

Molecular detection of *Leishmania* spp. in sandflies in the municipality of Porto Velho, Rondônia, Brazil

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Sandflies are insects with medical importance because they are vectors of Leishmaniasis. In Brazil about 20 species have a role in the transmission cycle of the disease. The municipality of Porto Velho is endemic to Cutaneous Leishmaniasis and the aim of this study was to evaluate the sandfly fauna with an emphasis on possible vectors. The collections were made with light traps (18:00-06:00 hours) in forest environments at nine locations: Campus da UNIR, Estrada da PENAL, Fazenda Rancho Colorado, Sítio do Gaúcho, Sítio do Careca, Mutum Paraná, Nova Mutum, Vila Abunã and UHE Jirau. In a laboratory setting these insects were clarified with Potassium Hydroxide (10%), mounted on slides and identified. The thoraces and abdomens of the females were stored in pools (1-20 specimens) for DNA extraction with Polymerase Chain Reaction (PCR) of the *kDNA* region (120 base pairs) and the positive samples were directed to another PCR of the *hsp70* region (240 base pairs). In total, 2,012 sandflies were collected and identified as belonging to 40 species and 12 genera: *Bichromomyia*, *Evandromyia*, *Lutzomyia*, *Micropygomyia*, *Nyssomyia*, *Pintomyia*, *Psathyromyia*, *Psychodopygus*, *Sciopemyia*, *Trichophoromyia*, *Trichopygomyia* and *Viannamyia*. The most abundant species were *Ny. antunesi* (897 individuals) and *Th. octavioi* (n=200). Among the species collected *Ny. antunesi*, *Th. ubiquitalis*, *Bi. flaviscutellata* and *Ny. umbratilis* are considered to be vector species. The most abundant location was Fazenda Rancho Colorado (n=754 individuals) with *Th. octavioi*, *Th. ubiquitalis* and *Ny. shawi* being the most representative species. The presence of *Leishmania* DNA was observed in two pools of *Th. ubiquitalis* in a PCR of *kDNA*; unfortunately in the amplification of *hsp70* by PCR, this was not observed. In this study, the high diversity of sandflies including vector species and the presence of *Leishmania* DNA in *Th. ubiquitalis* show that this species possibly participates in the transmission cycle of Leishmaniasis in rural areas of Porto Velho.

Key words: Sandflies, Leishmaniasis, Porto Velho.

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