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Marksomyia, a new subgenus of *Culicoides* Latreille (Diptera: Ceratopogonidae) from the Australasian biogeographic region with descriptions of two new species

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Abstract

Marksomyia is proposed as a new subgenus of the genus *Culicoides* Latreille to embrace six species from Australia and New Guinea. Comparative descriptions of males and females of *C. zentae* **sp. nov.** and *C. kayi* **sp. nov.**, pupae of *C. zentae* and redescriptions of *C. marksi* Lee & Reye, *C. dycei* Lee & Reye, *C. parvimaculatus* Lee & Reye and *C. pseudostigmaticus* Tokunaga are presented together with distributional data and keys for their specific determination. The designated type species of the subgenus is *C. marksi*. *Marksomyia* is further subdivided into three species complexes based on the shape and sclerotisation of the spermathecae.

Key words: Biting midges, Australasia, *Culicoides marksi*, *Culicoides dycei*, *Culicoides parvimaculatus*, *Culicoides pseudostigmaticus*, *Culicoides zentae*, *Culicoides kayi*

Introduction

While male genitalia generally are considered diagnostic for subgeneric taxa of *Culicoides* Latreille, the number of functional spermathecae is recognised to be of systematic significance (Khalaf 1954; Wirth & Hubert 1959; Atchley 1970). Currently five subgenera have been described where three spermathecae are a diagnostic feature; no other subgenera include species with three spermathecae.

Within groups that have three spermathecae, variability is seen in the degree of sclerotisation of the spermathecae. Thus, Khalaf (1954) erected the subgenus *Selfia* Khalaf based partly on the lack of sclerotised spermathecae. Atchley (1970), using a combination of morphological characters and biological information, confirmed the validity of *Selfia* but noted that included species possess three spermathecae, variably unsclerotised or partially sclerotised. The Palaearctic subgenus *Pontoculicoides* Remm also includes species with varying degrees of sclerotisation of the three spermathecae, but characters of the male genitalia serve to separate clearly this subgenus from *Selfia*. Wirth & Hubert (1959) proposed subgenus *Trithecoides* Wirth & Hubert to accommodate species from the Oriental and Afrotropical regions which differ from *Selfia* in many respects including the full sclerotisation of the three spermathecae. More recently Chu (1983) erected two new subgenera, viz *Jilinicoides* Chu and *Sinocoides* Chu, to accommodate a number of Chinese species with three fully sclerotised spermathecae. Unfortunately, males of these species are unknown so the correct systematic placement of these two subgenera is difficult to assess.

Within the Australasian region, relatively few species with three spermathecae have been recognised. Seven of these (three undescribed) were regarded by Dyce et al (2007) as belonging to subgenus *Trithecoides*, while the remaining six, viz *C. marksi* Lee & Reye, *C. dycei* Lee & Reye, *C. parvimaculatus* Lee & Reye, *C. pseudostigmaticus* Tokunaga, as well as two undescribed species, were not placed to subgenus but were grouped together as the *Marksi* group.

In this paper a new subgenus, *Marksomyia*, is proposed to accommodate the *Marksi* group *sensu* Dyce et al (2007). Redescriptions of *C. marksi*, *C. dycei*, *C. parvimaculatus* and *C. pseudostigmaticus* and descriptions of two new species belonging to *Marksomyia* are provided.

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