



The genus *Manota* Williston (Diptera: Mycetophilidae) in Mexico

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Abstract

The genus *Manota* Williston is represented in Mexico by the following species: *M. hidalgoensis* sp. n., *M. ibanezi* sp. n., *M. mexicanan* sp. n. and *M. nubicola* sp. n. The first three species were found in cloud forests near Tlanchinol in the state of Hidalgo, and the fourth one in a rainforest at Dos Amates in the state of Veracruz.

Key words: Diptera, Mycetophilidae, Mexico, *Manota*, new species

Introduction

The fungus gnat genus *Manota* is worldwide in distribution. The number of described species has increased rapidly in recent years and currently stands at 149, divided between the biogeographic regions as follows: Afrotropical 27 (Enderlein 1910, Matile 1972, 1978, Söli 1993, Jaschhof & Mostovski 2006, Hippa 2008b), Australian-Oceanian 18 (Tonnoir & Edwards 1927, Edwards 1928, Colless 1966, Matile 1993, Hippa 2007), Neotropical 30 (Williston 1896, Enderlein 1911, Lane 1948, Jaschhof & Hippa 2005), Oriental 66 (Senior-White 1922, Hippa 2006, 2008a, 2009, Hippa & Papp 2007), Palaearctic 8 (Lundström 1913, Ševčík 2002, Papp 2004, Hippa & Kjærandsen, manuscript in preparation). One species, *M. biunculata* Hippa, is common to the Australian-Oceanian and Oriental regions. In addition, one unnamed species is mentioned from the Nearctic region (Sherman 1920, Vockeroth 1981). So far as the Neotropical region is concerned, one species is described from St. Vincent, Lesser Antilles (Williston 1896), two from Brazil (Enderlein 1911, Lane 1948) and 27 from Costa Rica (Jaschhof & Hippa 2005). None of the Neotropical species have been recorded since their original description.

We have recently studied the material of fungus gnats collected by Malaise traps in cloud forests near Tlanchinol in the state of Hidalgo and in the most northern of the New World tropical rainforests at Dos Amates in the state of Veracruz. Among other Diptera, we found 10 specimens of *Manota* which proved to belong to four different species, all new. The aim of the present paper is to describe and name these species and thereby to add to knowledge of the very poorly known mycetophilid fauna of Mexico (Papavero and Ibáñez-Bernal 2001, 2003).

Material and methods

The material was collected and preserved in 70% ethanol. We detached the abdomen from each specimen and macerated it in warm concentrated potassium hydroxide (KOH). We then detached the hypopygium beyond segment 8. After washing in water and step-wise dehydration in alcohol, we placed the parts of the abdomen for a few seconds in clove oil (eugenol), after which we mounted them in “Euparal between two pieces of