

Jucelei Infran O.M.^{1,2}, Casaril Aline E.¹, Barbosa Matheus E.P.², Fernandes Wagner S.¹, Saraiva Elanderson F.³, Galati Eunice A.B.⁴, Galvis-Ovallos Fredy⁴, Werneck Guilherme L.⁵, Cruz Maria do Socorro P.⁶, Silva Monique Pinheiro Maia⁷, Oliveira Alessandra G.^{1,2,4*}

¹Institute of Biosciences Federal, University of Mato Grosso do Sul, Brazil

²Graduate Program in Infectious and Parasitic Diseases, Faculty of Medicine, Federal University of Mato Grosso do Sul, Brazil

³Institute of Mathematics, Federal University of Mato Grosso do Sul, Brazil

⁴Faculty of Public Health, University of São Paulo, Brazil

⁵Institute of Public Health Studies, Federal University of Rio de Janeiro, Brazil

⁶Graduate Program of Applied Technologies to Animals of Regional Interest, Federal University of Piauí, Brazil

⁷Health Secretary of Maranhão State, Brazil

***Corresponding author:** alessandra.oliveira@ufms.br

Abstract

In the Americas, Brazil is responsible for 96% of the visceral leishmaniasis cases notified and it is estimated that they are concentrated mainly in 121 municipalities, mainly in the states of Maranhão, Pará, and Tocantins. In the Maranhão state, the Ministry of Health considers Caxias municipality a priority area for prevention and control measures. The study's objective was to characterize the sand fly fauna in the urban area of Caxias. The sand flies were collected over a three-night period between August 2021 and August 2023. The collection was conducted using automatic light traps (CDC-type) in both indoor and outdoor areas of 20 residences, from 6:00 pm to 6:00 am. A total of 103,350 sandflies belonging to 23 species were identified. The following species were identified: *Bichromomyia flaviscutellata*, *Brumptomyia avellari*, *Br. brumpti*, *Evandromyia begoniae*, *Ev. bourrouli*, *Ev. evandroi*, *Ev. lenti*, *Ev. sallesi*, *Ev. saulensis*, *Ev. termitophila*, *Lutzomyia evangelistai*, *Lu. longipalpis*, *Lu. sherlocki*, *Micropygomyia longipennis*, *Mi. trinidadensis*, *Migonemyia villelai*, *Nyssomyia antunesi*, *Ny. whitmani*, *Psathyromyia aragaoi*, *Pa. bigeniculata*, *Pa. campbelli*, *Pa. hermanlenti*, and *Sciopemyia sordellii*. The peripheral areas close to the forest edge had a higher number of species captured (n=24), while in the central area, the presence of 15 species was identified. The most abundant species was *Lutzomyia longipalpis*, followed by *Ny. whitmani*. Both species have medical significance as vectors of the etiological agents of VL and cutaneous leishmaniasis, respectively. It is strongly recommended that health surveillance and control efforts in the municipality be intensified.

Keywords: Phlebotomines, Caxias, *Lutzomyia longipalpis*, Leishmaniasis