



Descriptions of the final instar larvae of three Chinese *Idionyx* species (Odonata: Anisoptera: Corduliidae)

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Abstract

The larvae of *Idionyx carinata* Fraser, 1926, *I. selysi* Fraser, 1926 and *I. victor* Hämäläinen, 1991 are described and illustrated for the first time based on final stage larvae reared in laboratory. *Idionyx selysi* is newly recorded from China. A generic diagnosis and biological information are provided.

Key words: Odonata, Anisoptera, *Idionyx*, larvae

Introduction

The genus *Idionyx* is characterized by its small sized, metallic green body and yellow maculation. Up to the present, 27 species of the genus are known (Schorr et al. 2009), all restricted to the Oriental Region. Six species are known from China, i.e. *I. carinata* Fraser, 1926, *I. claudia* Ris, 1912, *I. stevensi* Fraser, 1924, *I. unguiculata* Fraser, 1926, *I. victor* Hämäläinen, 1991, and *I. yunnanensis* Zhou et al., 1994 (Ris 1912; Fraser 1924, 1926; Needham 1930; Hämäläinen 1991; Zhou et al. 1994; Wilson & Reels 2001; Wilson 1996, 2005). However, the larval stage of *Idionyx* has been described for only two species, *I. montana* Karsch, 1891 and *I. stevensi* (Lieftinck 1971, Butler 2007). In this paper, we describe the final instar larvae of three *Idionyx* species for the first time: *I. carinata* Fraser, *I. selysi* Fraser, and *I. victor* Hämäläinen. Among them, *I. selysi*, originally described from Upper Burma and known also from Thailand and Laos, is here recorded from China for the first time. The association of larva and adult is confirmed by the specimens reared in the laboratory.

All examined specimens are deposited in the Collection of Aquatic Insects and Soil Animals, Department of Entomology, South China Agricultural University, Guangzhou, China. Mandibular terminology and formulae follow Watson (1956), and S = abdominal segment(s).

Generic definition for larvae. The larvae of Corduliidae possess very long legs and depressed circular abdomen, giving them a 'spidery' appearance. Labium is mask-shaped with long, regular teeth along the distal margins of the palpal lobes. Setae usually occur on the prementum and palpal lobes. Larvae of *Idionyx* are easily distinguished from other corduliids in the genera *Macromia*, *Macromidia*, and *Hemicordulia* by their strongly divergent wing pads and relatively small sized body. All final instar larvae of *Idionyx* share the following combination of characters:

- 1) Small sized with body length usually less than 20 mm.
- 2) Antennae filiform, 7-segmented.
- 3) Labial mask broad, apex of prementum not bifid, with robust setae, and its distal margin without conspicuous crenulations, with robust setae on each side. The palpal lobes strongly developed, their inner margin with 8 teeth and all carrying marginal setae at the apex.
- 4) Wing pads strongly divergent and extending to or beyond S₆.