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New records of Black Fungus Gnats (Diptera: Sciaridae) from New Caledonia, with the description of two new *Bradysia* species and an updated checklist

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Abstract

The black fungus gnats *Bradysia similigibbosa* sp. n. and *B. irwini* sp. n. are described and new records of species of *Bradysia* Winnertz, *Ctenosciara* Tuomikoski, *Epidapus* Haliday, *Pseudolykoriella* Menzel & Mohrig, and *Scatopsiara* Edwards are presented for New Caledonia. A checklist of the sciarids of New Caledonia is given.

Key words: Sciaroidea, Australasian region, biodiversity, taxonomy

Introduction

New Caledonian black fungus gnats (Sciaridae) have been neglected in the past, although a rich fauna would be expected. The isolated island has this in common with many other regions of the Southwest Pacific. For example Bickel (2009) notes that in Australia sciarids are “the dominant taxon at most sites for all seasons”. Nevertheless, in the last hundred years no modern taxonomic studies have been made on the Australian black fungus gnats. Thus Bickel (2009) considers them an orphan taxon. Fortunately, the sciarid flies of New Caledonia were recently studied for the first time. Vilkamaa, Hippa and Mohrig (2011, 2012 a, b, c, d) have described 43 new species of *Bradysia* Winnertz, *Ctenosciara* Tuomikoski, *Keilbachia* Mohrig, *Pseudolykoriella* Menzel & Mohrig and *Scatopsiara* Edwards in the last two years. Using their keys we were able to revise material from New Caledonia deposited in the collections of: the Senckenberg Deutsches Entomologisches Institut (SDEI), Müncheberg (Germany); the Museum National d'Histoire Naturelle (MNHN), Paris (France); and the California State Collection of Arthropods (CSCA), Sacramento, California (USA).

Material and methods

This study is based on 48 male sciarids from New Caledonia which are deposited in the MNHN, SDEI and CSCA. The material was collected by N.J. Mary and M.E. Irwin at Mt. Koghis (New Caledonia, Province South, 17 km NNE of Noumeá, 22°10.567'S 166°30.293'E, 550 m a.s.l.) during two periods: 29.XI.–13.XII.1998 and 13.–20.XII.1998. In both cases a Malaise trap was used. The specimens were mounted in Canada balsam on microscope slides. The microscopy studies and photographs were made with Olympus microscopes BX50 and BX51. Drawings were made using a drawing tube. The terminology of morphological structures follows Mohrig & Jaschhof (1999) and Menzel & Mohrig (2000) with the following exceptions: wing vein bM (= x) and vein r-m (= y).