



A revisionary approach of Colombian *Ananteris* (Scorpiones, Buthidae): two new species, a new synonymy, and notes on the value of trichobothria and hemispermatophore for the taxonomy of the group

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Abstract

Some contributions to the knowledge of the buthid scorpion genus *Ananteris* Thorell, 1891 in Colombia are herein presented, based upon the examination of over 100 specimens. *Ananteris ochoai* **sp. nov.** and *Ananteris solimariae* **sp. nov.** are described from Nariño and Santander departments, respectively. The recently described *Ananteris hasshy* Teruel & Roncallo, 2008 is synonymized under *Ananteris columbiana* Lourenço, 1991 based on several evidences from morphology. The males of *Ananteris dorae* Botero-Trujillo, 2008, *Ananteris ehrlichi* Lourenço, 1994 and *Ananteris myriamae* Botero-Trujillo, 2007, and the female of *Ananteris arcadioi* Botero-Trujillo, 2008 are described for the first time. *Ananteris meridana* González-Sponga, 2006 is reported for the first time for Colombia and the genus *Ananteris* for the departments of Cundinamarca, Santander and Norte de Santander. Likewise, new locality records are given for *A. arcadioi*, *A. dorae* and *A. myriamae*. Revised diagnoses and data on intraspecific variability are provided for *A. arcadioi*, *A. columbiana*, *A. dorae*, *A. ehrlichi*, *A. meridana* and *A. myriamae*. Hemispermatophore morphology is described for the first time for *A. arcadioi*, *A. columbiana*, *A. dorae*, *A. ehrlichi*, *A. meridana*, *A. myriamae*, *A. ochoai* **sp. nov.** and *A. solimariae* **sp. nov.**, providing evidence of this structure's taxonomic usefulness and revealing a paramount need to describe it in further taxonomic works on *Ananteris*. Some notes on the use of the fixed finger trichobothria for the definition of *Ananteris* species

are provided. A distribution map plotting the known locality records of the thirteen Colombian species of *Ananteris* and a key to their identification are also included. Finally, the name '*Ananteris antioquensis*', used by Otero *et al.* (2004) but never published, is herein deemed a *nomen nudum*.

Key words: *Ananteris ochoai* **sp. nov.**, *Ananteris solimariae* **sp. nov.**, *Ananteris hasshy* **syn. nov.**, *Ananteris antioquensis* **nomen nudum**, hemispermatofores, trichobothria, Colombia

Resumen

Se presentan algunas contribuciones al conocimiento del género *Ananteris* Thorell, 1891 en Colombia, con base en el estudio de más de 100 especímenes. Se describen *Ananteris ochoai* **sp. nov.** y *Ananteris solimariae* **sp. nov.** de los departamentos de Nariño y Santander, respectivamente. La recientemente descrita *Ananteris hasshy* Teruel & Roncallo, 2008 es sinonimizada con *Ananteris colombiana* Lourenço, 1991 con base en diversas evidencias morfológicas. Se describen por primera vez los machos de *Ananteris dorae* Botero-Trujillo, 2008, *Ananteris ehrlichi* Lourenço, 1994 y *Ananteris myriamae* Botero-Trujillo, 2007, así como la hembra de *Ananteris arcadioi* Botero-Trujillo, 2008. Se reporta por primera vez a *Ananteris meridana* González-Sponga, 2006 para Colombia y al género *Ananteris* para los departamentos de Cundinamarca, Santander y Norte de Santander. Asimismo, se dan nuevos registros de localidades para *A. arcadioi*, *A. dorae* y *A. myriamae*. Se proveen diagnósticos revisados e información sobre variabilidad intraespecífica para *A. arcadioi*, *A. colombiana*, *A. dorae*, *A. ehrlichi*, *A. meridana* y *A. myriamae*. Se describe por primera vez la morfología del hemispermatóforo para *A. arcadioi*, *A. colombiana*, *A. dorae*, *A. ehrlichi*, *A. meridana*, *A. myriamae*, *A. ochoai* **sp. nov.** y *A. solimariae* **sp. nov.**, mostrando evidencias de la utilidad taxonómica de esta estructura y revelando una imperante necesidad de describirla en futuros trabajos taxonómicos en *Ananteris*. Se presentan algunas notas acerca del uso de las tricobotrias del dedo fijo para la definición de especies de *Ananteris*. Se incluyen un mapa de distribución con todas las localidades donde han sido registradas las trece especies Colombianas de *Ananteris* y una clave para su identificación. Por último, el nombre '*Ananteris antioquensis*', utilizado por Otero *et al.* (2004) pero nunca publicado, es aquí considerado un *nomen nudum*.

Palabras clave: *Ananteris ochoai* **sp. nov.**, *Ananteris solimariae* **sp. nov.**, *Ananteris hasshy* **syn. nov.**, *Ananteris antioquensis* **nomen nudum**, hemispermatóforo, tricobotrias, Colombia

Introduction

Ananteris Thorell, 1891 is a group of small-sized buthid scorpions with a primarily Neotropical distribution. This genus currently consists of 72 species known from Costa Rica southward through tropical South America to Paraguay, with the greatest number of species occurring in Venezuela (31 spp.), Brazil (20 spp.) and Colombia (11 spp.) (González-Sponga 2006; Kovařík 2006; Lourenço *et al.* 2006; Botero-Trujillo 2007, 2008a, 2009; Teruel & García 2007; Rojas-Runjaic *et al.* 2008; Teruel & Roncallo 2008; Giupponi *et al.* 2009; Lourenço *et al.* 2009; Lourenço & Duhem 2010; Botero-Trujillo & Noriega 2011). This genus also includes the species *Ananteris feae* (Borelli, 1911) from Guinea, Guinea-Bissau and Ivory Coast in tropical West Africa, originally assigned to the monotypic genus *Ananteroides* Borelli, 1911 but transferred to this genus by Lourenço (1985), who considered *Ananteroides* to be a synonym of *Ananteris*. A checklist of the species of *Ananteris* described up to 2007 and the countries where they are known from was made available by Rojas-Runjaic *et al.* (2008).

Ananteris was first recorded in Colombia by Hummelinck (1940), who mentioned the collection of a juvenile female *Ananteris cussinii* Borelli, 1910 in the northern city of Riohacha—specimen that Flórez (2001a) and Botero-Trujillo (2008a) considered in need of revision. Subsequently, this genus was subject of various contributions that led to the eleven species that are known to date from this country (Lourenço & Flórez 1989; Lourenço 1991, 1994, 1999a; Botero-Trujillo 2007, 2008a, 2009; Teruel & García 2007; Teruel & Roncallo 2008), a number that may still be far from complete.

Contrasting with the situation dominating Colombian scorpion collections some 10 years ago, when only very few specimens of *Ananteris* were known to exist, today many specimens are available, due to intensive fieldwork and recent revisions to different collections that have recovered previously undetected samples of this genus. The large number of *Ananteris* specimens now housed in Colombian collections and the continuous increment in the number of species occurring recently were the motivations for the present paper. This contribution is based on the examination of 119 specimens; among the material examined are the types for two new species, the first males known of *Ananteris ehrlichi* Lourenço, 1994, *Ananteris myriamae* Botero-Trujillo, 2007 and *Ananteris dorae* Bot-