Brief Communication / Comunicación Breve

# *Triatoma jatai* Gonçalves *et al*., 2013 (Hemiptera: Heteroptera: Reduviidae: Triatominae): new occurrence for the state of Ceará, Brazil

*Triatoma jatai* Gonçalves *et al*., 2013 (Hemiptera: Heteroptera: Reduviidae: Triatominae): nuevo registro para el estado de Ceará, Brasil

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**Abstract.** *Triatoma jatai* Gonçalves *et al*., 2013 is a wild triatomine known so far only from the state of Tocantins, Brazil. This work aims to report a new occurrence of *T. jatai* in the state of Ceará and update its geographic distribution in the country by means of a map. In August 2022, during sampling in Dr. José Maria Soares Barata private collection, a female specimen of *T. jatai* was found. This specimen was collected in 1998 at a wild environment in the locality of Coqueiro, municipality of Salitre, Ceará. The identification was based on the original description of *T. jatai*. The specimen was donated and deposited in the collection of the Faculdade de Ciências Farmacêuticas, Unesp, Araraquara, São Paulo, Brazil. With this new first record, the distribution of the species is extended to the state of Ceará, which is represented by ten Triatominae species.

**Key words:** Biogeography; Chagas disease; triatomines; vectors.

**Resumen.** *Triatoma jatai* Gonçalves *et al*., 2013 es un triatomino silvestre conocido hasta el momento sólo del estado de Tocantins, Brasil. El presente trabajo tiene como objetivo reportar un nuevo registro de *T. jatai* en el estado de Ceará, actualizando su distribución geográfica en el país por medio de un mapa. En agosto de 2022, durante la revisión de la colección privada del Dr. José María Soares Barata, se encontró un ejemplar hembra de *T. jatai*. Este ejemplar fue recolectado en 1998 en un ambiente silvestre en la localidad de Coqueiro, municipio de Salitre, Ceará. La identificación se basó en la descripción original de *T. jatai*. El ejemplar fue donado y depositado en la colección de la Facultad de Ciencias Farmacéuticas, Unesp, Araraquara, São Paulo, Brasil. Con este nuevo primer registro se amplía la distribución de la especie al estado de Ceará, el cual queda representado por diez especies de Triatominae.

**Palabras clave:** Biogeografía; enfermedad de Chagas; triatominos; vectores.

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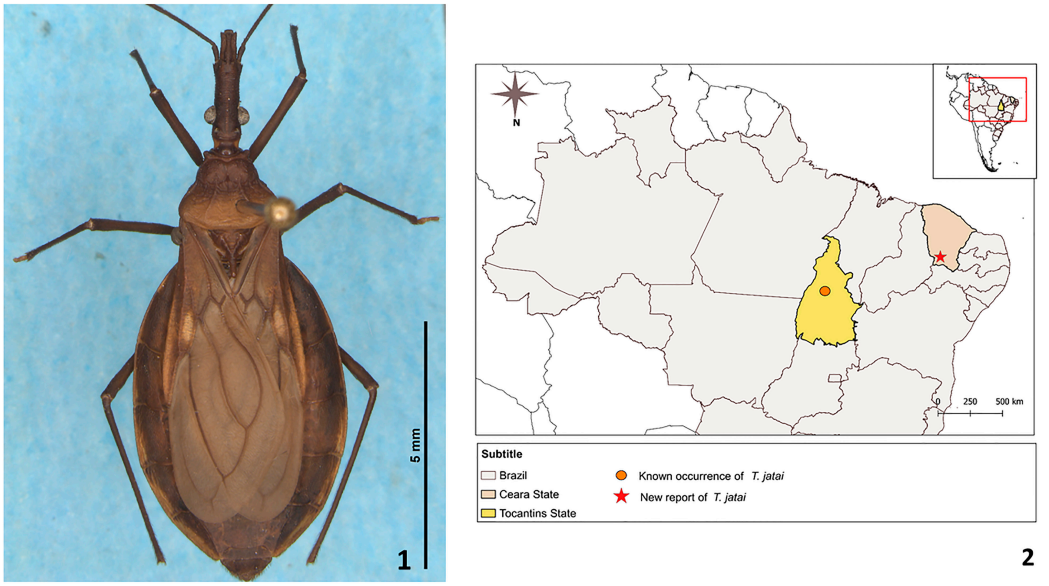
Triatomines are blood sucking insects of the Reduviidae family and Triatominae subfamily, and vectors of *Trypanosoma cruzi* (Chagas, 1909), the etiologic agent of Chagas disease. There are 65 recognized species of Triatominae in Brazil, among which is *Triatoma jatai* Gonçalves *et al*., 2013 (Alevi *et al*. 2021; Gil-Santana *et al*. 2022). This last species is a wild triatomine that was only known from the state of Tocantins (Fig. 2) where it was captured in rocky outcrops in the type locality of ranch Fazenda Jatai (12°42'40'' S 48°13'12'' W), located in the municipality of Paranã, which borders the TO-387/296 highway between Paranã and São Salvador (12°40'10'' S 48°12'16'' W and 12°40'40'' S 48°11'36'' W), as well as on Fazenda Vereda, Bangue (12°26'05'' S 48°03'59'' W).

The Ceará state is located in the Northeastern region of Brazil, is made up of 184 municipalities and covers an area of 148,825.60 km$^2$, becoming the fourth largest state by area in the Northeastern region of Brazil. Most of its territory has a semi-arid climate, with a diversified range of landscapes and vegetation patterns, especially the Caatinga (IBGE 2019)

In the state of Ceará, only nine species of triatomines were known so far: *Triatoma brasiliensis* Neiva, 1911, *Triatoma pseudomaculata* Corrêa & Espínola, 1964, *Triatoma rubrofasciata* (De Geer, 1773), *Triatoma petrochiae* Pinto & Barreto, 1925, *Panstrongylus megistus* (Burmeister, 1835), *Panstrongylus lutzi* (Neiva & Pinto, 1923), *Panstrongylus geniculatus* (Latreille, 1811), *Psammolestes tertius* Lent & Jurberg, 1965 and *Rhodnius nasutus* Stål, 1859 (De Alencar *et al*. 2021; Diotaiuti 2018).

In August 2022, when studying material from the private collection of the late professor Dr. José Maria Soares Barata (1936 - 2016) was encounter of a specimen of *T. jatai* collected in the state of Ceará (Fig. 2).

**Material examined.** Brazil, Ceará, Salitre, locality Coqueiro, 22-IV-1998, 1 female (deposited in the Dr. José Maria Soares Barata Triatominae Collection (CTJMSB) of the São Paulo State University Julio de Mesquita Filho, School of Pharmaceutical Sciences, Araraquara, São Paulo, Brazil).




**Figures 1-2. 1.** *Triatoma jatai*, female, dorsal view. Scale: 5.0 mm. **2**. Map of distribution and new occurrence. / **1.** *Triatoma jatai*, hembra adulta, vista dorsal. Escala: 5,0 mm. **2.** Mapa de distribución conocida y nueva registro.

**Morphological characteristics of *T. jatai* (Fig. 1):** It has a general brown coloration, and the females of the species are smaller in size compared to males. Other morphological aspects of *T. jatai* include brown legs, fore and mid femora with a couple of weak denticles subapically. The spongy fossa of the foreleg is absent in females. The hemelytra have a brown *corium* and *clavus*, and the membrane is gray with black veins. In females, the hemelytra are short, reaching the basal third or middle of the seventh urotergite. The *connexivum* is predominantly brown with clear triangular spots of variable width, located near the all basal intersegmental (Gonçalves *et al*. 2013). The specimen examined presents all characteristics mentioned in the original description.

Another important character that confirmed species identy was the external female genital, which has the same format proposed by Teves *et al*. (2020). In dorsal view, it showed that the posterior edge of urotergite VII has a W-shape, with a lateral pair of depressions rising in the median region. In the ventral side, the line of the posterior edge of urosternite VIII is prominent in the median region, and the gonocoxites of the 8th segment are long and wide.

The discovery of another species of triatomine occurring in the State of Ceará demonstrates that the biodiversity of these insects may have been underestimated, and requires further investigation to be fully understood. Therefore, it is important to conduct more studies on the triatomine fauna and its distribution in the state.

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