



## Two new species of phlebotomine sand flies (Diptera: Psychodidae, Phlebotominae) from Quintana Roo, Mexico

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### Abstract

Two new species of phlebotomine sand flies from Quintana Roo, Mexico are described and illustrated following the classification proposal of Galati (2003). *Pintomyia* (*Pifanomyia*) *itza* Ibáñez-Bernal, May-Uc and Rebollar-Tellez **sp. nov.**, is described based on four male specimens, whereas *Psathyromyia* (*Psathyromyia*) *maya* Ibáñez-Bernal, May-Uc and Rebollar-Tellez **sp. nov.**, is described based on seven female specimens. *Pintomyia* (*Pif.*) *itza* clearly belongs to the *verrucarum* series, and is the only species of this series known to occur outside South America. *Psathyromyia* (*Psa.*) *maya* belongs to the *lanei* series which was previously known only from Brazil and Paraguay.

**Key words:** Sand flies, Diptera, taxonomy

### Introduction

During the development of the project “Spatial variation of phlebotomine community structure in Quintana Roo, Mexico”, we collected seven female specimens of one undescribed species, and four male specimens of another undescribed species. In this report we describe these two new species following the classification proposal of Galati (2003). Galati (2003) raised many subgenera to generic status and regrouped some of the species treated by Young and Duncan (1994). Based on cladistic analysis of morphological characters Galati (1995) made a major contribution towards the systematic relationships of several phlebotomine supraspecific taxa. Galati’s proposal has received further support from more recent comparisons of ribosomal gene sequences (e.g., Beati *et al.* 2004).

### Material and methods

Collecting took place from January to April, 2008 at a number of localities considered representative of the State of Quintana Roo (i.e., evergreen forests that are at least 40 years old, as well as disturbed areas in which the forest was removed at least 10 years ago). Four Disney traps, 1 Shannon trap and 4 CDC miniature light traps were run from 18:00 to 22:00 hours over a period of 3 days at each locality. Specimens were cleared, dissected and permanently mounted on slides following the procedure outlined by Ibáñez-Bernal (2005). We follow the general morphological nomenclature of Quate and Vockeroth (1981), in accordance with McAlpine *et al.* (1981), however, we take into account some characters and terminology proposed by Galati (2003). Abbreviations used for genera and subgenera follow the proposal of Marcondes (2007). Specimens were