



## Six new *Orchestina* species from Hainan Island, China (Araneae, Oonopidae)

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### Abstract

Six new species of the genus *Orchestina* are described: *O. aureola* **sp. nov.**, *O. clavulata* **sp. nov.**, *O. truncatula* **sp. nov.**, *O. tubulata* **sp. nov.**, *O. yinggezui* **sp. nov.** and *O. zhengi* **sp. nov.** All species were collected on Hainan Island (China) by canopy fogging.

**Key words:** Taxonomy, spider, forest canopy, haplogyne

### Introduction

Oonopidae are very small, free-living, mostly ground-dwelling spiders. They are haplogyne and usually have six eyes, which are grouped close together (Saaristo & van Harten 2002). The genus *Orchestina* Simon, 1882 is characterized by a thickened femur IV, and males have a well-defined seminal duct in the palpal bulb (Saaristo 2001; Saaristo & van Harten 2006). At present, 45 species have been described. Only two species, *Orchestina sinensis* Xu, 1987 and *Orchestina thoracica* Xu, 1987, have been recorded from China (Platnick 2011; Xu 1987).

Until recently, *Orchestina* had been collected only from leaf litter and humus, in foliage of low shrubs and under bark. However, in the last decade, new collecting techniques have shown that *Orchestina* species are also present in the tree canopy (e.g. Fannes *et al.* 2008). In August 2010, Guo Zheng carried out a canopy fogging survey on Hainan Island, China. A large number of spider species was collected, including six new species of the genus *Orchestina*.

### Material and methods

The specimens were examined using a Leica M205C stereomicroscope. Details were studied under an Olympus BX51 compound microscope. All illustrations were made using a drawing tube and inked on ink jet plotter paper. Photos were made with a Canon EOS 550D zoom digital camera (18 megapixels) mounted on an Olympus BX51 compound microscope. Vulvae were cleared in lactic acid. Descriptions were generated with the aid of the Species Descriptive Database of the oonopid Planetary Biodiversity Inventory project and shortened where possible (see <http://research.amnh.org/oonopidae/>). Terminology of female genitalia partly follows Burger *et al.* (2010). All measurements were taken using an Olympus BX51 compound microscope and are in millimeters.

The following abbreviations are used in the text: ALE = anterior lateral eyes; PLE = posterior lateral eyes; PME = posterior median eyes; used in the illustrations: Csc = circular sclerite; Dc = duct; Dp = dorsal plate; Op = ellipse shaped openings; Pr = lateral protrusions; Sc = sclerite; Ssc = semicircular sclerite; Tsc = thin stick shaped sclerite; Va = vague arch; Vm = ventral membrane.

All specimens are deposited in the Institute of Zoology, Chinese Academy of Sciences in Beijing (IZCAS).