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***Calicnemia fortis* sp. nov. from Pakistan (Odonata: Zygoptera: Platycnemididae)**

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Abstract

Calicnemia fortis sp. nov. is described from Azad Jammu and Kashmir in Pakistan and compared with other group 2 species of *Calicnemia*.

Key words: Odonata, Zygoptera, Platycnemididae, *Calicnemia, fortis*, Pakistan, Azad Jammu and Kashmir, new species

Introduction

The genus *Calicnemia* Strand, 1926 has been known from India to the eastern side of China and southwards into peninsular Malaysia. Only *Calicnemia eximia* (Selys, 1863) has been recorded from Pakistan before now (e.g. Zia *et al.* 2011). In 2005 the second author collected specimens of a robust species of *Calicnemia* from Azad Jammu and Kashmir in north-eastern Pakistan. The number of postquadrangular cells (cells between the quadrilateral and the subnodus) in both fore- and hind wing is atypically high, so that the species runs out as *Indocnemis* Laidlaw, 1917, in the keys in Laidlaw (1917: 325) and Fraser (1933: 151). However, the species is clearly recognizable as *Calicnemia* by its colouration and markings, as well as the form of its genital ligula and anal appendages. The new species has no flagella on the genital ligula and hence falls into group 2 of *Calicnemia* as defined by Lieftinck (1984). It is described here as *C. fortis* sp. nov.

Terminology used here for wing venation follows that in Watson & O'Farrell (1991); other terminology largely follows Westfall & May (1996).

***Calicnemia fortis* sp. nov.**

(Figs. 1–7)

Type material. Holotype: ♂ (ODO/ZYG/217), Pakistan, Azad Jammu and Kashmir, Muzaffarabad, Noseri, 11 v 2005, leg. S. A. Zia, deposited in the National Insect Museum, Islamabad, Pakistan. **Paratype:** ♂ (ODO/ZYG/218), data as holotype.

Etymology. The species is named *fortis*, an adjective, meaning robust, referring to the strong build and relatively large size of the species.

Description of holotype male. Head: labium dark brown. Labrum black, clypeus black except for 2 small pale, widely separated spots on postclypeus. Mandible bases black. Genae dark brown adjacent to mandible bases, elsewhere dark with irregular pale markings. An indistinct pale area at junction of frons and clypeus, frons otherwise matte black, vertex and occiput same, antennae with scape and pedicel black with brown sections at top, flagellum missing. Ocelli yellowish.

Thorax (Fig. 1): Prothorax matte black with grey pruinescence covering most of propleuron, anterior lobe of pronotum and lateral anterior part of middle lobe. Synthorax matte black except for a narrow irregular yellowish stripe on metepisternum, broadest near legs where extending slightly onto mesepimeron, running above and over

that these examples will finally lay to rest the idea that the count of postquadrangular cells is a character of value for distinguishing *Calicnemia* from related genera.

With the addition of *C. fortis*, *Calicnemia* consists of 22 named species, unless *C. pyrrhosoma* Lieftinck, 1984 is recognised; this name persists on some world Odonata checklists although it was established as a junior synonym of *C. doonensis* Sangal & Tyagi, 1984 by Hämäläinen (1989). Yu & Bu (2008) commented on the extent of variability of markings with age and possibly location in *C. sinensis* Lieftinck, 1984, and geographical variation in markings may occur in other species, so that caution is needed in separating species based entirely on colour patterns. However, structural differences in ligula and caudal appendages are also often subtle, rendering *Calicnemia* a difficult genus to work on. As noted by Yu & Chen (2013), some of the Chinese species “seem to be closely related, and more detailed studies are needed to clarify their true relationships”; we can only extend this statement to the whole genus.

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