



Records of phlebotomine sand flies (Diptera, Psychodidae, Phlebotominae) with a description of a new species of *Sergentomyia* França & Parrot from Khao Yai National Park, Thailand

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Abstract

Males and females of *Sergentomyia phasukae* sp. nov., *S. bailyi* (Sinton), and *S. barraudi* (Sinton), and females of *S. gomboki* (Lewis & Wharton) and *Phlebotomus (Euphlebotomus)* sp. (Diptera, Psychodidae, Phlebotominae) were collected by Malaise traps and CDC traps in Khao Yai National Park, central Thailand. A new species is described and illustrated, collection records for described species are given, and some taxonomic problems concerning the subgenera of *Sergentomyia* are discussed.

Key words: Psychodidae, Phlebotominae, new species, *Sergentomyia*, *Phlebotomus*, Thailand

Introduction

Multiple cases of autochthonous visceral leishmaniasis have recently been reported in Thailand, but the vector(s) of *Leishmania* spp. in Thailand remain unknown (Sukmee *et al.* 2008). Phlebotomine psychodid flies are currently the only known vectors for *Leishmania* spp. affecting humans, and 21 species of Phlebotominae are currently known to occur in Thailand (Lewis 1978; Apiwathnasorn *et al.* 1989, 1993; Polseela *et al.* 2007; Muller *et al.* 2007; Depaquit *et al.* 2009). Nonetheless, described species of Phlebotominae continue to be collected as new records for Thailand, and some species remain undescribed (Polseela *et al.* 2007; Curler, unpublished). Many phlebotomine psychodids have recently been collected from Khao Yai National Park (KYNP) as part of a study of Psychodidae in Thailand.

With the exception of Bruchomyiinae, all subfamilies of Psychodidae are known to occur in KYNP (Curler *et al.* 2006; Curler & Courtney 2009; Curler, unpublished). In this paper one new species of *Sergentomyia* França & Parrot is described, records for multiple described species are given, and some taxonomic problems concerning the subgenera of *Sergentomyia* are discussed.

Material and methods

Study area. All specimens examined during this study were collected from multiple locations in Khao Yai National Park, Nakhon Nayok Province, Thailand.

Material. This research is based on an examination of adult males and females of *Sergentomyia phasukae* sp. nov., *S. bailyi* and *S. barraudi*, as well as adult females of *S. gomboki* and *Phlebotomus (Euphlebotomus)* sp. Specimens were collected by Malaise traps or Centers for Disease Control (CDC) miniature light traps equipped with incandescent bulbs (John W. Hock Company, Gainesville, Florida) and preserved in 70% EtOH. Association of adult males and females is based on morphological similarity or previous descriptions.

Specimens are deposited in the following repositories (acronyms used throughout the text): **LACM**, Natural History Museum of Los Angeles County, Los Angeles, CA.; **USNM**, National Museum of Natural History, Smith-