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A striking new treehopper genus *Mutilifolia* (Hemiptera: Membracidae: Smiliinae: Telamonini), from Costa Rica

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Abstract

A new treehopper genus from Costa Rica, *Mutilifolia*, based on *M. nishidai*, **new species**, is described and illustrated. *Mutilifolia* is considered a member of the subfamily Smiliinae, tribe Telamonini based on characteristics of the pronotum, fore- and hind wing venation, and female genitalia. This genus superficially resembles the telamonine genera *Antianthe*, *Archasia*, and *Hemicardiacus* due to the highly elevated, foliaceous, and largely green pronotum, but the male style clasp of *Mutilifolia* with two recurved teeth differs greatly from the styles of any other presently known telamonine. Further collecting of treehoppers in the mountainous regions of Central America and Mexico, areas often neglected by collectors, may yield additional new Telamonini taxa.

Key words: Auchenorrhyncha, morphology, Neotropical

Introduction

Since 2004, numerous articles have been published improving the taxonomy of the second largest treehopper subfamily, the Smiliinae. Most of the recent taxonomic work has focused on the tribes Amastrini (Evangelista and Sakakibara 2007b), Ceresini (Andrade 2004a, b; 2005; 2008), Smiliini (Wallace 2011), and Telamonini (Wallace 2011). Only two Smiliinae genera were described during this period, *Aurimastris* Evangelista and Sakakibara (2007a) from Brazil, and *Smilirhexia* McKamey (2008) from Costa Rica. Most recently, Wallace (2011) reinstated the tribe Telamonini based on a morphological phylogenetic analysis of 62 species of Smiliini and Telamonini.

Telamonines are known for their large size (8–10 mm) and striking pronotal projections, sometimes assuming a quadrate, sinuate, tonguelike, or thornlike shape (Ball 1931; Wallace 2011). The tribe consists of 10 genera and 66 species (Wallace 2011; McKamey and Wallace in prep.), and they are distinguished from other Smiliinae by these additional diagnostic features: head dorsal margin with abrupt elevation mesad of eyes; pronotal longitudinal rugae distinct (in most); humeral angles enlarged; forewing with vein R_{4+5} confluent with vein M_{1+2} distad of or at beginning of M fork; hind wing with veins R_{4+5} and M_{1+2} free; dorsal and ventral margins of second valvulae apex converging proximally, apex acuminate; and male style clasp angular with a large, recurved tooth. Telamonines feed on various trees and some vines, notably many species from the genus *Quercus* (oak) (Wallace 2011, 2014).

Of the 66 described telamonine species, 63 are predominantly Nearctic in distribution (Deitz and Wallace 2012; McKamey and Wallace in prep.), with only eight species in three genera (not counting the genus described here) recorded from the Neotropical region (Metcalf and Wade 1965; McKamey 1998). Indeed, *Treehoppers of Tropical America* by Godoy *et al.* (2006), a comprehensive taxonomic and biological work on Neotropical treehoppers, treats only a single telamonine genus, *Telamona*. Given the high diversity of telamonines in temperate North America, a large number of undescribed telamonines may exist in the less-well-sampled tropical highlands associated with the oaks found in these ecosystems. Studies of insect diversity in the tropics have often focused on low elevation wet forests, leaving many drier montane habitats, and thus oak-feeding insects like telamonines, largely unexplored (Longino and Colwell 1997; Basset 2001). Furthermore, the highest species diversity of oaks in the New World occurs in the mountains of southern Mexico (Nixon 1993). Wallace (2011) hypothesized a close

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