



***Ornithodoros guaporensis* (Acari, Ixodida: Argasidae), a new tick species from the Guaporé River Basin in the Bolivian Amazon**

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Abstract

The soft tick *Ornithodoros guaporensis* n. sp. (Acari: Ixodida: Argasidae) is described from larvae and adults. Morphological analysis and 16S rDNA sequences are provided. Adults were collected from a rocky fissure inhabited by bats located in the Amazonian forest in north-eastern Bolivia (Beni Department) close to the Guaporé River. Larvae were obtained from eggs laid by females collected in the field, and which were fed on rabbits in the laboratory. Larvae of *O. guaporensis* are morphologically closely related to *Ornithodoros rioplatensis*, *Ornithodoros puertoricensis* and *Ornithodoros talaje*. Larvae of *O. guaporensis* and *O. rioplatensis* can be separated from *O. puertoricensis* and *O. talaje* by the number of pairs of dorsal setae (20 in *O. guaporensis* and *O. rioplatensis*, 18 in *O. puertoricensis* and 17 in *O. talaje*). Larvae of *O. guaporensis* and *O. rioplatensis* can be differentiated by the medial dental formula (2/2 in *O. guaporensis* and 3/3 in *O. rioplatensis*) and the apex of the hypostome, which is more pointed in *O. rioplatensis* than in *O. guaporensis*. The Principal Component Analysis performed with morphometric characters of larvae showed a clear separation among *O. guaporensis*, *O. rioplatensis*, *O. puertoricensis* and *O. talaje*. Significant morphological differences among adults of these four species were not found. The analysis of the 16S rDNA sequences allowed for the differentiation between *O. guaporensis* and the remaining Neotropical species of the family Argasidae.

Key words: Argasidae, *Ornithodoros guaporensis*, Bolivia, Gaupor River Basin

Introduction

The suborder Ixodida is formed by three families, Ixodidae (hard ticks), Argasidae (soft ticks) and Nuttalliellidae (an African monotypic family). Argasidae contains 198 species around the world, and 85 of them are present in the Neotropical zoogeographic region (Guglielmone *et al.* 2003; Labruna & Venzal 2009; Guglielmone *et al.* 2010; Nava *et al.* 2010; Dantas-Torres *et al.* 2012; Venzal *et al.* 2012, 2013). Studies of both morphological and molecular characters recently performed in the Neotropics have suggested that the specific richness of Argasidae is probably underestimated in this zoogeographic region (Estrada-Peña *et al.* 2003; Labruna *et al.* 2008; Venzal *et al.* 2008; Labruna & Venzal 2009; Nava *et al.* 2010; Dantas-Torres *et al.* 2012; Venzal *et al.* 2012).

The tick fauna of Bolivia is composed of 35 species, six belonging to the family Argasidae and 29 to the family Ixodidae (Guglielmone *et al.* 2003). The species of soft ticks recorded in Bolivia are *Ornithodoros echimys* Kohls, Clifford & Jones, 1969, *Ornithodoros hasei* (Schulze, 1935), *Ornithodoros kohlsi* Guglielmone & Keirans, 2002, *Ornithodoros mimon* Kohls, Clifford & Jones, 1969, *Ornithodoros rostratus* Aragao, 1911 and *Otobius megnini*