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New Coelotine spiders from Xishuangbanna Rainforest, Southwestern China (Araneae: Amaurobiidae)

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Abstract

Four new species of coelotine species from Xishuangbanna Rainforest, Yunnan, China are described: *Coelotes forficatus* **sp. nov.**, *Draconarius bannaensis* **sp. nov.**, *Draconarius exiguus* **sp. nov.** and *Draconarius turriformis* **sp. nov.** Morphological descriptions and illustrations of all the four new species are given. The type specimens are deposited in the Institute of Zoology, Chinese Academy of Sciences in Beijing.

Key words: Taxonomy, new species, diagnosis, morphology, tropical forest

Introduction

The tropical forest of Xishuangbanna, a forest reserve transitional from a subtropical zone, contains more species diversity than similar forests in Southeast Asia (Zhu *et al*. 2006). It is a key area for biogeographic studies and a hotspot for biodiversity (Myers 1988). Since the 1960s, Xishuangbanna suffered from anthropogenic influences, in particular the development of exotic rubbe plantations. This development has caused a significant loss of indigenous rainforests and brought irreversible ecological effects. The destruction of natural habitats has resulted in the need for biodiversity assessments to form conservation and management decisions (Tsai *et al*. 2006).

Spiders are among the most diverse and abundant invertebrate predators in terrestrial ecosystems (Wise 1993, Nyffeler 2000). A year-long spider survey in Xishuangbanna (July 2006–August 2007) using ground and trunk pitfall traps, and active searching was carried out in six types of forest: primary tropical seasonal rain forest, secondary tropical seasonal moist forest, secondary tropical seasonal rain forest, *Paramichelia baillonii* plantation, rubber–tea plantation, and rubber plantation. These surveys yielded four new species of coelotine spiders in the genera *Coelotes* and *Draconarious*.

Coelotes and *Draconarious* are the two most diverse genera in the subfamily Coelotinae. Currently, 177 species of *Coelotes* are known worldwide, among which 44 are recorded from China. Similarly, 150 species of *Draconarious* are known worldwide, among which 110 are recorded from China (Platnick, 2010). Recently, many new Chinese species belonging to these two genera were described (Xu & Li 2008, Xu & Li 2007a, b, c, Xu & Li 2006a, b, Zhang 2005). However, evidence for the monophyly of both *Coelotes* and *Draconarius* is less than convincing. Wang (2002, 2003 and 2010) have done a great service on these two genera, especially by creating a website on the Coelotinae. The greatest strength of this website is listing all known species with detailed morphological illustrations, creating a kind of virtual revision in progress, and providing a rich treasury for further studies on the phylogeny of known species in these two genera. With more and more new species to be discovered and described in the future, this website will play a more important role on the future revisions on these genera.

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