



The genus *Phthinia* Winnertz (Diptera, Mycetophilidae) in the Neotropical region, with the first records from Brazil

SARAH SIQUEIRA OLIVEIRA¹ & DALTON DE SOUZA AMORIM²

Universidade de São Paulo, Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto, Departamento de Biologia, Avenida Bandeirantes 3900, CEP 14040-901, Ribeirão Preto, São Paulo, BRAZIL. Partially developed under FAPESP Grant 2003/10.274-9. E-mail: ¹oliveira.sarahcv@gmail.com, FAPESP (grant 08/52324-6). ²dsamorim@usp.br; CNPq Research Fellowship

Abstract

Three Neotropical species of *Phthinia* Winnertz have been described to date. The genus is known from Chile and southern Argentina. Four new species are herein described for the genus in the region, two from Brazil—*Phthinia theresae*, **sp.n.**, from the State of Espírito Santo, and *Phthinia urubici*, **sp.n.**, from the State of Santa Catarina—and two from Chile—*Phthinia freemani*, **sp.n.**, and *Phthinia parafurcata*, **sp.n.** Comments are made about the relationships between the Neotropical species. Some notes are added about *P. furcata* Freeman, *P. flagellata* Freeman, and *P. fasciata* Freeman, from Chile and southern Argentina. Attention is called for the fact that *Phthinia* has two species in Brazil disjunct from the other temperate species of the genus in South America, differently from most similar cases, that have a single known representative in Brazil.

Key words: *Phthinia*, Mycetophilidae, Diptera, Neotropics, Taxonomy

Introduction

The family Mycetophilidae has about to 4,100 described species (Evenhuis *et al.* 2007) in 135 extant genera in the world, and in the Bibionomorpha it is only less diverse than Cecidomyiidae, with more than 6,000 species worldwide. In the Neotropical region, there are close to 1,000 species of Mycetophilidae described in 53 genera. Most of these species were described by F. W. Edwards, Paul Freeman, John Lane, and José Pedro Duret (Papavero 1978, Amorim *et al.* 2002).

The monophyly of Mycetophilidae is well supported but Sciophilinae *s.l.* has been demonstrated as paraphyletic in several phylogenetic studies based on both morphological (Søli 1997, Tozoni 1998, Amorim & Rindal 2007) and molecular data (Rindal *et al.* 2009). The Sciophilinae *s.s.* includes 36 genera, most with macrotrichia on the wing membrane. A group of genera in the subfamily seems to compose a clade including species with M₄ incomplete or absent. This group includes *Megalopelma* Enderlein, *Sciophila* Meigen, *Acnemia* Winnertz, *Afrocnemia* Matile, *Cluzobra* Edwards, *Monoclona* Mik, *Parvicellula* Marshall, *Azana* Walker, *Neoaphelomera* Miller, *Neotrizygia* Tonnoir & Edwards, *Paratryzygia* Tonnoir, *Trizygia* Skuse, *Morganiella* Tonnoir & Edwards, and *Paramorganiella* Tonnoir (Matile 1999, Amorim & Oliveira 2008) – even though some species of *Sciophila* and *Megalopelma* have complete M₄. The remaining genera of the subfamily are presumably plesiomorphic for this feature, including *Phthinia* Winnertz.

Phthinia was established for three Palearctic species, of which Johannsen (1909) designated *Phthinia humilis* (Winnertz 1863) to be the type-species. The biology of *Phthinia* is known from the larva of *P. winnertzi* Mik, which is widely distributed in the Palearctic Region and attacks fruiting bodies of the fungi *Russula fava* (Rom.) Rom. ap. Lindbl. and *Pholiota* (Fr.) P. Kumm., in rotting logs of aspen and common alder (Kurina 1998, Alexander 2002, Jakovlev *et al.* 2008).

The genus *Phthinia* is predominantly Palearctic, with 16 extant species, but has six additional Nearctic species, three Neotropical and one Australasian species. One fossil species from the Oligocene in Germany, *P.*