

## The family Lygistorrhinidae (Diptera: Sciaroidea) in Mexico and the description of two new species

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### Abstract

The family Lygistorrhinidae is recorded for the first time in Mexico, based on adult morphological descriptions of two new species of the genus *Lygistorrhina* Skuse: *L. (Probolaeus) alexi* sp. nov. and *L. (P.) borkenti* sp. nov. A third species belonging to *L. (Lygistorrhina)* sp. was found, but it remains undescribed due to scarcity of specimens. The specimens were collected in two natural reserves of the state of Yucatan (Ría Lagartos and Ría Celestún), along the border of the states of Morelos and Mexico (National Park “Lagunas de Zempoala”), and in the state of Hidalgo (near the locality of Tlanchinol).

**Keys words:** Diptera, Lygistorrhinidae, Mexico, *Lygistorrhina*, *Probolaeus*, new species

### Introduction

The family Lygistorrhinidae (Sciaroidea) has a wide distribution in tropical and subtropical regions of the world (Grimaldi & Blagoderov 2001). To date, 13 genera are recognized, 7 extant and 6 known only from fossils. Thirty-two extant species have been described worldwide (Evenhuis 2008), yet many areas remain particularly poorly surveyed or uncollected. Hippa et al. (2005) mentioned the existence of several undescribed taxa from the Oriental region, and many others are known to exist in the Neotropics (D. Grimaldi, pers. comm.).

*Lygistorrhina* Skuse (1890) is the most diverse of all lygistorrhinid genera with 21 species and is provisionally divided in two subgenera: *Lygistorrhina* s. str., and *Probolaeus* Williston 1896; the status of the second is, however, in doubt (Thompson 1975; Grimaldi & Blagoderov 2001 and Hippa et al. 2005). *Lygistorrhina sanctaecatharinae* Thompson (1975) is a unique species known from the Nearctic region (southeastern U.S.), and seven species are known to occur in the Neotropics (Brazil) and West Indies (St. Vincent and Trinidad) (Thompson 1975, Papavero 1977, Bechev 1999, 2000, Grimaldi & Blagoderov 2001).

In this paper two new species of *Lygistorrhina* (*Probolaeus*) of Mexico are described and another, *Lygistorrhina* (*Lygistorrhina*) sp., is recorded. Adult specimens were collected with Malaise traps or aerial net in the Special Biosphere Reserves of Ría Lagartos and Ría Celestún in the state of Yucatan, in the National Park “Lagunas de Zempoala”, located on the border between the states of Morelos and Mexico, and in Tlanchinol, Hidalgo, Mexico (Fig. 1).