

New finding of *Eratyrus cuspidatus* Stål (Hemiptera: Reduviidae) in Yucatan

Nuevo hallazgo de *Eratyrus cuspidatus* Stål (Hemiptera: Reduviidae) en Yucatán

According to Cruz-Reyes and Pickering-López (2006), in Mexico there are 30 species of triatomines distributed in seven genera: *Belminus*, *Dipetalogaster*, *Eratyrus*, *Paratriatoma*, *Panstrongylus*, *Rhodnius* and *Triatoma*. Among this group, nine species are considered epidemiologically important for the transmission of *Trypanosoma cruzi* to humans and the remaining species participate in the parasite natural transmission cycle.

In the Yucatan Peninsula, five species belonging to this group have been documented: *Triatoma dimidiata* (Latreille); *Triatoma longipennis* Usinger, (an uncertain registry); *Triatoma hegneri* Mazzotti; *Triatoma nitida* Usinger and *E. cuspidatus* Stål (Zárate & Zárate 1985, Cruz-Reyes & Pickering-López 2006), the first being the most common and epidemiologically relevant due to its ample distribution in the area (Reyes-Novelo et al. 2011). In 1995, *E. cuspidatus* was reported for the first time in the Yucatan Peninsula (Ibañez-Bernal et al. 1995) with two male specimens collected in October of 1986 in the town of Celestun. This was an interesting finding since this species in Mexico had only been found in Los Tuxtlas in Veracruz and Bonampak in Chiapas (Zárate & Zárate 1985), both specimens found in wild habitats in high tropical evergreen forest, whereas the specimens from Yucatan were collected at a site where mangrove was the predominant vegetation (Ibañez-Bernal et al. 1995). After the publication of the above-referenced registry, there were no further findings of this species in the area, even with the extensive field work on the research of the epidemiology of American Trypanosomiasis and the biology and ecology of triatomines displayed during the past 20 years (see Reyes-Novelo et al. 2011).

During an extensive research field work encompassing various regional localities during the 2005, ten houses of Samaria locality, which belongs to Tizimin municipality (21°08'33"N 88°09'53"W) were searched by two expert collectors for triatomine presence. All collected individuals were stored in plastic containers and carried to the laboratory for specific identification with the Lent and Wygodzinsky (1979) keys.

This document confirms the presence of *E. cuspidatus* in the Peninsula. 21 years after being collected for the first time a male specimen was found in the slit of a wall, inside a premise at the edge of the town, adjacent to the jungle, on the 24th of June in 2005. The premise was built with wood, a cement floor, a zinc-laminated ceiling, and there were no domestic animals.

The most important diagnostic characteristics for identification are the head length which is longer than the maximum width found at eye level and the ocelli mounted on a protuberance behind the eyes, the anterior lobe of the pronotum with a pair of short and rounded discal tubercles on the apex, pointy humeral angles which do not quite reach large spines, and the spiniform projection on the scutellum in the side view; according with Lent and Wygodzinsky (1979) the last character is the most relevant to separate the two genera present in the area (*Triatoma* and *Eratyrus*) (Figs. 1 and 2).

An interesting issue of this finding that agrees with the records in Veracruz and Chiapas is the fact that was founded in a locality surrounded by jungle versus a mangrove area, as registered by Ibañez-Bernal et al. (1995). Due to the importance of the finding, the specimen is preserved in the entomological collection at the Regional Research Center of the Autonomous University of Yucatan. Likewise, the specimen was not diagnosed for *T. cruzi* infection, which would have been interesting since none of the Mexican specimens of this species have been found infected with the parasite.

Celestun and Samaria are geographically separated as they are located at opposite ends of Yucatan, which suggests that the species' distribution is widespread in the region. However, due to the shortage of specimens and records, it seems likely that the populations of this species are limited to certain sylvan habitats or hosts, with incidental or occasional intrusions into human dwellings. This finding highlights the importance of studying triatomines in the wild in order to better understand the biology and ecology of the transmission cycle of *T. cruzi* and particularly of its insect vectors.

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LITERATURE CITED

Cruz-Reyes A. and J.M. Pickering-López. 2006. Chagas disease in Mexico: an analysis of geographical distribution during the past 76 years - A review. *Memórias do Instituto Oswaldo Cruz*, 101: 345-354.

Ibañez-Bernal S., R. Paz-Rodríguez and D. Alonzo-Parra. 1995. Nuevo registro geográfico de *Eratyrus cuspidatus* Stål (Hemiptera: Reduviidae, Triatominae) de México. *Folia Entomológica Mexicana*, 94: 63-64.

Reyes-Novelo E., H. Ruíz-Piña, F. Escobedo-Ortegon,

R.I. Rodríguez-Vivas, M. Bolio-González, A. Polanco-Rodríguez and P. Manrique-Saide. 2011. Situación actual y perspectivas para el estudio de las enfermedades zoonóticas emergentes, reemergentes y olvidadas en la Península de Yucatán, México. *Tropical and Subtropical Agroecosystems*, 14: 35-54.

Zárate L.G. and R.J. Zárate. 1985. A checklist of the Triatominae (Hemiptera: Reduviidae) of Mexico. *International Journal of Entomology*, 27: 102-127.

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Figure 1. Dorsal habitus of *Triatoma dimidiata* and *Eratyrus cuspidatus* collected in Yucatan.

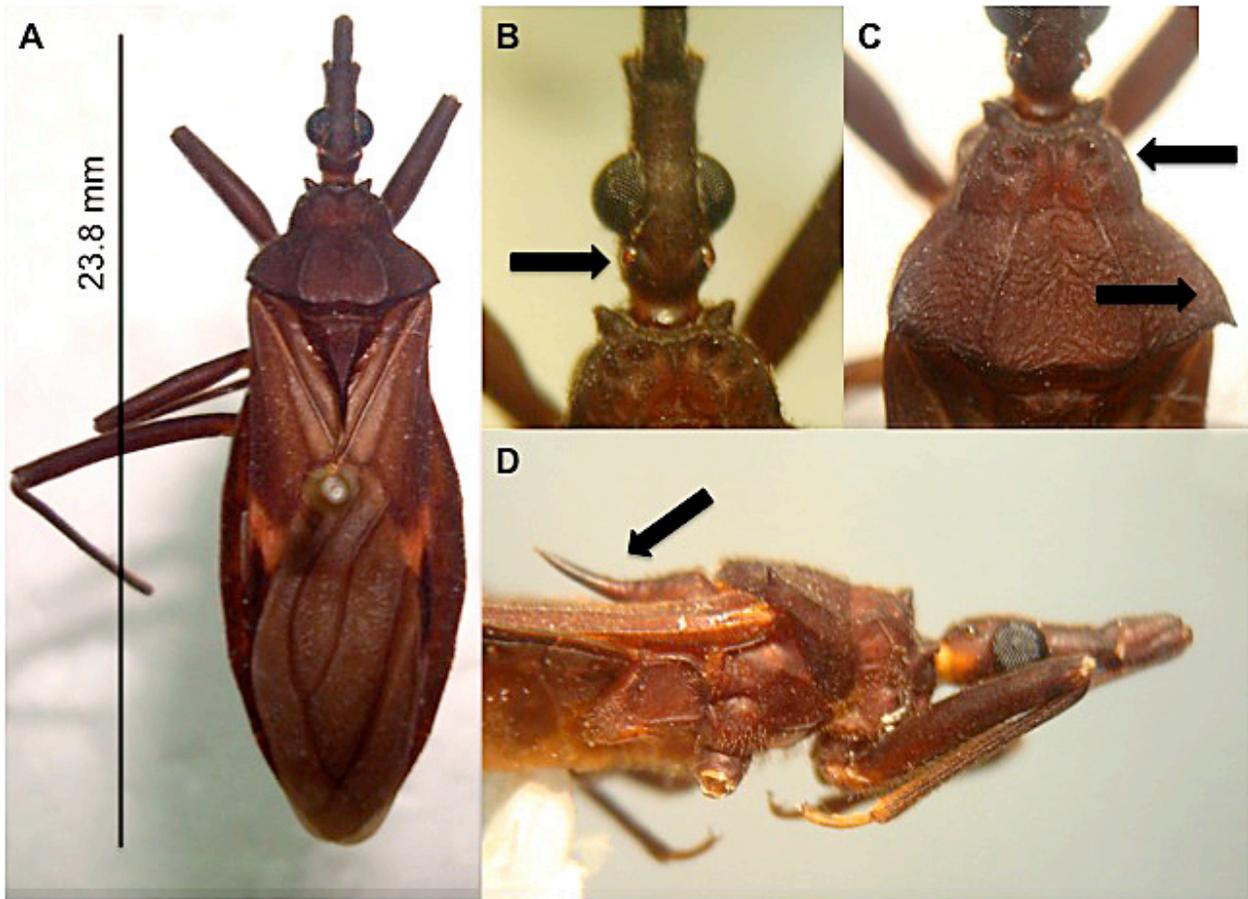


Figure 2. Diagnostic characters for the genus *Eratyrys*. a) length, b) ocelli, c) pronotal tubercles, d) spiniform projection on the scutellum.