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A New Species of the Leafhopper Genus *Subhimalus* Ghauri (Hemiptera: Cicadellidae: Deltocephalinae) from China

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ABSTRACT

In this paper, a new species *Subhimalus triangulus* sp. n. from China is described and illustrated. A key to four of the six known species of the genus is also given. The type specimens of the new species are deposited in the Institute of Entomology, Guizhou University, Guiyang, China (GUGC).

Key words: Homoptera, morphology, taxonomy, Paralimnini.

INTRODUCTION

The Oriental leafhopper genus *Subhimalus* Ghauri belongs to the tribe Paralimnini of the subfamily Deltocephalinae. The genus is noteworthy for its two unusual distal appendages of the style (Fig. 9). It was established by Ghauri (1971) with two species: *S. melanus* (type species of the genus) and *S. fuscus* from India. Later, Ramakrishnan (1983) described a new species *S. fuscomelanus* from India, Webb and Heller (1990) proposed a new combination *S. nigrifacialis* (Distant) from India, and Xing, Dai and Li (2011) described a new species *S. attenuatus* from China. All species in the genus are very similar externally with contrasting pale and dark markings (see Figs. 1-2) and also have relatively similar male genitalia.

The identity of two of the above species is uncertain. The original figures of *S. fuscomelanus* are rather poor and look similar to *S. melanus* while the figures of the male genitalia of S. *nigrifascialis* given by Datta (1988) and reproduced by Xing *et al* (2011), cannot be relied on as the types of the species are female (pers. com. M.D. Webb). Consequently these two species are omitted from the following key.

Here, a new species *Subhimalus triangulus* sp. n. is described and illustrated from Guizhou Province, China. The type specimens of the new species are deposited in the Institute of Entomology, Guizhou University, Guiyang, China (GUGC) and the Natural History Museum, London (BMNH). The genus *Subhimalus* now contains six species, four of which are separated in the following key.

RESULTS

Subhimalus Ghauri

Subhimalus Ghauri, 1971: 113; Xing, Dai and Li, 2011: 64

Type species: *Subhimalus melanus* Ghauri,1971

Distribution. Oriental Region.

For the relationship and diagnosis of *Subhimalus* see Ghauri (1971) and Xing, Dai and Li (2011).

World checklist of the genus *Subhimalus* Ghauri

S. nigrifacialis (Distant, 1918) Distribution: India.

S. melanus Ghauri, 1971 Distribution: India.

S. fuscus Ghauri, 1971 Distribution: India.

S. fuscomelanus Ramakrishnan, 1983 Distribution: India.

S. attenuatus Xing, Dai and Li, 2011 Distribution: China (Yunnan).

S. triangulus sp. n. Distribution: China (Guizhou).

Key to species (male) of *Subhimalus* (*nigrifascialis* and fuscomelanus omitted, see Introduction)

1. Style inner apical process relatively weakly developed, outer apical process bent at midlength (see Xing *et al*, 2011, Fig. 19)……***S. attenuatus* Xing, Dai and Li**

- Style inner apical process robust, outer apical process relatively straight (Fig 9)...2

2. Style inner apical process serrate distally, narrow apically (see Xing *et al*, 2011, Fig. 3, 6) ……3

- Style inner apical process smooth distally, broad apically (Fig. 9) ……***S. triangulus* sp. n.**

3. Style internal apical process long (see Xing *et al*, 2011, Fig. 6) ...***S. fuscus* Ghauri**

- Style external apical process relatively short (see Xing *et al*, 2011, Fig. 3) .....***S. melanus*** Ghauri

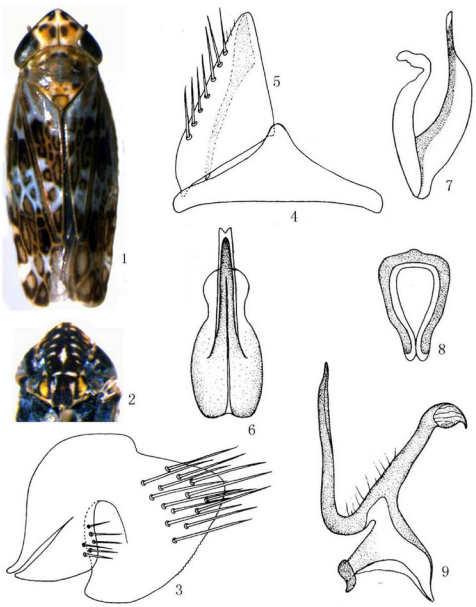
Subhimalus triangulus sp. n. Figs 1-9

Description: Yellowish brown species with dark brown markings. Head with six dark spots on vertex. Postclypeus with dark transverse streaks, anteclypeus dark-brown centrally; eyes black, ocelli pale yellow. Forewings with irregular fuscous markings, veins in basal, central and subapical part of wings pale brown. Legs dark brown.

Head slightly wider than greatest width of pronotum. Crown triangular, median length longer than width between eyes. Forewings venation reticulate as in other species of the genus.

Male genitalia: Pygofer with mactosetae on distal one third, medially constricted in the ventral half, roughly with a row of setae on anterior margin of constriction (Fig. 3).

Subgenital plate moderately long, triangular (Fig. 5). Style with internal apical process elongate, smooth apically, external process elongate, relatively straight with subapex broad (Fig. 9). Aedeagus with base broad in lateral view, strongly tapered subapically to short narrow apical region, with narrow pigmented bar dorsally (Figs. 6, 7).



Figs. 1-9. *Subhimalus triangulus* sp. n. 1. ♂, dorsal view 2. ♂, face 3. Male pygofer side, lateral view 4. Valve, ventral view 5. Subgenital plate, ventral view 6. Aedeagus, ventral view 7. Aedeagus, lateral view 8. Connective 9. Style, dorsal view.

Measurement: Length (including tegmen): ♂, 2.8–3.0mm, ♀, 3.1 3.3mm.

Host: Grasses.

Type Material: Holotype ♂, China: Guizhou Prov., Guanling County, Xinpu, 22 August 2009, coll. Jichun Xing (GUGC). Paratypes: 7♂♂ 5♀♀, Guanling County, Xinpu, 22 August 2009, coll. Jichun Xing and Hu Li (GUGC and BMNH); 3♂♂ 10♀♀, Guizhou Prov., Guanling County, Puli, 17 August 2009, coll. Jichun Xing and Hu Li (GUGC).

Remarks: This new species can be distinguished by the more acutely triangular subgenital plates. It is similar to *S. fuscus* Ghauri in the shape of the style but the outer apical process is straighte, lacks serrations and more robust distally. The aedeagal shaft is similar to *S. attenuatus* but is more abruptly tapered distally in lateral view with the distal narrow region shorter. Some specimens from Thailand (BMNH) identified probably as this species by M.D. Webb have the style inner apical process slightly shorter and more robust and the style outer apical process less robust and slightly narrower near the apex.

Etymology: The species name is derived from the Latin word "*triangulus*", indicating the triangular subgenital plates.

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