



***Nirvanguina* Zhang & Webb (Hemiptera: Cicadellidae: Deltocephalinae), a new record for China, with description of a new species**

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Abstract

The previously monotypic leafhopper genus *Nirvanguina* Zhang & Webb (Deltocephalinae, Drabescini, Paraboloponina), recorded from Australia and New Guinea, is recorded from mainland Asia (China) for the first time and a new species, *N. pecten* sp. nov., from Fanjingshan Mountain in Guizhou Prov., China, is described and illustrated.

Key words: Homoptera, Auchenorrhyncha, taxonomy, morphology

Introduction

The leafhopper genus *Nirvanguina* (Zhang & Webb, 1996) was described for its type species, *Lamia placida* Evans from Australia and New Guinea and placed in the tribe Paraboloponini of the subfamily Selenocphalinae. Subsequently, this tribe was placed as a subtribe of Drabescini (Dmitriev, 2004) in subfamily Deltocephalinae (Dietrich, 2005; Zahniser & Dietrich, 2008, 2010, 2013).

In this paper, we describe a new species of *Nirvanguina* from China, representing the first record from mainland Asia of this genus. Specimens of a different new species are also known from Thailand (pers. com. J. Zahniser) and specimens have also been seen from other Asian and Pacific countries (M.D. Webb, unpublished observations).

Nirvanguina is somewhat different from other members of the subtribe Paraboloponina in having the crown sharply slopping downward with the fore margin of the head foliaceous and rim-like with a pair of transverse carinae, the gena acutely emarginate below the eyes and the forewings relatively short, with supernumerary cross veins in the corium, the appendix broader and the inner subapical cell closed (see Fig. 28 in Zhang & Webb, 1996). Also, although the antennae are long and high on the face, as in other Paraboloponina, the antennal pits do not encroach onto the clypeus as in many genera of the subtribe (compare fig. 15 with Figs 7-9 in Zhang & Webb, 1996).

Type specimens are deposited in the Entomological Museum, Northwest A&F University, Yangling, Shaanxi, China (NWAFU).

Genus *Nirvanguina* Zhang & Webb

Nirvanguina Zhang & Webb, 1996: 18, figs. 308–311. Type species: *Lamia placida* Evans, 1966: 221, figs. 37, B1–B2

Diagnosis. Yellow with orange patches on vertex and pronotum; brown irroration on forewing and apical cell and appendix without markings, transparent brown.

Head slightly narrower than pronotum, fore margin foliaceous with two transverse carinae. Crown smooth, parabolically produced, sharply depressed and concave medially, slightly longer medially than basal width between eyes; ocelli situated on margin more than 2X own diameter from eyes. Face with clypellus slightly concave in lateral view; antennae situated near upper corner of eye in facial view, longer than half body length; antennal pit not encroaching onto

Male pygofer lobes with several dorsal macrosetae, elongate dorsal process dentate or comb-shaped apically. Subgenital plate triangular with uni-seriate row of blunt-tipped macrosetae ventrolaterally over basal half. Connective short, Y-shaped. Aedeagus shaft moderately long and narrow with pair of lateral preapical processes or flanges; dorsal apodeme well developed.

Distribution. China (Guizhou), Papua New Guinea and Australia (N. Queensland).

Remarks. The substantial morphological differences between this genus and other members of the subtribe (see Introduction) prompted Zhang & Webb (1996: 18) to consider its placement in Paraboloponina (as Paraboloponini) tentative. The claval cross veins shown here (Fig. 1L) are present in the type species but were not shown in the figure by Zhang & Webb (1996).

Key to species of *Nirvanguina* (males)

- 1 Pygofer with apex of dorsal process irregularly dentate; aedeagal shaft strongly upturned in lateral view, with pair of serrate dorsolateral subapical flanges; gonopore apical; basal apodeme tapered dorsally in ventral view *N. placida*
- Pygofer with apex of dorsal process pectinate (Fig. 1G); aedeagal shaft nearly straight in lateral view, with pair of dorsolateral teeth subapically; gonopore apical on ventral surface; basal apodeme broadly bilobed dorsally in ventral view (Figs. 1H, I)..... *N. pectena*

Nirvanguina pectena Lu & Zhang, sp. nov.

(Figs. 1A–P)

Description. Length (including forewing). Male: 4.9 mm.

Yellow marked with orange on vertex and adjacent area of pronotum and as lateral symmetrical patches on pronotum. Head narrower than pronotum. Crown concave in middle. Face with clypellus slightly concave in lateral view; genal margin below eyes strongly incurved.

Male abdominal apodemes as in figures 1M–O.

Male pygofer lobes with dorsal process apically pectinate with five teeth. Subgenital plate with macrosetae apically truncate. Aedeagus with shaft moderately long, in lateral view digitate with narrowly rounded apex, with pair of dentate dorsolateral flanges subapically; in ventral view, shaft narrowed near midlength with apex truncate, gonopore subapical on ventral surface; basal apodeme robust, narrow in lateral view, broadly bilobed in ventral view.

Material examined. Holotype: male, China, Guizhou Province, Fanjingshan Mountain, 5.viii.2012, on *Azalea*, Coll. Wang Yang (NWAUFU).

Etymology. The specific epithet “*pectena*” refers to the shape of the comblike pygofer dorsal processes.

Remarks. This species is similar to *N. placida* but can be distinguished in the male genitalia as indicated in the key.

Acknowledgements

We are grateful to Dr. Dai Wu, Northwest A&F University for revising the manuscript. This study was supported by the National Natural Science Foundation (31101652, 31093430) and by the Ministry of Education of China (TS2011XBNL061).

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