



The *Notiocoelotes* spiders (Araneae: Agelenidae) from Hainan Island, China

JIE LIU^{1,2} & SHUQIANG LI^{1,3}

¹Institute of Zoology, Chinese Academy of Sciences, Beijing 100101, China

²College of Life Sciences, Hubei University, Wuhan 430062, China

³Corresponding author. E-mail: lisq@ioz.ac.cn

Abstract

Six species of the genus *Notiocoelotes* Wang, Xu & Li, 2008, including four species newly described here, are known from Hainan Island, China. These are: *N. lingulatus* Wang, Xu & Li, 2008 (female); *N. membranaceus* **sp. nov.** (male); *N. orbiculatus* **sp. nov.** (female, male); *N. palinitropus* (Zhu & Wang, 1994) (female, male); *N. pseudolingulatus* **sp. nov.** (female); and *N. spirellus* **sp. nov.** (female, male). All of these species are illustrated and taxonomically distinguished via a dichotomous key.

Key words: New species, endemism, taxonomy, diagnosis, Coelotinae

Introduction

F.O.P.-Cambridge's subfamily Coelotinae is the most diverse subfamily in the family Agelenidae. Currently, 583 species of coelotins are known worldwide, comprising more than 50% of agelenid species (Wang 2010, Platnick 2010). The phylogenetic position of the subfamily Coelotinae, currently in the Agelenidae but formerly in the Amaurobiidae, was recently reevaluated (Wang 2002, Bi *et al.* 2005, Miller *et al.* 2010). The genus *Notiocoelotes* was established by Wang *et al.* (2008) with five known species: *N. palinitropus* (Zhu & Wang, 1994) and *N. lingulatus* Wang, Xu & Li, 2008 from Hainan, China; *N. laosensis* Wang, Xu & Li, 2008 from Khammouan, Laos; *N. sparus* (Dankittipakul, Chami-Kranon & Wang, 2005) from Nakhon Ratchasima, Thailand; and *N. vietnamensis* Wang, Xu & Li, 2008 from Huong Son, Vietnam (Platnick 2010, Wang *et al.* 2008). The known species of the genus *Notiocoelotes* are restricted to the northern regions of Southeast Asia (Huong Son in northern Vietnam, Khammouan in central Laos, Nakhon Ratchasima in central Thailand) and Hainan Island in southern China. Females of *Notiocoelotes* can be distinguished from other coelotine species by the presence of tongue-shaped scape on the posterior atrium (Figs 1B, 5B, 7B, 9B, 10A, 11B, 13B, 15B) and males by the presence of a strongly bifurcated lateral tibial apophysis (Figs 2C, 3D, 4B, 6D, 8C, 12B, 14D).

Hainan is a tropical island located in the South China Sea separated from the mainland by the Qiongzhou Strait, which is 18–40 km wide and 80 km long (Fig. 16). Endowed with a wealth of natural resources that include tropical forests, mountains, mangroves, and beaches, Hainan is recognized as one of the most biologically diverse regions in the world (Ouyang *et al.* 2001). Due to its isolation and active speciation, Hainan Island is well known for the high levels of endemism exhibited by many taxa (Song *et al.* 2002).

An extensive faunal survey of Hainan Island over a period of five years (2007–2011) is being carried out by the Chinese Academy of Sciences. Recent fieldwork has yielded six species of *Notiocoelotes*: *N. palinitropus*, *N. lingulatus*, *N. membranaceus* **sp. nov.**; *N. orbiculatus* **sp. nov.**; *N. pseudolingulatus* **sp. nov.** and *N. spirellus* **sp. nov.**

The absence of cymbial furrow (Figs 4B, 6D, 12B, 14D) and the extremely short RTA (Figs 4B, 6D, 12B, 14D) distinguish *N. orbiculatus* **sp. nov.** and *N. spirellus* **sp. nov.** from all other members of the subfamily Coelotinae. However, the presence of a tongue-shaped atrial scape on posterior atrium in females (Figs 5B,