



## A new species of *Agaporomorphus* Zimmermann from Venezuela, and a review of the *A. knischi* species group (Coleoptera: Dytiscidae: Copelatinae)

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### Abstract

A new species, *Agaporomorphus colberti* Miller and Wheeler, **sp. n.**, is described from specimens from Departamento Amazonas, Venezuela. The new species belongs to the *A. knischi* Zimmermann species group based on the common presence of a pair of series of fine setae on the dorsal surface of the male median lobe of the aedeagus. Within this group, *A. colberti* **sp. n.** is sister to *A. knischi* and is united with that species based on broadly expanded antennomeres V and VI in the male and other general shape features of the male genitalia. An updated phylogenetic analysis of the genus is provided and the *A. knischi* species group is briefly reviewed with male genitalia and other relevant features illustrated.

**Key words:** Diving beetles, taxonomy, classification

### Introduction

The genus *Agaporomorphus* Zimmermann includes small diving beetles (Coleoptera: Dytiscidae; Fig. 1) uncommonly collected in the Neotropical region. There are currently eight species with the great majority of specimens collected from lights at night such that little is known of their biology or natural history. The genus appears to be sister to the other members of the subfamily Copelatinae (the extremely species-rich subfamily in which it is currently placed) or possibly sister to Coptotominae with this clade sister to Copelatinae (Ribera, et al. 2008), making the genus particularly interesting from a phylogenetic perspective. New species are being discovered with some regularity with increased exploration of undercollected areas of South America (Miller 2001, 2005). New species also exist in collections among unidentified Copelatinae. This is true of the new species described here, which was discovered among unidentified Copelatinae at the United States National Collection of Insects (USNM). This new species is similar to members of a clade within the genus exemplified by *A. knischi* Zimmermann (Miller 2005) and unique in having similar, extremely complicated male genitalia particularly characterized by a series of setae on each side of the dorsal midline of the male median lobe (Figs 7, 10, 13, 17). Some members of the group also have the male antennae modified with either both antennomeres V and VI or just VI expanded and grooved (Figs 2, 3). Possibly this is for male grasping of females during mating, though this has not been observed. Also, several members of this group have a longitudinal fovea medially on visible abdominal sternite VI with a midapical triangular process on abdominal sternite V (Figs 5, 6).

The purpose of this project is to describe a new species of *Agaporomorphus* and place it within the context of the *A. knischi* group of species. This is the second installment (Miller 2005) after a recent first revision of