



***Ornithodoros brasiliensis* Aragão (Acari: Argasidae): description of the larva, redescription of male and female, and neotype designation**

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Abstract

Ornithodoros brasiliensis is an endemic tick from Brazil and is very aggressive to humans, resulting in pain, fever and intense inflammatory response. After more than 50 years without report, this species was recently found in rural areas of São Francisco de Paula municipality, State of Rio Grande do Sul, southern Brazil, from where it was originally described. Herein, we describe the larva and redescribe the adults of *O. brasiliensis* based on scanning electron microscopy. Since the type was lost we designate the neotype specimen under the number IBSP 10409. In addition, the relationship between *O. brasiliensis* and other species from the Neotropical region that share the morphological characteristics of *Ornithodoros* with dorsal humps on tarsi, and also live under the soil and feed on hosts other than bats, are discussed. Molecular analysis inferred from a portion of the 16S rRNA mitochondrial gene is also provided and it placed *O. brasiliensis* in a cluster supported by a maximal bootstrap value (100%) with *Ornithodoros parkeri*, *Ornithodoros rostratus*, and *Ornithodoros turicata*.

Key words: *Ornithodoros brasiliensis*, argasid ticks, taxonomy, DNA sequence, Brazil

Introduction

Classical argasid tick systematics recognizes five genera, namely *Ornithodoros* Koch, *Antricola* Cooley & Kohls, *Argas* Latreille, *Nothoaspis* Keirans & Clifford, and *Otobius* Banks (Hoogstraal 1985; Guglielmone *et al.* 2010).

Clifford *et al.* (1964) recognized 7 subgenera of *Ornithodoros* as follows: *Ornithodoros* s. str., *Alveonasus* Schulze, *Alectorobius* Pocock, *Pavlovskyella* Pospelova-Shtrom, *Reticulinasus* Schulze, and described *Ornamentum* and *Subparmatius* as new subgenera that were accepted by Hoogstraal (1985). Camicas and Morel (1977) considered *Alectorobius* as a valid genus including the subgenera *Reticulinasus*, *Ornamentum* and *Subparmatius* as well as *Pavlovskyella* (this last genus as a synonym of *Theriodoros*). This classification was maintained by Camicas *et al.* (1998), but Keirans (2009) retained the subgeneric classification proposed by Hoogstraal (1985) who did not recognize *Alectorobius* as a genus.

Klompen and Oliver (1993) recognized three genera in the Ornithodorinae, *Ornithodoros*, *Otobius*, and *Carios*, based on phylogenetic analysis. According to Estrada-Peña *et al.* (2010) the generic divisions proposed by