



Eight new species of *Empoasca* (Hemiptera: Cicadellidae: Typhlocybinae: Empoascini) from Peru and Bolivia

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Abstract

Eight new species in the leafhopper genus *Empoasca* Walsh 1862 are described and illustrated (*Empoasca acanthafera* n. sp., *Empoasca affinipeba* n. sp., *Empoasca apatapeba* n. sp., *Empoasca daggyi* n. sp., *Empoasca davidi* n. sp., *Empoasca nella* n. sp., *Empoasca peba* n. sp., *Empoasca pexa* n. sp.). Relationships to previously described species are discussed. *Solanasca* Ghauri 1974 is treated as a junior synonym of *Empoasca* (new synonymy) and a revised generic diagnosis is provided.

Key words: leafhopper, Neotropical

Introduction

The leafhopper genus *Empoasca* and the tribe Empoascini are diverse, complex, and cosmopolitan taxa. More than 1,000 species names (> 880 apparently valid) have been described in *Empoasca* and over 380 additional species have been described in other genera of the tribe. Thus, *Empoasca* is by far the most speciose currently recognized genus of Cicadellidae. The species-level classification of the genus is in need of comprehensive revision. Species descriptions are scattered over dozens of publications, no inclusive revision of the Empoascini or *Empoasca* have been attempted, and no comprehensive keys to genera of the tribe or to species of *Empoasca* have been published. Moreover, many descriptions and illustrations, particularly for older New World species, are inadequate by current standards. Thus, species identifications are difficult and subject to error.

The authors are currently attempting a comprehensive morphology-based phylogenetic analysis and revision of *Empoasca*. A number of apparently undescribed species of *Empoasca* have been included in the phylogenetic dataset. This paper describes and names some of those species from the eastern foothills of the Andes Mountains in Peru and Bolivia. Southern (1982) reviewed the *Empoasca* of eastern Peru and provided a key to 55 species recorded from that region. Study of recently collected specimens from eastern Peru and Bolivia reveals that the fauna of the Andean foothills is much richer in species than indicated by Southern's (1982) study. A preliminary interactive key to species of *Empoasca*, including those described herein, has been developed in collaboration with D. Dmitriev at the Illinois Natural History Survey and is accessible at: <http://ctap.inhs.uiuc.edu/dmitriev/index.asp>.

Material and methods

Except as described here, the majority of methods and terminology used in this work are those presented by Southern (1982). Illustrations were prepared using the methods described by Southern (2006). Terms used for venation and cells of the forewing follow those of Dietrich and Dmitriev (2006).