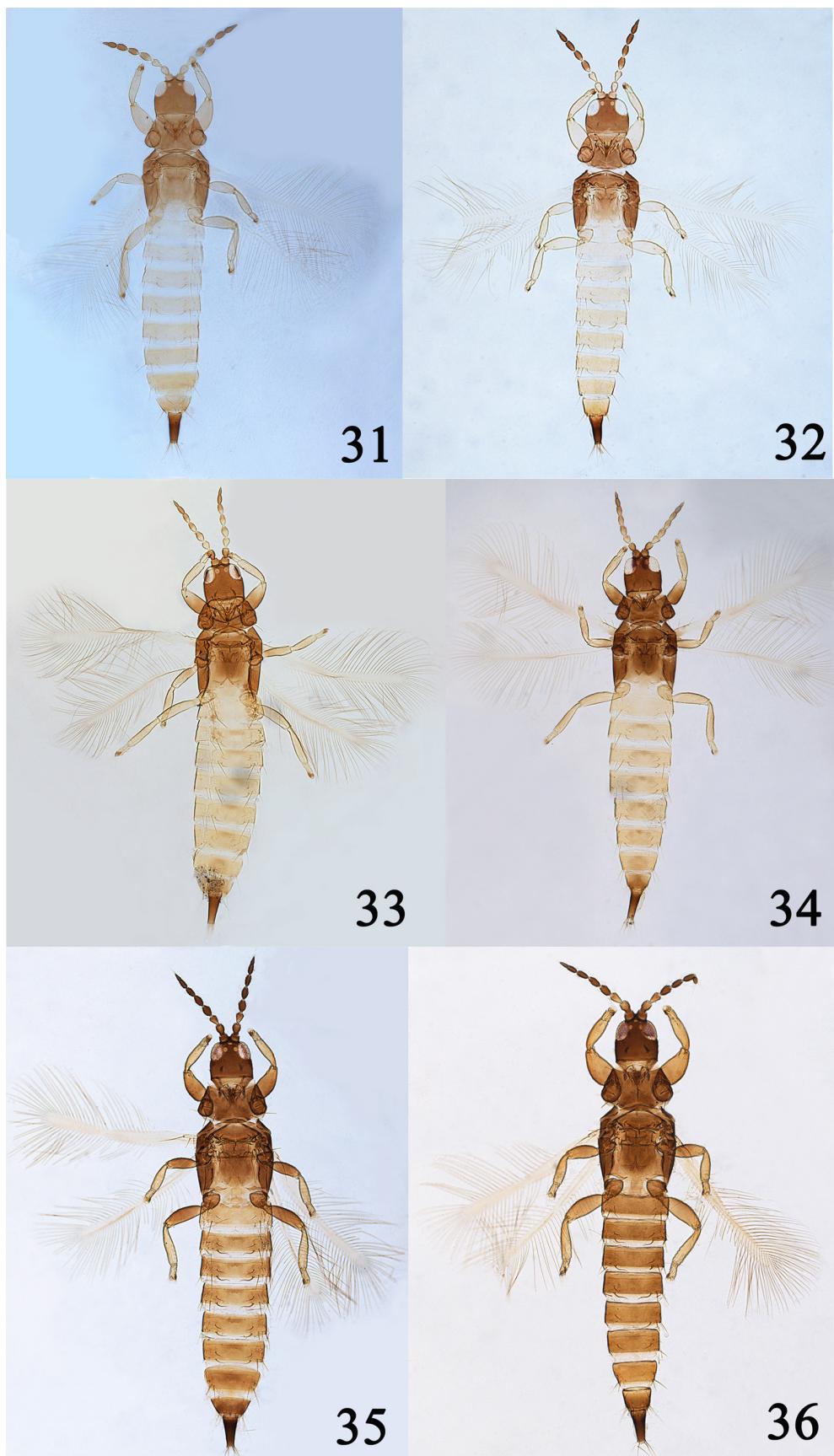
Distribution. China (Yunnan, Guangdong), Thailand.



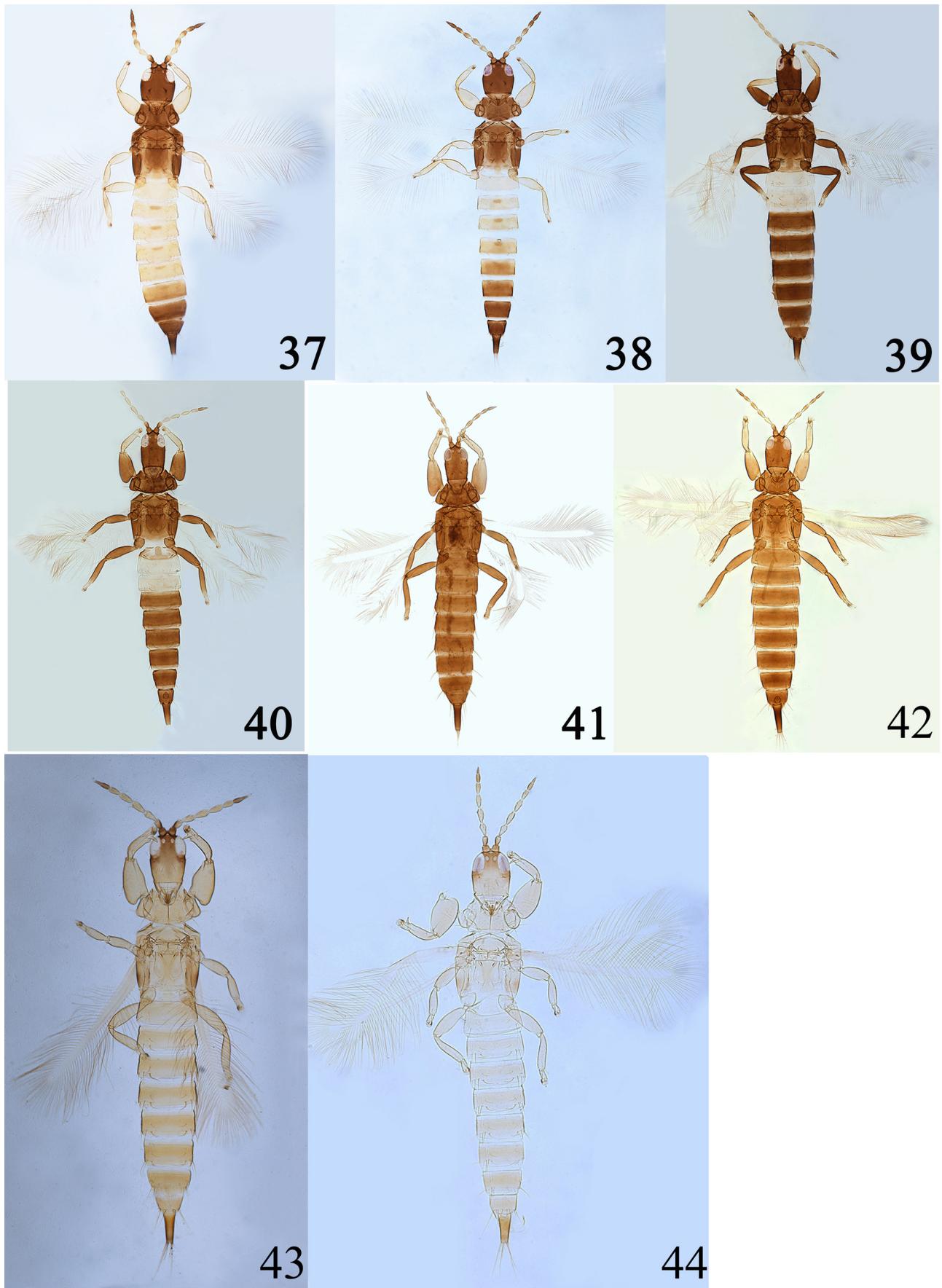
FIGURES 27–30. *Bamboosiella xiphophora*: (27) head; (28) pronotum; (29) fore leg of female; (30) fore leg of male (arrows indicate sub-apical tubercle bearing a short seta).

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FIGURES 31–36. *Bamboosiella* species. (31) *B. caudibruna* sp. n. (female); (32) *B. caudibruna* sp. n. (male); (33) *B. rugata* sp. n. (female); (34) *B. rugata* sp. n. (male); (35) *B. sculpta* sp. n. (female); (36) *B. sculpta* sp. n. (male).



FIGURES 37–44. *Bamboosiella* species. (37) *B. brevis* (female); (38) *B. brevis* (male); (39) *B. fasciata* (female); (40) *B. fasciata* (male); (41) *B. lewisi* (female); (42) *B. lewisi* (male); (43) *B. xiphophora* (female); (44) *B. xiphophora* (male).

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