



Phylogenetic analysis of the Neotropical social wasps of the genus *Angiopolybia* Araujo, 1946 (Hymenoptera, Vespidae, Epiponini)

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Abstract

A morphological cladistic analysis of the Neotropical swarm-founding genus *Angiopolybia* Araujo is presented. A single cladogram resulted from the analysis, with the following ingroup topology: (*A. pallens* + *A. zischkai*) + (*A. paraensis* + *A. obidensis*). The monophyly of the genus is supported by four synapomorphies. A new identification key is presented for the genus.

Key words: Vespidae, Epiponini, *Angiopolybia*, Phylogeny

Introduction

Angiopolybia is a small genus of tropical social wasps that contains only four described species, including *Angiopolybia pallens* (Lepeletier, 1836), *A. paraensis* (Spinola, 1851), *A. obidensis* (Ducke, 1904) and *A. zischkai* Richards, 1978. These species are widely distributed, extending from Costa Rica to Bolivia, and widespread in the Amazon. Nests of *Angiopolybia* consist of several combs hanging from a leaf or branch by pedicels (Richards, 1978). These nests have a characteristic envelope, being ovoid above and usually produced into a tube-like extension below with a circular entrance (Wenzel, 1998). Colonies typically contain a few hundred individuals (Richards, 1978), and caste differences are slight (Noll et al., 2004). The taxonomic history of *Angiopolybia* is tortuously complex, and a review is presented in the section on Taxonomic Background. We summarize previous cladistic treatments, and present a phylogenetic analysis of the species of *Angiopolybia* based on morphological characters of the adults. In addition, a new key to the species of the genus is provided.

Taxonomic background

Angiopolybia began with a different name, *Rhopalidia*, and was described by Lepeletier (1836) for two new species, *R. pallens* and *R. rufithorax*. Guérin-Méneville (1838) adopted Lepeletier's spelling for a genus he himself had earlier named *Ropalidia* (Guérin-Méneville, 1831). This change of spelling was unjustified. The Old World *Ropalidia* of Guérin-Méneville 1831 and the New World *Rhopalidia* of Lepeletier 1836 are quite distinctly different groups (see below). *Rhopalidia* of Lepeletier was not recognized by de Saussure in his monograph (1853–58); both of Lepeletier's species were treated as synonyms, *R. pallens* of *Polybia pallipes*