



## Revision of the *Apocephalus mucronatus* group of ant decapitating flies (Diptera: Phoridae)

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### Abstract

The species of the New World genus *Apocephalus* are parasitoids, mostly of ants, and many undescribed species exist. Here, the *Apocephalus mucronatus* group species are revised, with five new to science described: *A. longimanus*, *A. longimucrus*, *A. missouriensis*, *A. setissitergus*, and *A. weissii*. Along with the previously known two species, *Apocephalus mucronatus* Borgmeier and *Apocephalus mesacanthus* Brown & Lebrun, these form a well-defined monophyletic group based on the presence of a spinelike protrusion on the ov scape, distinctly sclerotized posterolateral membrane on intersegment 7–8, and other female characters. Life history data are known for only one species, which is a parasitoid of *Camponotus* carpenter ants.

**Key words:** Phoridae, *Apocephalus*, biodiversity, tropical, Diptera

### Introduction

The genus *Apocephalus* Coquillett is a large, New World group with about 300 currently described species. Many more new species are in collections or have yet to be collected, however, and this revision is part of a large effort to revise the entire genus. We intend to treat all of the undescribed species that we encounter.

Some groups were previously revised (Brown 1993b, 1994, 1996a, 1996b, 1997, 2000, 2002) as were new species from South America (Brown *et al.* 2010), Arizona, USA (Brown & LeBrun 2010), as well as a few species in other publications (Corona & Brown 2004; Disney & Bragança 2000).

The *Apocephalus mucronatus* group is a relatively small assemblage of species. The nominate species, *Apocephalus mucronatus* Borgmeier, has been found attacking *Camponotus blandus* (F. Smith) carpenter ants (Borgmeier 1958). No other life history information is known for these flies, which remain enigmatic and rarely collected.

### Methods and materials

Most specimens were extracted from alcohol-preserved Malaise trap samples, dried using hexamethyldisilazane (Brown 1993a), and glued to insect pins. Specimens are labeled with bar-coded collection numbers, in addition to the usual insect labels; these numbers indicate where collection data are stored (LACM), not ownership.

Specimens are deposited in the following collections:

IAVH	Instituto Alexander von Humboldt, Villa de Leyva, Colombia.
LACM	Natural History Museum Of Los Angeles County, Los Angeles, California.
MZSP	Museu de Zoologia, Universidade de São Paulo, Brazil.
USNM	National Museum Of Natural History, Smithsonian Institution, Washington, DC.