



***Mortonagrion indraneil* spec. nov. from Borneo, and a redescription of *M. arthuri* Fraser (Odonata: Zygoptera: Coenagrionidae)**

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Abstract

M. indraneil **spec. nov.** is described from locations in Sarawak, Malaysian Borneo. Both sexes of *M. arthuri* Fraser are re-described based on recent material. Records of *M. amoena* Ris from Borneo in fact refer to *M. indraneil*; there is no evidence that *M. amoena* occurs on Borneo. Relationships between *Argiocnemis*, *Agriocnemis* and *Mortonagrion* are discussed.

Key words: Odonata, Zygoptera, Coenagrionidae, Malaysia, Borneo, Singapore, Thailand, *Mortonagrion*, *indraneil*, *arthuri*

Introduction

The genus *Mortonagrion* Fraser, 1920 has been considered to consist of 13 species (Van Tol 2005), mostly from Asia, with one species known from Africa and another from the New Guinea region. Seven of the eleven Asian species of *Mortonagrion* are known from Sundaland: *M. aborense* (Laidlaw, 1914), *M. alcyone* (Laidlaw, 1931), *M. amoena* Ris, 1915, *M. appendiculatum* Lieftinck, 1937, *M. arthuri* Fraser, 1942, *M. falcatum* Lieftinck, 1934 and *M. forficulatum* Lieftinck, 1953. Another species clearly belonging to *Mortonagrion* as currently understood occurs in peat swamp forest in the northwest of Borneo; this species is described here as *M. indraneil* **spec. nov.**

Until recently *M. arthuri* was a very poorly known species, the only published records being Fraser's original description (Fraser 1942) and that in Asahina (1965). Recently a number of new records have been made (Tang *et al.* 2010, Kosterin *et al.* 2011), and other older specimens have come to light in museum collections. The original description in Fraser (1942) of *M. arthuri* is based on a single teneral male; a redescription of the male, based on fresh material, and the first full description of the female are given here.

The relationships of *Mortonagrion* with *Agriocnemis* Selys, 1877 and *Argiocnemis* Selys, 1877 have been unclear ever since *Mortonagrion* was erected. These relationships are discussed here. It is not possible at this time to make a definitive statement about the status of *Mortonagrion* as a whole or of some species doubtfully placed in the genus. The most promising lines of enquiry involve genital ligula structure and molecular studies, and some preliminary results are shown here.

Terminology used here for wing venation follows that in Watson & O'Farrell (1991); other terminology follows Westfall & May (1996). The code RMNH is used below for NCB Naturalis, Leiden, the Netherlands. All material collected by the author and at least initially in coll. Dow has a reference code; this code is only stated for type material and specimens for which a description is given.

***Mortonagrion arthuri* Fraser, 1942**

(Figs. 1, 2, 5, 6, 9, 11, 13, 15, 17, 19, 21, 23, 30)

Mortonagrion arthuri Fraser 1942: 97–98, figs. 1a,b, (original description male, Penang); — Lieftinck (1954: 70, distribution); — Asahina (1965: 226–227, figs. 1–4, brief description of female, illustrations of both sexes, Mergui Islands, Burma); — Kimmins (1966: 179, note on holotype); — van Tol (1992: 40); — Orr (2005: 45, illustration, male only, female considered unknown); — Tang *et al.* (2010: 71–72, distribution, photographs both sexes); — Kosterin *et al.* (2011: 12–13, Fig. 1, discussion, photograph male).