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Cladistic assessment and description of a new Neotropical genus and species of Lymeonina (Hymenoptera, Ichneumonidae, Cryptinae)

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Abstract

The Cryptini *Petila* **new genus**, from the Brazilian Atlantic Forest, is proposed, described, illustrated, and cladistically compared with representative species of ten genera of the subtribe Lymeonina and six outgroup species. A total of 19 species and 87 characters were evaluated. All analyses clearly suggest that *Petila* must indeed be treated as a distinct genus, closest to *Polycyrtidea* Viereck. The species *Petila capixaba,* **new species,** is described and illustrated.

Key words: Atlantic Forest, Cryptini, Mesostenini, Phygadeuontinae, *Polycyrtidea*

Introduction

Townes (1970) proposed Lymeonina as a group of cryptine wasps with small and medium sized species classified into 17 genera. The subtribe is characterized primarily by the notaulus reaching to about the center of the mesoscutum, hind margin of postscutellum without a dentiform projection on each side, transverse furrow at the base of the propodeum often with a series of longitudinal wrinkles, and petiole without basal lateral teeth (Townes 1970). Known hosts include various cocoons and nests of polistine vespids (Townes 1970).

Sixteen of these genera occur primarily or exclusively in the Neotropical Region, where the subtribe is also numerically abundant. There are a few species in the southern half of the Nearctic Region, notably some *Mallochia* Viereck, *Pachysomoides* Strand, and *Lymeon* Förster. In the Old World the only known genus is the monotypic *Savolia* Seirig, for which the type is the only known specimen (Yu & Horstmann 1997).

In fact, the subtribal arrangement of cryptine genera proposed by Townes is highly subjective, and the phylogenetic limits of Lymeonina have not been established. One molecular phylogeny study of Cryptinae, using six taxa of Lymeonina (Laurenne *et al.* 2006), recovered between three and six of these taxa grouped together with the only genus of Baryceratina used in that analysis (*Baryceros* Gravenhorst), and with the Hemigastrini *Platymystax* Townes. The same authors, however, point to the need of a thorough morphological study of Cryptinae, so that separate and combined analyses can be performed.

This work aims to propose a new genus and species of Lymeonina, presenting also a cladistic evaluation of its validity and closest relationships within Cryptini.

Material and methods

This work is based on material obtained from a series of recent collecting trips in the Brazilian Atlantic Forest. All specimens are deposited in the Entomological Collection of the Universidade Federal do Espírito Santo

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