

New record of the leafhopper genus *Pedionis* Hamilton, belonging to the tribe Macropsini from Korea (Homoptera: Cicadellidae)

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Abstract

The leafhopper genus *Pedionis* Hamilton 1980, is characterized by having the pronotum with oblique striations, distinctly declivous and weakly arched in shape. Male pygofer is armed with tiny apical spine or acute tip. Previously, one species is recorded in Korean peninsula as: *Pedionis (Pedionis) garuda* (Distant, 1916). During the continuous taxonomic survey on the leafhoppers in Korean peninsula, the authors have found a further unknown species new to science: *P. (P.) sarahae* sp. nov. Thus, a total of 2 species of the genus *Pedionis* are known to be occurred in Korea. Description and illustration of morphological features of this new species, and the key to Korean species of the present genus are provided respectively.

Key words: Auchenorrhyncha, leafhopper, Macropsini, new species, taxonomy, Korea

Systematics

Checklist of species of the genus *Pedionis* Hamilton from Korea

Family Cicadellidae

Subfamily Macropsinae Evans, 1935

Genus *Pedionis* Hamilton, 1980

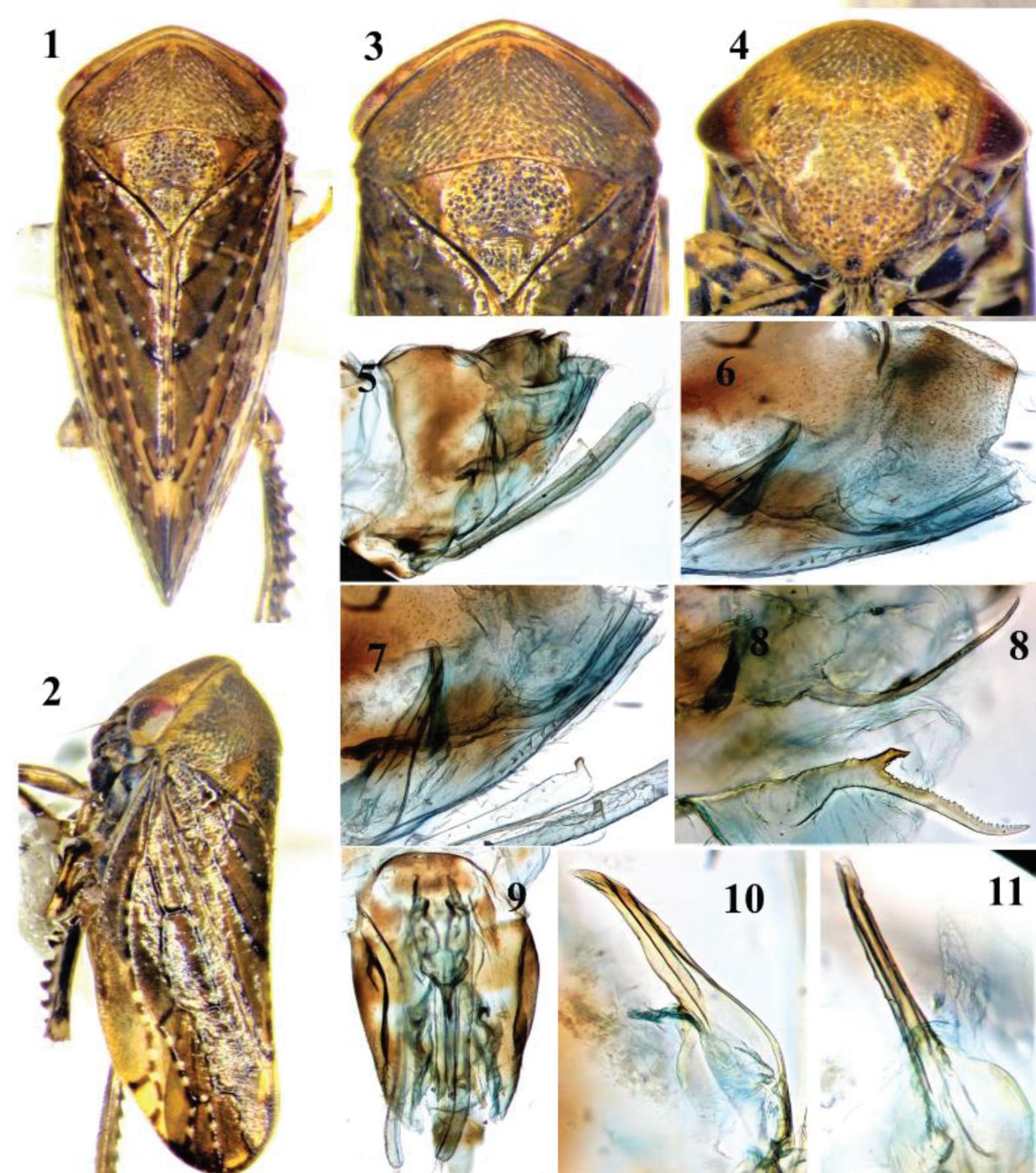
Subgenus *Pedionis* Hamilton, 1980

1. *Pedionis (Pedionis) garuda* (Distant, 1916)

2. *Pedionis (Pedionis) sarahae* sp. nov.

Key to species of *Pedionis* from Korea

1. Aedeagal shaft with 2 pairs of processes distally ----- *P. garuda*
 -. Aedeagal shaft lacking any apical processes distally ----- *P. sarahae* sp. nov.



Figs. 1-11. *Pedionis (Pedionis) sarahae* sp. nov. 1, 2: adult, 3: head, 4: face, 5, 6, 9: male genitalia, 7: pygofer, 8: style, 10, 11: aedeagus.

Description of the new species

Pedionis (Pedionis) sarahae sp. nov.

Description. Body coloration usually greyish yellow to greyish ocher. Head with anterior margin forming obtuse angle in dorsal aspect, in facial aspect uniformly yellow, vertex and apical margin of anteclypeus darker, apical margin of crown and vertex without any spots. Face in lateral aspect slightly bowed, ventral part of frontoclypeus almost two times wider than anteclypeus, posterior margin of antennal ledge almost half-way between apical margin of crown and apical margin of anteclypeus. Pronotum generally grayish yellow to grayish ocher, fore margin with more or less wide dim dark patch behind each eye, posterior margin usually more grayish, first plural sclerite in lateral aspect subheptagonal, with spots. Scutellum yellow, with black scutellar spot, two concave dim spots between scutellar spots. Forewing generally smoky ocher.

Male genitalia. Pygofer narrow basally, dorsal margin incised, caudal margin declivous caudoventrally, tapered to point. Subgenital plate more or less slender, subparallel margined, not projected beyond apical margin of pygofer, apex round, dorsal surface with setae, longer distally. Aedeagus broad basally, shaft with pair of ventrolateral spines near middle; in lateral view, slightly bent dorsally, shaft tapered to acute apex; in ventral view, shaft lateral margins slightly sinuate above spines, apex round, gonopore apical. Dorsal connective apical process slender, sinuate, ventral margin with median triangular projection, tapered and finely serrated more distad, apex subacute. Style slender, angled on nearly basal 1/3, stem slightly sinuate and gradually widened, apex abruptly narrowed and reflexed with truncate tip.

Female. Pygofer lobe almost bare ventrally and laterally. 7th sternite with apical margin shallow roundly produced, notched mesally.

Length. male 3.6 - 4.0 mm, female 3.9 - 4.2 mm .

Material examined. Holotype ♂, Is. Chubongdo, Hansan-myeon, Kyungsangnam-do, Korea, 17, VI, 2022, Y.J. Kwon (KNU); paratypes: 2♂ 2♀, same data as holotype; 1♂, Gonggoji, Is. Geojedo, Kyungsangnam-do, Korea, 17, VI, 2022, Y.J. Kwon (KNU).

Distribution. Korea (new record: Central).

Remarks. This species externally resembles *Pedionis garuda*, but can be separated by the aedeagal shaft elongate and narrowed apically, lacking any distal processes.

References

- Hamilton, K.G.A. (1980) Contributions to the study of the World Macropsini (Rhynchota: Homoptera: Cicadellidae). The Canadian Entomologist. 112: 875-932.
 Li et al (2017) Leafhopper subgenus *Pedionis (Pedionis)* Hamilton, 1980 (Hemiptera: Cicadellidae: Macropsinae) with new species, record, combination and synonymy from Southern China. Zootaxa, 4294 (1): 112-118.
 Kwon et al (2021) Taxonomic revision of the leafhopper genus *Macropsis* Lewis from Korea (Homoptera: Cicadellidae). Zootaxa, 5060 (2): 215-230.
 National Institute of Biological Resources (2019) National Species List of Korea. National Institute of Biological Resources, 986pp.



Fig. 12. Habitat of *P. sarahae* sp. nov., an evergreen forest in Is. Chubongdo, GN, Korea.