



***Riekophlebia crocina*, a new genus and species of Atalophlebiinae (Ephemeroptera: Leptophlebiidae) from the Wet Tropics bioregion of north-eastern Australia**

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Abstract

Riekophlebia crocina, a new genus and species, is described from Australia based on nymphs and adults. *Riekophlebia* belongs to a lineage that also includes the Australian genera *Austrophlebioides*, *Kirrara*, *Manggabora* and *Tillyardophlebia*.

Key words: mayflies, taxonomy, Leptophlebiidae, Australia

Introduction

There have been few taxonomic studies on the Leptophlebiidae of the Wet Tropics bioregion of north-eastern Australia. The first species to be described from the region were those by Ulmer (1916). Later, two species of the genus *Jappa* were described by Skedros and Polhemus (1986), the genus *Kalbaybaria* was established by Campbell (1993), and two northern species of *Atalomicria* were included in a revision of that genus by Campbell and Peters (1993). More recently, Christidis (2003) recorded 27 species in 13 genera from the Wet Tropics bioregion, many of which are undescribed. Formal description of these undescribed taxa commenced with the description of three species of the genus *Austrophlebioides* by Christidis and Dean (2005). In this paper I describe a new genus from the Wet Tropics bioregion of north-eastern Australia and record its phylogenetic relationship to other Gondwanan genera.

Methods

Nymphs were collected from streams by carefully removing individuals from the surface of stones with forceps. Individuals for rearing were placed in aerated containers, all other specimens were preserved in 70% ethanol. Nymphs were reared individually in chambers similar to those recommended by Edmunds *et al.* (1976). Imago wings were dissected and mounted on slides. Male genitalia were mounted in Euparal. The mouthparts, forelegs, and some abdominal gills of nymphs were also mounted in Euparal. All measurements are in millimetres. Type specimens and other material examined are lodged in the Queensland Museum (QM), Brisbane, Australia.