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***Macrocnemis gracilis*, a new genus and species of Idiocnemidinae (Zygoptera: Platycnemididae) from Papua New Guinea**

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Abstract

A new genus and species belonging to the damselfly subfamily Idiocnemidinae from Papua New Guinea, *Macrocnemis gracilis* **gen. nov. sp. nov.** is described and illustrated. It is the largest known member of the Papuan idiocnemidine radiation, and its affinities to existing genera remain unclear. The new taxon is currently known with certainty only from small streams flowing through mid-montane rainforest in the Hindenburg Range of Papua New Guinea's rugged central cordillera.

Key words: Damselfly, Platycnemididae, Idiocnemidinae, new genus, new species, Papua New Guinea

Introduction

The Old World family Platycnemididae currently holds 42 genera with more than 417 species (Schorr & Paulson 2015), predominantly found at running waters. The recent molecular revision of Zygoptera (Dijkstra *et al.* 2014) supported the finding of Gassmann (2005) and Michalski (2012) that the species occurring east of Huxley's line (Philippines, the Papuan region and the Solomons) form a monophyletic group based on, among other characters, the autapomorphic development of a crenulated wing margin (modified to form a smoothly sinuate wing margin in the Philippine genus *Igneocnemis*). Dijkstra *et al.* (2014) established the subfamily Idiocnemidinae, thereby adding four genera to those that had already been included by Gassmann (2005). These genera, previously included in Coenagrionidae, lack the crenulated wing margin. Based on their position within the molecular cladogram of Dijkstra *et al.* (2014), this scenario would require a reversal from a crenulate to a smooth wing margin. The subfamily currently holds fifteen genera with over 112 species and is especially speciose both at the genus and species level in the Papuan region (Gassmann 2005, Kalkman & Orr 2013). The eleven Papuan genera contain small to moderately large, often brightly coloured, damselflies that are closely associated with clear forest streams (e.g. Orr *et al.* 2012, 2014; Theischinger & Richards 2013).

Several specimens of a large idiocnemidine damselfly collected in the Hindenburg Range of western Papua New Guinea in 2013 show no obvious affinities with any known idiocnemidine species and do not match the morphological criteria for any of the available genera. This taxon, the largest member of the group in the New Guinea region, is described as a new genus and species below.

Material and methods

Descriptive terminology largely follows Chao (1953) and Watson & O'Farrell (1991). Colouration is given as