

Scientific Note

First report of *Panstrongylus geniculatus* (Latreille, 1811) (Hemiptera: Reduviidae) in a cave in the state of Rondônia, Western Amazon, Brazil

Primer reporte de *Panstrongylus geniculatus* (Latreille, 1811) (Hemiptera: Reduviidae) en una cueva en el estado de Rondonia, Amazonía occidental, Brasil

Flávio Aparecido Terassini¹ , Dionatas Ulises de Oliveira Meneguetti^{2,3,4*}  and Jader de Oliveira^{2,5} 

¹Departamento de Biología e Medicina do Centro Universitário São Lucas, Porto Velho, RO, Brasil. ²Programa de Pós-graduação em Ciência, Inovação e Tecnologia para–Amazônia da Universidade Federal do Acre, Rio Branco, Acre, Brasil. ³Programa de Pós-graduação em Ciência da Saúde da Universidade Federal do Acre, Rio Branco, Acre, Brasil. ⁴Colégio de Aplicação da Universidade Federal do Acre, Rio Branco, Acre, Brasil. ⁵Laboratório de Entomologia em Saúde Pública, Departamento de Epidemiologia, Faculdade de Saúde Pública, Universidade de São Paulo, Av. Dr. Arnaldo 715, São Paulo, SP, Brasil. ✉ *dionatas.meneguetti@ufac.br

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Abstract. The occurrence of *Panstrongylus geniculatus* in a cave in Porto Velho in the state Rondônia, Brazil is reported for the first time. A triatomine specimen collected in Sr. Rena cave, was found to be a female of *Panstrongylus geniculatus*.

Key words: Biodiversity; cave fauna; Triatominae; vectors.

Resumen. Se reporta por primera vez la presencia de *Panstrongylus geniculatus* en una cueva en Porto Velho en el estado de Rondonia, Brasil. Un ejemplar de triatomo recolectado en la cueva Sr. Rena, resultó ser una hembra de *Panstrongylus geniculatus*.

Palabras clave: Biodiversidad; fauna cavernícola; Triatominae; vectores.

The family Reduviidae is considered the second largest family of suborder Heteroptera, with more than 7,000 described species worldwide (Maldonado 1990; Weirauch *et al.* 2014; Schuh & Weirauch 2020). Of this total, about 11% (~ 800) are cataloged for Brazil (CTFB 2020). With the exception of the Triatominae that are hematophagous, the other reduviids are considered predators of other arthropods and in Triatominae some peculiarities have already been reported in relation to the food aspect (Otálora-Luna *et al.* 2021). They are very variable in size, body conformation and appendages, from some species of *Empicoris* Wolff, 1811 (Hemiptera: Emesinae), with delicate appendages and only 3 mm in total length, up to several species with a robust body, which can reach 40 mm in length (Wygodzinsky 1966; Schuh & Weirauch 2020). Diagnostic features for Reduviidae include: eyes usually large, eyespots usually present, lip usually curved and robust, but may be straight and/or thin, with three visible segments (except in Hammacerinae which have four); prosternum with stridulatory groove (stridulitrum); hemielitrum membrane

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usually with two or three elongated cells; spongy fossa present at the ventral end of the anterior and middle tibiae in many taxa (Gil-Santana *et al.* 2015; Schuh & Weirauch 2020).

The majority of Triatomines stand out among the Reduviidae because they feed on the blood of vertebrates in all their life stages and are vectors of the protozoan (Otálora-Luna *et al.* 2021). *Trypanosoma cruzi* (Chagas, 1909), etiological agent of Chagas Disease, a pathology that is still of significant importance in Public Health in Latin America (Monteiro *et al.* 2018). Several species of Triatominae have been collected or found in caves (Lent & Wygodzinsky 1979). The etymology of *Cavernicola* Barber, 1937, for example, reflects the cave-dwelling specialization of the species for which the genus was described, *Cavernicola pilosa* Barber, 1937 (Hemiptera: Triatominae), which presents wide geographic distribution in South America and is found mainly in caves inhabited by bats (Oliveira *et al.* 2008; Galvão & Gurgel-Gonçalves 2014; Galvão 2020).

Panstrongylus geniculatus (Latreille, 1811) (Fig. 1A) is a species of Triatomines with the widest geographic distribution in South and Central America and is found in several habitats, including caves with bat colonies (Lent & Wygodzinsky 1979; Vivas *et al.* 2021) or caves in general (Molinari *et al.* 2007; Galvão & Gurgel-Gonçalves 2014). However, in the Western Brazilian Amazon (which includes the states of Acre, Amazonas, Rondônia e Roraima), there are no studies that report the occurrence of this species in caves. Therefore, the present study describes for the first time the occurrence of *P. geniculatus* in a cave in the state of Rondônia, Western Amazon, Brazil.

A female specimen of *P. geniculatus* (Figs. 1A, B) was collected in Sr. Rena cave (Figs. 1C, D, E), Porto Velho, Rondônia, Brazil (08°37'6930"S - 063°57'9188"W), 05.XII.2018, Terassini F, leg.; deposited in the Dr. Jose Maria Soares Barata Triatominae Collection (CTJMSB) of the São Paulo State University Julio de Mesquita Filho, School of Pharmaceutical Sciences, Araraquara, São Paulo, Brazil.

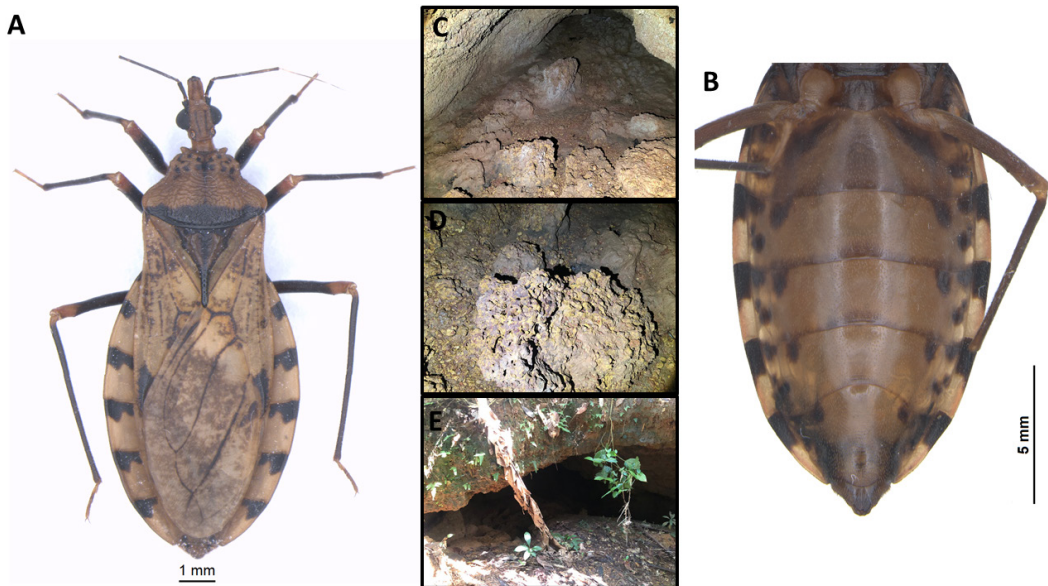


Figure 1. (A) Dorsal view of a female *Panstrongylus geniculatus*. (B) Detail of abdomen, ventral view. (C) Detail of the inner region of the cave. (D) Rock where the specimen was collected. (E) Cave opening detail. / (A) Vista dorsal de una hembra de *Panstrongylus geniculatus*. (B) Detalle del abdomen, vista ventral. (C) Detalle de la región interior de la cueva. (D) Roca donde se recolectó el espécimen. (E) Detalle de la apertura de la cueva.

This is the first report of a triatomine in caves in the state of Rondônia, and it is also the first report of the species *P. geniculatus* in caves in Western Brazilian Amazon. In Brazil the species *P. geniculatus*, has already been described in caves in the state of Pará (Atzingen *et al.* 2007) and added to this, are also described in caves in Brazil the species *Eratyrus mucronatus* Stål, 1859 (Galvão & Gurgel-Gonçalves 2014; Galvão 2020), *C. pilosa* (Atzingen *et al.* 2007; Galvão & Gurgel-Gonçalves 2014; Galvão 2020) and *Triatoma brasiliensis* Neiva, 1911 (Atzingen *et al.* 2007).

The occurrence of *P. geniculatus* in a cave in Rondônia demonstrates the need for future studies to better understand the dynamics of this species and its role in this ecotone, in addition to investigating *T. cruzi* infection and which genotypes are found in specimens from this environment.

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