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A new genus of Psychodinae (Diptera, Psychodidae) from phytotelmata in a Honduran cloud forest

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Abstract

Larvae of a new species of Psychodinae, *Moruseodina cusucoensis* **gen. et sp. nov.**, were collected during a biodiversity survey of aquatic invertebrates in plant held water bodies (phytotelmata) in Cusuco National Park, Honduras. The fourth instar larva, pupa and adult male are described based on reared material. The new species was difficult to place in an existing genus, thus a new genus name is proposed. Based on similarities in morphological characteristics, ecology and distribution, the species *Moruseodina superba* **comb. nov.** and *Moruseodina conspicua* **comb. nov.** are transferred from *Telmatoscopus* Eaton, 1904 to the new genus.

Key words: *Moruseodina*, Paramormiini, Central America, moth flies, new species.

Introduction

Moth flies (Diptera: Psychodidae) are a diverse family with approximately 2900 species described (Curler & Courtney 2009; Wagner & Ibáñez-Bernal 2009). Currently 274 species are recorded from Central America (Wagner & Ibáñez-Bernal 2009), but this number is likely to increase. The ecology of psychodid larvae is diverse and largely unknown, but in general they are detritivores. Psychodid larvae can be found in a variety of aquatic and semi-aquatic habitats such as rotting wood, carrion, fungi and dung (Wagner 1997). Larvae of some Psychodinae are adapted to live in phytotelmata (Quate & Vockeroth 1981); typically recorded from water-filled tree holes, bromeliad tanks, bamboo internodes and a range of plant axils (Kitching 2000; Frank *et al.* 2004; Frank & Lounibos 2009; Bravo *et al.* 2010).

During a biodiversity survey of freshwater invertebrate communities in phytotelmata in Cusuco National Park, Honduras, an undescribed species of Psychodidae was commonly observed in tree holes and bromeliads. Morphological characteristics of the adult antennae and maxillary palpi suggested a close association with members of the genus *Lepiseodina* Enderlein, 1936. However, based on the morphology of male genitalia we suggest that this species would be more appropriately placed in a new genus of Psychodidae, herein described. Two Nearctic species, *Telmatoscopus superbus* (Banks, 1894) and *Telmatoscopus conspicuus* (del Rosario, 1936) are also transferred from *Telmatoscopus* Eaton, 1904 to the new genus.

Material and methods

Specimens were collected during an expedition organized by the ecovolunteer driven conservation organization Operation Wallacea to Cusuco National Park (CNP), between 12 July and 22 August 2006. CNP (Fig. 1) is situated in northwestern Honduras, within the Merendon Mountain range. The core zone of the park consists of lower montane tropical rain forest (a mix of primary and secondary), with patches of primary cloud forest and upper

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