



On the genus *Diadocidia* (Diptera, Sciaroidea, Diadocidiidae) in Australia

MATHIAS JASCHHOF¹ & CATRIN JASCHHOF²

¹University of Greifswald, Zoological Institute and Museum, Bachstrasse 11/12, D-17489 Greifswald, Germany.

E-mail: mjaschhof@yahoo.de

²Jahnstrasse 7, D-17489 Greifswald. E-mail: c.jaschhof@gmx.de

Abstract

The first two Australian species of the genus *Diadocidia* Ruthe, *macrosetigera* sp. n. and *queenslandensis* sp. n., are described from Queensland. Both species are assigned to the subgenus *Adidocidia* Laštovka & Matile. As structures of the male terminalia suggest, the two Australian species are only distantly related to one another, whereas *queenslandensis* shows definite affinities to *D. (A.) papua* Ševčík from Papua New Guinea.

Key words: taxonomy, morphology, Diadocidiidae, *Diadocidia*, new species, Australia

Introduction

Diadocidiidae make up a small family of fungus gnats which comprises 23 extant and two fossil species classified in three genera, *Diadocidia* Ruthe, *Palaeodocidia* Sasakawa, and †*Docidiadia* Blagoderov & Grimaldi (Blagoderov 2007, Jaschhof & Jaschhof 2007). The genus *Diadocidia* includes the majority of species, 22 extant and one fossil, and is subdivided into three subgenera, *Diadocidia* s. str., *Adidocidia* Laštovka & Matile, and *Taidocidia* Papp & Ševčík. While most described *Diadocidia* species fit into one of the subgenera as defined by Laštovka and Matile (1972) and Papp and Ševčík (2005), other species do not (Papp & Ševčík 2005, Jaschhof & Jaschhof 2007), indicating that the present subgeneric classification is premature.

Extant *Diadocidia* species are known to occur in each of the world biogeographic regions except for the Afrotropics. Their occurrence and morphology in Australasia is scarcely documented, though. The only species hitherto named are those three described recently by Ševčík (2003) from Papua New Guinea. The presence of *Diadocidia* in Australia has been known since Tonnoir (1929), who reported on an apparently uncommon but widespread species in Tasmania. The wing photograph published of that species (l. c.: pl. XXII, fig. 3) leaves no doubt that the generic affiliation was correct, but this species has never been named or described. Matile (1989), in a reference to Colless (1963), remarked on a second unidentified species from Australia.

Here we describe two new *Diadocidia* species from the Australian continent and discuss their relationships. The specimens studied were found among Malaise trap material of minor extent, which indicates that *Diadocidia* is not as uncommon in Australia as the little information available on it from the literature might suggest. This genus can be identified readily by its distinctive wing venation figured (Fig. 2A) here for a single purpose: to encourage dipterists working in Australian woodlands to keep an eye out for *Diadocidia* and keep apart any specimens for taxonomic study. Almost 80 years after Tonnoir's (1929) first mention, our paper is the first descriptive one on members of the family Diadocidiidae in Australia—high time to do some justice to the intriguing and diverse fungus gnat fauna down under.