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Pholcid spiders of the genus *Khorata* Huber, 2005 (Araneae: Pholcidae) from Guangxi, China

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Abstract

Eighteen species of the genus *Khorata* Huber, including 16 new species, are reported from Guangxi, China: *Khorata digitata* sp. nov., *K. dongkou* sp. nov., *K. epunctata* sp. nov., *K. flabelliformis* sp. nov., *K. fusui* Zhang & Zhu, 2009, *K. guiensis* sp. nov., *K. liuzhouensis* sp. nov., *K. luojinensis* sp. nov., *K. macilenta* sp. nov., *K. miaoshanensis* sp. nov., *K. nanningensis* sp. nov., *K. ningming* Zhang & Zhu, 2009, *K. paquini* sp. nov., *K. robertmurphyi* sp. nov., *K. rongshuiensis* sp. nov., *K. shao* sp. nov., *K. triangula* sp. nov. and *K. wangae* sp. nov.

Key words: Taxonomy, morphology, new species, cave, Southeast Asia

Introduction

The Pholcidae, the ninth largest spider family, includes 84 genera and 1084 species, of which 12 genera and 101 species are recorded from China (Zhang & Zhu 2009a; Gao & Li 2010; Li & Wang 2010; Platnick 2010; Tong & Li 2010). Pholcids are small to medium-sized, ecribellate, haplogyne spiders, and they have a global distribution. They can be easily distinguished from other families by the following characters: clypeus about as high as chelicerae, male chelicerae with sexual modifications, male palp with prominent retrolateral paracymbium (procurus), tibiae of walking legs with three trichobothria, and tarsi with pseudosegments (Huber 2000). Recent revisions (Wunderlich 1992; Huber 2000, 2001, 2003a, 2003b, 2003c, 2005a, 2005b, 2009; Senglet 2001; Bruvo-Madžarić *et al.* 2005; Astrin *et al.* 2007; Dimitrov & Ribera 2007; Dimitrov *et al.* 2008; Huber & Astrin 2009; Zhang & Zhu 2009b) have removed much taxonomic confusion in this family.

The small genus *Khorata*, established by Huber (2005b), contains 9 species from southern China, Laos and Thailand: *K. bangkok* Huber, 2005, *K. diaoluoshanensis* Tong & Li, 2008, *K. fusui* Zhang & Zhu, 2009, *K. jaegeri* Huber, 2005, *K. khammouan* Huber, 2005, *K. ningming* Zhang & Zhu, 2009, *K. schwendingeri* Huber, 2005, *K. xingyi* Chen, Zhang & Zhu, 2009 and *K. zhui* Zhang & Zhang, 2008 (Huber 2005b; Tong & Li 2008; Zhang & Zhang 2008; Chen *et al.* 2009; Zhang & Zhu 2009a). The genus can be diagnosed by the shallow thoracic furrow, the sclerotized ledges on the frontolateral surface of the male chelicerae, the sclerotized proximal cheliceral apophyses, the apophysis presented retrolaterally on the male palpal femur, the relatively small male palpal tibia, a membranous embolus, and the absence of posterior pockets on the female opisthosoma (Huber 2005b).

Located in southern China, Guangxi (officially known as Guangxi Zhuang Autonomous Region) extends about 610 kilometers from north to south and about 750 kilometers from east to west and covers more than 230,000 km². Guangxi has typical karst landforms. A total of 18 *Khorata* species from Guangxi, including 16 new species collected near the entrances of caves, are studied in this paper.

Material and methods

Specimens were examined and measured with a LEICA M205 C stereomicroscope, details were studied with an Olympus BX51 compound microscope. Illustrations were made using a camera lucida attached to the Olympus BX51 microscope, and inked to an ink jet plotter. Male palps and female genitalia were examined and illustrated after they were dissected from the spiders. Vulvae were removed and treated in 10% warm solution of potassium hydroxide (KOH) before illustration. Left palps of male spiders were illustrated, except as otherwise indicated. Type specimens were preserved in 75% ethanol solution. Photos were taken with an Olympus C7070 wide zoom digital camera (7.1 megapixels) mounted on an Olympus SZX12 stereomicroscope. The images were montaged using Helicon image stacking software. All measurements were given in millimeters unless otherwise noted. Leg measurements are shown as: total length (femur + patella + tibia + metatarsus + tarsus). Leg segments were measured on their dorsal side. Terminology and taxonomic descriptions follow Huber (2000, 2005b).

The following abbreviations are used: ALE, anterior lateral eye; AME, anterior median eye; PLE, posterior lateral eye; PME, posterior median eye; e, embolus; pp, pore plate; pr, procurus.