

## **Article**



## Revision of the fishfly genus *Neochauliodes* van der Weele (Megaloptera: Corydalidae) from India and adjacent regions of South Asia

XINGYUE LIU<sup>1,2</sup>, FUMIO HAYASHI<sup>2</sup> & DING YANG<sup>1</sup>

Department of Entomology, China Agricultural University, Beijing 100193, China. E-mail: liu\_xingyue@yahoo.com.cn

## **Abstract**

A revision of the fishfly genus *Neochauliodes* van der Weele from India and its adjacent regions in South Asia is presented. Seven species are recorded and re-described from Bangladesh, Bhutan, India, and Nepal, with one species described as new to science. A key to the adults of the *Neochauliodes* from South Asia is also given.

Key words: Chauliodinae, Neochauliodes, taxonomy, India, South Asia

## Introduction

Indian subcontinent is one of the most biologically diverse regions in the world. The number of described insect species in India has reached more than 61,000, perhaps as much as 7% of the world species (Ramakrishna & Alfred 2007). The adjacent regions of India in South Asia, i.e. Bangladesh, Bhutan, the Maldives, Nepal, Pakistan, and Sri Lanka, also host a considerably rich insect fauna. However, the Megaloptera of India and adjacent regions remains poorly described. In the monograph of van der Weele (1910), 14 species of Megaloptera from India were recorded, all of them belonging to the family Corydalidae. Ghosh (2000) recently reviewed the Neuroptera from northeast India, reporting 20 species of megalopterans, and providing keys to genera and species. However, the Ghosh (2000) revision missed several important references (e.g. Kimmins 1948, 1954), did not examine sufficient material, and perpetuated older errors, resulting in the misuse of several names of invalid and New World endemic taxa. Megaloptera from adjacent south Asian regions are even more poorly known with only four species recorded from Bangladesh and Nepal (van der Weele 1910; Kimmins 1948, 1954; Glorioso 1981). In recent years, the megalopteran fauna of southeast Asia has become better known (Liu *et al.* 2007b, 2008, 2009). In this paper we summarize the fauna of the fishfly genus *Neochauliodes* van der Weele, 1909 from India and adjacent regions of South Asia.

*Neochauliodes* is the largest genus of the subfamily Chauliodinae, which includes more than 40 species and is widely distributed from tropical and temperate Asia. The genus is characterized by sexual dimorphic antennal structure (pectinate segments in males, subserrate in females) and feebly sinuate 1A and 2A veins of the forewing. Most species can be also distinguished by a transverse band-like marking or a series of spots arranged band-like and located medially on the forewing.

The species of *Neochauliodes* from eastern and southeastern Asia were revised by Liu & Yang (2005a, b, 2006), Liu (2008), and Liu *et al.* (2007b, 2010a, b). The present revision is the last paper of our recent systematic work on the genus *Neochauliodes*. In this paper, seven species of *Neochauliodes* are recorded from Bangladesh, Bhutan, India, and Nepal. One species is described as new to science and the other six species are redescribed, with the first genitalic descriptions of the male of *Neochauliodes subfasciatus* (Westwood, 1848) and the females of *Neochauliodes fletcheri* Kimmins, 1954, *Neochauliodes indicus* (van der Weele, 1907), *Neochauliodes obscurus* van der Weele, 1909, and *Neochauliodes simplex* (Walker, 1853). A key to the *Neochauliodes* species from India and adjacent regions of south Asia is also given.

<sup>&</sup>lt;sup>2</sup>Department of Biology, Tokyo Metropolitan University, Minamiosawa 1–1, Hachioji, Tokyo 192–0397, Japan