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A new species of *Zonana* DeLong & Freytag (Hemiptera: Cicadellidae: Iassinae: Gyponini) from Peru with a key to species of the genus

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Abstract

A new species of the genus *Zonana* DeLong & Freytag, 1963 from Peru is described and illustrated: *Z. petalacea* sp. nov. This species is easily distinguished from other species of the genus by its peculiar aedeagus with a pair of slender ventral processes and a unique flattened petal-shaped dorsal process. A taxonomic key to the now four known species of *Zonana* is provided.

Key words: leafhoppers, taxonomy, Neotropical region, *Zonana petalacea* sp. nov.

Introduction

The leafhopper genus *Zonana* was described by DeLong & Freytag (1963) to include two species: the type-species *Zonana flamma* DeLong & Freytag, 1963 known from a male and two females from Panama and *Zonana alera* DeLong & Freytag, 1963 known only from six females from Costa Rica. Freytag (1990) described the third species of the genus: *Zonana bilobata* Freytag, 1990 from Venezuela based on four males. In this paper a new species, *Zonana petalacea* sp. nov., is described from Peru based on a single male. A key to the now four known species of *Zonana* is provided.

Material and methods

The holotype of the new species will be deposited at Museo de Historia Natural de la Universidad Mayor de San Marcos (MUSM), Lima, Peru and additional material was studied from the DeLong collection at the C.A. Triplehorn Insect Collection, Ohio State University (OSU), Columbus, USA.

For the analysis of genital structures, the abdomen was removed and placed in hot 10% KOH, following Oman (1949). Terminalia were washed for 5–10 minutes in hot water, placed on a concave slide with glycerin for examination and preparation of photographs, and stored in a small vial with glycerin pinned below the specimen. The right hind wing was mounted between two microslides and also pinned below the specimen. Photographs were taken with a camera attached to a Leica stereomicroscope, using the image stacking software CombineZP. Morphological terminology follows mainly Dietrich (2005), except for the head sclerites (Hamilton 1981, Mejdalani 1998) and leg chaetotaxy (Rakitov 1997).

The revised genus diagnosis includes all characteristics known to vary among Gyponini genera and thought to be stable at the genus level (based on the study of two *Zonana* species). Characteristics not included in the original description of the type-species of *Zonana* are marked with an asterisk (*). Characters of the external morphology considered taxonomically important are included in the species description.

Taxonomic key to adults of *Zonana*

- 1 Females (unknown in *Z. petalacea* and *Z. bilobata*) 2
- Males (unknown in *Z. alera*) 3
- 2 Abdominal sternite VII with posterior margin deeply excavated laterad of prominent median lobe, which is bifid (DeLong & Freytag, 1963, Fig. 11) *Z. alera* (Costa Rica)
- Abdominal sternite VII with posterior margin shallowly excavated laterad of slightly produced median lobe, which is not bifid (DeLong & Freytag, 1963, Fig. 10) *Z. flamma* (Panama)
- 3 Aedeagus ventral processes with spines 4
- Aedeagus ventral processes without spines (Figs 9, 10) *Z. petalacea* sp. nov. (Peru)
- 4 Subgenital plates with apex truncated (Freytag, 1990, Fig. 4); aedeagus ventral processes with small spines along ventral margin (Freytag, 1990, Fig. 2) *Z. bilobata* (Venezuela)
- Subgenital plates with apex rounded (DeLong & Freytag, 1963, Fig. 6); aedeagus ventral processes with spines at apex (DeLong & Freytag, 1963, Figs 4, 5) *Z. flamma* (Panama)

Additional material examined. *Dragonana comata* DeLong & Freytag, 1964: 1 male, holotype, “Mexico City D.F.\ S. in Canyon\ 10.20.45”, “OSUC 0169558”, OSU.

Dragonana dracontea (Gibson, 1919): 1 female, USA, Arizona, Koebele, Nogale, 10.8.98, Hebert Osborn Collection, OSU; 10 females and 31 males, USA, Arizona, Chiricahua Mountains, D. J. & J. N. Knull Collrs, OSU; 5 females and 8 males, USA, Arizona, Huachuca Mountains, D. J. & J. N. Knull Collrs, OSU; 1 male, USA, Arizona, Patagonia Mountains, VIII.20.40, OSU; 1 female, USA, Arizona, Santa Rita Mountains, VIII.30.38, OSU; 1 male, USA, Arizona, Tumacacori Mountains, VII.21.40, OSU.

Zonana alera DeLong & Freytag, 1963: 2 female paratypes, Costa Rica, San Isidro del General, D. L. Bounds, OSU.

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