



## A survey of Dryinidae (Hymenoptera, Chrysidoidea) from Caxiuana, Amazon Basin, with three new taxa and keys to genera and species

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### Abstract

The dryinid wasp fauna of Caxiuana National Forest, Pará, Brazil is summarized. Seventeen species, three of which are new, in six genera and three subfamilies have been found: Anteoninae: *Anteon panamense* Olmi, *A. chiriquense* (Cameron), *A. noyesi* Olmi, *Deinodryinus bicolor* (Olmi et Currado), *D. bilobus* Fenton, *D. caxiuana* sp. nov.; Dryininae: *Dryinus argentinus* Olmi, *D. striatus* (Fenton), *D. snellingi* Olmi, *D. ruficeps* Cameron, *D. multicarinatus* sp. nov., *D. hamulus* sp. nov.; Gonatopodinae: *Gonatopus campbelli* Olmi, *G. neotropicus* (Olmi), *G. testaceus* Cameron, *Neodryinus incaicus* Olmi, and *Trichogonatopus neotropicus* Olmi. *Gonatopus neotropicus* and *N. incaicus* are newly recorded from Brazil. The new species are described and illustrated. Keys to genera and species are provided.

**Key words:** Brazil, Aculeata, Chrysidoidea, Neotropical region

### Introduction

Dryinidae are distinctive parasitoid wasps which attack nymphal and adult Auchenorrhyncha (Hemiptera). Adult females grasp the host with a chelate claw formed of the protarsomere 5 and an enlarged pretarsal ungue (pleiomorphically absent in the subfamilies Aphelopinae and Erwiniinae). The family comprises at least 1600 species and is one of the few hymenopteran families to have been completely revised (Olmi 1984, and numerous updates in the last 25 years). The family is relatively ancient, with members of several subfamilies extending into the later part of the Early Cretaceous (*e.g.*, Engel 2003, 2005; Grimaldi & Engel 2005). Dryinidae are considered to be the sister group of the uncommon Embolemidae, and together comprise the sister group of Sclerogibbidae (Carpenter 1999), themselves rarely encountered and specialized parasitoids of webspinners (Embioidea) (Olmi 2004b; Engel & Grimaldi 2006). The internal phylogenetic relationships among lineages of dryinids remain controversial and difficult to investigate mostly owing to dramatic secondary sexual differences, which occur in the vast majority of species.

Recently a monogeneric subfamily has been established for a single, peculiar species of Ecuadorian dryinid, *Erwinius prognatus* Olmi & Guglielmino (2010). Females of Erwiniinae lack a protarsal chela like Aphelopinae and, indeed, the recognition of the former subfamily very likely renders the latter paraphyletic. The prognathous head condition and broad clypeus, the only distinct features of the new taxon, insufficiently demonstrate that *E. prognatus* is outside of Aphelopinae, with these minor morphological differences scarcely justifying any supraspecific status.

The Brazilian Dryinidae remained understudied for a long period of time. De Santis (1980) reported only 13 described species known from this vast country, a figure in stark contrast with the 204 species already known for the entire Neotropical region at that time (Olmi 1984). Such a discrepancy might seem perplexing given the large