



Taxonomy of the Oriental leafhopper genus *Fistulatus* (Hemiptera: Cicadellidae: Deltocephalinae), with description of a new species from China

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Abstract

A new species, *Fistulatus quadrispinosus* sp. nov. is described from the Qingliangfeng Mountains in Zhejiang Province in China. A key and checklist to species (males) of *Fistulatus* are also provided.

Key words: Homoptera, Auchenorrhyncha, Drabescini, Paraboloponina, taxonomy

Introduction

The Oriental leafhopper genus *Fistulatus* Zhang, Zhang & Chen (Zhang *et al.*, 1997) was established for its type species *Fistulatus sinensis* from China. Based on the transverse striations on the fore margin of the head, long antennae high on the face and antennal pits encroaching onto the frontoclypeus, it belongs to the subtribe Paraboloponina of Drabescini (Cicadellidae: Deltocephalinae) (Dietrich & Rakitov, 2002; Dmitriev, 2004; Dietrich, 2005; Zahniser & Dietrich, 2008, 2010). In addition to the type species, five other species have been described, three from China and two from Sabah (Malaysia) (see checklist).

In this paper, we describe another new species of *Fistulatus* from the Qingliangfeng Mountains in Zhejiang Province in China and provide a key and checklist to all seven species (males). The type specimen of the new species is deposited in the Entomological Museum, Northwest A&F University, Yangling, Shaanxi, China (NWAFU).

Genus *Fistulatus* Zhang, Zhang & Chen

Type species: *Fistulatus sinensis* Zhang, Zhang & Chen, 1997: 237

Fistulatus Zhang, Zhang & Chen, 1997; Cen & Cai, 2002: 117–119; Shang & Zhang, 2003: 21; Shang *et al.*, 2006: 152

Diagnosis. Crown about as broad as pronotum; length shorter than half distance between eyes and slightly longer medially than next to eyes. Crown transversely depressed subapically with few transverse striations on anterior margin. Ocelli marginal, near corresponding eyes. Face broader than long; antenna longer than half body length, located at anterodorsal corner of eye; antennal pit deep and encroaching onto frontoclypeus; frontoclypeus narrow with median area slightly swollen; anteclypeus narrowed medially, expanded apically; lora large; genal sides nearly straight below eye. Pronotum with sides fairly short; transversely striate. Scutellum about same length as pronotum. Forewing with four apical cells and three subapical cells, first subapical cell open. Forefemur with single AV1 seta, intercalary row with about 9–11 setae, subapical AM1 present, stout, but the anterior ventral margin bearing 3–4 stout setae. Foretibia dorsal seta formula 1+4; hind femur apical spines 2+2+1. Pygofer with one or two lateral processes. Valve approximately rectangular. Connective with stem very short, Y-shaped with arms converging apically. Aedeagus large with basal part (socle) narrow; basal apodeme elongate; shaft tubular and elongate with paired processes or flanges, gonopore apical on posterior surface.

Aedeagus with dorsal apodeme well developed; shaft long and tubular, strongly curved dorsad with dorsal margin sinuate in lateral view, dorsal surface with medial subapical flange and pair of short slender processes slightly distad of midlength curved laterally and tapered to apex and shorter pair of acute processes at apex; gonopore large, apical on posterior surface.

Material examined. Holotype: male, China, Zhejiang Province, Qingliangfeng Mountains, Longtangshan Country, 5.viii.2011, Coll. Lu Lin (NWAUFU).

Etymology. The specific epithet "*quadrispinosus*" is derived from this species having four aedeagal processes.

Remarks. This species resembles *F. luteolus* based on the characters of the pygofer, but can be differentiated from the latter by the aedeagus having a pair of narrow processes in the middle. Also the species is similar to *F. bidentatus*, but the latter lacks ventral processes of the pygofer and the shape of the aedeagal processes is also different.

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