



## Six new species and 1 new species record of *Orthotrichia* (Trichoptera: Hydroptilidae) from China

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### Abstract

Six new species of the caddisfly genus *Orthotrichia* are described and illustrated from China, namely *Or. apophysis* Zhou & Yang, **sp. nov.**; *Or. latiramifera* Zhou & Yang, **sp. nov.**; *Or. cornuta* Zhou & Yang, **sp. nov.**; *Or. discedata* Zhou & Morse, **sp. nov.**; *Or. cuspidigera* Zhou & Yang, **sp. nov.**; and *Or. subrhomba* Zhou & Morse, **sp. nov.**. One species, *Or. terpsichore* Malicky & Chantaramongkol, 2007, is recorded for the first time from China, bringing the number of species of the genus known from China to 14. Of these, 10 species are distributed among 3 species groups of Marshall (1979), with 4 species unassigned. The known distributions for all the Chinese *Orthotrichia* species are provided.

**Key words:** Trichoptera, Hydroptilidae, *Orthotrichia*, China

### Introduction

*Orthotrichia* is one of the most successful genera in Hydroptilidae, with an almost continuous world-wide distribution. There are 203 species of *Orthotrichia* species currently known globally, with species from all biogeographic regions except the Antarctic (Morse 2009). However, this genus is predominantly distributed in the Oriental (76 species) and Australasian Biogeographic Regions (71 species) (Morse 2009). Wells (1986) estimated that the genus *Orthotrichia* is more diverse in Australia than elsewhere in the world. Only 7 species of *Orthotrichia* have been documented from China since Wang Shi-Da first reported *Or. costalis* (Curtis), 1834, and *Or. tragetti* Mosely, 1930, from Hubei, China, in 1963 (Oláh 1989, Wang 1963, Xue 1989, Xue & Yang 1990, 1991, Yang & Xue 1992, Wells & Dudgeon 1990). From 1990 to 2005, the junior authors have organized 5 expeditions in the southeastern, southwestern, northwestern, and central parts of China. As a result, 6 new species and 1 new species record for China have been discovered, doubling the number of Chinese *Orthotrichia* species to 14.

Larvae of *Orthotrichia* are associated with aquatic vegetation in standing waters (Marshall 1979) and also are found on or under rocks in streams (Wells *et al.* 1990). Our adult specimens were collected in similar habitats in Jiangxi, Sichuan, Guangxi, and Fujian Provinces, southeastern China, during May to July, in the years 1990, 2004 and 2005.

Wells (1979, 1983) and Marshall (1979) discussed the species groups for genus *Orthotrichia*. Wells recognized 4 species groups and provided some characters for each group; Marshall recognized 5 species groups and provided a few characters for 4 of them. This paper follows Marshall's (1979) species group system, except the *Or. litoralis* Group is not separated from the *Or. angustella* Group as Marshall suggested.

The morphological terms follow those of Marshall (1979) and Wells (1979). All the specimens are stored in 80% ethyl alcohol and deposited in Insect Collection of Nanjing Agricultural University.