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Three new species in the leafhopper genus *Pedionis* Hamilton (Hemiptera: Cicadellidae: Macropsinae) from China, with a key to Chinese species

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Abstract

Three new species, *Pedionis* (*Pedionis*) *tribrachyblasta*, *P.* (*P.*) *dentiforma* and *P.* (*P.*) *dinghuensis* **spp. nov.** are recorded from China. Images of adults and genitalia of the three species are provided, with a key to distinguish all male species in this genus from China.

Key words: Homoptera, Auchenorrhyncha, Macropsini, morphology, taxonomy

Introduction

The leafhopper genus *Pedionis* was established by Hamilton (1980) with *Pediopsis garuda* Distant, 1916 as its type species. It belongs to the tribe Macropsini in the subfamily Macropsinae. Based on the number of anteapical cells on the forewing and the form of the male genitalia, these *Pedionis* species were placed into two subgenera (*Pedionis* and *Thyia*) which are characterized as follows. *Pedionis* (*Pedionis*): tegmina with 2 anteapical cells; male pygofer strongly tapered with tiny apical spine, acute tip or caudal margin serrate; dorsal connective slender, smoothly curved with marginal minute serrations and slightly expanded at base on medial margin. *Pedionis* (*Thyia*) with 3 anteapical cells; male pygofer bluntly rounded apically, armed with small spine in slight depression of margin; dorsal connective stout, nearly straight, armed with short spatulate process on mesal margin near middle and with decurved spine on dorsal end.

Many authors (Viraktamath 1981, 1996; Kuoh 1987; Huang & Viraktamath 1993; Liu & Zhang 2003; Okudera 2009; Zhang & Viraktamath 2010; Dai & Li 2012; Li *et al*. 2011) added new species to this genus. So far, 14 species of the genus *Pedionis* (all belonging to the subgenus *P.* (*Pedionis*)) are known in China. They are all distributed in the Palaearctic, Oriental and Australasian regions and most *Pedionis* species prefer shrubs and trees as hosts.

Three new species in the genus *Pedionis*, *P.* (*P.*) *tribrachyblasta* **sp. nov.** from Fujian Province, *P.* (*P.*) *dentiforma* **sp. nov.** from Sichuan Province and *P.* (*P.*) *dinghuensis* **sp. nov.** from Guangdong Province are described and illustrated. A key to the Chinese males is given.

Material and methods

Morphological terminology used in this work follows Hamilton (1980) and Zhang (1990).

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

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Remarks. *Pedionis dentiforma* resembles *P. spinata* Zhang & Viraktamath internally, but differs in having more caudo-ventral setae; longer apical setae on subgenital plates; and the apical processes of the aedeagus much wider and sharper. It also has obvious differences externally: lighter colouration; much clearer striations and spots.

Etymology. The specific epithet is derived from the Latin word "dentiformis", referring to the contrastingly colored, tusklike basal triangles of the scutellum.

***Pedionis* (*Pedionis*) *dinghuensis* sp. nov.**
(Figs. 1I–L, 4)

Description. Length. Male 3.6 mm, female 3.8 mm.

Coloration. Body pale brown with numerous dark brown spots, striations on pronotum and head strong (Figs. 1I, J). Ocelli white, eyes pale brown (Fig. 1L). Scutellum triangular, yellowish, with scattered dark notches, base of lateral sides yellow (Fig. 1K). Forewing hyaline-brown, except basal and distal areas which are opaque chocolate-brown, venation fuscous spotted with white (Fig. 1J).

Morphology. Body stout and small. Face shorter. Hind tibial spinulation $R_1$11, $R_2$8, $R_3$5.

Male genitalia. Pygofer (Fig. 4A) with an obvious incision on dorsal margin, posterior half rather straight, caudo-dorsal angle with a small spine, several setae on ventral margin. Subgenital plate of uniform width, and with many setae, several especially long at the end. Style (Fig. 4G) parallel-margined and angled on apical third, apex obliquely truncate. Aedeagus shaft (Figs. 4D, E) with 2 paired processes, subapical slender, fingerlike ones ventrally directed. Dorsal connective (Fig. 4F) sinuate, with broad base, apical half slender, with serrated mesal edge and provided with basal fingerlike process.

Female. Body coloration and appearance similar to male. 7th sternite with posterior margin sinuated, midline about 2.5 times longer than 6th, ovipositor strongly projecting beyond pygofer.

Distribution. China: Guangdong (Mt. Dinghu)

Material examined. Holotype. Male, China: Guangdong Province, Mt. Dinghu, 14 July 2005, coll. by Lu Lin. Paratypes: 1 male, 1 female, same data as holotype.

Remarks. *Pedionis dinghuensis* resembles *P. rufoscutellata* Huang & Viraktamath internally, but differs in having a pair of ventrally directed subapical aedeagal processes, and lacks falcate process on dorsal connective. *P. rufoscutellata* have processes perpendicular to shaft and have a large falcate medial process on dorsal connective.

Etymology. The new species epithet refers to the type locality, Mt. Dinghu in Guangdong Province, China.

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References

Dai, R.H. & Li, H. (2012) Three new species of the leafhopper genus *Pedionis* Hamilton (Hemiptera: Cicadellidae: Macropsinae) from China. *Zootaxa*, 3568, 65–73.

Kuoh, C.L. (1987) *Agricultural insects, spiders, plant diseases and weeds of Xizang Vol. I*. Xizang People's Press, Lasa, 107–132.

Hamilton, K.G.A. (1980) Contributions to the study of the world Macropsini (Rhynchota: Homoptera: Cicadellidae). *The Canadian Entomologist*, 112, 875–932.
http://dx.doi.org/10.4039/ent112875-9

Huang, K.W. & Viraktamath, C.A. (1993) The Macropsine leafhoppers (Homoptera: Cicadellidae) of Taiwan. *Chinese J. Entomol.*, 13, 361–373.

Li, H., Dai, R.H. & Li, Z.Z. (2011) Notes on the genus *Pedionis* Hamilton (Hemiptera, Cicadellidae, Macropsinae), and with description of two new species from China. *ZooKeys*, 96, 1–10.
http://dx.doi.org/10.3897/zookeys.96.1495

Liu, Z.J. & Zhang, Y.L. (2003) Description of two new species of Macropsinae (Homoptera: Cicadellidae) from China. *Entomotaxonomia*, 25 (3), 181–185.

Okudera, S. (2009) Taxonomic notes on Japanese species of the genus *Pedionis* Hamilton (Auchenorrhyncha, Cicadellidae, Macropsinae). *The Japanese Journal of Systematic Entomology*, 15, 313–318.

Viraktamath, C.A. (1981) Indian Macropsinae (Homoptera: Cicadellidae). II. Species described by Distant and description of new species from Indian subcontinent. *Entomologica Scandinavica,* 12, 295–310. http://dx.doi.org/10.1163/187631281794709791

Viraktamath, C.A. (1996) New Oriental Macropsinae with a key to species of the Indian subcontinent (Insecta: Auchenorrhyncha: Cicadellidae). *Entomologische Abhandlungen Staatliches Museum für Tierkunde Dresden*, 57 (7), 183–200.

Zhang, B. & Viraktamath, C.A. (2010) New species of macropsine leafhopper genus *Pedionis* Hamilton (Hemiptera, Cicadellidae) from China, with a key to Chinese species. *Zootaxa*, 2484, 53–60.

Zhang, Y.L. (1990) *A taxonomic study of Chinese Cicadellidae (Homoptera)*. Tianze Eldonejo, Yan-gling, Shaanxi, China, 218 pp. [in Chinese]