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## Distribution, Abundance and Infection of *Lutzomyia longipalpis*, vector of Visceral Leishmaniasis in three Municipalities of the Department of Caaguazú, Paraguay

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*Lutzomyia longipalpis*, is the main vector of Visceral Leishmaniasis (VL) in Latin America, and is a complex of species with wide distribution throughout the continent with adaptations to different habitats. Several areas of Paraguay, including the Department of Caaguazú, are considered endemic for leishmaniasis. The aim of this study was to determine the distribution, abundance and infection of *Lu. longipalpis* in the urban and peri urban areas of three districts of the department of Caaguazú, Paraguay. For collecting the insects, 108 CDC traps were placed in housing of urban and peri urban areas in the San José, Caaguazú and Coronel Oviedo districts. The insects were identified with the taxonomic key of Young and Duncan and the females were subjected to DNA extraction and PCR method to determine the infection with the parasite. The presence of sandflies was detected in 9.3% of the total traps placed and 41 sandflies were captured, 97.5% corresponding to the species *Lutzomyia longipalpis* and 2.5% to *Nyssomyia whitmani*, of which 34.2 % were females. The infection with *Leishmania* sp. was determined by PCR and was positive in 7.1% of the sandflies. The distribution of traps with phlebotome-infested by municipalities was registered for San José (13.6%), Coronel Oviedo (11.4%) and Caaguazú (4.8%). It is concluded that the vector is widely distributed in the study area and the determined infection confirms the risk of frequent transmission of leishmaniasis, which represents an area of potential risk for the appearance of human visceral leishmaniasis. Finally, the authors consider that it is necessary to continue with the integrated management measures of epidemiological surveillance and to initiate a community health education strategy for the control of this vector.

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