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The crab spiders of the genus *Lysiteles* from Yunnan Province, China (Araneae: Thomisidae)

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Abstract

This paper describes or redescribes 25 species of crab spiders of the genus *Lysiteles* (Araneae: Thomisidae) from Yunnan Province, China, including: 12 new species (*L. arcuatus* **sp. nov.,** *L. auriculatus* **sp. nov.,** *L. clavellatus* **sp. nov.,** *L. conflatus* **sp. nov.,** *L. corrugus* **sp. nov.,** *L. curvatus* **sp. nov.,** *L. distortus* **sp. nov.,** *L. guoi* **sp. nov.,** *L. spirellus* **sp. nov.,** *L. subdianicus* **sp. nov.,** *L. transversus* **sp. nov.**and *L. uniprocessus* **sp. nov.**); 3 new records for China (*L. himalayensis* Ono, 1979; *L. niger* Ono, 1979 and *L. punctiger* Ono, 2001); and 10 species previously known from China (*L. ambrosii* Ono, 2001, *L. bhutanus* Ono, 2001, *L. conicus* Tang, Yin, Peng, Ubick & Griswold, 2007, *L. davidi* Tang, Yin, Peng,

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Ubick & Griswold, 2007, *L. dentatus* Tang, Yin, Peng, Ubick & Griswold, 2007, *L. dianicus* Song & Zhao, 1994**,** *L. kunmingensis* Song & Zhao, 1994**,** *L. maius* Ono, 1979**,** *L. saltus* Ono, 1979**,** and *L. torsivus* Zhang, Zhu & Tso, 2006). The males of *L. punctiger* and *L. dianicus* are described here for the first time. Of these 25 *Lysiteles* species, 24 were collected from the Gaoligong Mountains, Yunnan Province. Detailed morphological characters, distribution map, photos and illustrations of the habitus and genital organs are given to each species except for the five ones reported in the paper by Tang *et al.* (2007) (*L. ambrosii*, *L. bhutanus*, *L. conicus*, *L. davidi* and *L. dentatus*). All species are described in alphabetic order. The key to species of the genus *Lysiteles* from Yunnan Province is presented.

Key words: Taxonomy, new species, new records, Gaoligong Mountains

Introduction

The genus *Lysiteles* was established by Simon (1895) for the type species *L. catulus* Simon, 1895 from India. It contains small Thomisidae (total length from 2.0 to 4.5 mm) that are mainly found in southern and eastern Asia (Ono 1988). Most species have conspicuous blackish brown markings on the dorsal shield of the prosoma and on the dorsum of the opisthosoma, these markings are often variable in size and pigmentation even in the same species. Some different species have similar general appearance. The cervical groove, radial grooves and fovea are indistinct. The distance between the eyes is as follows: ALE > PLE > AME > PME. Spiders of the genus *Lysiteles* typically inhabit grasses, shrubs, tree foliage and leaf litter. It is difficult to collect *Lysiteles* in the field because of their small size. Almost 50% of the known species have been described from few specimens of a single sex.

In recent years, Ono (1979, 1980, 1988, 2001) and Ono *et al.* (1990) described 23 species of *Lysiteles*. At present, a total of 42 species are described, including the following 24 from China: *L. ambrosii* Ono, 2001, *L. amoenus* Ono, 1980, *L. anchorus* Zhu, Lian, & Ono, 2004, *L. badongensis* Song & Chai, 1990, *L. bhutanus* Ono, 2001, *L. amoenus* Tang, Yin, Peng, Ubick & Griswold, 2007, *L. coronatus* (Grube, 1861), *L. davidi* Tang, Yin, Peng, Ubick & Griswold, 2007, *L. dentatus* Tang, Yin, Peng, Ubick & Griswold, 2007, *L. dianicus* Song & Zhao, 1994, *L. digitatus* Zhang, Zhu & Tso, 2006, *L. hongkong* Song, Zhu & Wu, 1997, *L. inflatus* Song & Chai, 1990, *L. kunmingensis* Song & Zhao, 1994, *L. linzhiensis* Hu, 2001, *L. maius* Ono, 1979, *L. mandali* (Tikader, 1966), *L. minimus* (Schenkel, 1953), *L. minusculus* Song & Chai, 1990, *L. qiuae* Song & Wang, 1991, *L. saltus* Ono, 1979, *L. silvanus* Ono, 1980, *L. torsivus* Zhang, Zhu & Tso, 2006, *L. wenensis* Song, 1995 (Song & Zhao 1994; Song & Zhu 1997; Hu 2001; Zhu *et al.* 2004; Zhang *et al.* 2006; Platnick 2007; Tang *et al.* 2007).

The Gaoligong Mountains of Yunnan Province lie in the southwest of China. This region is one of the 34 biologically richest hotspots in the world (Conservation International 2007). Past studies have recorded one new genus of crab spiders and five species of *Lysiteles* from this region (Tang *et al.* 2006, 2007). Recent examination of Thomisidae from Yunnan Province turned up 20 additional species, including nineteen species from Gaoligong Mountains and one additional species from Kunming City, Yunnan Province.

The many new species found in this study show that there is still much work to be done in this genus: more field work as well as a thorough examination of new and old material. Some species with only one known sex need be associated with the missing sex, and some records perhaps representing misidentifications need to be reviewed.

Material and Methods

All observed specimens have been collected from P. R. CHINA, Yunnan Province during the surveys conducted by the California Academy of Sciences (CAS) and the Hunan Normal University (HNU) from 1998 to 2006. Specimens were described and illustrated under an Olympus SZ11 dissecting stereomicroscope. Photos