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The Triatominae (Hemiptera: Heteroptera: Reduviidae) of Veracruz, Mexico: geographic distribution, taxonomic redescriptions, and a key

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Abstract

An annotated list of the triatomine bugs from Veracruz, Mexico, is presented. The list is mainly based on field collections, but also on literature review and museum collections. Ten species in five genera and two tribes are known in the state. Two species, *Triatoma dimidiata* (Latreille), the most common and widely distributed, and *Triatoma gerstaeckeri* (Stål), are the most important vectors of Chagas disease in the region. *Panstrongylus rufotuberculatus* (Champion), *Belminus costarricensis* Herrer, Lent & Wygodzinsky, and *Eratyrus cuspidatus* (Stål) are confined to sylvan habitats in the south of the state. *Triatoma rubida* (Uhler) probably represent a misidentification. The presence of *Meccus pallidipennis* Stål, *Panstrongylus geniculatus* (Latreille), *Triatoma barberi* Usinger, and *Triatoma infestans* (Klug) are fortuitous. GARP distribution maps are provided for *T. dimidiata* and *T. gerstaeckeri*. A key to species and photographs of the adults of the ten species are also included.

Key words: kissing bugs, geographic records, ecological niche modeling, Chagas disease vectors

Introduction

Bugs of the subfamily Triatominae are vectors of *Trypanosoma cruzi* (Chagas), a protozoan that produces Chagas disease or American trypanosomiasis. 141 known species of Triatominae are distributed in the Americas (Schofield & Galvão 2009, Jurberg *et al.* 2009). In Mexico 33 triatomine species are known, 28 species are endemic and 67% have been reported infected with *T. cruzi*. Historically, ten species had been recorded in the state of Veracruz (Lent & Wygodzinsky 1979, Zárate & Zárate 1985; Ibáñez-Bernal *et al.* 1995; Vidal-Acosta *et al.* 2000, Galvão *et al.* 2003; Salazar-Schettino *et al.* 2010).

The state of Veracruz extends 745 km along the coast of Gulf of Mexico, with an area of 72,420 km² (Fig. 1). Veracruz shares common borders with the states of Tamaulipas (to the north), Oaxaca and Chiapas (to the south), Tabasco (to the southeast), and Puebla, Hidalgo, and San Luis Potosí (on the west). It is a tropical coastal plain with a sudden change of topography to temperate valleys and thence to the highlands of the Eastern Sierra Madre mountains. As a result, the state's climate is very assorted, evolving from warm-humid western coastal areas to the cold snow-topped mountains (Pico de Orizaba and Perote). A total of 27 ecological zones are recognized in Veracruz (Fig. 1) and this state supports about 7.39% of Mexico's national population.

Triatomine bugs were first mentioned in Veracruz in the Spanish colonial period. Antonio de Herrera in his description of Francisco de Garay's Expedition to the Pánuco region, mentioned that the expeditionary army "*fue víctima de los mosquitos y pitos que pican y dejan señal como chinches y suelen causar calenturas...*" ("was victim of mosquitoes and bugs that bite and left sign as bedbugs that usually produce fever...") (De Herrera 1725). At the same time, friar Bernardino de Sahagún in his General History of the Things of New Spain (2006), described the