SANDFLIES DIVERSITY AND NATURAL INFECTION BY TRIPANOSSOMATIDS IN WILD AND SYNANTROPIC ENVIRONMENT, FROM TWO LOCALITIES IN THE BRAZILIAN AMAZON REGION.

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Sandflies are known as important vectors of pathogens that cause human and animal disease around the world. In the Amazon Region, this insects present a high diversity, with many species known as vectors of *Leishmania* parasites, that cause leishmaniasis. Futhermore, some studies carried out over the past decades, have recorded natural infection by other members from the Tripanossomatidae family in this insects, but their role in the emergence of infectious disease still poorly understood. The alarming climatic and environmental crisis in the Amazon region has been shown that some sandflies species have become adaptaded to anthropic lands, which increase the risk of contact with new pathogens and emergence of new transmission cycles. Therefore, the aim of this study is evaluate the composition and diversity of sandflies fauna in differents landscapes, and the natural infection by tripanossomatids, from two areas in the Brazilian Amazon region. Sandflies samples were carried out between May/2023 to March/2024, in the municipalities of Presidente Figueiredo - PF (North from Amazonas river) and Urucurituba - UR (South from Amazonas river), using CDC light traps, in the forest and crop environments. After the sampling, sandflies were transported and sorted in the field laboratory. The females were dissecated on PBS 1x, and the midgut were analysed under microscopy for search of flagellate forms. If positive, the midgut were isolated in LIT culture médium, suplemented with 10% of FBS, and stored at 27ºC, for parasite grown. Negative midguts were stored in 99% etanol for molecular detection of tripanossomatids. Females and males were identified to species or genera level using the cladistic keys from Galati (2022). For calculate the minimum infection rate, we used the following formula: number of sandflies / number of sandflies analised x100.The data were tabulated on Microsoft Excel, the ecological analyses were performed on the the programs Past, R Studio and Dives. A total of 2275 sandflies were collected, belonging to 15 genera and 80 species. The genera most abundant were *Evandromyia* (14 species) and the most abundant species was *Micropygomyia rototaensis* (613 individuals). We recorded 8 new ocurrences of sandflies species for Amazon state: *Evandromyia aldafalcaoae, Evandromyia andersoni, Lutzomyia carvalhoi, Brumptomyia mesai* and *Pressatia calcarata*. The abundance and richness in the forest was higher than in the crop environment, on both locations, however, the diversity was higher in crop environment in the PF municipality, and no statistical difference in the diversity between both municipalities was observed. Natural infection were recorded, under microscopy, in 9 sanflies species: *Lutzomyia* sp. (1 individual/ forest environment), *Sciopemyia nematoducta* (3 individuals / 2 forest, 1 crop) *Trichophoromyia ubiquitalis* (1 / forest) *Micropygomyia rorotaensis* (1/ forest) *Evandromyia inpai* (1/forest) *Evandromyia walkeri* (1 / forest) *Nyssomyia antunesi* (1 / crop), all collected at PF municipality. The minimum infection rate was 1,85%. This results suggest a high diversity of sanflies, on both localites, even in environments under human action, and the record of tripanossomatids in different sandflies species in both environments indicate the ocurrence of different transmission cycles in this landscapes.

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