



## On the status of the tribes Orthognathini and Rhinostomini (Coleoptera: Curculionidae: Dryophthorinae)

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### Abstract

A cladistic analysis is performed of the four genera of the tribe Orthognathini of the curculionid subfamily Dryophthorinae, specifically to assess whether the tribe constitutes a monophyletic group or whether the genus *Rhinostomus* falls outside it into a separate tribe, as advocated in some classification systems. The analysis based on 27 morphological characters revealed that Orthognathini is indeed a monophyletic group, with the phylogenetic sequence *Rhinostomus* (= *Yuccaborus*), *Sipalinus*, *Mesocordylus* and *Orthognathus*. The basal position of *Rhinostomus* with respect to the other genera may warrant recognition of a separate subtribe, Rhinostomina, for it. Taxonomic synopses of the tribe and subtribes and a key to the genera are provided.

**Key words:** cladistic analysis, classification, phylogeny, *Mesocordylus*, *Orthognathus*, *Rhinostomus*, *Sipalinus*

### Introduction

The tribe Orthognathini Lacordaire, 1866 (= Sipalini Lacordaire, 1866) formerly comprised the genera *Rhinostomus* Rafinesque, *Yuccaborus* LeConte, *Mesocordylus* Lacordaire, *Orthognathus* Schoenherr and *Sipalinus* Marshall (Vaurie 1970a, b, 1971, 1973, 1976; Zherikhin 2000). Kuschel (1995), in a key to the tribes of Dryophthorinae (as Rhynchophorinae), proposed a separate tribe, Rhinostomini, for *Rhinostomus*, but some later authors (Alonso-Zarazaga & Lyal 1999, Anderson 2002a, Morrone & Cuevas 2004), giving Dryophthorinae family status, again treated both tribes as belonging to the subfamily Orthognathinae. In recent phylogenetic classifications of the Curculionoidea (e.g., Marvaldi & Morrone 2000, Anderson 2002b, Marvaldi *et al.* 2002, Oberprieler *et al.* 2007), in which Dryophthorinae are considered as a subfamily of Curculionidae and Orthognathini thus again as a tribe, it remains unclear whether Rhinostomini should be included in Orthognathini or recognised as a distinct tribe.

The objective of this study is to examine the relationships of the genera formerly assigned to Orthognathini, in order to clarify their tribal placement. We hope that this analysis contributes to a phylogenetic system of the subfamily Dryophthorinae.

### Material and methods

The specimens examined in this study were obtained on loan from the following collections:

AMNH	American Museum of Natural History, New York, USA.
BMNH	Natural History Museum, London, Great Britain.
CAUVG	Colección de Insectos, Universidad de Guatemala, Guatemala.
CNCI	Canadian National Collection of Insects, Ottawa, Canada.