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Occurrence of *Amblyomma* sp. (Acari: Ixodidae) in *Tropidurus hispidus* (Spix, 1825) (Squamata: Tropiduridae) in Parque Nacional Serra de Itabaiana, Sergipe, Brazil

Daniel Oliveira Santana[1], Francis Luiz Santos Caldas[1,2], Lucas Barbosa de Queiroga Cavalcanti[1], Fabíola Fonseca Almeida Gomes[3], Bruno Duarte da Silva[3], Rafael Alves dos Santos[3] & Renato Gomes Faria[3]

(1) Universidade Federal da Paraíba, Departamento de Sistemática e Ecologia, Programa de Pós-Graduação em Ciências Biológicas (Zoologia), Cidade Universitária, João Pessoa 58051-900, Paraíba, Brazil. E-mail: danielbioufs@yahoo.com.br

(2) Faculdades Integradas de Sergipe, Largo Glicério Cerqueira 387, Centro, Tobias Barreto 35690-000, Sergipe, Brazil. E-mail: francisluiz_bio@hotmail.com

(3) Universidade Federal de Sergipe, Departamento de Ecologia, Programa de Pós-Graduação em Ecologia e Conservação, Rosa Elze, São Cristóvão 49100-000, Sergipe, Brazil. E-mail: biola_gomes@hotmail.com

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Ocorrência de *Amblyomma* sp. (Acari: Ixodidae) em *Tropidurus hispidus* (Spix, 1825) (Squamata: Tropiduridae) no Parque Nacional Serra de Itabaiana, Sergipe, Brasil

Resumo: Lagartos frequentemente são parasitados por espécies de Acari (ácaros e carrapatos). No presente estudo relatamos a ocorrência de *Amblyomma* sp. (carrapato) parasitando um indivíduo juvenil de *Tropidurus hispidus* (Spix, 1825). A observação foi realizada no Parque Nacional Serra de Itabaiana (PNSI) no estado de Sergipe, nordeste do Brasil.

Palavras chave: Parasita, carrapato, *Amblyomma*, bolsa de ácaro, *Tropidurus*.

Abstract: Lizards are often parasitized by Acari species (mites and ticks). In this study we report the occurrence of a specimen of tick (*Amblyomma* sp.) parasitizing a juvenile individual of *Tropidurus hispidus* (Spix, 1825) in Parque Nacional Serra de Itabaiana (PNSI) in the state of Sergipe, northeastern Brazil.

Key words: Parasites, ticks, *Amblyomma*, mite pocket, *Tropidurus*.

Mites and ticks are parasites on plenty of animal species, mostly vertebrates which include reptiles (Urquhart *et al.* 1998; Labruna *et al.* 2007). These ectoparasites use their mouthpiece to fix and feed on their hosts, while some inject toxins which could affect host metabolism by causing negative consequences (i.e., weakness, low rates of hematocrits, paralysis, death) (Cupp 1991; Barbosa *et al.* 2006). These parasites were found on many species from Brazilian herpetofauna, such as frogs, snakes, turtles, alligators and other lizards (Amorim *et al.* 1996; Lampo & Bayliss 1996; Evans *et al.* 2000; Brum & Costa 2003; Barbosa *et al.* 2006; Onofrio *et al.* 2006; Labruna *et al.* 2007; Ahid *et al.* 2009; Fischer *et al.* 2009; Morais *et al.* 2010; Viana *et al.* 2012). Lizards are often parasitized by Acari (Bauer *et al.* 1990, 1993; Delfino *et al.* 2011). For instance, some *Tropidurus* Wied-Neuwied, 1825 species present skin folds in many different

body regions, which consists on structures called "mite pockets" (Rodrigues 1987; Bauer *et al.* 1990, 1993; Delfino *et al.* 2011). *Tropidurus hispidus* (Spix, 1825) is the largest genus species, presenting an insectivore diet and a sit-and-wait foraging mode (Rodrigues 1987; Vitt *et al.* 1996; Colli & Paiva 1997; Santana *et al.* 2011a,b). These lizards are usually found on rocky outcrops (Vitt *et al.* 1996, 1997; Van-Sluys *et al.* 2004; Santana *et al.* 2014). Nevertheless, they can also be found on trees, fallen logs, sandy soils, forest borders and anthropic habitats, being a generalist species (Rodrigues 1987; Vitt 1995; Carvalho *et al.* 2005; Santana *et al.* 2014; Gomes *et al.* 2015). This species is widely distributed (Yonenaga-Yassuda *et al.* 1988), occuring from Northeast South America (Venezuela) to South of Minas Gerais, Brazil (Rodrigues 1987; Ávila-Pires 1995).

Amblyomma Koch, 1844 is a tick genus of the family Ixodidae Murray, 1877, distributed worldwide, with exception of Antarctica (Fischer *et al.* 2009). These ticks are usually called hard ticks, by the presence of a hard chitinous shield (Cupp 1991; Labruna *et al.* 2005). They are quite large when compared to other mites, and present: an ornamented back, colored leg bands, eyes and garlands (Urquhart *et al.* 1998; Onofrio *et al.* 2006). *Amblyomma* species frequently parasite vertebrates (Evans *et al.* 2000), majorly birds, mammals (Sinkoc *et al.* 1997), reptiles (Carothers & Jaksic 2001) and frogs (Urquhart *et al.* 1998; Brum & Costa 2003; Antonucci *et al.* 2011; Antonucci *et al.* 2012).

We found an adult specimen of hard tick (*Amblyomma* sp.), parasitizing a juvenile *Tropidurus hispidus* (SVL = 66.0 mm; to the nearest 1 mm). The lizard was captured using a lace made of floss and a "telescopic" fishing pole on a forest border. The parasite was fixed on the right side of the animal and occupied the entire neck mite pocket (**Figure 1**). The tick was removed, formalized (4%) and preserved on alcohol 70%. The tick was analyzed and identified on laboratory, using a stereomicroscope and according to the dichotomous keys of Onofrio *et al.* (2006). The observation was made on Year 2009, February 26th, at Parque Nacional Serra de Itabaiana (PNSI; 10°40' S, 37°25' W), a transition zone between Caatinga and Atlantic Forest, located 35 km from Aracaju city, Sergipe state, Northeast Brazil.

Figure 1. Juvenile specimen of *Tropidurus hispidus* being a host of *Amblyomma* sp. at Parque Nacional Serra de Itabaiana, Sergipe, Brazil (Photo: Daniel Oliveira Santana).

In Brazil, mostly mite studies are limited to short communications from random observations and/or a single register, such as this paper (Dantas-Torres *et al.* 2005; Lopes *et al.* 2010; Viana *et al.* 2012). Concerning *Tropidurus* being a host of *Amblyomma*, *A. rotundatum* Koch, 1844 was found on natural conditions parasitizing an *Tropidurus* species, found by Labruna *et al.* (2005) but the lizard species was not specified on the given study.

Ecological relationships between lizards and their parasites are still unclear for most species, making such considerations difficult to make (Silva & Araújo 2008). Also, the knowledge of *Amblyomma* parasitism on wild reptiles is limited, being this communication a contribution to a new register concerning this lack of information. In this study, we found that *Tropidurus hispidus* can be a host for *Amblyomma* sp.

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