

Cavernicola pilosa Barber, 1937 (Hemiptera: Reduviidae: Triatominae): First report in the state of Maranhão, Brazil

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ABSTRACT: *Cavernicola pilosa* Barber, 1937 (Hemiptera: Reduviidae: Triatominae) is reported for the first time in Maranhão State, Northeastern Brazil.

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Since the discovery of Chagas (1909), blood-sucking insects of the subfamily Triatominae have been recognized as real or potential vectors of Chagas disease, caused by infection by the protozoan *Trypanosoma cruzi* (Chagas, 1909) (Lent and Wygodzinsky 1979).

Among the five tribes included in Triatominae, Cavernicolini, has only one genus, *Cavernicola* Barber, 1937, which at the present time includes two species: *C. lenti* Barrett & Arias, 1985 and *C. pilosa* Barber, 1937 (Galvão *et al.* 2003; Oliveira *et al.* 2007; Schofield and Galvão 2009). *C. pilosa* has been found mainly in caves and hollow trees and is associated with bats (Lent and Wygodzinsky 1979; Oliveira *et al.* 2007; 2008). Their close association with bats suggests that they are the only natural food source for *C. pilosa* (Oliveira *et al.* 2008). There are reports on the presence of *C. pilosa* in inhabited or non-inhabited human dwellings (Gomes and Pereira 1977; Silva *et al.* 1992; Oliveira *et al.* 2007; 2008). This species has been found to be infected by a species of *Trypanosoma* Gruby, 1843, which is closely related to *T. cruzi* (Lent and Wygodzinsky 1979; Oliveira *et al.* 2007; 2008). *C. lenti* has been observed only in the state of Amazonas, Brazil, whilst *C. pilosa* has been recorded in Panama, Colombia, Venezuela, Ecuador, French Guiana, Peru and Brazil (Lent and Wygodzinsky 1979; Galvão *et al.* 2003; Bérenger *et al.* 2009).

In Brazil, *C. pilosa* has been identified in the states of Pará, Tocantins, Bahia, Espírito Santo, Goiás, Mato Grosso do Sul, Minas Gerais, and Paraná (Lent and Jurberg 1969; Silva *et al.* 1992; Galvão *et al.* 2003; Oliveira *et al.* 2007; 2008; Gonçalves *et al.* 2012). On the other hand, Rebêlo *et al.* (1998) and Galvão *et al.* (2003) recorded fifteen and sixteen species of Triatominae in the state of Maranhão, Brazil, respectively, without mentioning any *Cavernicola* spp. It is noteworthy that although these two studies recorded almost the same species in Maranhão, *Triatoma maculata* (Erichson, 1848) was mentioned only by Rebêlo

et al. (1998), while *Rhodnius domesticus* Neiva & Pinto, 1923 and *Triatoma sordida* (Stål, 1859) were recorded only by Galvão *et al.* (2003), thus making a total of 17 species already recorded in this state (Table 1).

The material examined consisted of a male and a female of *Cavernicola pilosa* (Figures 1 and 2), collected in a 250 W UV-light trap in December 1991 in the municipality of “Feira Nova do Maranhão”, “Retiro”, 07°00' S, 46° 26' W, 480 m a.s.l., Maranhão State, C. Mielke *leg.* The material was deposited in the Entomological Collection of “Museu Nacional da Universidade Federal do Rio de Janeiro” (MNRJ), Rio de Janeiro, Brazil. The specimens were identified following Lent and Jurberg (1969), Lent and Wygodzinsky (1979) and Oliveira *et al.* (2007), and



FIGURE 1. *Cavernicola pilosa*, female from “Feira Nova do Maranhão”, state of Maranhão, dorsal view.



FIGURE 2. *Cavernicola pilosa*, male from “Feira Nova do Maranhão”, state of Maranhão, dorsal view.

were fully in accordance with these previous descriptions. It should be noted that there were variations in two morphological features of *C. pilosa*: 1 — a certain degree of variation in color, mainly regarding the brighter corium of the hemelytra (Figs. 1–2), which may otherwise be completely dark in some specimens (Lent and Jurberg 1969); and 2 — “pale chestnut patches” on the anterior lobe of pronotum (Oliveira et al. 2007), which were conspicuously evident in the female examined (Figure 1), but less so in the male (Figure 2).

The area from which the specimens were collected is surrounded by gallery forest, a type of vegetation found in the “Cerrado” (savanna) biome in Brazil. Although *C. pilosa* has been associated with bats and bat shelters (Lent and Wygodzinsky 1979; Oliveira et al. 2007; 2008), it was not possible to correlate the specimens collected with those

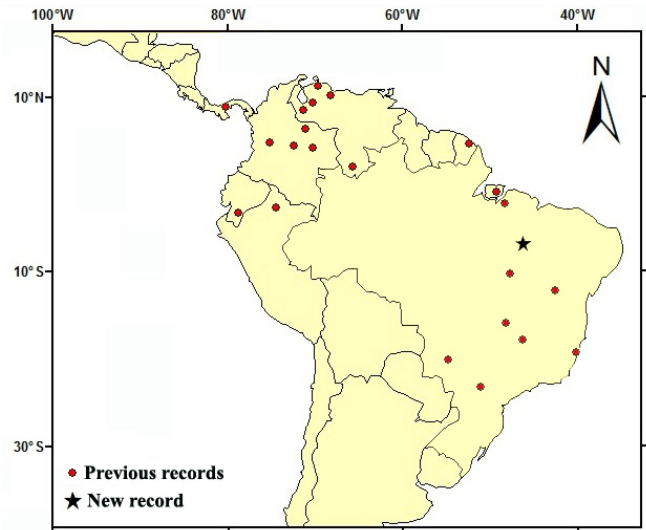


FIGURE 3. Geographical distribution of *Cavernicola pilosa* in Central and South America. Adapted from Oliveira et al. (2007) and using records furnished by Lent and Jurberg (1969), Gomes and Pereira (1977), Silva et al. (1992), Oliveira et al. (2008), Bérenger et al. (2009) and Gonçalves et al. (2012). Red circles indicate previous records as described in the text and the black star indicates the new record of *C. pilosa* from “Feira Nova do Maranhão” (07°00’ S, 46°26’ W), state of Maranhão, Brazil.

hosts or niches, since they were simply attracted to a light trap. Because these were occasional findings, only future surveillance of triatomines, including searches in bat shelters, would be likely to produce a better survey of the distribution of *C. pilosa* in the state of Maranhão.

Nonetheless, from the present study, the first record of *C. pilosa* in the state of Maranhão, Brazil, is provided here, which now means that a total of 18 species of Triatominae have been recorded in this state (Table 1).

The occurrence of a native triatomine species that sporadically invade human dwellings is a major issue for vector surveillance programs. Knowledge of its geographical distribution is fundamental to the

TABLE 1. Check List of Triatominae species recorded in the state of Maranhão. Previous records follow Rebêlo et al. (1998) and Galvão et al. (2003).

TRIBE	SPECIES
Cavernicolini	<i>Cavernicola pilosa</i> Barber, 1937
Rhodniini	<i>Psammolestes tertius</i> Lent & Jurberg, 1965
	<i>Rhodnius brethesi</i> Matta, 1919
	<i>Rhodnius domesticus</i> Neiva & Pinto, 1923
	<i>Rhodnius nasutus</i> Stål, 1859
	<i>Rhodnius neglectus</i> Lent, 1954
	<i>Rhodnius pictipes</i> Stål, 1872
	<i>Rhodnius robustus</i> Larrouse, 1927
Triatomini	<i>Eratyrus mucronatus</i> Stål, 1859
	<i>Panstrongylus diasii</i> Pinto & Lent, 1946
	<i>Panstrongylus geniculatus</i> (Latreille, 1811)
	<i>Panstrongylus lignarius</i> (Walker, 1873)
	<i>Panstrongylus megistus</i> (Burmeister, 1835)
	<i>Triatoma brasiliensis</i> Neiva, 1911
	<i>Triatoma maculata</i> (Erichson, 1848)
	<i>Triatoma pseudomaculata</i> Côrrea & Spinola, 1964
	<i>Triatoma rubrofasciata</i> (De Geer, 1773)
	<i>Triatoma sordida</i> (Stål, 1859)

understanding of the epidemiological aspects related to *T. cruzi* transmission and should be considered as a guide for the Chagas disease control and surveillance activities (Caranha et al. 2011).

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