

Revision of the Oriental Genus *Bambusiphaga* Huang and Ding (Hemiptera: Fulgoroidea: Delphacidae)

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Xiang-Sheng Chen and Ai-Ping Liang (2007) Revision of the oriental genus *Bambusiphaga* Huang and Ding (Hemiptera: Fulgoroidea: Delphacidae). *Zoological Studies* 46(4): 503-519. The Oriental delphacid bamboo genus *Bambusiphaga* Huang and Ding, 1979 (Hemiptera: Delphacidae), is revised to include 20 species known from China (18 species including 2 new species), Singapore (2 species), Malaysia (2 species), Taiwan (4 species), the Philippines (1 species), and the northeastern Himalayas (1 species). Based on the characters of the male genitalia, the 20 species of the genus are divided into 7 species groups. Thirteen species, including the 2 new species, *B. maolanensis* Chen and Liang, sp. nov. and *B. pianmaensis* Chen and Liang, sp. nov., are described and illustrated. Two new synonymies are created: *Malaxa herioca* Yang, 1989 is a junior synonym of *B. facia* Huang and Tian, 1980 and *B. latispina* Qin and Yuan, 1999 is a junior synonym of *B. bakeri* (Muir, 1919). One new combination, *B. bakeri* (Muir, 1919) comb. nov. (from *Malaxa* Melichar), is proposed. A key to all the known species in the genus is provided. <http://zoolstud.sinica.edu.tw/Journal/46.4/503.pdf>

Key words: Hemiptera, Delphacidae, *Bambusiphaga*, Taxonomy, Oriental region.

Bambusiphaga was established by Huang and Ding in Huang et al. (1979) with 6 new species from southwestern, southern, and eastern China (type species: *B. nigripunctata* Huang and Ding, 1979). Since then, 11 species have been added to the genus from China (9 species) (Kuoh et al. 1980, Ding 1982, Ding and Hu 1982, Asche 1983, Ding et al. 1986, Yang and Yang 1986, Chen and Li 2000, Chen et al. 2000), Taiwan (2 species), Singapore (1 species) (Asche 1983), Malaysia (1 species) (Asche 1983), and the north-eastern Himalayas (1 species) (Asche 1983).

Species of *Bambusiphaga* are known to exclusively feed on bamboo (Bambusoideae) (Huang et al. 1979, Ding et al. 1986, Yang and Yang 1986, Yang et al. 1999, Chen 2003). Members collect on leaves of bamboo of several genera, including *Bambusa*, *Dendrocalamus*, *Sinocalamus*, *Neosinocalamus*, and *Phyllostachys* (Huang et al. 1979, Ding and Hu 1982, Ding et al.

1986, Yang and Yang 1986, Chen and Li 2000, Chen et al. 2000).

Yang et al. (1999) reported 17 planthopper species (including 8 species of *Bambusiphaga*) in 7 genera as pests which attack bamboo in Guizhou Province, China. They noted that *B. furca* Huang and Ding, *B. citricolorata* Huang and Tian, *B. taiwanensis* (Muir), and *B. lacticolorata* Huang and Ding are of economic significance since these species can have large populations in bamboo fields.

Recently, we cleared up and identified 13 species of the genus *Bambusiphaga* from specimens collected from some provinces of China by the first author and his colleagues during the period 1996-2003. In the present paper, 2 new species are described and illustrated in detail: *B. maolanensis* Chen and Liang, sp. nov. and *B. pianmaensis* Chen and Liang, sp. nov., from Southwest China (Guizhou, Yunnan Province).

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Two new synonymies are reported: *Malaxa herioca* Yang, 1989 is a junior synonym of *Bambusiphaga facia* Huang and Tian, 1980, and *B. latispina* Qin and Yuan, 1999 is junior synonym of *B. bakeri* (Muir), 1919. One new combination is proposed: *bakeri* Muir, 1919 is transferred from *Malaxa* Melichar to *Bambusiphaga* Huang and Ding.

Based mainly on the characters of the male genitalia, 20 species of the genus *Bambusiphaga* recorded in the world to date are divided into 7 species groups. A key to the 20 species of the genus *Bambusiphaga* is also provided.

MATERIALS AND METHODS

The specimens studied in the course of this work were mostly collected by the first author and his colleagues in 1996-2003, and all are deposited in the Insect Collection of the Institute of Entomology, Guizhou Univ., Guiyang, China (IEGU).

Morphological terminology follows that of Huang et al. (1979) and Yang and Yang (1986).

TAXONOMY

Genus *Bambusiphaga* Hung and Ding

Bambusiphaga Huang and Ding, 1979: 170.

Bambusiphaga: Asche, 1983: 211.

Bambusiphaga: Ding and Tian, 1984: 49.

Bambusiphaga: Yang and Yang, 1986: 37.

Bambusiphaga: Wang and Ding, 1996: 22.

Bambusiphaga: Ding et al., 1999: 441.

Type species: Bambusiphaga nigripunctata Huang and Ding, 1979, by original designation.

Description: Slender and elongate delphacid species, body length 3.1-5.2 mm (from apex of vertex to end of tegmen). General color milky-yellow to yellowish-brown, often with brown or black markings.

Head including eyes narrower than pronotum. Vertex quadrate or rectangular, slightly longer or shorter medially than width at base, slightly narrower at apex than at base, lateral margins more or less diverging anteriorly, apical part slightly projecting in front of eyes, apical margin evenly rounded into frons, submedian carinae originating from near apical 1/3 of lateral carinae, uniting at apex of vertex, lateral carinae curved inward, Y-shaped carina distinct and fine. Frons elongate, rectangular, longer at middle line than wide (2.0-2.7:1),

median carina distinct and simple, lateral carinae parallel or subparallel. Postclypeus with incomplete median carina, lateral carinae absent. Rostrum reaching mesotrochanters, apical segment slightly longer than wide. Antennae cylindrical, basal segment slightly longer or equal to width, 2nd segment longer than 1st one (more than 3:1), reaching or not reaching frontoclypeal suture. Pronotum about as long as vertex, lateral carinae straight, reaching or almost reaching hind margin. Mesonotum longer at middle line than vertex and pronotum together (about 1.3-2.0:1), median carina extending to tip of scutellum. Spinal formula of hind leg 5-6-4. Tegmina much longer than abdomen, hyaline, cross vein deposited medially, apical margin acutely rounded.

Genitalia. Anal style small. Anal segment of male ring-like, ventral margin with or without a process. Pygofer with or without a medioventral process. Aedeagus with or without phallobase; phallus complex, tubular. Genital styles simple, with a process, or forked apically. Seventh abdominal sternite of female present or absent.

Remarks: This genus is related to *Specinervures* Kuoh and Ding, 1980, but differs from the latter in the tegmina which has a cross vein situated in the middle, the membrane of the tegmina is normal (in the latter, the cross vein is situated near the middle of the tegmina, slightly basad of it, the membrane of the tegmina is broad and large, and the hind margin is blunt and roundly produced beyond clavus); the rostrum reaches the mesotrochanters (which in the latter reaches the post-trochanters); and the pygofer of the male has a normal lateral-ventral margin (lateral-ventral margin is produced lamellate-like in the latter). It is also similar to *Malaxa* Melichar, 1914, but differs in the vertex which has submedian carinae united at the apex; shorter antennae, only reaching or surpassing frontoclypeal suture; and the ventral margin of the pygofer is not concaved, and is V-shaped.

Host plant: Bamboo (Bambusoideae). Some species of the genus are important pests which attack bamboo (Yang et al. 1999). Species were collected on leaves of bamboo in several genera, *Bambusa*, *Dendrocalamus*, *Sinocalamus*, *Neosinocalamus*, and *Phyllostachys* (Huang et al. 1979, Ding and Hu 1982, Ding et al. 1986, Yang and Yang 1986, Chen and Li 2000, Chen et al. 2000).

Distribution: Oriental Region, with abundant species in China.

Key to species of genus *Bambusiphaga*

1. Vertex dark brown or with blackish-brown markings (Fig. 46).....2
 - Vertex without markings (Figs. 16, 29, 54).....3
2. Vertex yellowish-brown, basal compartment with a black oval spot in middle part (Huang et al. 1979: fig. 2); anal segment of male without process, pygofer without medioventral process (Fig. 1).....*nigripunctata*
 - Vertex dark brown, basal compartment of vertex without black oval spot (Figs. 45, 46); anal segment of male with a very long process which surpasses base of genital styles; pygofer with conjugated medioventral processes (Figs. 49-51).....*pianmaensis*
3. Mesonotum with blackish-brown markings..... 4
 - Mesonotum lacking blackish-brown markings.....7
4. Pronotum with blackish-brown markings on lateral areas; tegmina with blackish-brown markings on basal 1/2.....5
 - Pronotum and tegmina without above markings.....6
5. Basal 1/2 of tegmina black; pygofer without medioventral process; genital styles not forked at apex (Ding and Hu 1987: figs. 1, 2)..... *fascia*
 - Basal 1/3 of tegmina with black markings (Fig. 44); pygofer with conjugated medioventral processes (Figs. 40, 42); genital styles with forked apex (Fig. 39)..... *maculata*
6. Tegmina somewhat reddish-orange, costal margin blackish-brown; genital styles relatively broad and short (Kuoh et al. 1980: fig. 8d-f).....*nigromarginata*
 - Tegmina somewhat yellowish-brown, costal margin yellowish-brown; genital styles relatively slender (Fig. 5).....*taiwanensis*
7. Ventral margin of anal segment with a process (Figs. 32, 34, 58, 59).....8
 - Ventral margin of anal segment without a process (Figs. 7, 11, 18, 23, 27).....12
8. Pygofer with a medioventral process (Figs. 32, 33)..*bakeri*
 - Pygofer without a medioventral process (Fig. 58).....9
9. Process of anal segment very long, reaching ventral margin of pygofer.....10
 - Process of anal segment very short (Fig. 58).....11
10. Body length male 3.5-3.6 mm; genital styles with a process at base (Ding et al. 1986: fig. 1).....*jinghongensis*
 - Body length of male 4.3 mm; genital styles without a process at base (Huang et al. 1979: fig. 18).....*mirostylis*
11. Apical 1/2 of pterygodes blackish-brown; hind margin of male pygofer with produced acute angle medially; genital styles slender; aedeagus without phallobase (Ding and Hu 1982: figs. 1-5).....*huangi*
 - Pterygodes yellowish-brown; hind margin of male pygofer not produced into an angle medially; genital styles broad and short; aedeagus with developed phallobase (Figs. 58, 60, 61).....*wangmoensis*
12. Ventral margin of pygofer with a spine (Figs. 3, 4; Muir 1919: pl. I, fig. 8).....13
 - Ventral margin of pygofer without a spine.....14
13. With reddish-orange stripes along median carina of vertex and of pronotum; aedeagus without a process (Fig. 3).....*luodianensis*
 - Without reddish-orange stripe along median carina of vertex or of pronotum; aedeagus with a contrary process (Muir 1919: pl. I, fig. 8).....*singaporensis*
14. Base of genital styles with a finger-like process (Figs. 18-20).....*maolanensis*
 - Base of genital styles without a finger-like process.....15
15. Apex of genital styles forked (Figs. 9, 13; Asche 1983: fig. 4).....16
 - Apex of genital styles not forked (Figs. 23, 25, 27).....18
16. Frons longer at middle line than wide at widest part, about 2.0: 1; basocaudal portion of genital styles in profile produced into a right angle, granulate (Fig. 13).....*membranacea*
 - Frons longer at middle line than wide at widest part, about 2.5: 1; basocaudal portion of genital styles in profile not produced into a right angle (Fig. 9; Asche 1983: fig. 4).....17
17. Median portion of genital styles granulate (Fig. 9).....*furca*
 - Median portion of genital styles not granulate (Asche 1983: fig. 4).....*lynchi*
18. Ventral margin of anal segment incised medially; genital styles short, lamellate (Fig. 27).....*lacticolorata*
 - Ventral margin of anal segment not incised medially; genital styles slender (Fig. 23).....19
19. Apex of vertex obviously broadened, frons widest at base; apex of genital styles without small tooth; aedeagus short, stout (Huang et al. 1979: fig. 17).....*similis*
 - Apex of vertex not broadened, frons widest at apex; apex of genital styles with several small teeth; aedeagus relatively long (Figs. 25, 26).....*citricolorata*

Division of the species groups in *Bambusiphaga*

The species of genus *Bambusiphaga* exhibit morphological diversity, especially represented by the male genitalia. Asche (1983) divided the members of the genus *Bambusiphaga* into 4 different groups of species, namely the *nigropunctata* group, *citricolorata* group, *lacticolorata* group, and *mirostylis* group. Based on the male genitalia of 20 species, we think there are at least 7 groups of species.

1. The *nigropunctata* group: lateral margin of pygofer without process, ventral margin usually without process or with a small spine; anal segment ring-like; genital style moderately long, apex generally forked; aedeagus with thick basal 1/2, forked apical 1/2, or with a process. This group contains 8 species: *B. nigropunctata* Huang and Ding, *B. furca* Huang and Ding, *B. taiwanensis* (Muir), *B. singaporensis* (Muir), *B. lynchi* Asche, *B. membranacea* Yang and Yang, *B. luodiaensis* Ding, and *B. huangi* Ding and Hu.

2. The *citricolorata* group: lateral and ventral margin of pygofer without a process; anal segment ring-like; genital style slender, apex not forked; aedeagus moderately long, tubular, with several teeth arranged convolutely around gonopore. This group contains 3 species: *B. citricolorata* Huang and Tian, *B. similes* Huang and Tian, and *B. maolanensis* Chen and Liang.

3. The *lacticolorata* group: body smaller, body length including tegmen of male 3.0-3.2 mm and of female 3.5 mm; anal segment collar-like, with inwardly incised ventral margin; genital styles short

and broad, lamellate; aedeagus tubular, simple. This group contains 2 species: *B. lacticolorata* Huang and Ding and *B. nigromarginata* Huang and Tian.

4. The *fascia* group: body length including tegmen of male 3.1-3.7 mm and of female 3.6-4.0 mm; tegmina often with zonal or nub-like black markings; anal segment ring-like, left lateroapical angle strongly produced into a very long process which surpasses base of genital styles; genital styles moderately long; aedeagus slender, bent ventrad near middle. This group contains 3 species: *B. fascia* Huang and Tian, *B. bakeri* (Muir), and *B. jinghongensis* Ding and Hu.

5. The *maculata* group: species occur in mountains (at elevations above 1500 m); body larger: body length including tegmen of male 4.4-5.2 mm and of female 4.8-5.2 mm; anal segment ring-like, left lateroapical angle strongly produced into a very long process; pygofer with conjugated medioventral processes; apex of genital styles close to each other; aedeagus C-shaped, very slender, shaft tubular, narrowing to apex. This group contains 2 species: *B. maculata* Chen and Li and *B. pianma* Chen and Liang.

6. The *wangmoensis* group: anal segment ring-like, ventral margin with a short process; opening of pygofer smaller in posterior view; genital styles short and broad, close to each other; apical 1/3 of aedeagus curved and ring-like, phallobase developed. This group contains only 1 species: *B. wangmoensis* Chen and Li.

7. The *mirostylis* group: the structure of the male genitalia is very peculiar. This group contains only 1 species: *B. mirostylis* Huang and Ding.

SPECIES DESCRIPTIONS

1. The *nigropunctata* group

Bambusiphaga nigropunctata Huang and Ding (Figs. 1, 2)

Bambusiphaga nigropunctata Huang and Ding, 1979:170, figs. 1-7.

Bambusiphaga nigropunctata: Ding and Tian, 1984: 50.

Bambusiphaga nigropunctata: Wang and Ding, 1996: 23.

Description: Length of body of male 1.8-1.9 mm and female 2.5-2.7 mm; including tegmen of male 3.5-3.6 mm and female 4.0-4.1 mm.

Generally yellowish-brown. Basal compartment of vertex with an oval spot in middle; pronotum with 2 circular spots near lateral margins, median carina of pronotum, carinae of mesono-

tum, and dorsal area of abdomen blackish-brown; tegmina buff, with blackish-brown stripes along cross veins and apical veins; pterostigma blackish-brown; veins of wings taupe; dorsal area of pygofer blackish-brown, ventral area buff; genital styles pitch-black; anal process dark brown.

Vertex long, medially subequal to width at base. Frons at middle line longer than wide at widest part (about 2.5: 1). Basal segment of antennae shorter than 2nd one (about 1: 3.6). Mesonotum about 1.4 times as long as vertex and pronotum together.

Male genitalia. Ventral margin of anal segment without a process. Pygofer with circular opening in posterior view, lateral and ventral margins without a process (Figs. 1, 2). Aedeagus broad at base, with a finger-shaped process near base, apex with a knife-like process and a node near apex. Genital styles moderately long and simple, with truncate apical margin (Fig. 1).

Remarks: This species is similar to *B. luodianensis* but differs from the latter in that the vertex has a black oval spot in the middle part of the basal compartment, the tegmina has blackish-brown stripes along the cross veins and apical veins, pygofer lacks spines on the ventral margin, and the genital styles are not forked at apex.

Specimens examined: China, Sichuan Prov.: 20 ♂♂, 23 ♀♀, Chengdu, coll. X. S. Chen, 24 Aug. 1998; Guizhou Prov.: 1 ♂, 2 ♀♀, Xishui, coll. X. S. Chen, 3 June 2000 (IEGU).

Host plant: *Neosinocalamus affinis* (Rendle) Keng f. (Huang et al., 1979).

Distribution: China (Gansu, Guizhou, and Sichuan Provs.).

Bambusiphaga luodianensis Ding (Figs. 3, 4)

Bambusiphaga luodianensis Ding, 1982: 42, figs. 1-6.

Description: Length of body of male 2.3 mm and female 2.7 mm; including tegmen of male 3.6 mm and female 3.8 mm; length of tegmen of male 2.8 mm and female 3.0 mm.

Body yellowish-brown, with reddish-orange stripes along median carina of vertex, and carinae of pronotum and mesonotum. Mesonotum somewhat dark and testaceous, with blackish-brown anterior margin, scutellum, and tegula. Tegmina slightly yellowish-brown, marginal areas and veins dark brown. Abdomen with reddish-orange base, 5th-10th terga blackish-brown. Pygofer and anal segment dark brown.

Vertex slightly longer medially than wide at base (about 0.9: 1). Frons at middle line longer than wide at widest part (about 2.0: 1). Basal segment of antennae shorter than 2nd segment (about 1: 3.0). Pronotum as long as vertex. Mesonotum about 1.7 times as long as vertex and pronotum together.

Male genitalia. Anal segment ring-like. Opening of pygofer longer than wide in posterior view, with a single spine on ventral margin (Figs. 3, 4). Aedeagus with tubular, simple phallus, narrowing to apex, strongly arched in middle. Genital styles long, slender, forked at apex, with stout outer process and slender inner process.

Remarks: This species is similar to *B. taiwanensis* but differs from the latter in the disc of the mesonotum being mostly dark testaceous, the head and thorax have orange-red stripes along the median carina, the pygofer has a spine on ventral margin, the genital styles are forked at the apex, and the aedeagus is simple, not forked.

Specimens examined: China, Guizhou Prov.: 3 ♂♂, 2 ♀♀, Changshun, coll. X. S. Chen, 30 Sept. 1997; 11 ♂♂, 23 ♀♀, Wangmo, coll. X. S. Chen, 30 Aug. 1998; 13 ♂♂, 7 ♀♀, Maolan, coll.

X. S. Chen, 21-22 Oct. 1998 (IEGU).

Host plant: Bamboo (*Phyllostachys* sp.).

Distribution: China (Guizhou Prov.).

***Bambusiphaga taiwanensis* (Muir)**

(Figs. 5, 6)

Stenocranus (?) *taiwanensis* Muir, 1917: 323.

Stenocranus (?) *taiwanensis*: Ishihara, 1949: 30.

Columbisoga taiwanensis Muir, 1926: 11.

Bambusiphaga zhonghei Kuoh, 1980: 196. Synonymized by Asche, 1983: 202.

Bambusiphaga zhonghei: Ding and Tian, 1984: 54.

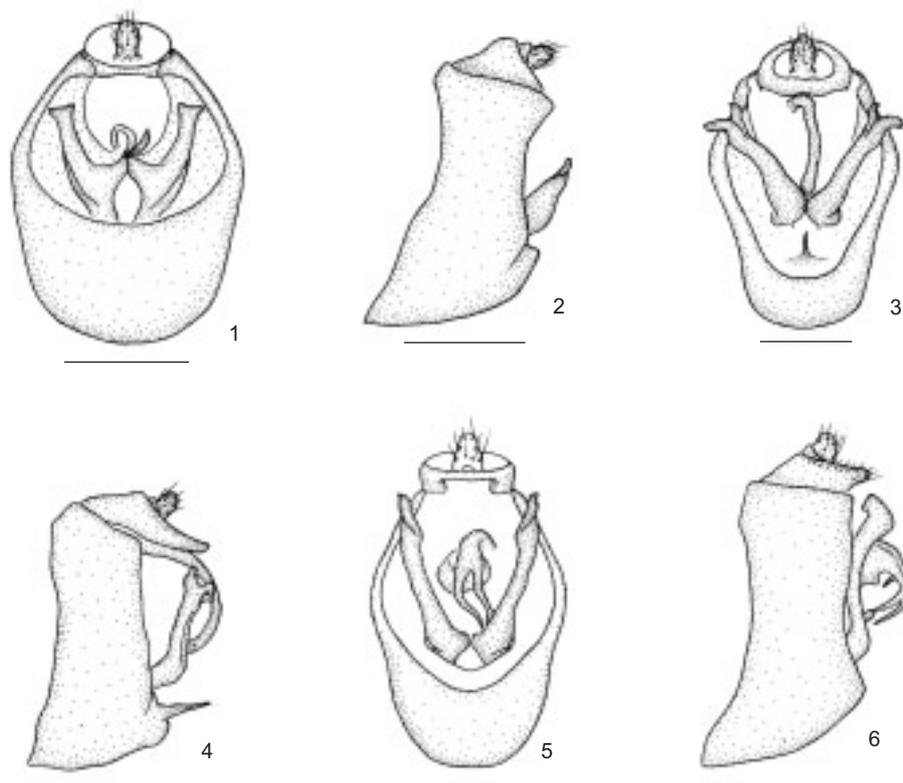
Bambusiphaga taiwanensis: Asche, 1983: 197.

Bambusiphaga taiwanensis: Yang and Yang, 1986: 38.

Bambusiphaga taiwanensis: Ding et al., 1984: 441.

Description: Length of body of male 2.3 mm and female 2.6 mm; including tegmen of male 4.2-4.3 mm and female 5.0-5.2 mm; length of tegmen of male 3.2-3.4 mm and female 4.0-4.2 mm.

General color brownish-yellow to brownish-orange. Eyes, tegulae, mesonotum, and abdominal tergites darker than remainder, mesonotum with black markings in middle. Tegmina hyaline, with dark longitudinal band along posterior margin.



Figs. 1-6. *Bambusiphaga* species. **1, 2.** *B. nigropunctata*: **1.** Male genitalia, posterior view; **2.** the same, lateral view. **3, 4.** *B. luodianensis*: **3.** Male genitalia, posterior view; **4.** the same, lateral view. **5, 6.** *B. taiwanensis*: **5.** Male genitalia, posterior view; **6.** the same, lateral view. Scale bars = 0.2 mm.

Wings hyaline, veins concolorous.

Vertex slightly longer medially than wide at base (about 1.1: 1), apex as wide as base, median carina distinct but arms feeble. Frons at middle line longer than wide at widest part (about 2.0: 1). Basal segment of antennae shorter than 2nd one (about 1: 3.0). Pronotum as long as vertex. Mesonotum about 1.5 times as long as vertex and pronotum combined.

Male genitalia. Anal segment short. Pygofer with shallowly concave ventral margin, high and narrow in profile, constricted below middle, dorsal margin straight (Figs. 5, 6). Aedeagus stout, with distinct phallobase. Phallobase small, in profile broad at base, thin and strongly curved at apex, dorsal surface strongly emarginated to receive phallus. Phallus complex, apical 1/2 with 3 branches, main body at right, apex modified as a node around orifice, with several small teeth on dorsal and lateral sides, left process moderately long, strongly curved, subacute at apex, median one short, acute at apex, directed ventrad. Genital styles relative long, slender, strongly divergent apically, slightly curved inward at apical 1/3, apex truncated.

Remarks: This species is similar to *B. luodianensis* but differs from the latter in the disc of the mesonotum being mostly black, head and thorax lack the orange-red stripes along the median carina, the pygofer lacks a spine on the ventral margin, the genital styles are not forked at the apex, the aedeagus has a distinct phallobase, and the phallus is complex, the apical 1/2 of which has 3 branches.

Specimens examined: China, Guizhou Prov.: 15 ♂♂, 21 ♀♀, Wangmo, coll. X. S. Chen, 23 Sept. 1997; 8 ♂♂, 13 ♀♀, Changshun, coll. X. S. Chen, 30 Sept. 1997. Taiwan: 25 ♂♂, 35 ♀♀, Nantou, coll. X. S. Chen, 24 Nov. 2002 (IEGU).

Host plant: *Dendrocalamus latiflorus* Munro (Yang and Yang 1986).

Distribution: China (Guizhou and Fujian Provs.), Taiwan.

***Bambusiphaga furca* Huang and Ding**
(Figs. 7-10)

Bambusiphaga furca: Huang and Ding, 1979: 172, figs. 8-11.
Bambusiphaga furca: Ding and Tian, 1984: 51.

Description: Length of body of male 1.7 mm and female 2.0 mm; including tegmen of male 3.7 mm and female 3.9 mm; length of tegmen of male 3.0 mm and female 3.3 mm.

Body light yellow or reddish-orange. Tegmina light yellowish-white, veins grayish-brown, with a small dark brown mark along cross vein Cu_2-Cu_1b . Abdomen with a small red mark at dorsal apex.

Vertex shorter medially than wide at base (about 1:1.2). Frons at middle line longer than wide (about 2.5:1). Basal segment of antennae shorter than 2nd one (about 1:3.5). Mesonotum about 1.7 times as long as vertex and pronotum together.

Male genitalia. Anal segment ring-like, without process. Opening of pygofer in posterior view longer than wide, without medioventral process (Figs. 7, 8). Aedeagus without phyllobase. Phallus stout, tubular, broad at base, strongly arched medially, with a stout process at apical 1/3 of ventral margin and a large membranous lobe submesially on right side (Fig. 10). Genital styles long, slender, arched medially, forked at apex, outer margin of median portion granulate (Fig. 9).

Remarks: This species is similar to *B. membranacea* but differs from the latter in that the frons is longer at the middle line than wide at its widest part (about 2.5:1), and the genital styles in profile basocaudal portion are not produced into a right angle.

Specimens examined: China, Guizhou Prov.: 15 ♂♂, 34 ♀♀, Guiyang, coll. X. S. Chen, 12 Sept. 1997; 10 ♂♂, 21 ♀♀, Luodian, coll. X. S. Chen, 2 Aug. 1998; 1 ♂, 2 ♀♀, Libo, coll. X. S. Chen, 22 Oct. 1998; 4 ♂♂, 2 ♀♀, Xishui, coll. X. S. Chen, 26 Sept. 2000 (IEGU).

Host plant: *Neosinocalamus affinis* (Rendle) Keng f. (Huang et al. 1979).

Distribution: China (Yunnan and Guizhou Provs.).

***Bambusiphaga membranacea* Yang and Yang**
(Figs. 11-14)

Bambusiphaga membranacea Yang and Yang, 1986: 41, fig. 22A-K.

Description: Length of body of male 1.9 mm and female 2.1 mm; including tegmen of male 3.5 mm and female 4.0 mm; length of tegmen of male 2.8 mm and female 3.3 mm.

General color reddish-range, except for yellow legs. Tegmina and wings hyaline, veins concolorous.

Vertex nearly as long as wide medially at base. Frons at middle line longer than wide (about 2.0: 1). Basal segment of antennae as long as wide, shorter than 2nd one (about 1:3.7).

Pronotum as long as vertex. Mesonotum about 1.6 times as long as vertex and pronotum together.

Male genitalia. Anal style small. Anal segment cylindrical, ring-like, sunk in emargination of pygofer. In posterior view, opening of pygofer longer than wide, without medioventral process (Figs. 11, 12). Aedeagus without phyllobase. Phallus stout, tubular, broad at base, strongly arched medially, apical 1/3 of ventral margin armed with a stout process, beyond middle on right side a large membranous lobe protruding which is weakly sclerotized along lateral margin (Fig. 14). Genital styles long, slender, pointed at apex, each inner margin produced subapically into a stout process, directed laterodorsad, in profile basocaudal portion produced into a right angle, granulate (Fig. 13).

Remarks: This species is closely related to *B. lynchi* but differs from the latter in the frons being longer at the middle line than wide at the widest

part (about 2.0:1), and basocaudal portion of genital styles in profile produced into a right angle and granulate.

Specimens examined: China, Guizhou Prov.: 10 ♂♂, 14 ♀♀, Wangmo, coll. X. S. Chen, 23 Sept. 1997; 1 ♂, Libo, coll. X. S. Chen, 22 Oct. 1998 (IEGU).

Host plant: *Dendrocalamus latiflorus* Munro (Yang and Yang 1986).

Distribution: China (Guizhou Prov.), Taiwan.

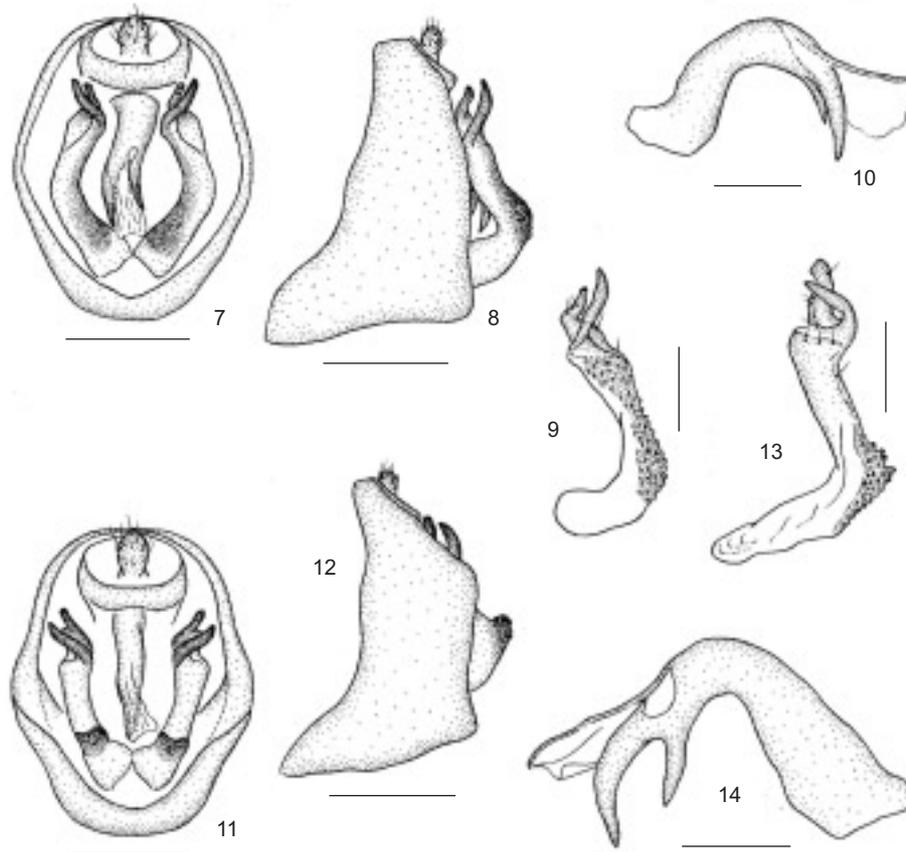
Bambusiphaga huangi Ding and Hu

Bambusiphaga huangi Ding and Hu, 1982: 443, figs. 1-5.

No specimens of this species were available for this study.

Host plant: *Neosinocalamus affinis* (Rendle) Keng f. (Ding and Hu 1982).

Distribution: China (Yunnan Prov.).



Figs. 7-14. *Bambusiphaga* species. 7-10. *B. furca*: 7. Male genitalia, posterior view; 8. the same, lateral view; 9. genital styles, left side; 10. aedeagus, left side. 11-14. *B. membranacea*: 11. Male genitalia, posterior view; 12. the same, lateral view; 13. genital styles, left side; 14. aedeagus, right side. Scale bars = 0.2 mm (Figs. 7, 8, 11, 12), and 0.1 mm (Figs. 9, 10, 13, 14).

***Bambusiphaga lynchi* Asche**

Bambusiphaga lynchi Asche, 1983: 197, figs. 1-5.

No specimens of this species were available for this study.

Host plant: Unknown.

Distribution: Northeastern Himalayas.

***Bambusiphaga singaporensis* (Muir)**

Stenocranus (?) *singaporensis* Muir, 1919: 529, pl. I, fig. 8.

Columbisoga singaporensis, Muir, 1926: 11.

Bambusiphaga singaporensis, Asche, 1983: 203.

No specimens of this species were available for this study.

Host plant: Unknown.

Distribution: Singapore, Malaysia (Penang).

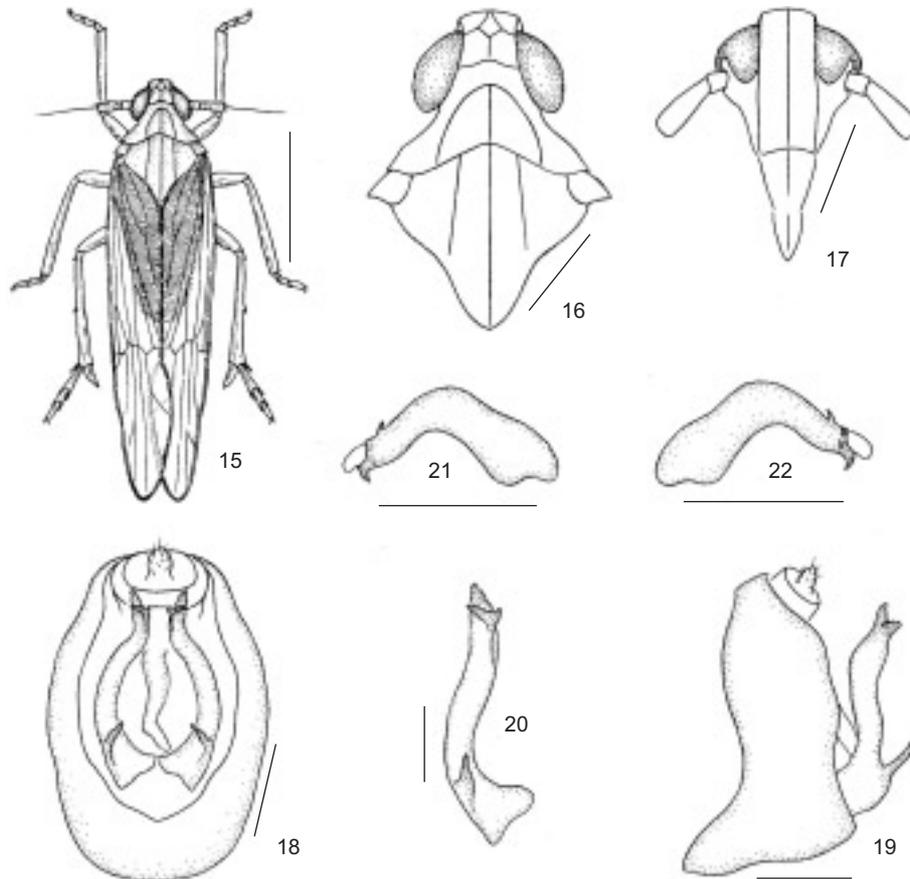
2. The *citricolorata* group***Bambusiphaga maolanensis* sp. nov.**

(Figs. 15-22)

Description: Length of body of male 1.9 mm; including tegmen of male 3.3 mm; length of tegmen of male 2.7 mm.

Body milky and somewhat yellow. Eyes brown, ocelli red. Tegmina milky, somewhat yellowish-brown apically. First-8th segments of terga and sterna of abdomen reddish-orange, except terga of 5th and 6th segments which are brown to dark brown. Pygofer and anal segment milky, except for red dorsal margin, brown anal process with apex, brown process of genital styles.

Vertex quadrate, shorter medially than wide at base (about 1:1.3), apical margin protruding arch-



Figs. 15-22. *Bambusiphaga maolanensis* sp. nov. **15.** Male adult, dorsal view; **16.** head and thorax, dorsal view; **17.** frons and clypeus; **18.** male genitalia, posterior view; **19.** the same, lateral view; **20.** genital styles, lateral view; **21, 22.** aedeagus, lateral view. Scale bars = 1 mm (Fig. 15), 0.25 mm (Figs. 16, 17), and 0.2 mm (Figs. 18-22).

like, carinae distinct, submedian carinae originating from 1/3 of lateral carinae, uniting at apex of vertex (Fig. 16). Frons rectangular, longer at middle line than wide (about 2.3: 1), lateral carinae nearly straight, median carina simple. Postclypeus with middle portion tumefied, as wide at base as frons at apex, median carina distinct (Fig. 17). Antennae cylindrical, 1st segment as long as wide, 2nd segment longer at middle line than 1st segment (about 3.5: 1), 2 segments together reaching frontoclypeal suture (Fig. 17). Pronotum longer at middle line than vertex (about 1.2: 1), lateral carinae curving inward and reaching hind margin. Mesonotum longer at middle line than vertex and pronotum together (about 1.43: 1), median carina reaching end of scutellum (Figs. 15, 16).

Male genitalia. Anal segment ring-like, ventral margin lacking a process. Dorsal margin of pygofer obviously shorter in profile than ventral margin, posterior margin undose (Fig. 19), in posterior view, opening longer than wide, long, elliptic (Fig. 18). Genital styles long, S-shaped, apical part turning outward, tapering apically, near apex and near base respectively with 1 finger-like process (Figs. 18-20). Aedeagus tubular, arched in middle, apex somewhat membranous, with 4 teeth surrounding gonopore (Figs. 21, 22).

Holotype: male. China, Guizhou Prov.: Maolan (25°30'N, 108°10'E), elev. 500 m, coll. X. S. Chen, 26 Oct. 1998 (IEGU).

Remarks: This species is related to *B. citricolorata* Huang and Tian, but can be distinguished from the latter by the milky-yellow body; genital styles with 1 process respectively near the apex and near the base; and aedeagus arched in middle, with 4 teeth at the apex.

Host plant: Bamboo.

Distribution: Southwest China (Guizhou Prov.).

***Bambusiphaga similis* Huang and Tian**

Bambusiphaga similis Huang and Tian, 1979: 174, figs. 16, 17.
Bambusiphaga similis: Ding and Tian, 1984: 52.

No specimens of this species were available for this study.

Host plant: *Neosinocalamus affinis* (Rendle) Keng f. (Huang et al. 1979).

Distribution: China (Yunnan Prov.).

***Bambusiphaga citricolorata* Huang and Tian** (Figs. 23-26)

Bambusiphaga citricolorata Huang and Tian, 1979: 172, figs. 12-15.

Bambusiphaga citricolorata: Ding end Tian, 1984: 51.

Description: Length of body of male 2.1 mm and female 2.6 mm; including tegmen of male 4.0 mm and female 4.3 mm; length of tegmen of male 3.4 mm and female 3.7 mm.

Body yellowish-orange or reddish-orange. Tegmina light yellow, with a small dark brown mark along cross veins Cu_2-Cu_1b . Abdomen with a small red mark at dorsal apex.

Vertex longer medially than wide at base (about 1.2: 1). Frons at middle line longer than wide at widest part (about 2.2: 1), widest at apex. Antennae reaching frontoclypeal suture, basal segment shorter than 2nd one (about 1: 3.5). Pronotum as long as vertex. Mesonotum about 2.0 times as long as vertex and pronotum together.

Male genitalia. Anal segment ring-like, lacking a process. Opening of pygofer in posterior view longer than wide, lacking a medioventral process (Fig. 23). Aedeagus with stout, tubular phallus, with a node at apex, on which there are several short gear-like processes (Fig. 26). Genital styles moderately long, strongly divergent apically, broad at base, narrowing to apex, with small teeth at apex (Figs. 23, 25).

Remarks: This species is similar to *B. similis*, but differs from the latter in that the apex of the vertex is not broadened, the frons is widest at the apex, the apex of the genital styles has several small teeth, and the aedeagus is relatively long.

Specimens examined: China, Guizhou Prov.: 14 ♂♂, 29 ♀♀, Wangmo, coll. X. S. Chen, 28 July 1998; 5 ♂♂, 9 ♀♀, Luodian, coll. X. S. Chen, 2 July 1998; 1 ♂, 1 ♀, Libo, coll. Z. Z. Li, 25 Oct. 1998 (IEGU).

Host plant: *Neosinocalamus affinis* (Rendle) Keng f. (Huang et al. 1979).

Distribution: China (Yunnan and Guizhou).

3. The *lacticolorata* group

***Bambusiphaga lacticolorata* Huang and Ding** (Figs. 27, 28)

Bambusiphaga lacticolorata Huang and Ding, 1979: 175, figs. 19-23.

Bambusiphaga lacticolorata: Ding and Tian, 1984: 53.

Description: Length of body of male 1.7 mm and female 2.1 mm; including tegmen of male 3.2 mm and female 3.5 mm; length of tegmen of male 2.6 mm and female 2.9 mm.

Body light milky-yellow. Eyes and ocelli red. Tegmina light yellowish-white. Pygofer, anal segment, and anal style primrose-yellow. Genital styles with brown base and black apex.

Vertex longer medially than wide at base (about 1.1: 1). Frons at middle line longer than wide at middle (about 2.7: 1). Basal segment of antennae shorter than 2nd one (about 1:3.4). Pronotum as long as vertex. Mesonotum about 1.4 times as long as vertex and pronotum together.

Male genitalia. Lateroapical part of anal segment produced and angled. Opening of pygofer in posterior view longer than wide, ventral margin with an obtuse angle (Figs. 27, 28). Aedeagus without phyllobase. Phallus tubular, broad at base, narrowing apically, with a node at apex. Genital styles short, lamellate, expanding at apex and somewhat twisted.

Remarks: This species is closely related to *B. nigromarginata* but differs from the latter in the milky-yellow mesonotum, the lack of dark markings, the ventral margin of the pygofer being protuberant in lateral view, and in the shape of the genital styles.

Specimens examined: China, Guizhou: 2 ♂♂, 2 ♀♀, Maolan, coll. X. S. Chen, 24 May 1998 (IEGU).

Host plant: *Phyllostachys* sp. (Huang and Ding 1979).

Distribution: China (Guizhou, and Jiangsu).

***Bambusiphaga nigromarginata* Huang and Tian**

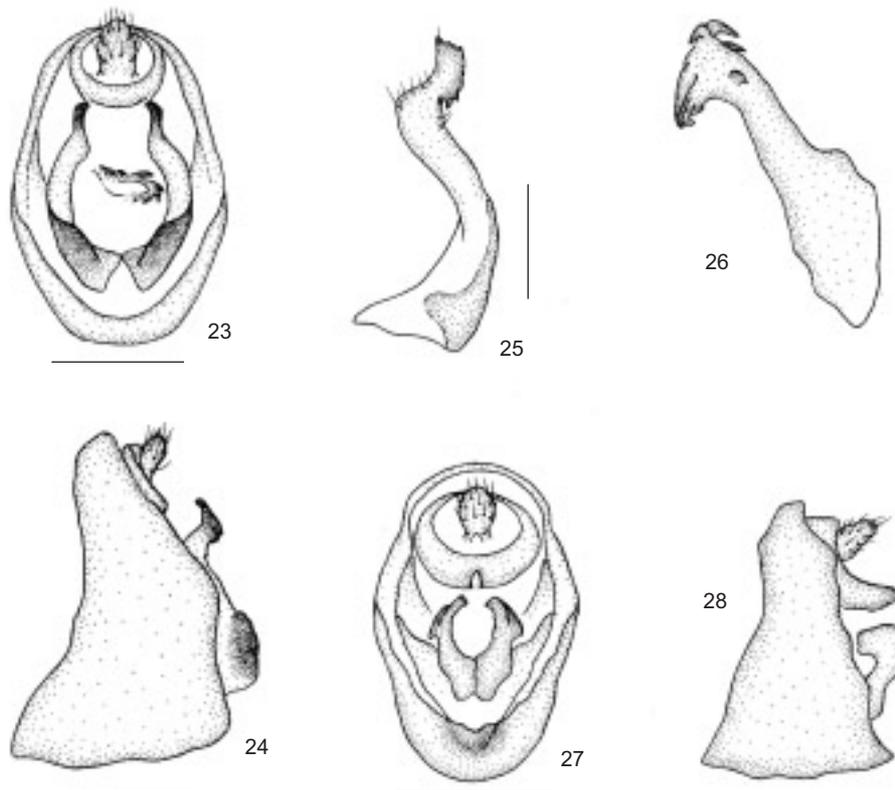
Bambusiphaga nigromarginata Huang and Tian, 1980: 421, fig. 8a-g.

Bambusiphaga nigromarginata: Ding and Tian, 1984: 54.

No specimens of this species were available for this study.

Host plant: Bamboo.

Distribution: China (Jiangsu Prov.).



Figs. 23-28. *Bambusiphaga* species. **23-26.** *B. citricolorata*: **23.** Male genitalia, posterior view; **24.** the same, lateral view; **25.** genital style; **26.** aedeagus, lateral view. **27, 28.** *B. lacticolorata*: **27.** Male genitalia, posterior view; **28.** the same, lateral view. Scale bars = 0.2 mm (Figs. 23, 24, 27, 28), and 0.1 mm (Figs. 25, 26).

4. The *fasica* group

Bambusiphaga fasica Huang and Tian

Bambusiphaga fasica Huang and Tian, 1980: 433, fig. 9a-d.

Bambusiphaga fasica: Ding and Tian, 1984: 55.

Bambusiphaga fasica: Ding and Hu, 1987: 106.

Bambusiphaga fasica: Wang and Ding, 1996: 24.

Malax herioca Yang, 1989: 25, syn. nov.

Description: Length of body of male 1.7 mm and female 2.0 mm; including tegmen of male 3.1-3.7 mm and female 4.0 mm; length of tegmen of male 2.5-3.0 mm and female 3.0 mm.

Vertex, frons, and genae below level of ocelli yellowish-white. Margins and area between lateral carinae of pronotum yellowish-white but with small black markings. Anteclypeus, rostrum, and legs yellowish. First segment of antennae dark brown, 2nd yellowish, each with a brown stripe. Genae above level of ocelli, postclypeus, areas of outer lateral carinae of pronotum, mesonotum, fore- and midcoxae, and abdomen dark brown to black except somewhat-reddish ventral aspect of abdomen. Basal 1/2 of tegmina black. Female body generally yellowish-white, median area of tegmina with a dark-brown transverse stripe from anterior margin to posterior margin. Tergum of abdomen yellowish-brown.

Vertex longer medially than wide at base (about 1.4: 1). Frons at middle line longer than wide at widest part (about 2.6: 1), widest at apex. Antennae reaching frontoclypeal suture, basal segment slightly longer than wide (about 1.3: 1), shorter than 2nd one (about 1: 4.0). Pronotum as long as vertex. Mesonotum about 1.5 times as long as vertex and pronotum together.

Male genitalia. Anal segment ring-like, left lateroapical angle strongly produced into a very long process which surpasses base of genital styles. Pygofer very wide in profile, wider ventrally than dorsally, slightly produced caudad near base, opening longer than wide in posterior view, without medioventral process. Phallobase and process membranous, indistinct. Genital styles moderately long, broad at base, narrowing to apex, in profile pointed at apex, strongly concave at anterior margin.

Remarks: This species was described and illustrated by Huang and Tian in 1980 based on 1 female specimen from Jiangsu Prov. (Yangzhou), and the males were reported in detail by Ding and Hu in 1987, based on specimens collected from Anhui (Huangshan) and Zhejiang Provs. (Tianmushan). *Malax herioca* Yang 1989 was described based on 1 male specimen from Taiwan

(Nantou Co.). We treat it as a junior synonym of *B. fasica* Huang and Tian based on a comparison of the structures of the male genitalia of the 2 species. This species is similar to *B. bakeri* but differs from the latter in the apex of frons not broadened, basal 1/2 of tegmina black, pygofer lacking a medioventral process, phallobase and process membranous, indistinct, genital styles not forked at apex.

Specimens examined: China, Guizhou Prov.: 1 ♂, 1 ♀, Changshun, coll. X. S. Chen, 30 Sept. 1997; 6 ♂♂, 8 ♀♀, Guiyang, coll. X. S. Chen, 28 July 1998; 14 ♂♂, 19 ♀♀, Pingba, coll. X. S. Chen, 5 Sept. 1998; 1 ♂, Shinan, coll. Y. X. Chen, no date. Taiwan: 8 ♂♂, 10 ♀♀, Nantou Co., coll. X. S. Chen, 24 Nov. 2002 (IEGU).

Host plant: Bamboo.

Distribution: China (Jiangsu, Anhui, Zhejiang, Gansu, and Guizhou Provs.), Taiwan.

Bambusiphaga bakeri (Muir), comb. nov.

(Figs. 29-38)

Malaxa bakeri Muir, 1919: 523, pl. I, fig. 3.

Malaxa bakeri: Yang and Yang 1986: 56.

Bambusiphaga latispina Qin and Yuan, 1999: 33 syn. nov.

Description: Length of body of male 1.9 mm and female 2.5 mm; including tegmen of male 3.3 mm and female 4.0 mm; length of tegmen of male 2.6 mm and female 3.1 mm.

Body slight yellowish-brown. Eyes dark brown, ocellis reddish-brown. Tegmina with a brown band along transverse vein, connecting part of Sc+R and M, apex of I_A with a brown spot (Fig. 31). Pygofer brownish, anal segment and anal style yellowish-white. Basal 1/2 of genital styles brown, apical 1/2 blackish-brown.

Vertex longer medially than wide at base (about 1.2: 1) (Fig. 29). Frons at middle line longer than wide at widest part (about 2.3: 1), widest at apex (Fig. 30). Antennae slightly surpassing frontoclypeal suture, basal segment shorter than 2nd one (about 1: 3.4). Pronotum as long as vertex. Mesonotum about 1.3 times as long as vertex and pronotum together.

Male genitalia. Anal segment ring-like, left lateroapical angle strongly produced into a long process, cross-section not circular but blade-shaped, strongly angulated above middle, distinctly divided into 2 layers, upper one strongly sclerotized, lower somewhat membranous (Fig. 34). Opening of pygofer in posterior view longer than wide, medioventral process single, apex turned downward, slightly left hook-like (Figs. 32, 33).

Phallus of aedeagus tubular, simple, on right side, in dorsal view strongly curved left, phallobase incomplete, with process in profile strongly arched upward medially, reflected cephalad at apex and into a large membranous lobe, with an elliptical node at middle (Figs. 37, 38). Genital styles moderately long, apex roundly pointed, basal angle produced, in profile basolateral surface produced, spoon-shaped (Figs. 35, 36).

Remarks: Muir (1919) described this species in *Malaxa* from *Malaysia*. Yang and Yang (1986) reported the species from Taiwan. We here transfer it from *Malaxa* to *Bambusiphaga* based on the characters of the vertex, frons, antennae, and the male genitalia. We treat *Bambusiphaga latispina* Qin and Yuan as a junior synonym of *M. bakeri* Muir based on our study of the structures of the male genitalia of the 2 species (also see Muir 1919, Qin and Yuan 1998). This species is similar to *B. fascia* but differs from the latter in that the apex of the frons is broadened, the tegmina has a brown band along the transverse vein, the pygofer has a medioventral process, the aedeagus has a

distinct phallobase, and the genital styles are forked at the apex.

Specimens examined: China, Guizhou Prov.: 1 ♂, Wangmo, coll. X. S. Chen, 30 July 1998; 1 ♂, 2 ♀♀, Luodian, coll. X. S. Chen, 2 Aug. 1998 (IEGU).

Host plants: *Bambusa stenostachya* Hackel, *B. oldhamii* Munro, and *B. dolichoclada* Hayata (Yang and Yang 1986).

Distribution: China (Guizhou, Hainan, Guangdong, and Shaanxi), Taiwan, the Philippines (Luzon and Laguna), Singapore, Malaysia (Penang).

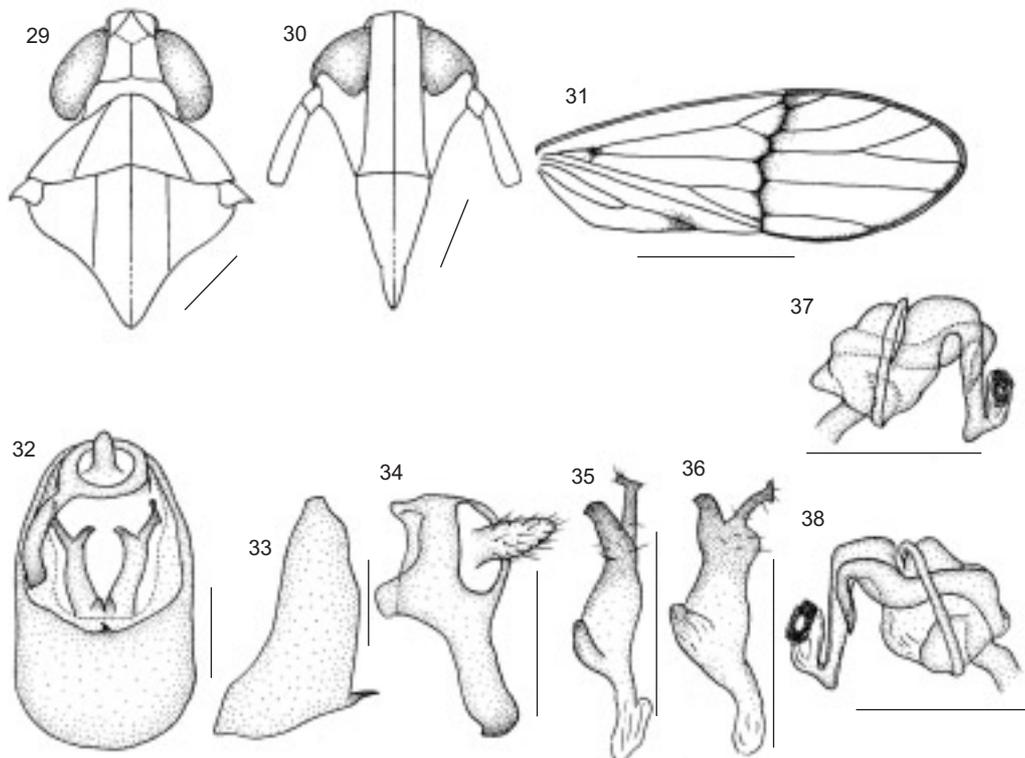
Bambusiphaga jinghongensis Ding and Hu

Bambusiphaga jinghongensis Ding and Hu, 1986: 415, pl. I, figs. 1-7.

No specimens of this species were available for this study.

Host plant: Bamboo.

Distribution: China (Yunnan).



Figs. 29-38. *Bambusiphaga bakeri*. 29. Head and thorax, dorsal view; 30. frons and clypeus; 31. tegmen; 32. male genitalia, posterior view; 33. pygofer of male, left side; 34. anal segment, lateral view; 35, 36. genital style; 37, 38. aedeagus, lateral view. Scale bars = 0.25 mm (Figs. 29, 30), 1 mm (Fig. 31), and 0.2 mm (Figs. 32-38).

5. The *maculata* group

Bambusiphaga maculata Chen and Li (Figs. 39-44)

Bambusiphaga maculata Chen and Li, 2000: 77, figs. 1-8.

Description: Body length of male 2.2 mm and female 2.6 mm; including tegmen of male 4.4 mm and female 4.8 mm; length of tegmen of male 3.7 mm and female 4.1 mm.

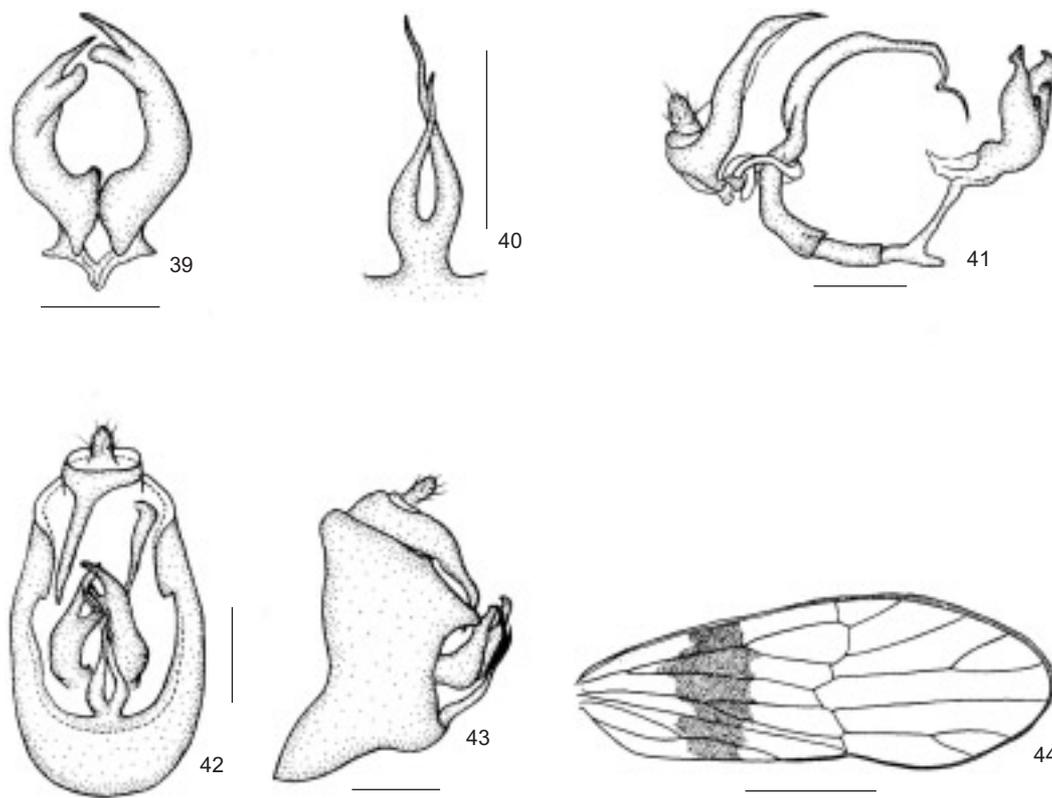
Body lightly yellowish-white, slightly brown. Vertex, frons, genae, and antennae lightly yellowish-white. Ocelli and eyes reddish-brown. Central areas of lateral carinae and mesonotum of pronotum mostly blackish-brown. Tegmina with a large dark-brown mark at basal 1/3 (Fig. 44). Fore- and midcoxae light brown. Dorsal areas of abdomen brown, pygofer dark brown, anal segment and anal style yellowish-brown.

Vertex quadrate, wider at base than length (about 1.1: 1), narrower at apex than at base (1.2: 1), apical margin truncate, carinae distinct, submedian carinae united at apex. Frons oblong, longer

at middle line than wide at widest part (about 2.3: 1), slightly narrower at base than at apex. Clypeus developed, postclypeus slightly wider at base than frons at apex, median carina feeble. Second segment of antennae 3.4 times as long as 1st one, 2 segments together reaching frontoclypeal suture. Pronotum as long as vertex, lateral carinae reaching hind margin. Mesonotum about 1.4 times length of vertex and pronotum together.

Male genitalia. Anal segment of male ring-like, left lateroapical angle produced into a long process (Fig. 42). Pygofer in profile much longer ventrally than dorsally, strongly produced caudad at middle of posterior margin (Fig. 43), in posterior view opening longer than wide, medioventral process developed, forked near base, right branch longer than left one (Fig. 40). Aedeagus slender, very long, apical 1/4 bent ventrad, sinuate (Fig. 41). Genital styles moderately long, forked at apex, pliers-like, basal angle of left style slightly produced, shaped as in figure 39.

Remarks: This species is similar to *B. pianmaensis* but can be distinguished from the latter by a large dark brown mark at the basal 1/3 of the



Figs. 39-44. *Bambusiphaga maculata*. **39.** Genital style, posterior view; **40.** medioventral process, ventral view; **41.** male anal segment, aedeagus, and genital styles; **42.** male genitalia, posterior view; **43.** the same, lateral view; **44.** tegmen. Scale bars = 1 mm (Fig. 44), and 0.2 mm (Figs. 39-43).

tegmina; the process of anal segment is shorter, not reaching the ventral margin of the pygofer; and the apex of the genital styles is forked.

Specimens examined: China, Guizhou Prov.: 3 ♂♂, 2 ♀♀, Fanjing Mt., coll. X. S. Chen, 4 July 1998; Henan Prov.: 28 ♂♂, 42 ♀♀, Baiyun Mt., coll. X. S. Chen, 19-24 July 2002 (IEGU).

Host plant: *Sinobambusa kunishii* (Hayata) Naki (Chen and Li 2000).

Distribution: China (Guizhou and Henan).

***Bambusiphaga pianmaensis*, sp. nov.**

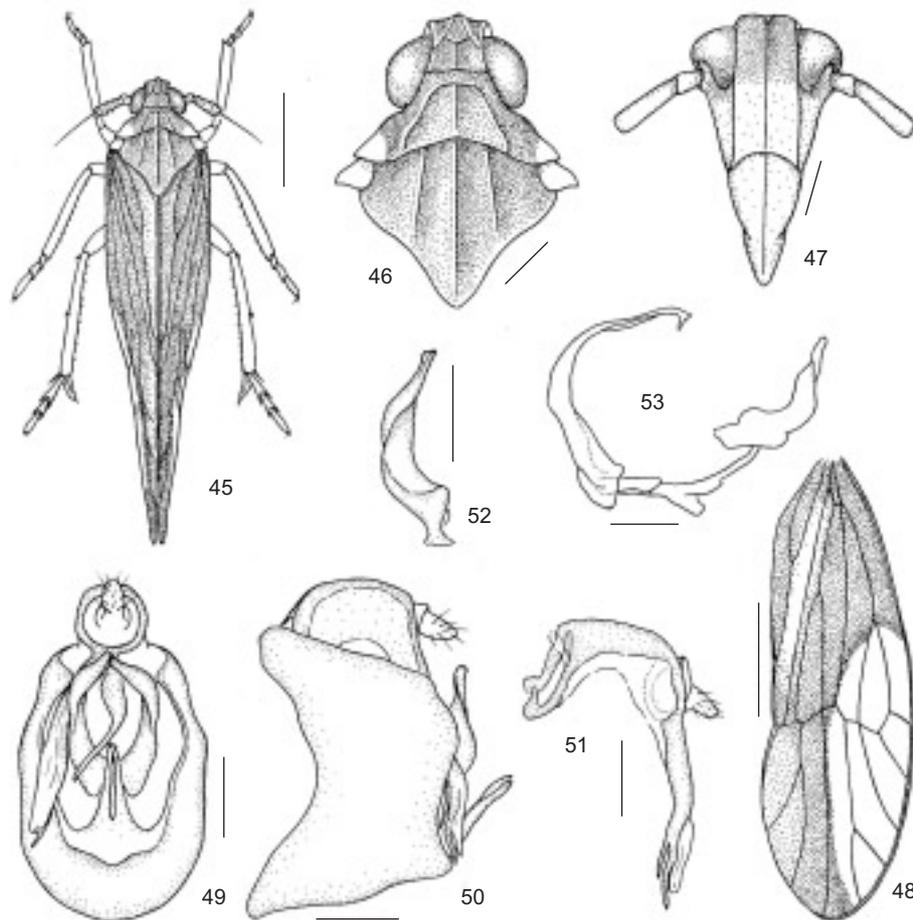
(Figs. 45-53)

Description: Length of body of male 2.4-2.6 mm and female 2.8-3.1 mm; including tegmen of male 4.8-5.2 mm and female 4.9-5.2 mm; length of tegmen of male 3.8-4.5 mm and female 3.8-4.6 mm.

Body milky-yellow to yellowish-brown, partly

dark brown to blackish-brown. Vertex, basal 1/2 of frons, basal part of genae dark brown (Figs. 45-47). Antennae brown, but 1st and 2nd segments darker at apex. Eyes reddish-brown. Pronotum and mesonotum blackish-brown, except yellowish-brown lateral margin (Fig. 46). Tegmina dark brown, except yellowish-brown posterior 1/2 of costal margin (Fig. 48). Thorax yellowish brown to reddish-orange, except blackish-brown sternopleura. Most areas of femora and tibiae of forelegs, median legs, and 3rd digitus dark brown. Tibiae of hind legs yellowish-brown, except dark-brown basal part. Abdomen with blackish-brown terga, sterna dark reddish-orange, except blackish-brown anterior margin of each segment. Pygofer blackish-brown. Anal segment dark brown.

Vertex quadrate, nearly as long medially as wide at base, apex as wide as base, anterior margin truncate, carinae distinct, submedian carinae originating from middle of lateral carinae, uniting at



Figs. 45-53. *Bambusiphaga pianmaensis* sp. nov. **45.** Male adult, dorsal view; **46.** head and thorax, dorsal view; **47.** frons and clypeus; **48.** tegmen; **49.** male genitalia, posterior view; **50.** the same, lateral view; **51.** anal segment, lateral view; **52.** genital styles, posterior view; **53.** aedeagus and genital styles, lateral view. Scale bars = 1 mm (Figs. 45, 48), 0.25 mm (Figs. 46, 47), and 0.2 mm (Figs. 49-53).

apex of vertex (Figs. 45, 46). Frons rectangular, longer at middle line than wide (about 2.1: 1), lateral carinae nearly straight (Fig. 47). Postclypeus wider at base than frons at apex, median carina distinct. First segment of antennae longer than wide (about 1.25: 1), 2nd one longer in middle line than 1st (about 4.0:1), 2 segments together reaching frontoclypeal suture. Pronotum longer at middle line than vertex (about 1.2: 1). Mesonotum longer at middle line than vertex and pronotum together (about 1.4: 1) (Fig. 46).

Male genitalia. Anal segment of male ring-like, left lateroapical strongly produced into a long, somewhat twisted process, reaching ventral margin of pygofer, apical part distinctly divided into 2 layers, upper one somewhat membranous, lower one strongly sclerotized (Figs. 49, 51). Dorsal margin of pygofer in profile as long as ventral margin, posterior margin undose (Fig. 50), opening in posterior view longer than wide, ventral margin with a pair of medioventral processes, apices turning to each other. Genital styles long, apical part turning inward, tapering apically (Fig. 52).

Aedeagus tubular, strongly arched in middle, tapering apically, apex somewhat membranous, trumpet-like (Fig. 53).

Holotype: male. *Paratypes*: 5 ♂♂, 13 ♀♀, China, Yunnan Prov.: Panma (26°03'N, 98°24'E), elev. 1750 m, coll. X. S. Chen, 17 Aug. 2000 (IEGU).

Remarks: This species is related to *B. maculata* Chen and Li, but can be distinguished from the latter by the mostly dark-brown tegmina; the process of the anal segment is longer, reaching the ventral margin of the pygofer; and the apex of the genital styles is not forked.

Host plant: Bamboo.

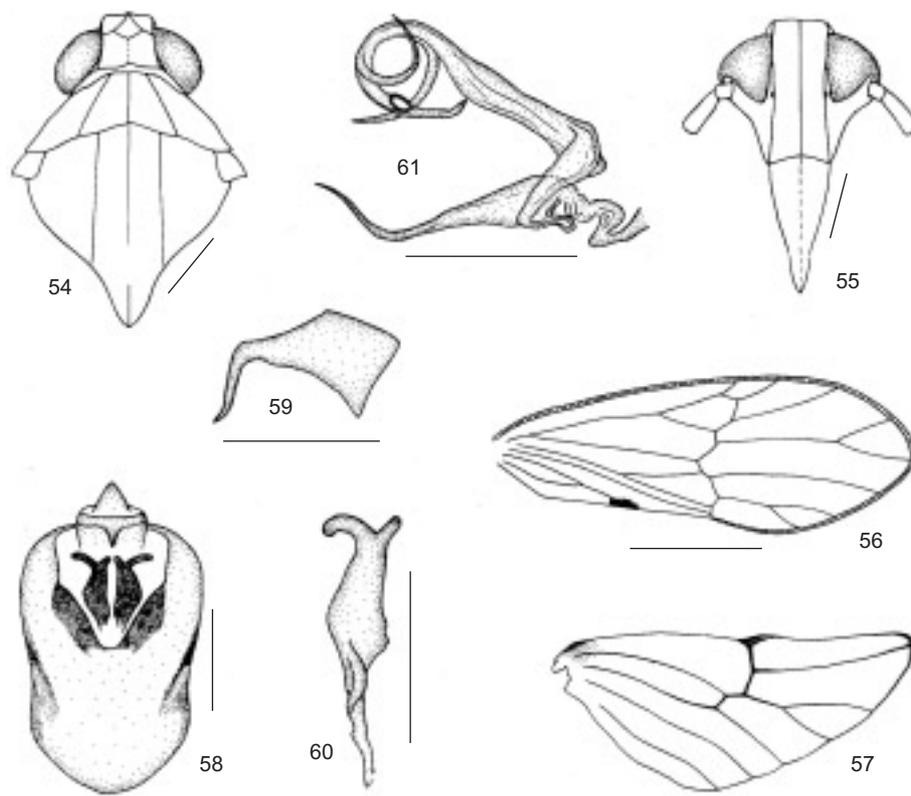
Distribution: Southwest China (Yunnan).

6. The *wangmoensis* group

Bambusiphaga wangmoensis Chen and Li (Figs. 54-61)

Bambusiphaga wangmoensis Chen and Li, 2000: 179, figs. 9-16.

Description: Length of body of male 1.9 mm



Figs. 54-61. *Bambusiphaga wangmoensis*. **54.** Head and thorax, dorsal view; **55.** frons and clypeus; **56.** tegmen; **57.** wing; **58.** male genitalia, posterior view; **59.** anal segment, lateral view; **60.** genital style, posterior view; **61.** aedeagus, lateral view. Scale bars = 0.25 mm (Figs. 54, 55), 0.5 mm (Figs. 56, 57), and 0.2 mm (Figs. 58-61).

and female 2.4 mm; including tegmen of male 3.9 mm and female 4.3 mm; length of tegmen of male 3.3 mm and female 3.6 mm.

Body mostly yellow to brownish-yellow. Eyes dark brown, ocelli red. Tegmina almost hyaline, light brown, veins brown, costal margin grayish-brown, pterostigmas black (Fig. 56). Lateral sides of thorax, median and posterior area of abdominal tergites dark brown, legs brownish-yellow. Pygofer brown, except blackish-brown posterior margin, anal segment, anal process yellow, genital styles black. Female color same as male, but base of tegmina light milky-white, apex light brown, a yellowish-brown transverse band in middle.

Vertex quadrate, longer at middle line than wide at base (about 1.2:1), narrower at apex than at base, apex evenly rounded into frons, carinae distinct, submedian carinae united at apex (Fig. 54). Frons oblong, longer at middle line than wide (about 2.3:1) (Fig. 55). Second segment of antennae 3.2 times as long as 1st one, 2 segments together not reaching frontoclypeal suture. Mesonotum about 1.8 times length of head and pronotum together (Fig. 54).

Male genitalia. Anal segment with a ventral process medially (Fig. 58, 59). Opening of pygofer small, longer than wide (Fig. 58). Genital styles broad in middle, outer angle about twice as long as inner angle (Fig. 60). Aedeagus with simple phallobase, wide at base and tapering to apex, phallus developed, with a node near apex, apical 1/3 curved, ring-like, with 2 curved processes, semicircular (Fig. 61).

Remarks: This species is similar to *B. bakeri* but differs from the latter in the apex of frons not being broadened, the anal segment has a ventral process medially, the ventral margin of the pygofer lacks a medioventral process, and the phallus has 2 curved processes at the apical 1/3.

Specimens examined: China, Guizhou Prov.: 15 ♂♂, 27 ♀♀, Wangmo, coll. X. S. Chen, 23 Sept. 1997 (IEGU).

Host plant: *Neosinocalamus affinis* (Rendle) Keng f. (Chen and Li 2000).

Distribution: China (Guizhou).

7. The *mirostylis* group

Bambusiphaga mirostylis Huang and Ding

Bambusiphaga mirostylis Huang and Ding, 1979: 174, fig. 18.
Bambusiphaga mirostylis: Ding and Tian, 1984: 53.

No specimens of this species were available

for this study.

Host plant: *Neosinocalamus affinis* (Rendle) Keng f. (Huang et al. 1979).

Distribution: China (Yunnan).

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