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Muscidae (Insecta: Diptera) of Argentina: revision of Buenos Aires province fauna, with a pictorial key to species

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Abstract

The knowledge of Muscidae of Argentina is fragmentary and incomplete. In this work, 43 species of Muscidae are recorded from Buenos Aires province, the largest and the most populated of Argentina. Redescriptions of *Dolichophaonia trigona* (Shannon & Del Ponte), *Helina nivaloides* Albuquerque, *Mydaea sexpunctata* (Wulp) are presented. Two new synonymies are proposed: *Mydaea latomensis* Snyder is established as a new junior synonym of *M. sexpunctata*, and *Neodexiopsis croceifrons* Snyder is established as a new junior synonym of *N. paulistensis* Albuquerque. We designated lectotypes for *Ophyra carbonaria* Shannon & Del Ponte, *Phyronota platensis* Shannon & Del Ponte, *Phyronota portensis* Shannon & Del Ponte, and *Spilogaster sexpunctata* Wulp. *Arthurella choelensis* Patitucci & Mariluis, *Limnophora aurifacies* Stein, *Lispe setuligera* (Stein), *Morellia (Trichomorellia) trichops* (Malloch), *Neomuscina zosteris* (Shannon & Del Ponte), and *Synthesiomia nudiseta* (Wulp) are recorded for the first time from Buenos Aires province, and *Graphomya maculata* (Scopoli) and *Helina nivaloides* are newly recorded from Argentina. New records of distribution for 21 of the 43 species herein studied are presented. A pictoric key to adults of the 43 species of Muscidae from Buenos Aires province is presented. Notes on biology, distribution in Argentina, and references in the literature for this family are also given.

Key words: Argentina, Buenos Aires, Muscidae, pictoric key

Introduction

Muscidae is one of the most diverse families of calyprtrae Diptera, with more than 5200 species worldwide (Brown *et al.* 2009), and present in all biogeographic regions (Carvalho *et al.* 2005). Muscidae species display several ecological specializations and life history strategies. Their adults occur in numerous habitats (forest, grasslands, wetlands, around water courses, and urban environments), except for the most arid. Their larvae can be found in substrates that include dung, carrion, garbage, rotting fungi, fresh or decomposed vegetal matter; bird and mammal nests, sewage, mud and running water (Savage & Vockeroth 2010).

The habits of adults are highly diverse. Although a large number of species are saprophagous, most of Coenosiinae are predaceous (on small soft-bodied insects). Also, some species are considered anthophilous (*Graphomya*), and others are blood feeders (*Stomoxys*). In a similar way, the trophic habits of larvae can be coprophagous, necrophagous, predaceous, subcutaneous parasites (*Philornis*), or phytophagous (*Atherigona*) (Skidmore 1985).

The Neotropical fauna of Muscidae is represented by more than 850 species (Carvalho *et al.* 2005), and 181 species are recorded from Argentina. Early mentions of the argentinean muscid fauna can be found in literature in the late XIX (Wulp 1883; Bigot 1885), and early XX centuries (Stein 1907; 1918; 1919; Bezzi 1922). Subsequently, three main publications account for the taxonomic knowledge on argentinean fauna of Muscidae. The monograph on Calyprtrae made by Shannon & Del Ponte (1926; 1928) included several Muscidae species. These authors presented part of the fauna of Buenos Aires and Tucumán provinces, with descriptions of new species, and a key. The second study is the work of the Muscoidea of Patagonia and southern Chile (Malloch 1934), which includes the description of 96 new species and 7 new genera, many of them considered endemic. Finally, the