SAND FLY FAUNA (DIPTERA, PSYCHODIDAE) IN THE AMAZON, *CERRADO* AND *CAATINGA* BIOMES IN AREAS OF LEISHMANIASIS TRANSMISSION IN NORTH-EASTERN BRAZIL

RONAYCE CONCEIÇÃO DE JESUS SERRÃO PIMENTA, JUDSON CHAVES RODRIGUES, ROSA CRISTINA RIBEIRO DA SILVA, ANTONIA SUELY GUIMARÃES E SILVA, MAXCILENE DA SILVA DE OLIVEIRA, KAREN BRAYNER ANDRADE PIMENTEL, LUCAS SANTOS RIBEIRO, FABIANO CORRÊA, VALÉRIA CRISTINA SOARES PINHEIRO

UNIVERSIDADE ESTADUAL DO MARANHÃO, *CAMPUS* CAXIAS, MARANHÃO, BRAZIL

Phlebotomine Sand flies (Diptera, Psychodidae, Phlebotominae) are insects of medical and veterinary importance that transmit leishmaniasis causative agents. Entomological surveys to identify biotypes help to update our knowledge of the composition of species distributed in different habitats. The main objective was to assess the diversity, abundance and spatial distribution of sand flies species between the Amazon, *Cerrado* and Caatinga biomes in the states of Maranhão e Piauí. The study was conducted in six districts in the states of Maranhão (Amazon and *Cerrado*) and Piauí (*Caatinga*). The specimens were captured between 2022 and 2023 using CDC-type light traps. In each area, the specimens were collected on two consecutive nights during the dry season. A total of 680 specimens were collected, spread over four subtribes, 11 genera and 30 species. The *Cerrado* had the highest relative abundance (51.76%) and richness (19 species), followed by the Amazon (32.65%; 15 species) and the *Caatinga* (15.59%; eight species). However, the Amazon region had the highest diversity (H′=1.88). The most abundant species in the Amazon was *Bichromomyia flaviscutellata* (25.6%), in the *Cerrado Evandromyia lenti* (42.6%) and in the *Caatinga Nyssomyia whitmani* (42.5%). The latter species is the main vector of cutaneous leishmaniasis in Brazil and was detected in all three biomes, demonstrating its good adaptation to different habitats. In addition, a total of eight proven or putative *Leishmania* vectors were identified. The differences observed between biomes in terms of richness, abundance and diversity emphasize the need for more studies about interactions between species and their role in the transmission of leishmaniasis. Therefore, this work shows that more studies in these areas are essential to support conservation measures for the wild habitats of sand flies, which could be a measure to control the spread of the disease in urban areas.

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