



Article

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***Compsodactylus*, a new South American genus with one new species and two new combinations (Coleoptera: Scarabaeidae: Melolonthinae)**

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Abstract

Compsodactylus **new genus** and *C. scabrosus* **new species** are described and *C. martinezi* (Frey, 1972) **new combination** and *C. parvulus* (Frey, 1970) **new combination** are redescribed and transferred from *Dicrania* LePeletier & Audinet-Serville, 1828. The new genus is placed in Macroductylini (Coleoptera: Scarabaeidae: Melolonthinae) and occurs in the South American Andean and Preandean regions. A key to the species, modification on the recent generic key to Macroductylini, and distributional map are presented.

Key words: *Dicrania*, Macroductylini, Neotropical, Scarabaeoidea, *Viguiera*

Introduction

The genus *Dicrania* Lepeletier & Audinet-Serville, 1828 comprises 42 species distributed in South America, principally in Brazil (Evans & Smith 2009). *Dicrania* was revised by Frey (1972), but the genus and some species remain poorly characterized or with inadequate diagnoses. Systematic research is being conducted on this genus and the first results are presented here.

The genus *Compsodactylus* **new genus** is erected to include *C. scabrosus* **new species**, *C. martinezi* (Frey, 1972) **new combination**, and *C. parvulus* (Frey, 1970) **new combination**. The two latter species were formerly placed in *Dicrania*. Frey (1972) described *D. martinezi* and noted the species uncertain generic position. Character states of *C. martinezi* and *C. parvulus* conflict with those that currently define *Dicrania*, principally in the structure of head, elytra, and legs. *Compsodactylus* species are known to occur in the Andean and Preandean regions.

The purpose of this paper is to describe *Compsodactylus* and *C. scabrosus* and correct the placement of two species formerly placed in the genus *Dicrania*. A modified key to the Macroductylini genera and a key to *Compsodactylus* species are presented. A distribution map of the species and natural history observations are also given.

Material and methods

Internal and external morphological characters form the basis of this study. The specimens were examined using a Carl Zeiss Stemi SV6 stereomicroscope and a Carl Zeiss Axioskop microscope. Illustrations were produced using a camera lucida attached to both microscopes. Photographs were taken with a Canon Power Shot A640 digital camera and processed using Helicon Focus 4.2.1 software (www.heliconsoft.com/heliconfocus.html) or with a Leica m205c stereomicroscope and processed using Leica Application Suit (LAS) 3.6.0. Measurements were taken with an ocular micrometer. Internal morphology, mouthparts, wing, and terminalia were studied using dissected specimens by relaxing the parts in hot water. Dissected specimens and detached parts were card mounted with acid-free water-soluble glue.

The terminology follows Browne and Scholtz (1994) (wing), Krell (1996) (terminalia), Kukalová-Peck and Lawrence (1993, 2004) (wing), and Snodgrass (1993) (general morphology). Plant names follow the International