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Description of a new phlebotomine species (Diptera: Psychodidae, Phlebotominae) and new records of sand flies from the State of Acre, northern Brazil

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Abstract

Groundbreaking studies of phlebotomine sand fly populations in Assis Brasil, State of Acre, Brazil, resulted in the collection of 13 new records of phlebotomine sand flies and one previously undescribed species. *Lutzomyia naiffi* sp. nov. is described here. The new species is similar to *Lutzomyia columbiana* (Ristorcelli & Van Ty) in measurements and other morphological characters.

Key words: *Lutzomyia naiffi* sp. nov., taxonomy, Neotropical region

Introduction

Some phlebotomine species serve as vectors for species of *Leishmania* Ross to animals and humans. In the municipality of Assis Brasil, State of Acre, Brazil, a significant number of cases of American Tegumentary Leishmaniasis (ATL), (1,098 cases/100,000 inhabitants) were reported between 2001 and 2010 (SINAN 2011). This warranted the study of phlebotomine sand fly diversity in the region, particularly to identify possible vectors of the ATL agents. The study also provided a basis for the preparation and implementation of protocols aimed at treating and controlling leishmaniasis.

Studies of phlebotomine sand flies in the State of Acre are still scanty, and little biological information is available (Martins & Silva 1964; Arias & Freitas 1982; Silva-Nunes *et al.* 2008). 52 sand fly species have previously been reported in the state (Aguiar & Medeiros 2003; Azevedo *et al.* 2008); therefore, sand flies were sampled in the municipality of Assis Brasil in order to acquire a more comprehensive basic knowledge of the fauna. The survey resulted in the discovery of a species new to science, which is described here. 13 species are also newly recorded for the State of Acre, Brazil.

Material and methods

Specimens were collected from different areas in the municipality of Assis Brasil located approximately 330 km south west of Rio Branco (capital of the State of Acre), in the mesoregion of the Acre valley, on the left bank of the