



A new sericomyiine flower fly from China (Diptera: Syrphidae)

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Abstract

A new species of flower flies is described from China (Sichuan & Yunnan: Hengduan Mountains), *Sericomyia khamensis* Thompson & Xie). A key is provided to the species of the subtribe Sericomyiina found in China along with nomenclatural and taxonomical notes on them.

Key words: Taxonomy, Sericomyiina, new species, identification key

Introduction

A striking new flower fly from the higher regions of southwestern China is here described. The fly is a pollinator of the yellow poppy native to this region.

Sericomyiine flower flies are common in the boreal forests across the Holarctic regions and extend southward in the higher elevations into the Oriental and Neotropical regions. The adults are pollinators and are common on flowers, the known immatures are aquatic filter-feeders in bogs.

Sericomyiine flower flies have been recognized as a family-group taxon since the family was broken down into intrafamilial groups (Rondani 1845, 1857; Kertész 1910). The taxon is generally recognized today as a tribe within the subfamily Eristalinae (Wirth *et al.* 1965: 603; Knutson *et al.* 1975: 339; Thompson *et al.* 1976: 88; Peck 1988: 150; Thompson & Rotheray 1998) or as a subtribe within tribe Eristalini (Thompson 2003). The first and last comprehensive treatment of the group was by Hull (1949: 351), who recognized four genera (*Pseudovolucella*, *Pyritis*, *Sericomyia* & *Tapetomyia*) and four subgenera of *Sericomyia* (*Arctophila*, *Condidea*, *Pararctophila* & *Sericomyia*). More recently Skevington and Thompson (2012) reviewed the New World species of the group and considered *Arctophila*, *Condidea* and *Conosyrphus* as synonyms of a broader concept for *Sericomyia*. The group *Arctophila* merely represented species that are mimics of bumble bees (genus *Bombus*), but without a common phyletic origin. The new species here described would fall within the traditional definition of *Arctophila* but is quite different in facial shape and habitus.

Sericomyiine flower flies are a distinctive monophyletic clade related to the eristaline flower flies, both these groups having aquatic maggots with long “tails”, so-called rat-tailed maggots, which are unlike those of other flower flies. In both of these groups, the tails of the maggots when fully extended are twice as long as the rest of the body. Sericomyiine maggots differ from eristaline maggots in having non-retractable thoracic spiracles. The male genitalia of sericomyiines are unique in having asymmetric surstyles. Recent phylogenetic analyses using total evidence (adult, larval and DNA sequence characters) have supported the rat-tailed maggots (sericomyiines + eristalines) as a monophyletic clade (Ståhls *et al.* 2003; Hippa & Ståhls 2005: 64).

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