Zootaxa 1586: 33–38 (2007)
www.mapress.com/zootaxa/

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

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

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Abstract

The genus *Diadocidia* Ruthe is shown for the first time to be present in Costa Rica. Three species were found: *Diadocidia nigripalpis* Edwards, hitherto known to occur in the south of Brazil, and two new species, *hybrida* and *similis*. While *nigripalpis* is confirmed to belong to the subgenus *Adidocidia* Laštovka & Matile, both *hybrida* and *similis* cannot be classified on a subgeneric level, since their morphology includes features typical of both *Diadocidia* s. str. and *Adidocidia*. A key is provided to the Costa Rican species of *Diadocidia*.

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

Introduction

With 20 species described, *Diadocidia* Ruthe is by far the largest genus of the small family Diadocidiidae (Blagoderov 2007). Laštovka and Matile (1972), in their revision of the Holarctic species, subdivided this genus into *Diadocidia* s. str. and *Adidocidia* Laštovka & Matile. Later authors assigned most of their new species to either of these subgenera, until Papp and Ševčik (2005) introduced *Taidocidia* for a single new species, *globosa*, from Taiwan. Extant species of *Diadocidia* occur in all biogeographic regions except for the Afrotropics, and a fossil species is known even from Baltic amber (Blagoderov 2007).

The only Neotropical species hitherto named is *Diadocidia nigripalpis* Edwards from southern Brazil, which Laštovka & Matile (1972) classified tentatively with *Adidocidia*. There is reference to a *Diadocidia* species from Chile (Freeman 1951), which was argued to be different from *nigripalpis* (Papavero 1977), but the single specimen known of it is not now traceable in the collections of the Natural History Museum, London (Wyatt, in litt.). The presence of *Diadocidia* in the northern Neotropics including Central America was hitherto undocumented, but as shown here, at least three species do occur in Costa Rica. These are, apart from *nigripalpis*, two unnamed species that are remarkable due to the fact that they share characters typical of both *Diadocidia* s. str. and *Adidocidia*, and thus cannot be assigned to either of these subgenera. The aims of this paper are to supplement the description of *nigripalpis* and introduce the new species, *hybrida* and *similis*, thereby adding to our still inadequate knowledge of the rich fungus gnat fauna of Costa Rica.

Material and methods

Specimens were picked from Malaise samples in the care of the Instituto Nacional de Biodiversidad (INBio), Santo Domingo de Heredia, Costa Rica. In 10 of 97 samples seen we found *Diadocidia* specimens, but only three samples yielded males. Females unaccompanied by males we did not study, but we kept them separate in

Accepted by J. Moulton: 8 Aug. 2007; published: 17 Sept. 2007