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Key to Species of the Leafhopper Subgenus *Pediopsoides* (*Celopsis*) Hamilton (Hemiptera: Cicadellidae: Macropsinae), with the Description of a New Species from China

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ABSTRACT

A new species *Pediopsoides* (*Celopsis*) *undata* sp. nov. is described and illustrated from China. A key, based on the males aedeagus, is given to separate all species of the subgenus from the world. The type specimens of the new species is deposited in the Institute of Entomology, Guizhou University, Guiyang, China (GUGC).

Key words: Hemiptera, *Pediopsoides,* new species, taxonomy, distribution, China

INTRODUCTION

The leafhopper subgenus *Pediopsoides* (*Celopsis*), belonging to the tribe Macropsini of the subfamily Macropsinae (Hemiptera: Cicadellidae), was established by Hamilton (1980) for a single species *Macropsis dapitana* Merino, 1936 from the Philippine Islands. Subsequently, Viraktamath (1996) recorded one new species and recently, Zhang (2010) described another new species. Until now, three species of this subgenus from the world were recorded.

In this paper, one new species *Pediopsoides* (*Celopsis*) *undata* sp. nov. is described and illustrated from Guangxi province, China. The type specimens of the new species is deposited in the Institute of Entomology, Guizhou University, Guiyang, China (GUGC).

Pediopsoides (*Celopsis*) Hamilton

Pediopsoides (*Celopsis*) Hamilton, 1980: 896.

Type species: *Macropsis dapitana* Merino, 1936.

Body appearance typical of the genus *Pediopsoides*. Head equal to or slightly wider than pronotum. Face more or less as wide as long, the distance of ocelli usually as about four times as far from ocellus to adjacent eye, lora very small. Pronotum stripes blurred, curved prominently on anterior margin, slightly concave on posterior margin. Tegmina with 2-3 anteapical cells. Hind tibia with 7-9 macrosetae.

Male pygofer caudal lobe round, normally armed with short spines or processes. Subgenital plate slender, with setae. Dorsal connective varying between individuals, fused to tenth tergite. Style straight or a little bent to dorsum. Aedeagus bulbous basally, shaft with variable processes, gonopore apical.

Distribution. Philippine Islands, Indonesia, China (Guizhou, Guangxi).

Remark

The subgenus *Pediopsoides* (*Celopsis*) is distinguished from all other genera or subgenera of macropsinae by its fused dorsal connective and tenth tergite.

Checklist of the subgenus of *Pediopsoides* (*Celopsis*)

***Pediopsoides* (*Celopsis*) *dapitana* (Merino)** (Fig. 1)

Macropsis dapitana Merino, 1936: 324;

Pediopsoides (*Celopsis*) *dapitana* , Hamilton, 1980: 896.

Distribution. Philippine Islands.

***Pediopsoides* (*Celopsis*) *membrana* Zhang** (Figs. 2-3)

Pediopsoides (*Celopsis*) *membrana* Zhang, 2010: 57-58.

Distribution. China (Guizhou).

***Pediopsoides* (*Celopsis*) *pectinata* Viraktamath** (Figs. 4-5)

Pediopsoides (*Celopsis*) *pectinata* Viraktamath, 1996: 187-188.

Distribution. Indonesia.

***Pediopsoides* (*Celopsis*) *undata* sp. nov.** (Figs. 13-14)

Distribution. China (Guangxi).

Key to the males species of the subgenus *Pediopsoides* (*Celopsis*)

1. Aedeagal shaft ornamented with microscopic protuberances on ventral margin (Figs. 4-5).....*P.* (*C.*) *pectinata*

- Aedeagal shaft without protuberances on ventral margin (Figs. 1, 2-3, 13-14)……2

2. Gonopore subapical, slightly convex, surrounded by membranous process with distinctly serrate margin (Figs. 2-3) ....…….....……..…….....*P.* (*C.*) *membrana*

- Gonopore apical, not surrounded by serrate membranous process (Figs .1, 13-14) ..3

3. Apical processes beyond apex of aedeagal shaft (Figs. 13-14)..... ..... *P.* (*C.*) *undata* sp. nov.

- Apical processes reaching but not exceeding apex of aedeagal shaft (Fig. 1) ....*P.* (*C.*) *dapitana*

***Pediopsoides* (*Celopsis*) *undata* sp. nov.** (Figs. 6-17)

Description

Body yellowish and less dark (Figs. 6, 7, 8). Head, face and pronotum yellow; eyes

brown; Scutellum yellow-brown. Forewings dark-brown on base to the middle region, yellowish on the remaining area. Legs yellow, spotted with black.

Head, as wide as pronotum, weakly curved in profile. Face relatively smooth; ocelli located between the eyes, distance as four times long as that ocellus to adjacent eye. Tegmina with three anteapical cells.

Male genitalia. Pygofer broad, caudal lobe round (Fig. 9), ventral margin with two strong spines on inner aspect (Fig. 11). Subgenital plate slender, with marginal setae (Fig. 10). Aedeagus broader basally, bent dorsally in lateral aspect (Fig. 13); shaft with two pairs of lamellate processes in ventral aspect (Fig. 14), apical pair of processes produced on ventral margin, beyond apex, enlarged and serrated in middle, subapical pair of processes located on lateral margin, relatively small, with dentate margin. Style straight, with setae, angled on apical fourth, tips upturned (Fig. 15). Dorsal connective strong, tips bifurcated (Fig. 16). Connective with a finger-like protrusion in middle between arms, arms moderately long, bent dorsally (Fig. 17).

Female. Unknown.

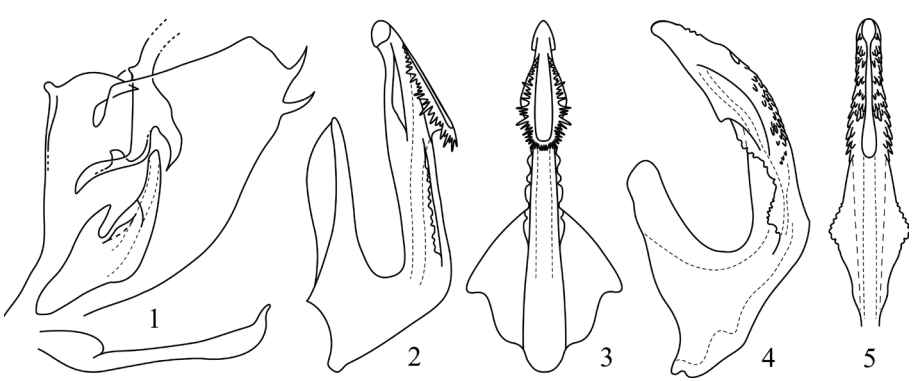
Measurement. Length (including tegmen): ♂, 3.6mm.

Host. Unknown.

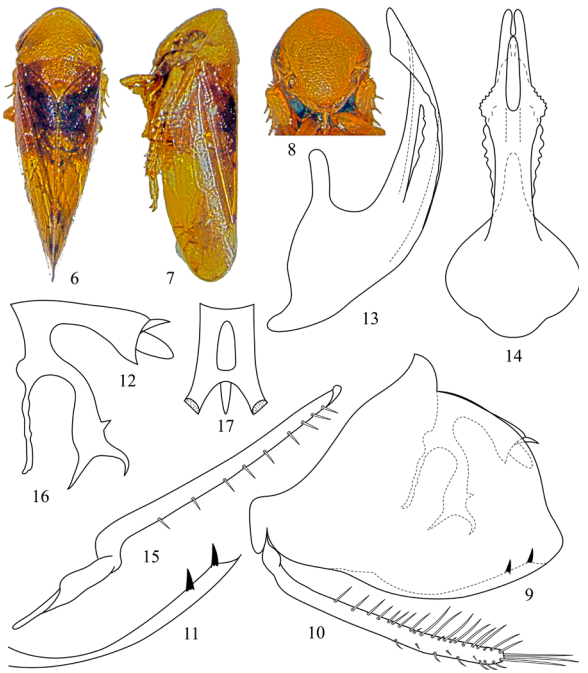
Type Material. Holotype ♂, China: Guangxi province, Yuanbaoshan, 580-1300m, 14 April, 2004, collected by Maofa Yang (GUGC).

Diagnosis. This new species is similar to *Pediopsoides* (*Celopsis*) *pectinata* Viraktamath, 1996 but can be distinguished from the latter by the apical pair of processes of the aedeagal shaft extending to the apex of the shaft, without minute protuberances, and the pygofer processes and dorsal connective also differ in shape between the two species.

Etymology. The new species name is derived from the Latin words "*undatus*", indicating that two pairs of processes of aedeagal shaft are serrated.



Figs. 1-5. Aedeagus of the subgenus *Pediopsoides* (*Celopsis*) species 1. *P.* (*C.*) *dapitana* Merino, lateral view; 2, 3. *P.* (*C.*) *membrane* Zhang, lateral view and ventral view; 4, 5. *P.* (*C.*) *pectinata* Viraktamath, lateral view and ventral view. (1. after Hamilton,1980; 2-3. after Zhang, 2010; 4-5. after Viraktamath, 1996.)



Figs. 6-17. *Pediopsoides* (*Celopsis*) *undata* sp. nov. 6. Male, dorsal aspect; 7. Male, lateral aspect; 8. Male, facial aspect; 9. Male, pygofer side, lateral aspect; 10. Subgenital plate, lateral aspect; 11. Male, pygofer processes, inner aspect; 12. Tenth tergite, lateral aspect; 13. Aedeagus, lateral aspect; 14. Aedeagus, ventral aspect; 15. Style, dorsal aspect; 16. Dorsal connective, lateral aspect; 17. Connective, dorsal aspect.

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