

**FIRST REPORT OF *Amblyomma brasiliense* (Acari: Ixodidae) AMONG
Myocastor coypus (MOLINA, 1782) IN THE PLATEAU REGION OF SANTA
CATARINA, BRAZIL**

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ABSTRACT

This short communication reports ectoparasitism on a *Myocastor coypus* specimen found lifeless, killed by motor vehicles in the municipality of Lages, Santa Catarina, Brazil, near the SC-438 highway. Necropsy examination revealed the presence of ticks of the *Ixodidae* family on the ventral region of the animal's body. Fourteen female specimens were collected and identified as *Amblyomma brasiliense*, with the following phenotypic characteristics: ornate scutum with whitish spots, strong spines on coxa I, spines on the internal border shorter than on the external border, half of the article length, and spines on the internal boarder on coxae II to IV were short and not very evident. The use of wild animals killed by motor vehicles on highways has proven to be relevant to the study of parasitic fauna. Although the occurrence of *A. brasiliense* among rodents has been previously reported, this is the first report in the literature of that species among *M. coypus*.

Keywords: Ectoparasite. Ticks. *Rodentia*. Nutria.

Myocastor coypus, also known as nutria, is the sole living species of the *Capromyidae* family within the order *Rodentia* in Brazil. These semi-aquatic animals feed on plant stems and roots, living alongside stretches of water such as rivers and lakes, where they dig burrows that serve as refuge or nest. Although being native to the Southernmost tip of South America, they are widely dispersed throughout the United States and Europe, where their meat and fur are commercially exploited (CULAU et al., 2008).

There are about 870 species of ticks described in the world, of which approximately 60 have already been reported in Brazil (BARROS-BATTESTI et al., 2006). The genus *Amblyomma* has approximately 130 species, of which 57 are described in the Neotropical realm, 33 of them in Brazil (GUIMARÃES et al., 2001; LABRUNA et al., 2001). *Amblyomma brasiliense* is an endemic *Ixodidae* from South America reported in Brazil, Argentina and Paraguay, considered one of the most aggressive ticks to humans (SANCHES et al., 2009). This report aims to describe the occurrence of *A. brasiliense* among *M. coypus* in the plateau region of Santa Catarina, Brazil.

An adult male specimen of *M. coypus* (Figure 1) found lifeless, killed by motor vehicles in the municipality of Lages, Santa Catarina, Brazil, near the SC-438 highway (coordinates 27°47'25.61" S and 50°14'59.89" W) was collected for the study. The animal was submitted to necropsy, and the external examination found ticks of the *Ixodidae* family in the animal's ventral region, which were collected with tweezers and then preserved in alcohol 70%. The ticks were identified under stereomicroscope examination at the Parasitology Laboratory of the Center for Agroveterinary Sciences, State University of Santa Catarina (CAV-UDESC), Brazil. The *Ixodidae* were deposited in the zoological collection of the Parasitology Laboratory of the Planalto Catarinense University (UNIPLAC).



Figure 1 - *Myocastor coypus* rescued after being hit on the highway in Lages, Santa Catarina.

A total of 14 female specimens were collected and identified, according to the taxonomic key, as being of the species *A. brasiliense* (ARAGÃO, 1908), with the following phenotypic characteristics: ornate scutum with whitish spots, strong spines on coxa I, spines on the internal border shorter than on the external border, half of the article length, and spines on the internal boarder on coxae II to IV were short and not very evident (Figures 2 and 3). *A. brasiliense* parasitizes mammals of the orders *Artiodactyla* and *Perissodactyla*, as well as birds, rodents (paca, capybara and agouti) and humans (BARROS-BATTESTI et al., 2006).



Figure 2 - *Amblyomma brasiliense* – side view.

Figure 3 - *Amblyomma brasiliense* – ventral view.

Sanches et al. (2008) showed that *A. brasiliense* has a life cycle of approximately one year under laboratory conditions, at 20 °C, 90% RH and a 12-hour photoperiod – conditions considered vital for their off-host development, given their great sensitivity to variations in temperature and humidity.

Sinkoc et al. (1997) mentioned *A. brasiliense* as one of the main parasites in capybaras, in addition to *A. parvum*, *A. striatum* and *A. cooperi*. Guimarães et al. (2001) reported *A. brasiliense* as being common parasites among collared peccary (*Tayassu tajacu*), occurring in smaller numbers in white-lipped peccary (*Tayassu pecari*), spotted paca (*Agouti paca*), common agouti (*Dasyprocta agouti*), capybara (*Hydrochaeris hydrochaeris*) and tapir (*Tapirus terrestris*). *A. brasiliense* was also reported in the bird rusty-margined guan (*Penelope superciliaris*). Serra-Freire (2010) reported the occurrence of larvae, nymphs and adults of *Amblyomma brasiliense* in residents and tourists in the state of Pará, Northern Brazil. The species was also found in tracks of animals in the Atlantic Forest Reserve of the Intervalles State Park, in the South of the State of São Paulo, Brazil (SZABO et al., 2003).

The study of wild animals collected after being killed by motor vehicles on highways, in partnership with the IBAMA (Brazilian Institute of the Environment and Renewable Natural

Resources), allows extending research in the area and identifying ectoparasites and endoparasites.

Although the occurrence of *A. brasiliense* among rodents has been previously reported, this is the first report in the literature of that species among *M. coypus*.

**PRIMEIRO REGISTRO DE *Amblyomma brasiliense* (Acari: Ixodidae) EM
Myocastor coypus (MOLINA, 1782) NO PLANALTO DE SANTA CATARINA,
BRASIL**

RESUMO

Registra-se o ectoparasitismo em *Myocastor coypus* resgatado sem vida, após atropelamento, no município de Lages, Santa Catarina, junto a rodovia SC 438. No exame necroscópico o animal apresentava ácaros da família *Ixodidae* na região ventral do corpo. Foram coletados 14 exemplares fêmeas e identificados como *Amblyomma brasiliense*, com características fenotípicas: escudo ornamentado, com manchas esbranquiçadas, presença de espinhos fortes na coxa I, o espinho interno menor que o externo, metade do comprimento do artículo e os espinhos internos das coxas II a IV são curtos e pouco evidentes. É relevante o resgate de animais silvestres atropelados, pois permite ampliar os estudos da fauna parasitária. Embora ocorra o registro de *A. brasiliense* em roedores, este é o primeiro relato na literatura desta espécie em *M. coypus*.

Palavras-chave: Ectoparasito. Carrapato. *Rodentia*. Nútria.

**PRIMER REGISTRO DE *Amblyomma brasiliense* (Acari: Ixodidae) EM
Myocastor coypus (MOLINA, 1782) EN LO PLANALTO DE SANTA CATARINA,
BRAZIL**

RESUMEN

Se registra el ectoparasitismo en *Myocastor coypus* rescatado sin vida, tras atropellamiento, en el municipio de Lages, Santa Catarina, junto a la Ruta SC 438. En el examen necroscópico el animal presentaba ácaros de la familia *Ixodidae* en la región ventral del cuerpo. Fueron colectados 14 ejemplares hembras e identificadas como *Amblyomma brasiliense*, con características fenotípicas: escudo ornamentado, con manchas blanquecinas, presencia de espinas fuertes en la pata I, la espina interna menor que la externa, mitad del largo del artículo y las espinas de las patas II y IV son cortos y poco evidentes. Es relevante el rescate de animales silvestres atropellados pues permite ampliar los estudios de la fauna parasitaria. Aunque ocurre el registro de *A. brasiliense* en roedores, este es el primer relato en la literatura de esta especie en *M. coypus*.

Palabras clave: Ectoparasito. Garrapata. *Rodentia*. Nutria.

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