



***Acamerobia inflatus* gen. n. & sp. n. from Australia (Acari: Prostigmata: Raphignathoidea: Camerobiidae) with notes on the idiosomal chaetotaxy**

QING-HAI FAN¹ & DAVID E. WALTER²

¹Key Lab of Biopesticide and Chemical Biology, Ministry of Education; College of Plant Protection, Fujian Agricultural and Forestry University, Fuzhou 350002, China

Current address: Plant Health & Environment Laboratory, Investigation & Diagnostic Centres, MAF Biosecurity New Zealand, Auckland, New Zealand. E-mail: qinghai.fan@maf.govt.nz

²Department of Biological Sciences, University of Alberta, Edmonton, Alberta, T6G 2E9 Canada. E-mail: dew@ualberta.ca

Abstract

Currently, six genera are known in the family Camerobiidae (Acari: Prostigmata). Herein we propose a new genus, *Acamerobia*, based on a new species, *Acamerobia inflatus*, from bark of *Jacaranda mimosifolia* in Brisbane, Australia, and redefine the family and provide a key to genera. We also give comments on the idiosomal chaetotaxy for the family.

Key words: Taxonomy, Australia, new genus

Introduction

The Camerobiidae forms the second largest family of the superfamily Raphignathoidea and consists of about 140 species in 6 genera (Bolland 1986; Fan 2005). Members of the family are known as free-living predators of some mites of Prostigmata (Acari), such as eriophyid mites (Eriophyoidea), false spider mites (Tenuipalpidae), tarsonemid mites (Tarsonemidae) and tydeid mites (Tydeidae), and crawlers of scale insects (Coccoidea) (De Leon 1958; Meyer 1962; Bolland 1983; Gerson *et al.* 2003). They are often found on tree stems, tree bark, grass, and straw and in leaf litter and distributed worldwide (Fan & Zhang 2005).

The first known genus of Camerobiidae, *Neophyllobius* Berlese, had been included in the family Tetranychidae until McGregor (1950) who transferred it to Stigmaeidae. Later, it was referred to Caligonellidae by Summers & Schlinger (1955) based on the anatomy of the mouthparts. Southcott (1957) proposed two families: Camerobiidae based on his genus *Camerobia*, and Neophyllobiidae based on *Neophyllobius*. He recognized them from other families of the Raphignathoidea by the absence of palptibial claws and dorsal body shields, and distinguished Camerobiidae from Neophyllobiidae by the presence of a camerostome. The idea was followed by some subsequent researchers (Summers 1966; Gerson 1968). However, Atyeo (1961) claimed, “A singular modification or absence of the palpal claw hardly warrants the elevation of a genus to family status” and synonymized Neophyllobiidae with Caligonellidae, but didn’t make any comments on Camerobiidae. Gerson (1972) synonymized Neophyllobiidae with Camerobiidae and redefined the family Camerobiidae. Bolland (1986) provided an excellent historical review of the family and erected three genera: *Decaphyllobius*, *Tillandsobius* and *Tycherobius*. Later, du Toit *et al.* (1998) added the sixth genus, *Bisetulobius*. The systematic position of the family was analyzed by Walter & Gerson (1998) and two representative genera were thought to be closely related to the genera of Xenocaligonellidae and Dasythyreidae. For this study we propose the seventh genus, *Acamerobia* **gen. n.**, based on a new species collected from bark of *Jacaranda mimosifolia* in Brisbane, Australia.