



New record of the genus *Bambusiphaga* (Hemiptera: Delphacidae: Tropidocephalini) from India with description of a new species

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Abstract

The genus *Bambusiphaga* Huang & Ding is recorded from India for the first time and one new species *B. unispina* sp. nov. is described and illustrated. The new species is similar to *B. taiwanensis* (Muir) but can be separated by the male genitalic structure.

Key words: Planthopper, morphology, distribution, identification

Introduction

The delphacid fauna of India remains inadequately studied. The only comprehensive treatment of Indian Delphacidae was that of Distant (1906, 1916) in the fauna of India including Sri Lanka and Burma, which deals with 49 species in 20 genera. Asche (1990) and Liang (2002) recorded the subfamily Vizcayinae in Southern India. Obviously, much taxonomic work on the group is to be carried out.

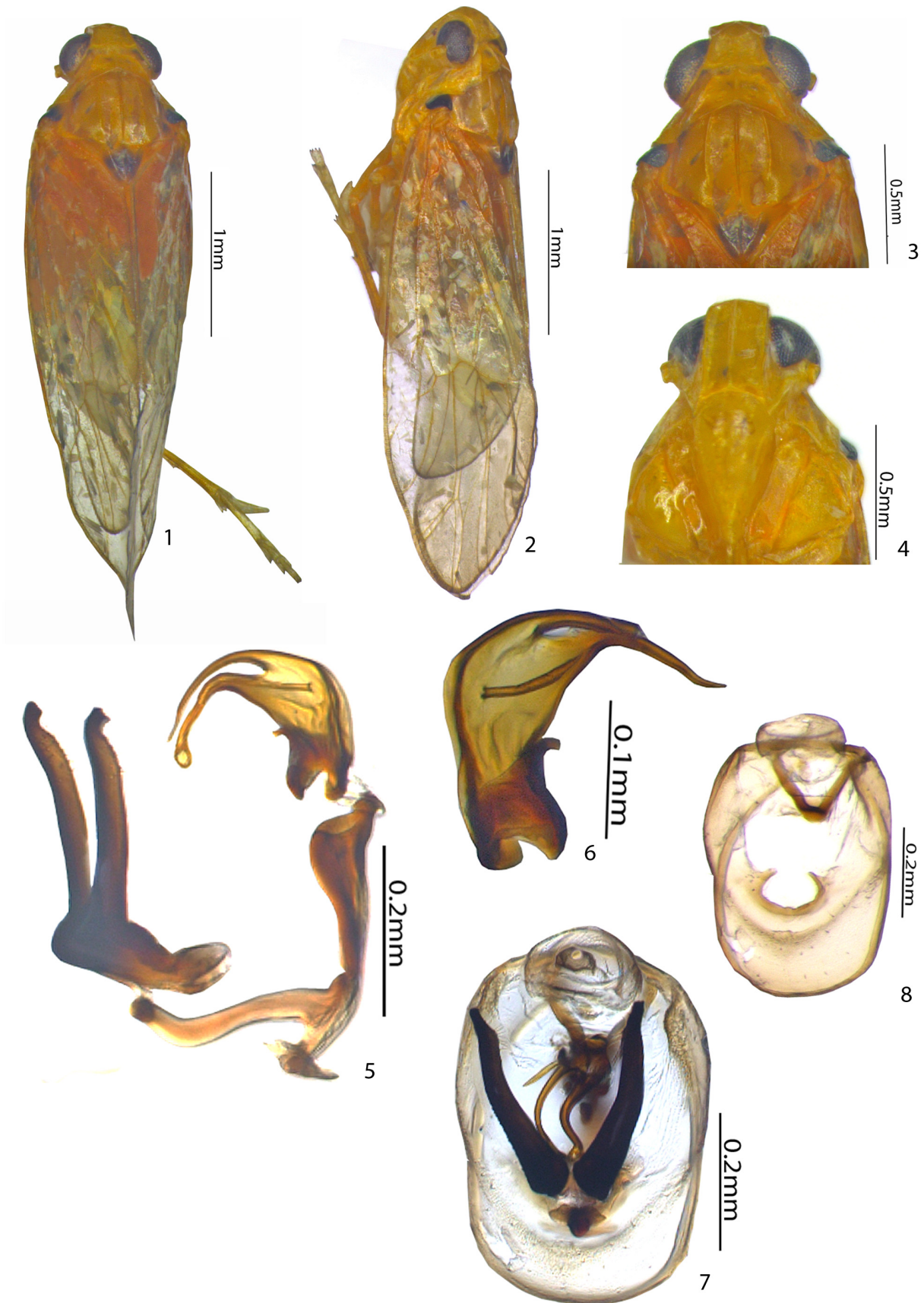
Bambusiphaga is an Oriental bamboo-feeding planthopper genus, belonging to tribe Tropidocephalini under family Delphacidae. It was established by Huang and Ding (1979) with type species *Bambusiphaga nigropunctata*. A total of 25 species were reported from Oriental region, viz., China (23 species), Taiwan (4 species), Singapore (2 species), Malaysia (2 species), Philippines (1 species), and North-Eastern Himalayas (1 species) (Chen and Liang, 2007; Li *et al.* 2018). Species in the genus exhibit morphological diversity in male genitalia. Asche (1983) divided the members of genus *Bambusiphaga* into 4 species groups (*citrocolorata*, *lacticolorata*, *nigropunctata* and *mirostylis*) based on male genitalia characters. Chen and Liang (2007) revised the genus and added 3 new species groups (*fascia*, *maculate* and *wangmoensis*) which led to total 7 groups. Detailed checklist and key for the identification of species in the genus was provided by Yang and Chen (2011) and Li *et al.* (2018). *Bambusiphaga* can be distinguished from other related genera by the following characters: body yellowish-brown, often with brown or black markings; head including eyes narrower than pronotum; scutellum longer at middle line than vertex and pronotum together; aedeagus (phallosome) complex, tubular, with or without phallobase; and segment 10 ring-like, with or without process.

The genus was previously recorded in China, Taiwan, Singapore, Malaysia and Philippines and in this paper it is recorded for the first time from India.

Material and methods

The terminology followed is after Asche (1985) except anal tube which is referred as “segment 10” and also the ‘Aedeagal complex’ refers to structures viz., phallosome, connective, parameres, and postgenital segments, when these structures have been separated from the pygofer. The ‘Phallosome’ is referred to the fusion of true aedeagus with theca (Bartlett, 2009).

The photographs were taken with a Leica DFC 425C digital camera mounted on a Leica M205FA stereozoom autotomontage microscope. Male genitalia dissections were carried out as described by Oman (1949) and Knight (1965). Type material is deposited in the National Pusa Collection, Division of Entomology, ICAR-Indian Agricultural Research Institute, New Delhi, India (NPC).



FIGURES 1–8. *Bambusiphaga unispina* sp. nov., male. 1. Habitus, dorsal view; 2. Habitus, lateral view; 3. Head and pronotum, dorsal view; 4. Head, ventral view; 5. Aedeagal complex; 6. Aedeagus, left lateral view; 7. Genitalia, caudal view; 8. Pygofer with segment 10.

Taxonomy

Bambusiphaga unispina sp. nov. (Figs 1–8)

Measurements (mm). Male 3.4 long, 0.5 wide across eyes, 0.6 wide across hind margin of pronotum.

Male (Figs 1–8). Yellowish orange; vertex and face pale yellow. Eyes, tegulae, mesonotum, and abdominal tergites darker than remainder. Scutellum with black transverse vitta at hind margin. Tegulae black. Fore wings hyaline with dark coastal margin (Figs 1–4).

Head obliquely rounded in front and 1.4x wider than pronotum. Vertex length 0.2x width across eyes; lateral carinae straight, submedian carinae uniting just before frons. Face 1.5x as long as wide; frontoclypeus broad, frontal suture reaching up to vertex, median carina extended up to anterior margin of vertex (Fig. 3). Ocelli present. Fastigium rounded in lateral view. Frons somewhat rectangular shaped (Fig. 4). Pronotum 0.3x as long as wide and 0.5x length of scutellum; lateral carinae progressively diverged and reaching hind margin (Fig. 4). Mesonotum with median carinae reaching to tip of scutellum and lateral carinae.

Male genitalia. Pygofer longer than wide, dorsolateral margin slightly produced, ventral margin with round opening, without diaphragm. Segment 10 rounded, short, without lateroapical processes, housing inconspicuous segment 11 (Figs 7, 8). Phallosome attached to connective with emarginate base (Fig. 5). Paramere slender, bulged basally and truncate apically (Fig. 5). Phallobase uniform throughout but narrowed and curved at apex. Aedeagus broad basally, narrowed apically, with one long, caudal process, originating mid-ventrally, almost reaching apex of shaft with acute apex. Aedeagal shaft with mid-lateral spinelike process. Gonopore apical (Figs 5, 6).

Type material: Holotype ♂, INDIA: Himachal Pradesh, Palampur, CSK-HPKV, 32°10'03"N 76°54'65"E, 10.viii.2018, on mercury vapour lamp Coll. Sunil (NPC).

Remarks. Externally this new species closely resembles *B. taiwanensis* (Muir) but can be separated from the latter by the aedeagus broad basally, narrowed apically, with one long, caudal process, originating mid-ventrally, almost reaching the apex of the shaft with acute apex; aedeagal shaft with mid-lateral spinelike process; and gonopore apical.

Etymology. The species name alludes to the presence of spine like process at the mid-lateral part of phallosome.

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