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Taxonomic revision of the American spider genus *Arachosia* (Araneae: Anyphaenidae)

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Abstract

We review the American spider genus *Arachosia* O.P.-Cambridge, and present a descriptive taxonomic study with a comparative dichotomous key including 21 species, of which seven are newly described (*A. avalosi* sp. nov., *A. carancho* sp. nov., *A. kapiipeoi* sp. nov., *A. magna* sp. nov., *A. monserrate* sp. nov., *A. pinhalito* sp. nov. and *A. tungurahua* sp. nov.). Four species names are considered *nomina dubia*: *Oxysoma dubium* Berland, *Gayenna duplovittata* Mello-Leitão, *Oxysoma polytrichium* Mello-Leitão, and *Arachosia sulfurea* Mello-Leitão. *Arachosia bonneti* (Mello-Leitão) is newly synonymized with *A. albiventris* Mello-Leitão, and *A. mezenioides* Mello-Leitão with *A. freiburgensis* Keyserling. Previous problems with the identification of species in a species complex including *A. cubana* (Banks) are resolved. A disjunct distributional pattern is reported for *A. kapiipeoi* sp. nov.; a preliminary phylogenetic analysis based on mitochondrial COI sequences shows that these may correspond with two cryptic species. In this contribution, grassland and forests are discussed as the two main habitats inhabited by species of *Arachosia*. Finally, we propose a hypothesis of matching sexes based on functionality of some genital structures, involving sclerites of the male copulatory organ with structures of the epigyne: the prolateral projection on the primary conductor of the male would have a direct interaction with the lateral projections of the anterior pouch on the median epigynal field of females.

Key words: Spider, American, Araneae, Anyphaenidae

Introduction

The spider genus *Arachosia* was created by O.P.-Cambridge (1882) and currently constitutes the most diverse of the 22 genera of Amaurobioidinae. Within this subfamily, *Arachosia* is one of 11 genera of tribe Gayennini, more closely related with the genera *Gayenna* Nicolet, *Gayennoides* Ramírez, and *Sanogasta* Mello-Leitão (Ramírez 2003). In the phylogenetic analysis of Ramírez (2003), most clades of Gayennini obtained high support values, and were defined by characteristic patterns of the genitalia of both sexes: a distinctive primary conductor and spherical

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