



Phlebotomine sand flies (Diptera: Psychodidae) of Chiapas collected near the Guatemala border, with additions to the fauna of Mexico and a new subgenus name

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Abstract

Collections from four localities, two of the High Plateau and two of the Eastern Mountains Municipality of Chiapas, near the border with Guatemala, included 26 species with four new species records for Mexico: *Lutzomyia (Helcocyrtomyia) hartmanni* (Fairchild & Hertig, 1957), *Dampfomyia (Coromyia) disneyi* (Williams, 1987), *Psychodopygus bispinosus* (Fairchild & Hertig, 1951), and *Psychodopygus corossonienseis* (LePont & Pajot, 1978). These records represent an updated total of 50 species in Mexico, 48 of which are extant species and the remaining two fossils. The name *Xiphopsathyromyia n. n.* is proposed in substitution of *Xiphomyia* Artemiev, 1991, a homonym of *Xiphomyia* Townsend, 1917, a genus of Tachinidae (Diptera).

Key words: taxonomy, fauna, new records, leishmaniasis vectors

Introduction

Records of Phlebotominae for the state of Chiapas, Mexico include 27 species (Dampf 1947, Ibáñez-Bernal 1999, 2000, 2001a and b, 2002, 2003, 2004, 2005a, 2005b, Mickery-Pacheco *et al.* 2012, Pérez *et al.* 2014) representing 59% of all phlebotomine species recorded for Mexico to date. Despite the fact that Chiapas is the state in Mexico with the greatest richness of phlebotomine species, faunistic studies are rare and geographic records of species are few.

In addition to being of great significance for its biodiversity, Chiapas is ethnically diverse, with a dense human population that has historically been marginalized. These socio-economic factors exert considerable pressure on the natural resources of the state. Furthermore, these factors, in combination with the presence of sand fly vectors, contribute to an elevated risk of transmission of zoonotic pathogens, such as *Leishmania* species. In Chiapas there have been reports of leishmaniasis in the period between 1981 and 2010. Of these reports, approximately 1,892 are the clinical form of localized cutaneous leishmaniasis, with 7 cases of mucocutaneous, 11 diffuse cutaneous, and 124 visceral leishmaniasis (Data courtesy Dr. Carmen Guzmán Bracho, from Sistema Único de Información Epidemiológica, Secretaría de Salud, Mexico). In order to make effective decisions in the management of Leishmaniasis, the National and State surveillance program are dependent on accurate characterizations of the phlebotomine fauna, particularly those species related to the transmission of *Leishmania* parasites.

We systematically sampled phlebotomine sand flies in four localities of Chiapas near the Mexico-Guatemala border during different seasons over a period of two years. Here we present diagnoses and information pertaining to the sandfly species collected. Four species are recognized as new records for Mexico. Moreover, the name *Xiphopsathyromyia n. n.* is proposed in substitution of *Xiphomyia* Artemiev, a homonym of *Xiphomyia* Townsend, a genus of Tachinidae (Diptera).