

A review of fungus gnats in the tribe Exechiini (Diptera, Mycetophilidae) from the J. W. Zetterstedt collection at the Museum of Zoology in Lund, Sweden

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Abstract

The collections of fungus gnats by Johan Wilhelm Zetterstedt (1785–1874), lodged in the Museum of Zoology in Lund, Sweden, are examined for all species belonging in the tribe Exechiini Edwards. The majority of the material was collected in Fennoscandia, mainly in Sweden, in the first half of the 19th century. Altogether 37 species of the tribe Exechiini could be safely identified. Three additional species are strongly indicated to be present in the collections, but could not be identified with certainty, viz. *Allodia (Brachycampta) alternans* (Zetterstedt, 1838), *Cordyla murina* Winnertz, 1863 and *Stigmatomeria crassicornis* (Stannius, 1831). Some of Zetterstedt's types have been erroneously synonymized and misinterpreted in modern literature. Hence, illustrations of terminalia are presented for all recognizable Exechiini types described by Zetterstedt. In order to preserve nomenclatural stability a **lectotype** is selected for *Brevicornu griseolum* (Zetterstedt, 1852) sensu auctore nec Edwards, and a **neotype** is selected for *Allodia (Brachycampta) alternans* (Zetterstedt, 1838). Two species names are reinstated, viz. *Brevicornu canescens* (Zetterstedt, 1852) **sp. restit. stat. n.** and *Notolopha brachycera* (Zetterstedt, 1838) **sp. restit. stat. n.** Two new synonyms are established, viz. *Notolopha brachycera* (Zetterstedt, 1838) = *Allodiopsis (Notolopha) tuomikoskii* Zaitzev & Maximova, 2000 **syn. n.**, and *Brevicornu griseolum* (Zetterstedt,

1852) = *Brevicornu boreale* (Lundström, 1914) **syn. n.** All type specimens of *Brevicornu fusculum* (Zetterstedt, 1838) have lost their abdomens. No material of *Exechia parvula* (Zetterstedt, 1852) or *Cordyla canescens* Zetterstedt, 1852 could be located in the collections. Although the type material of *Exechia parvula* probably is lost, the name is still valid as a junior synonym for *Mycetophila nana* Staeger, 1840 since *Mycetophila nana* Staeger, 1840 is a junior primary homonym of *Mycetophila nana* Macquart, 1826. *Cordyla canescens* has been made a junior synonym for *Stigmatomeria crassicornis* (Stannius, 1831). The identity of *Brevicornu fusculum* is highly uncertain and the name must remain as a **nomen dubium**. Eleven species are reinstated or correctly reported from Sweden for the first time: *Allodia (Allodia) tuomikoskii* Hackman, 1971, *Allodia (Allodia) zaitzevi* Kurina, 1998, *Allodiopsis rustica* (Edwards, 1941), *Brevicornu canescens* (Zetterstedt, 1852), *Brevicornu nigrofuscum* (Lundström, 1909), *Exechiopsis (Xenexechia) crucigera* (Lundström, 1909), *Pseudexechia aurivernica* Chandler, 1978, *Notolopha brachycera* (Zetterstedt, 1852) *Synplasta gracilis* (Winnertz, 1863), *Tarnania dziedzickii* (Edwards, 1941), and *Tarnania nemoralis* (Edwards, 1941).

Key words: Mycetophilidae, fungus gnats, Exechiini, coll. Zetterstedt, MZLU, Sweden, synonymy, lectotype, neotype

Introduction

Johan Wilhelm Zetterstedt (1785–1874) was professor of natural history at the university of Lund between 1840 and 1853 (Fig. 1). He was a specialist on Diptera of which he collected and described more than 1000 species from Scandinavia in his monumental works "*Insecta Lapponica*" (Zetterstedt 1838) and "*Diptera Scandinaviae*" (Zetterstedt 1842, 1843, 1844, 1845, 1846, 1847, 1848, 1849, 1850, 1851, 1852, 1855, 1859, 1860). Two large collecting expeditions to the taiga of Sweden, Norway and Finland in 1821 and Sweden in 1832 produced the major part of the collections. In addition several smaller collections from various parts of Fennoscandia are included, as well as a separate collection named "*Exotic*" from various localities outside Fennoscandia. F. W. Edwards visited Lund in the summer of 1923 and studied most of Zetterstedt's types of fungus gnats. Based on this visit Edwards (1924) presented a number of nomenclatural changes. Apart from this the collection of fungus gnats seemingly has remained unrevised with respect to the tribe Exechiini.

Modern classification of fungus gnats (superfamily Sciaroidea) largely follows Edwards (1925) who divided what was then called family Mycetophilidae into ten subfamilies and six tribes. Seven of Edwards' subfamilies have later been raised to family level (Matile 1990, 1997). Edwards' six tribes, however, all within family Mycetophilidae (s.s.), are still widely accepted (e.g. Hackman et al. 1988) although with a somewhat modified composition of genera (e.g. Sjøli 1997). With a few exceptions the single genus *Mycetophila* Meigen, 1803 as treated by Zetterstedt conforms to the entire subfamily Mycetophilinae *sensu* Edwards. The exceptions are a few species placed in *Pachypalpus* Macquart, 1834 [= *Cordyla* Meigen, 1803] and one species misplaced by Zetterstedt in *Cordyla* Meigen, 1803.