

*Crowsonius parensis*, a new species of Neotropical *Rhizophagidae*  
from the nest of the stingless bee *Trigona dallatorreana* FRIESE  
(Hymenoptera: Apidae)\*  
(Coleoptera: Cucujoidea)

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ABSTRACT. A new species of neotropical *Rhizophagidae*, *Crowsonius parensis*, is described. This is the third known species for the family inhabiting the nests of stingless bees. All specimens were collected from a single nest of *Trigona dallatorreana* Friese from Pará, Brazil. This species is compared to congeners and aedeagal characters are illustrated.

Key words: entomology, Brazil, new species, taxonomy, *Hymenoptera*, *Apidae*, *Trigona*, melittophile, *Coleoptera*, *Rhizophagidae*.

#### INTRODUCTION

Several years ago we described a new genus and two new species of neotropical *Rhizophagidae* associated with the nests of stingless bees (PAKALUK & ŚLIPIŃSKI 1993). Although we suggested that certain morphological features of these beetles, belonging to the genus *Crowsonius*, such as winglessness and extremely reduced eyes, were likely indicators that these beetles were associated with bees, we had no firm evidence that they were true melittophiles rather than accidental associates. We believe that discovering a third, undescribed species of this genus from Pará, Brazil, offers such evidence, as nearly 100 adult beetles were collected from the

\*Papers Celebrating the 90th Birthday of Dr. Bolesław Burakowski

refuse pile of a single nest. Thus, we publish this description to document this event and alter slightly the description for the genus *Crowsonius* that we published previously (PAKALUK & ŚLIPIŃSKI 1993). The following changes should be added to the generic description: elytra with striae punctures fine or large, confluent or subconfluent; interstriae alternately costate or convex; and propygidium usually partially visible. Most important, we hope that these two modest contributions on bee nest-inhabiting beetles stimulate others, particularly melittologists, to search for and preserve associated adult and larval beetles, many of which are poorly known and with potential phylogenetic significance.

In the following description, acronyms designating depositories for types are as follows:

INPA, Instituto Nacional de Pesquisas da Amazonia, Manaus

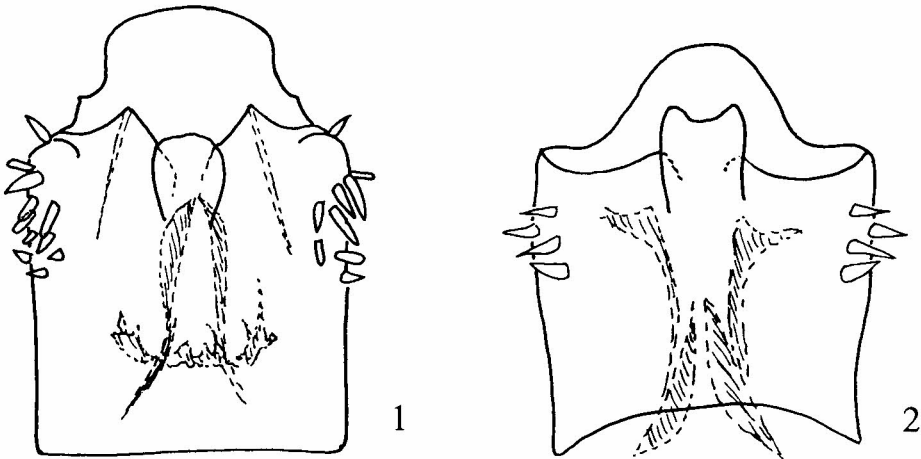
IZPA, Muzeum i Instytut Zoologii, Polska Akademia Nauk, Warsaw

MNRJ, Museu Nacional do Rio de Janeiro

MZSP, Museu de Zoologia, Universidade de São Paulo

SEMC, Snow Entomological Museum, University of Kansas, Lawrence

USNM, National Museum of Natural History, Smithsonian Institution, Washington.



1, 2. *Crowsonius* spp., aedeagus, ventral. 1 - *C. parensis*, 2 - *C. similis*

### *Crowsonius parensis*, new species

(Fig. 1)

#### DIAGNOSIS

This species differs from other members of the genus, *Crowsonius meliponae* PAKALUK & ŚLIPIŃSKI and *C. similis* PAKALUK & ŚLIPIŃSKI, by its convex rather than concave frons, more weakly sculpted pronotum, weakly crenulate lateral edges of the

pronotum, well-developed anterolateral elytral projections, and elytra not costate between rows of punctures. In addition, males of this species have a distinct, round medial impression on the last ventrite whereas this sexual character is lacking in the other two species. The aedeagus (Fig. 1) is most similar to that of *Crowsonius similis* (Fig. 2).

#### DESCRIPTION

Length 2.13-2.75 mm. Body elongate, about 2.9-3.2x longer than wide, lateral edges subparallel, except for exposed abdominal segments. Head reddish brown to dark reddish brown; pronotum with disc dark reddish brown, margins reddish brown; elytra reddish brown, striae punctures dark reddish brown; propygidium, if exposed, light brown, dark brown on apical margin; pygidium and venter reddish brown, with mottled patches dark reddish brown; legs light reddish brown to reddish brown. Clypeus convex, granulate, minutely punctate, punctures distinctly visible at 50x magnification. Vertex weakly rugose, without distinct costa medially. Pronotum subequal in length and width, irregularly punctate, most punctures on disc circular, some confluent to form elongate grooves, grooves never extending on entire length of pronotum, cuticle in punctures granulate, surrounding cuticle shiny, more densely granulate. Elytra 1.38-1.50x longer than pronotum, striae punctures large, circular, confluent to subconfluent, interstriae shiny, convex, never costate. Pygidium granulate, distinctly punctate, with small asperities apically. Aedeagus as in Fig. 1.

#### TYPES

Holotype (male): Brazil. Pará: Altamira, 14 October 1985, ex nest of *Trigona dallatorreana* (MZSP). Paratypes (93 specimens): same data as holotype (INPA, IZPA, MNRJ, MZSP, SEMC, USNM).

#### ETYMOLOGY

The name *parensis* is based upon the only province in Brazil where this species has been collected.

#### BIOLOGY

All ninety-four specimens of this new species were taken from a single nest of *Trigona dallatorreana* collected in Pará, Brazil. The beetles were collected while the nest was being dissected, and all of the beetles were found in the large, compacted detritus pile (sometimes called the scutellum). When the detritus pile was opened, the beetles, which were inside galleries, "were so numerous that while breaking the 'scutellum' they flowed like gun powder." (Gabriel MELO, in litt.)

#### ACKNOWLEDGMENTS

We thank Richard A. B. LESCHEN for calling our attention to this series and Gabriel MELO for providing the specimens and information about collecting these beetles from the host nest. We are grateful to John HERATY, Marion KOTRBA, Joseph

V. MCHUGH, Allen L. NORRBOM and Quentin D. WHEELER for reviewing this paper. This study was supported, in part, by a grant to one of us (JP) from the Polish Academy of Sciences facilitating a visit to Warsaw.

#### REFERENCES

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