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Life cycle and feeding patterns of six populations of *Meccus pallidipennis* (Hemiptera: Reduviidae: Triatominae) in Mexico

José Alejandro Martínez-Ibarra[1], Benjamín Nogueda-Torres[2], Luis Eduardo Jiménez-Íñiguez[1], José de Jesús De la Torre-Álvarez[1], Felipe de Jesús Cárdenas-Barón[1], Fausto Antonio Ambriz-Galván[1], Gonzalo Rocha-Chávez

[1]*Universidad de Guadalajara, México.*

[2]*Instituto Politécnico Nacional, Escuela Nacional de Ciencias Biológicas, Laboratorio de Parasitología, México*

aibarra@cusur.udg.mx

Abstract

Meccus pallidipennis is considered as one of the most important vectors for the transmission of *Trypanosoma cruzi* (ethiological agent of Chagas disease) in Mexico. That species is distributed in 11 (33.3%) of the Mexican states, with epidemiological importance in most of them. Environmental conditions are very different along the distribution area of the species, as a consequence, important differences on behavior of *M. pallidipennis* could be expected. In order to test that hypothesis, six populations of *M. pallidipennis* from different geographical areas (central, western and southern) of Mexico were studied. One hundred eggs were selected for each population to establish six cohorts. Obtained nymphs were put into plastic containers (by cohort) in groups of ten and were fed in a fortnightly basis on New Zealand rabbits. Feeding times and number of blood meals to molt were recorded when triatomines were fed. They were checked daily to record death or molt of specimens. The life cycles significant varied from 143.73 ± 15.97 days (in the cohort from Amilcingo, Morelos) to 162.37 ± 21.51 (Taretan, Michoacán). The number of blood meals to molt varied from 9.92 ± 1.73 (Izúcar de Matamoros, Puebla) to 11.97 ± 1.60 (Mariscala de Juárez). Feeding times were over 10 min (the lapse to consider a triatomine as an effective transmitter of *T. cruzi*) in most cohorts (exception of Chilpancingo, Guerrero). Our results show the high heterogeneity of this species along its distribution area in Mexico, associated with different recorded numbers of infected people by *T. cruzi*.

Biography

José Alejandro Martínez-Ibarra has completed his Ph.D on Medical Entomology at the age of 34 years from Colegio de Postgraduados, in Mexico. He has published more than 35 papers in journals indexed at the JCR and serving as an editorial board member of repute journals.