Zootaxa 3986 (4): 461–471
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

http://dx.doi.org/10.11646/zootaxa.3986.4.5
http://zoobank.org/urn:lsid:zoobank.org:pub:F0EF76A2-9584-4E3E-A94E-23B58365F313

Pumiliofossorum: A new genus of Scotobiini (Coleoptera: Tenebrionidae) with two new species from Peru, and a revised key for the genera of the tribe

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Abstract

A new genus, *Pumiliofossorum* Silvestro & Giraldo **gen. nov.** (Tenebrioninae: Scotobiini) and two new Peruvian species, *Pumiliofossorum moche* Silvestro & Flores **sp. nov.** and *P. sechurae* Giraldo & Flores **sp. nov.** are described and illustrated. Distributional data, habitat records, photographs, and SEM images are included. A revised key for the six genera of Scotobiini is provided. Morphology of the newly described genus is discussed in reference to the other genera of Scotobiini. Dome-shaped placoid sensoria are imaged for the first time in Scotobiini.

Key words: taxonomy, Tenebrioninae, Scotobiini, dune adapted, Peruvian species

Introduction

The family Tenebrionidae comprises about 2,300 genera and 20,000 species worldwide (Matthews *et al*., 2010). Tenebrioninae is one of its most diverse subfamilies with most of the species living in mesic environments such as temperate and subtropical grasslands and forests, but some tribes of Tenebrioninae, including Scotobiini, are abundant in arid and subarid environments (Doyen, 1994). All members of Scotobiini show adaptations to arid and semiarid habitats namely: the absence of the second pair of wings, strong joints between the elytra and the abdominal sterna and develop a subelytral cavity to help prevent water loss (e.g. Silvestro *et al*., 2012).

Scotobiini was created by Solier in 1838 to include the previously described genera *Ammophorus* Guérin-Méneville and *Scotobius* Germar, and three new genera *Diastoleus* Solier, *Gonogenius* Solier, and *Leptynoderes* Solier. Lacordaire (1859) added *Emmallodera* Blanchard and *Psammetichus* Latreille to the tribe, synonymized *Gonogenius* with *Scotobius* and transferred *Ammophorus* to Nyctoporini. Later, Kulzer (1955) reviewed the Scotobiini and added a new genus, *Pseudoscotobius*. Since then *Pseudoscotobius* was synonymized with *Phrynocarenum* Gebien (Marcuzzi, 1976) and *Psammetichus* transferred to Elenophorini (Doyen & Lawrence, 1979). Recently, Doyen (1994) added newly the genus *Ammophorus* to the tribe. Prior to this study Scotobiini was comprised of 111 species/subspecies (Silvestro, unpublished data) classified in five genera: *Ammophorus*, *Diastoleus*, *Emmallodera*, *Leptynoderes* and *Scotobius*.

Scotobiini is endemic to South America. The representatives of this tribe mainly occur in arid lands of Ecuador, Galapagos Islands, Peru, Bolivia, Chile and Argentina (Matthews *et al.*, 2010). On the other hand, several species also inhabit mesic environments of Eastern Argentina, Uruguay and Southeastern Brazil (Kulzer, 1955). The distribution of this tribe extends to the south, reaching Tierra del Fuego Island.

As a result of several sampling excursions conducted in Northwestern Peru, specimens belonging to two new species of Scotobiini were found. After an examination of characters of these new species, we demonstrate that they deserve recognition as a separate genus, which we name *Pumiliofossorum*. The objectives of this paper are to describe and illustrate a new genus and two new species of Scotobiini from Peru.

Accepted by A. Smith: 23 Jun. 2015; published: 20 Jul. 2015