



A new genus and species of the planthopper tribe Augilini Baker (Hemiptera, Caliscelidae, Ommatidiotinae) from Thailand and China

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Abstract

In the present paper a new genus and new species of caliscelid planthopper (Hemiptera: Fulgoromorpha), *Pseudosymplanella nigrifasciata* are described and illustrated. The species is recorded from China and from bamboo in Thailand. This represents the first record of the tribe Augilini from Thailand and the first record of bamboo as a host for a member of this tribe. A key to genera of Augilini is provided and notes given on *Augilina longipes* Melichar.

Key words: Fulgoroidea, Fulgoromorpha, taxonomy, bamboo

Introduction

The planthopper family Caliscelidae Amyot & Serville was recently reviewed by Gnezdilov & Wilson (2006) and divided into two subfamilies and five tribes, Caliscelinae (Caliscelini Amyot & Serville, Peltonotellini Fieber), Ommatidiotinae (Ommatidiotini Fieber, Augilini Baker, Adenissini Dlabola) (Gnezdilov & Wilson, 2006; Gnezdilov, 2008; Emeljanov, 2008). Although the two subfamilies (Caliscelinae and Ommatidiotinae) were distinguished (in keys) only on characters of the immatures (Emeljanov, 1999; Gnezdilov & Wilson, 2006), they also differ in the well developed phallobase and more or less reduced aedeagus in Caliscelinae, compared to a reduced phallobase and well developed aedeagus in Ommatidiotinae (Gnezdilov & Bourgoin, 2009). One of the Ommatidiotinae tribes, Augilini Baker, was revised by Fennah (1987) and Gnezdilov & Bourgoin (2009) and comprises eight genera of variable appearance (see figs 1–6). After Fennah (1987) two more species, *Augilodes apicomacula* Wang, Chou & Yuan (2002) and *Symplanella unipuncta* Zhang & Wang (2009), were added from China.

In the present paper, a new genus and species of this tribe, collected on bamboo (*Bambusa* sp.) in Thailand and China, are described and illustrated. In addition, a revised key to genera is given to correct a mistake in Fennah's (1987) key (couplet 3) that *Augilina* Melichar lacks facial carinae. From images of the unique type of its type species, *A. longipes* Melichar (Fig. 6), this taxon has two facial carinae. The description of the new genus and species represents the first record of the tribe Augilini in Thailand. Previous records include Madagascar, India, Sri Lanka, Vietnam, Myanmar, Cambodia, Philippines and China.

Material and methods

Terminology used mainly follows Chan & Yang (1994). The genital segments of the examined specimens were macerated in 10% KOH and examined in glycerin jelly for illustrating using a Leica MZ125

stereomicroscope. Photographs of the specimens were made using a Leica MZ125 stereomicroscope with a Q-image CCD. Images were produced using the software Synoptics Automontage.

The specimens examined are deposited either in the Entomological Museum, Northwest A & F University (NWAUFU) or in the Natural History Museum, London, UK (BMNH), where indicated.

Key to genera of Augilini (modified from Fennah, 1987)

1. Frons with two or three carinae. Apical segment of rostrum distinctly longer than broad..... 2
- Frons without carinae. Apical segment of rostrum as broad or broader than long 8
- 2 (1). Frons bicarinate (Fig. 6)..... 3
- Frons tricarinate (Fig. 3) 4
- 3 (2). Vertex strongly produced anteriorly. Tegmen with strongly sinuate costal margin
..... *Symplanodes* Fennah
- Vertex slightly produced anteriorly. Tegmen with weakly sinuate costal margin..... *Augilina* Melichar
- 4 (2). Vertex strongly produced anteriorly; frons not visible in dorsal view 5
- Vertex not or very slightly produced anteriorly; frons visible in dorsal view 7
- 5 (4). Tegmen without nodal vein, first metatarsomere with only two lateral spines apically
..... *Signoreta* Gnezdilov & Bourgoïn
- Not as above 6
- 6 (5). Fore femora and tibiae weakly dilated and strongly flattened *Cicimora* Emeljanov
- Fore femora and tibiae not dilated and flattened..... *Symplana* Kirby
- 7 (4). Vertex wider than long (Fig. 1) *Pseudosymplanella*, gen. nov.
- Vertex as long as, or longer than wide *Symplanella* Fennah
- 8 (1). Apex of head rounded in profile. Frons broad with a dorsal flagellum *Augilodes* Fennah
- Apex of head acute in profile (Fig. 5). Frons narrow without dorsal flagellum *Augila* Stål

Pseudosymplanella, new genus

Type species: *Pseudosymplanella nigrifasciata*, sp.nov.

Description. Head with eyes narrower than pronotum; vertex nearly hexagonal, broader than long, disc depressed, anterior margin a little convex, lateral margins distinctly carinate; ocelli present; frons slightly elevated with three carinae, anterior margin distinctly emarginated, longer than widest part; frontoclypeal suture nearly straight to slightly arched; clypeus convex with carina; rostrum long, reaching to metatrochanter. Pronotum moderately convex anteriorly, angularly emarginate posteriorly; disc slightly elevated with two pits. Mesonotum with pit along lateral margin; disc flattened; lateral areas obliquely depressed, almost twice as broad as length at middle. Tegmina subhyaline, relatively narrow, parallel-sided; veins distinct, claval suture present. Wings translucent, longer than half length of tegmen, with three lobes, much broader than tegmen; veins distinct. Legs relatively long. Male with U-shaped aedeagus short, genital style elongate. Female genitalia with gonoplas short and rounded in lateral view.

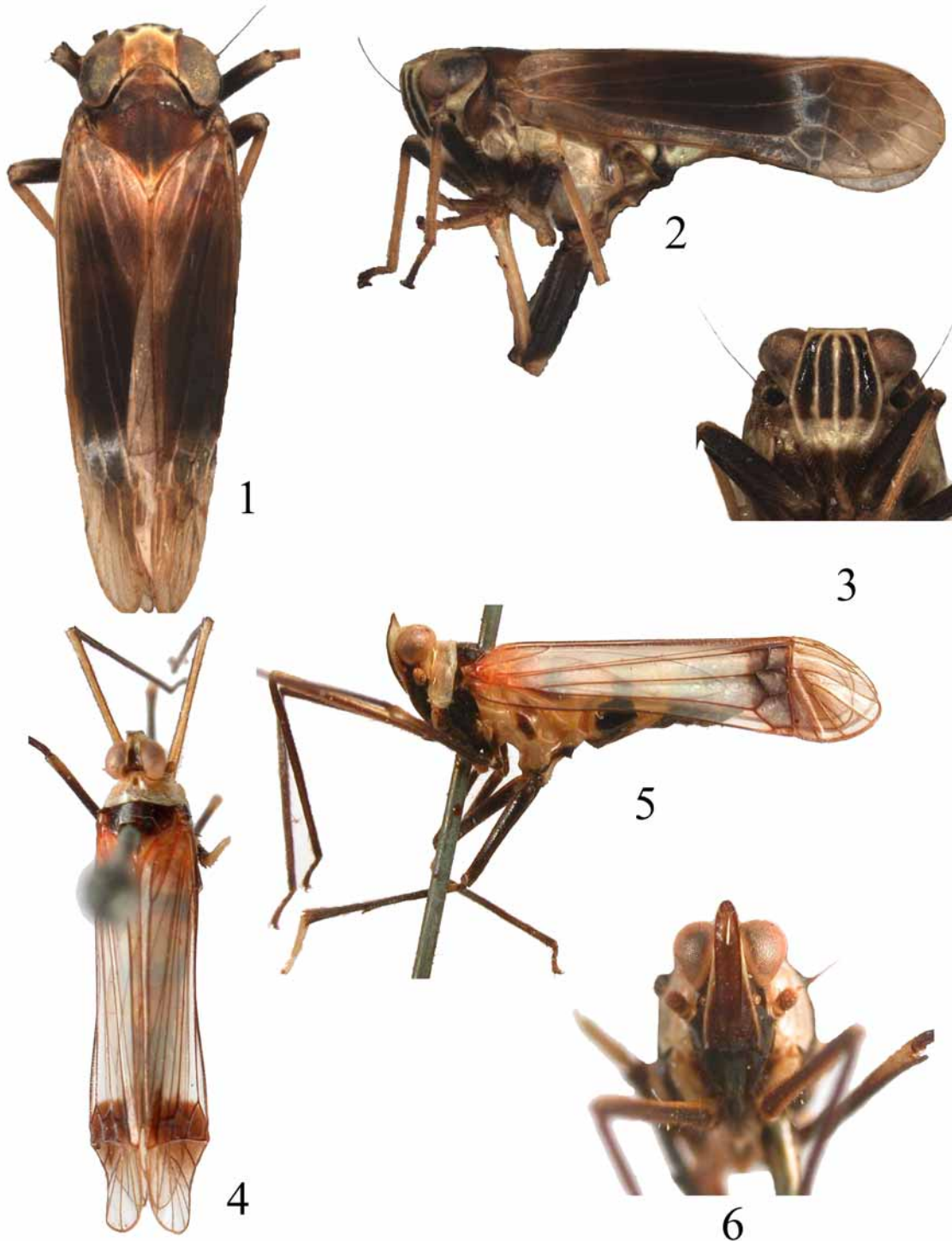
Remarks. This genus runs to *Symplanella* in Fennah's (1987) key, but it can be distinguished from the latter by: 1) vertex broader than long (as long as or longer than wide in *Symplanella*); 2) male pygofer with laterodorsal angles produced into a spine (without spine in *Symplanella*); 4) genital style simple (biramous in *Symplanella*).

Etymology. The scientific name *Pseudosymplanella* refers to the strong resemblance of this genus to *Symplanella*. The genus is feminine in gender.

Distribution. China (Yunnan), Thailand.

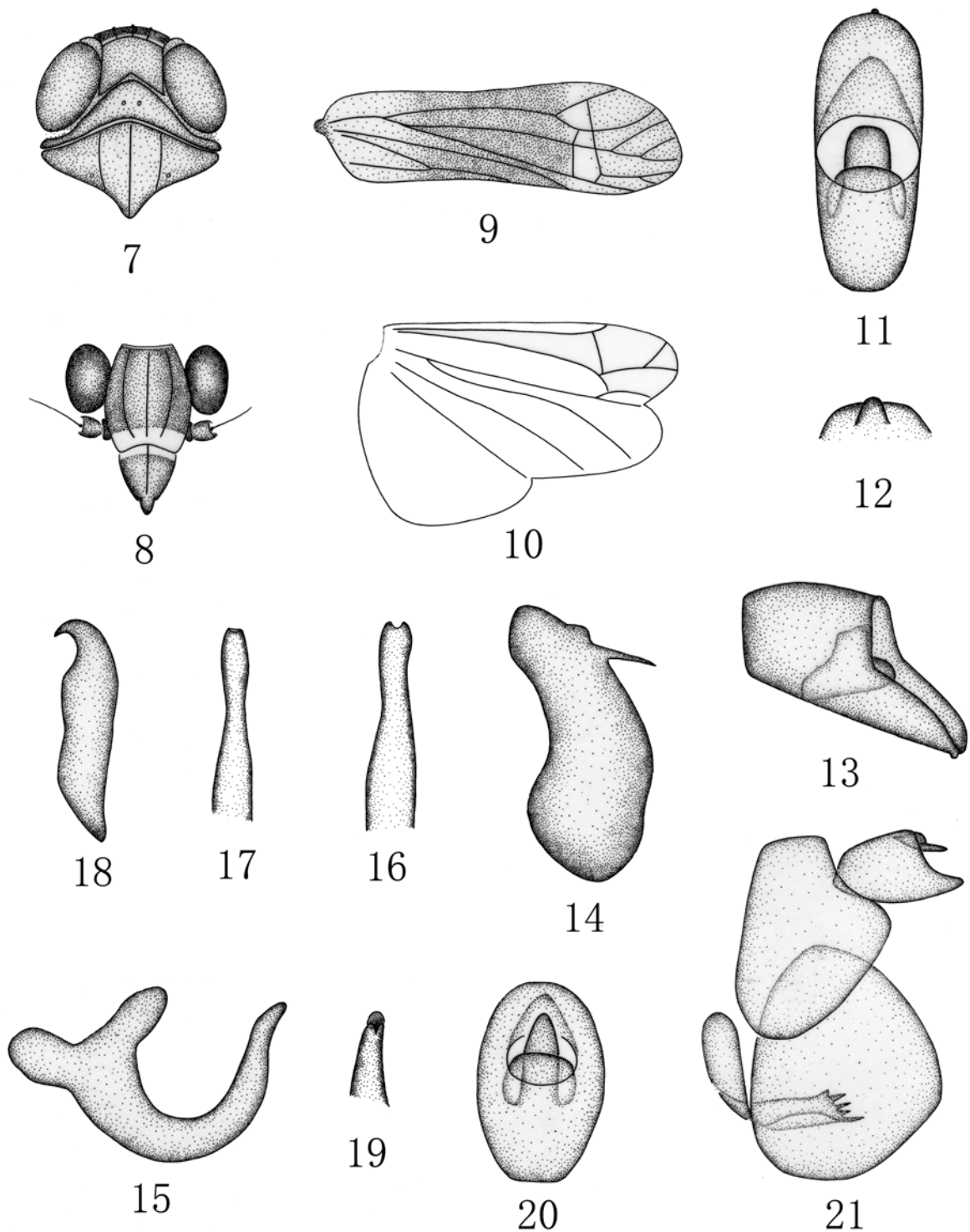
1. *Pseudosymplanella nigrifasciata*, sp. nov. (Figs 1–3, 7–21)

Description. Length (incl. tegmen): ♂, 5.0mm, ♀, 5.1 mm; Length of tegmen: ♂, 4.1mm, ♀, 4.3mm.



FIGURES 1–6. External features of Ommatidiotinae. 1–3, *Pseudosymplanella nigrifasciata* (male), 1, dorsal view, 2, lateral view; 3, facial view. 4–6, *Augilina longipes* (male), 4, dorsal view, 5, lateral view, 6, facial view.

Coloration. Body brown with pale yellow carinae and dark brown fascia. Vertex with disc dark brown; anterior, posterior and lateral margins brown; eyes black; frons blackish brown, carinae pale yellow, base and apex with pale yellow fascia respectively; clypeus blackish brown, carina pale yellow, base with pale yellow fascia; rostrum brown. Pronotum and mesonotum dark brown, carinae of the latter paler brown. Tegmina subhyaline with broad, brown, transverse band medially. Legs blackish brown, tibiae and tarsi dark brown. Venter and dorsum of abdomen pale yellow, apex dark brown.



FIGURES 7–21. *Pseudosymplanella nigrifasciata*, sp.nov. 7. Head and thorax, dorsal view; 8. Frons and clypeus; 9. Tegmen; 10. Wing; 11. Anal segment, dorsal view; 12. Apex of anal segment, ventral view; 13. Anal segment, lateral view; 14. Pygofer, lateral view; 15. Aedeagus, lateral view; 16. Apex of aedeagus, ventral view; 17. Apex of aedeagus, dorsal view; 18. Genital style, lateral view; 19. Apex of genital style, ventral view; 20. Anal segment, dorsal view; 21. Female genitalia, left side.

Vertex with anterior margin roundly convex, posterior margin a little emarginate, 1.6× wider at apex than long in middle line; frons glossy, with disc slightly convex, median and lateral carinae present, 1.2× longer at mid than width of widest part, 1.5× wider at widest part than width of base; frontoclypeal suture slightly

arched; clypeus with median carina. Pronotum narrow and small, anterior margin distinctly convex, posterior concave medially. Mesonotum nearly rhomboid, anterior margin clearly produced medially, with median and lateral carinae, 1.3× wider at widest than medial length. Tegmen 3.5× longer than widest part, venation as figured. Wing large, 0.9 times length of tegmen. Lateral margin of hind tibia with a single tooth; spines at apex of 1–3 hind tarsi: 7–9–2 respectively.

Male genitalia: Anal segment approximately three times as long as medial width in dorsal view (Fig. 11), apical margin smoothly convex with a small finger-like process at mid-ventral side (Fig. 12); in lateral view wide basally, tapered to apex distally with ventral margin relatively straight (Fig. 13). Pygofer with laterodorsal angles produced into a spine and small protuberance (Fig. 14). Phallus strongly curved in lateral view, without processes, apex undivided (Fig. 15); aedeagus with lateral margins incurved subapically, apical margin with slight indentation in ventral view (Fig. 16). Genital styles elongate with apex hook-like (Fig. 18).

Female genitalia: anal segment nearly oval in dorsal view (Fig. 20). First valvula small, curved; apical margin with five unequal teeth, lateral margin upturned. Third valvula nearly triangular (Fig. 21). Ninth tergum larger, nearly trapeziform. Seventh sternum with apical margin nearly truncate.

Type material. Holotype ♂, Thailand, Chiangmai, 12 May 1992, coll. W. Hongsaprug, on bamboo (BMNH). Paratypes: Thailand: 1♂, 1♀, same data as holotype; 1♂, 1♀, Chiangmai, Phuping, 13 May 1992, W. Hongsaprug (BMNH); China: 1♀, Yunnan Prov., Mengyang, 10 June 1991, coll. WANG Yinglun and CAI Wanzhi (NWFU).

Etymology. The specific name is derived from the Latin words “nigra” and “fascia” which refer to the dark band on the forewing.

Discussion

Augilini is a small tribe with nine genera (including the new genus *Pseudosymplanella*), distributed in the Afrotropical and Oriental Regions. Only three genera, *Augilodes*, *Symplanella* and *Pseudosymplanella*, are recorded from China and description of the new genus and species represents the first record of the tribe from Thailand. Bamboo is reported for the first time as host plant of this tribe.

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