



***Nivalios* gen. nov. (Hemiptera: Fulgoromorpha: Flatidae), first record of the tribe Nephesini from China**

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Abstract

This paper describes one new flatid genus, *Nivalios* **gen. n.**, and one new species, *N. punctatus* **sp. n.**, from southern China. The new genus is assigned to the tribe Nephesini. A key to genera of the tribe Nephesini from the Oriental Region is provided. Scanning electron micrographs of the antennal sensilla, cross-sections through the subapical rostral segment and wax glands on the tegmen of the new species are included.

Key words: Planthoppers, new record tribe, taxonomy, antennal sensilla, wax glands, maxillae and mandibles, Fulgoroidea

Introduction

The planthopper tribe Nephesini was established with three subtribes by Melichar (1923). It is the largest of the 15 recognized flatid tribes, including more than 53 genera. The tribe is mainly distributed in the Australasian Region (31 genera) and Oriental Region (10 genera), with some genera also in the Afrotropical and Neotropical Regions but only one genus each in the Palearctic and Nearctic Regions.

Members of the Nephesini can be recognized by the following combination of characters: body and tegmina usually greyish-green or brown; frons with median carina, lateral margins carinate; antennal segment II not extending beyond anterior margin of gena. Postocular eminence of pronotum conical (Figs. 2, 6). Mesonotum usually but not always tricarinate. Tegmina elongate, base of clavus not elevated, costal margin evenly convex, not sinuate near apex; three or four longitudinal veins (Sc+R, M, Cu; or Sc, R, M, Cu) arising from basal cell (Figs. 1, 5).

Medler (2001) reviewed the Nephesini and divided it into three tribes, i.e. Pseudoflatini Melichar, 1923, Nephesini Melichar, 1923 and Ormenisini Medler, 2001. Pseudoflatini was distinguished by the absence of longitudinal carina on the pronotum and the conical vertex; Ormenisini was established for specimens with two metatibia lateral spines, not conical vertex, sharply ridged postocular eminence and truncate tegminal apical margin. Nephesini was retained for genera with the vertex convex, postocular eminence conical, tegmina elongate but no more than two times as long as wide and tegminal apical margin convex.

In the present paper, a new genus and species of the Nephesini collected from southern China are described and illustrated. We also describe the ultrastructures of antennae, cross-sections of subapical mouthparts and the tegminal wax glands by scanning electron microscopy. We anticipate these ultrastructure characters can be used for further phylogenetic analysis on this group.

Material and methods

Dry preserved specimens were used in this study. Terminology follows Chou & Lu (1985) for the external morphology and Yang & Chang (2000) for the male genitalia. All measurements are in millimeters (mm). The genital segments of the examined specimens were macerated in 10% NaOH and transferred into glycerin jelly for illustra-