



## The identity of *Paratrizygia conformis* Tonnoir (Diptera, Mycetophilidae), with comments on its systematic position

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### Abstract

*Paratrizygia conformis*, the type–species of the genus *Paratrizygia*, from Tasmania, is redescribed from the holotype. The wing venation and male terminalia are illustrated in detail. The question of the monophyly of the genus—which has four additional species in Chile and southern Argentina, and four species in the Atlantic Forest, in Brazil—is addressed. Comments are made on the relationships of the genus in the *Azana*–group of Sciophilinae. The hypothesis of monophyly of *Paratrizygia* is retained, as indicated by the presence of modified, elongated spines on a distal fold of tergite 9.

**Key words:** *Paratrizygia*, Sciophilinae, Mycetophilidae, taxonomy, redescription

### Introduction

Mycetophilidae are the second most diverse family of Bibionomorpha, after Cecidomyiidae, with more than 4,100 described species worldwide (Evenhuis *et al.* 2007). Seven subfamilies may be recognized in the family, Sciophilinae *s.s.*, Gnoristinae, Mycomyinae, Leiinae, Allactoneurinae, Manotinae, and Mycetophilinae (*e.g.* Väisänen 1984, 1986, Amorim & Oliveira 2008, Rindal *et al.* 2009). As discussed by Väisänen (1986), the Sciophilinae *s.l.*, including most of these subfamilies as tribes, would constitute a paraphyletic grouping in the classification of the Mycetophilidae. Some authors also give subfamilial rank to the Gnoristine tribe Metanepsini (Väisänen 1984, Ševčík & Hippa 2010), though doing this would probably make the Gnoristinae paraphyletic (Kallweit 1998). The Sciophilinae include 36 genera (Amorim *et al.* 2008), though it may not be a monophyletic group (Søli 1997, Rindal *et al.* 2009).

*Paratrizygia* Tonnoir was described from a single species from Tasmania, known only from one male specimen. In the genus, both the anterior and the posterior forks are incomplete, and there is a detached vein between the medial and cubital veins, possibly  $M_4$  (Oliveira & Amorim 2010). Freeman (1951) subsequently described three Neotropical species of *Paratrizygia* from southern Chile and Argentina, indicating that the only relevant difference between the Australian and the South American species would be the presence of  $R_4$  in the type–species, absent in the Neotropical representatives. Duret (1984) added one more species to the genus also from southern Argentina and Chile, and a further four species from the southern Atlantic Forest in Brazil were recently described (Oliveira & Amorim 2010).

The holotype of *Paratrizygia conformis* Tonnoir, however, was considered formally missing from the Australian Museum collection (Bugledich 1999: 269). Oliveira & Amorim (2010) mentioned that an examination of the genotype of *Paratrizygia* would be necessary to determine if the Neotropical species assigned to the genus were actually congeneric with the type–species. A proper morphological examination would provide a greater understanding of the evolution of the genus and determine its possible position within the Sciophilinae.

Contacts with multiple museum curators led to the rediscovery of the holotype of *P. conformis* in the Natural History Museum of London—borrowed by Paul Freeman (1916–2010) in the 1940s and never returned. In this