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A new cave-dwelling millipede of the genus *Scutogona* from central Portugal (Diplopoda, Chordeumatida, Chamaesomatidae)

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Abstract

A new cave-dwelling species of the genus *Scutogona* Ribaut, 1913, *S. minor* n. sp., is described from caves of Sicó karst in central Portugal. The classification and delimitation of *Scutogona* vis-à-vis related genera, in particular *Meinerteuma* Mauriès, 1982, is discussed.

Key words: Millipede, troglobiont, caves, Sicó karst massif, Iberian Peninsula

Introduction

The cave millipedes of Portugal have until recently only received little attention. Of the order Chordeumatida, only one species has been identified from Portuguese caves, viz., *Haplobainosoma lusitanum* Verhoeff, 1900 (fam. Haplobainosomatidae) (Reboleira & Enghoff in press). We here describe as new a second species, belonging to a different family (but see notes below) and to the genus *Scutogona* Ribaut, 1913. The new species is illustrated with scanning electron micrographs, differences vis-à-vis its congeners are discussed, as is the classification of the genus. We further provide information on the environment in which the new species has been found and a note on silk production by chordeumatidan millipedes.

The genus *Scutogona* was described by Ribaut (1913) for two new species: *S. mutica* (type species, Spain) and *S. jeanneli* (France). Ribaut placed *Scutogona* in a new family, Anthogonidae, and distinguished it from the other genera he placed in that family, viz., *Anthogona* Ribaut, 1913, *Cranogona* Ribaut, 1913, and *Origmatogona* Ribaut, 1913, by, among other things, the combination of the presence of flagella on the anterior gonopods, triarticulate posterior gonopods, and the presence of a coxal process on the male legs of the 9th (*recte*: 11th) pair.

Schubart (1958) added *S. alba*, a new species described from France, based on a juvenile female specimen. The same author (Schubart 1960) recorded a “*Scutogona* ? sp.”, also from France. Later, Mauriès & Vicente (1977) added two further species, *S. oculinigra* and *S. vivesi*, both from Spain. *S. oculinigra* was subsequently indicated for (continental) Portugal in Fauna Europaea (Enghoff & Kime 2009), but this record is based on immature specimens and is thus not beyond doubt. Up to now, the genus thus contains five species, one of which remains dubious.

Now a species of the genus has been found in several caves in the karst area of Sicó-Condeixa, in central Portugal. Whereas this species undoubtedly belongs to *Scutogona*, it is clearly different from the four well-described known species, and we here describe it as new.

The family-level classification of Chordeumatida has changed considerably during the century that has elapsed since *Scutogona* was first described (see discussion in Hoffman 1980), and this instability is well illustrated by the classification of this genus. *Scutogona* was originally (Ribaut 1913) placed in Anthogonidae. Verhoeff (1914) erected a subfamily Scutogoninae of fam. Brachychaeteumatidae and later (Verhoeff 1932: 1462, 1482) upgraded this taxon to fam. Scutogonidae. Brolemann (1935) placed *Scutogona* in Xystrosomatidae, whereas Strasser (1937)

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