



New species and color forms of *Empoasca* (Hemiptera: Cicadellidae: Typhlocybinae: Empoascini) from South America

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Abstract

Three new Neotropical species in the genus *Empoasca* are described and illustrated (*Empoasca bartletti* n. sp., *Empoasca concava* n. sp., *Empoasca coofa* n. sp.). The species are placed in a previously published key and relationships to other species of the genus are described. Two informal species groups, the *E. dolonis* group and the *E. papae* group are described and included species are listed. Evidence for the occurrence of dimorphic color forms in the genus is discussed.

Key words: leafhopper, *Empoasca*, *dolonis* group, *papae* group, color forms, distribution

Introduction

The genus *Empoasca* and the tribe Empoascini are very species rich taxa. To date, over 1,000 species names have been described in or combined with *Empoasca*. Although some of these species have subsequently been treated as junior synonyms or moved to other related genera, the number of valid species names currently placed within *Empoasca* exceeds 880. Over 380 additional species have been described in other genera of Empoascini. Although the majority of species occurring in the temperate zones of the Northern Hemisphere have probably been described, this is not the case for tropical species. In my experience, examination of any general collection (at light, sweeping, etc.) from a location in the American tropics is likely to yield numerous empoasine species, the majority of which are undescribed. Although 149 species of *Empoasca* (and 8 species currently placed in *Solanasca*) have been described from South America, undoubtedly many more are yet to be described. Three such species are treated here. Southern (1982, 2006) reviewed the literature relative to Neotropical *Empoasca*.

Material and methods

Except as described here, the methods and terminology used in this work are those presented by Southern (1982, 2006). Several additional body measurements are given in this paper in the hope that they will prove useful in future revisions. These include head length (measured from the anterior margin of the crown to a line joining the posterior-most margin of the compound eyes), head width (measured between the outer margins of the compound eyes), hind tibia length, hind tarsus length, hind tarsomere I length, and the ratio of the hind tarsomere I length to the total hind tarsus length.

Terms used for venation and cells of the forewing follow those of Dietrich and Dmitriev (2006). Consequently, the “apical cell 3” used in my previous work is herein called “apical cell 2” (this is the cell that is