



Article

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New species of *Fissiphallius* Martens 1988 from Brazil and notes on the morphology of Fissiphalliidae (Arachnida, Opiliones)

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Abstract

The seventh species of Fissiphalliidae, *Fissiphallius orube* sp. nov., and the fourth from Brazil (type locality state of Acre, Cruzeiro do Sul, at the Moa river), is described. The new species differs from the remaining species of the family in lacking a pergula, having a knob at the base of the rutrum, and the ocularium spiniform projection with apical portion single or divided in two to three parts.

Key words: Amazonian Rainforest, harvestmen, taxonomy, Laniatores, genitalic morphology

Introduction

The family Fissiphalliidae was described by Martens (1988), who named it after its unusual genitalia, the main diagnostic feature of the family. At first, the family was thought to be related to Phalangodidae due to some similarities in the genitalia and body size (Martens 1988). However, at the time, the study of the genitalia of Laniatores was very limited to a small number of published drawings and descriptions, especially for tiny species. With better knowledge of the genitalia of small harvestmen, some authors suggested the subsequent placement of Fissiphalliidae as the sister group of Zalmoxidae or a monophyletic group within Zalmoxidae (Kury & Pérez, 2002, Pinto-da-Rocha, 2004; Tourinho & Pérez González, 2006), as closely related to Icaleptidae (Kury & Pérez, 2002), or as related to both Guasiniidae and Icaleptidae, based on the presence of the stragulum (Pinto-da-Rocha & Kury 2003). This relationship has been recovered in molecular phylogenetic analyses, wherein Fissiphalliidae is the sister group of Zalmoxidae, and both these families are more closely related to Icaleptidae than to other Zalmoxoidea (Giribet et al 2010, Sharma & Giribet 2011, 2012). The phylogenies based on molecules reject the hypothesis of Fissiphalliidae as nested within Zalmoxidae.

Tourinho and Pérez González (2006) conducted a comparative study of the species of Fissiphalliidae and a brief study of the geographical distribution of the new species they described. It is very likely that the diversity of the family, as well other harvestmen families, is even greater, especially in the Amazon, and that some members are presently included in other families of small harvestmen, or not assigned to any family at all (Kury, 2003).

Knowledge on the diversity of Amazonian species is still scarce, since most of the region—especially the sites most remote and distant from urban centers—is not accessed by researchers. However, some sites have been surveyed by the Instituto Nacional de Pesquisas da Amazônia, the Museu Paraense Emilio Goeldi, the Universidade Federal do Mato Grosso, and the Universidade Federal d Acre (A.L. Tourinho, pers. comm.). If it is difficult to estimate the diversity of large Amazonian species (e.g., Manaosbiidae, Cosmetidae), then small species are presumably much more neglected (Tourinho & Pérez González 2006).

The main objectives of this study are the description of a new species of Fissiphalliidae.