Arcanobisium, a remarkable new genus, representing a new subfamily with a relictual distribution from eastern Spain (Arachnida: Pseudoscorpiones: Syarinidae)

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Abstract

Arcanobisium gen. nov. is described for Arcanobisium comasi sp. nov., from a limestone cave in the Valencian Community, Castellón province, Spain. By its unique features, compared to other syarinids, it warrants the creation of a new subfamily, Arcanobisiinae, for its accommodation. Some characters of the Syarinidae are evaluated and the genera Chitrellina Muchmore, 1996, Hadoblothrus Beier, 1952, Microcreagrella Beier, 1961 and Microcreagrina Beier, 1961 are transferred to the subfamily Ideobisiinae from the Chitrellinae. A key to the subfamilies of Syarinidae is given. The relictual status of the new subfamily is discussed.

Key words: Pseudoscorpiones, Syarinidae, cave, Valencian Community, Spain

Introduction

The neobisioid pseudoscorpion family Syarinidae was created by Chamberlin (1930) and at first was represented by two subfamilies: Syarininae Chamberlin and Chitrinae Chamberlin. The type genus of the family is Syarinus Chamberlin, 1925 with the type species, Syarinus obscurus (Banks, 1893), from North America. Other contributions concerning the family Syarinidae include those of Beier (1932, 1963), Chamberlin (1938), Muchmore (1982), Harvey (1992, 1998), Harvey & Volschenk (2007) and Murienne et al. (2008). Currently, the Syarinidae consists of three subfamilies: Chitrellinae Beier, 1932 (replacement name for Chitrinae), Ideobisiinae Banks, 1895 and Syarininae Chamberlin, 1930, with eight, five and two genera respectively, and the unplaced genus Hyarinus Chamberlin, 1925 (Harvey 2009).

The Syarinidae have been characterized by Muchmore (1982, 1990) and Harvey (1992, 1998). On the basis of morphological and molecular data, Harvey & Volschenk (2007) and Murienne et al. (2008) indicated that the Syarinidae are polyphyletic, which is probably why the diagnosis of the family formulated by Muchmore (1982) is, in part, contradictory: “chela with usual complement of 12 trichobothria, of which t is usually short and lanceolate (except in European and North African forms). Within the Syarinidae pleural membranes may range from striate to granulate; the suture between the parts of the femur of leg IV may be oblique or perpendicular to the long axis of the femur; a galea may be present or not; if present, the galea may...