



A generic conspectus of the Microdontinae (Diptera: Syrphidae) with the description of two new genera from Africa and China

XIN-YUE CHENG¹ & F. CHRISTIAN THOMPSON²

¹College of Life Science, Beijing Normal University, Beijing, 100875, China. E-mail: chengxy@bnu.edu.cn

²Systematic Entomology Laboratory, PSI, Agricultural Research Service, U. S. Department of Agriculture, NHB-0169, Smithsonian Institution, Washington, D. C. 20013-7012 USA E-mail: chris.thompson@ars.usda.gov

Abstract

A new genus and species of flower flies is described from China (*Furcantenna* Cheng, type *F. yangi* Cheng). Another new genus is proposed for the Afrotropical species incorrectly placed in *Ceratophya*, *Afromicrodon* Thompson, type *Microdon johanna* Doesburg. A key is provided to the groups of the Subfamily Microdontinae, along with a checklist of genus-group names proposed within the subfamily and nomenclatural and taxonomic notes on them.

Key words: Taxonomy, Syrphidae, Microdontinae, key, China, Afrotropics

Introduction

Microdontine flies are an unusual group among the flower flies. The adults are rarely encountered as they do not go to flowers and remain close to their breeding sites. The known larvae are predators of ant brood, and, hence, found in ant nests (Andries 1912, Duffield 1981). Adults are found commonly around those nests and do not range far from them. Normally microdontine flies are rare in Malaise and other kind of traps, but if the trap is close to ant nests, then adults can be abundant in the trap samples. This is especially true in the tropics, where ants frequently nest in trees, high in the canopy.

The larvae of microdontine flies are unusual in their appearance, so much so that they have been on four occasions described as mollusks (see below under *Ceratoconcha*, *Parmula* and *Scutelligera*, also Haas (1924)). The larvae and puparia provide excellent characters for identification and phylogeny, but as so few are known and associated with adults, these characters have been and are little used (Thompson 1981a, Doczkal & Schmid 1999 & Schmid 2004).

The greatest diversity of microdontine flies is in the tropics, especially the neotropics (currently 405 species recognized worldwide, 172 occur in the Neotropics (Thompson 2008). Their diversity in the temperate regions is sharply limited. But such diversity pattern is to be expected as it maps that of their hosts, the ants.

Microdon flies were known to Linnaeus and other early naturalists. These flies were segregated early by Meigen (1803, *Microdon*) and Latreille (1804, *Aphritis*) at a generic level and also at a family-group level (Aphritidae Fleming (1821: 55; 1822: 584), Microdonellae Rondani (1845: 451, 1857: 206 (Microdoninae)). Subsequently, as the exotic faunas became known, more genera were described. Thompson (1969, 1972) recognized the primitive (basal) relationship of microdontine flies to all other flower flies, first by re-instating their subfamily status and later by proposing separate family status for the group. He was supported by Speight (1987, 1994), but today all workers accept the microdons only as a subfamily of the Syrphidae. Ståhls et al. (2003) have confirmed with molecular (DNA) sequence data the basal relationship of the Microdontinae