



## Some remarkable new Neotropical treehoppers (Hemiptera: Cicadomorpha: Membracidae)

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### Abstract

The new Neotropical treehopper genera *Smergotomia*, based on *S. clairae*, new species, from Ecuador, and *Braxtonota*, based on *B. enigmata*, new species, from Puerto Rico are described and illustrated. Despite lacking a posterior pronotal process, *Smergotomia* appears to be most closely related to *Smerdalea* Fowler based on the forewing venation and male genitalia, but the subfamily and tribal placement of these two genera is uncertain. *Braxtonota* appears to be related to the two membracid tribes that are endemic to the Caribbean, but lacks the extra hind femoral cucullate setae diagnostic for Monobelini and the large teeth on the second valvulae diagnostic for Nessorhinini. It is provisionally placed in Monobelini. *Smerdalea veracruzensis*, new species from Mexico, with a pronotum considerably less ornate than its congeners, is also described and illustrated and a key to species of *Smerdalea* is provided.

**Key words:** Homoptera, Auchenorrhyncha, morphology, identification, distribution, phylogeny

### Introduction

Recent revisions of the membracid subfamilies Stegaspinae (Cryan and Deitz 1999), Centrotinae (Wallace and Deitz 2004), and Nicomiinae (Albertson and Dietrich 2005, 2006) have greatly facilitated identification of genera and species in these diverse, plesiomorphic treehopper lineages. These revisions have increased the numbers of known species in various groups by as much as 80% (Albertson and Dietrich 2005, 2006), indicating that the extant treehopper fauna is considerably more speciose than indicated by the number of described species, which now stands at approximately 3,200. Further improvements in knowledge of the Neotropical treehopper fauna are needed to help resolve relationships among the major membracid lineages which, despite several recent morphology- and DNA sequence-based phylogenetic analyses (Dietrich and Deitz 1993, Dietrich *et al.* 2001, Cryan *et al.* 2000, 2003, Lin *et al.* 2004), remain poorly understood. The new genera and species described herein, although based on very sparse material, are important because they embody unusual combinations of morphological features that may bridge gaps between previously known lineages. These taxa are described below and their relationships are discussed.

Morphological terminology follows that of Deitz (1975), Dietrich and Deitz (1993), Dietrich *et al.* (2001), and Wallace and Deitz (2004). Specimens are deposited in the insect collections of the Illinois Natural History Survey, Champaign, IL, USA [INHS]; United States National Museum of Natural History, Washington, DC, USA [USNM]; Universidad Nacional Autonómica de México, Mexico City, D.F. [UNAM], and University of Georgia, Athens, USA [UGA].