



## Four new troglophilous species of the genus *Belisana* Thorell, 1898 (Araneae, Pholcidae) from Guizhou Province, China

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### Abstract

Four new troglophilous, six-eyed pholcid spiders belonging to the genus *Belisana* from caves in Shuicheng County, Zhijing County, Xishui County and Yanhe Tujia Autonomic County, Guizhou, China, are diagnosed, described and illustrated: *Belisana douqing* sp. nov., *B. daji* sp. nov., *B. xishui* sp. nov., and *B. yanhe* sp. nov..

**Key words:** Pholcidae, new species, *Belisana*, cave, Guizhou, China

### Introduction

Pholcids are small to medium-sized, cribellate, haplogyne spiders, usually with eight or six eyes, rarely with two, but cave species are often blind (Huber, 2000). Because traditionally many European taxonomists started with European taxa before expanding to the tropics and because pholcids are poorly represented in Europe, most taxonomists were not well prepared to the diversity encountered in the tropics (B.A. Huber, pers. comm.). The family has an almost worldwide distribution and occupies a wide range of ecosystems and habitats. Many species have been found in caves, and some of these are highly troglomorphic, which includes the total loss of eyes and color. The family is currently represented by 85 genera and 1000 species world-wide (Platnick, 2008; Zhang, Chen & Zhu, 2008), with 56 species belonging to 10 genera in China.

Thorell (1898) established the genus *Belisana* and Huber (2005) reviewed the genus and described many new species. Up to now, 71 species of *Belisana* have been described, including 14 Chinese species. The known species in China are: *Belisana rollofoliolata* (Wang, 1983; Huber, 2005), *B. anhuiensis* (Xu & Wang, 1984; Huber, 2005), *B. yadongensis* (Hu, 1985; Huber, 2005), *B. junkoae* (Irie, 1997; Huber, 2005), *B. forcipata* (Tu, 1994; Huber, 2005), *B. nujiang*, *B. pianma* (Huber, 2005); *B. mainling*, *B. gyirong* (Zhang, Zhu & Song, 2006); *B. zhang* (Tong & Li, 2007); *B. aliformis*, *B. huberi*, *B. lamellaris* (Tong & Li, 2008), and *B. tongle* (Zhang, Chen & Zhu, 2008).

*Belisana* is widely distributed between Southeast Asia, India, Japan, and northern Australia. Most species have been collected in primary tropical forests, either from leaf litter or from the underside of leaves, some occur even in fruit plantations, some are found in caves (Huber 2005). The purpose of this contribution is to describe four new species of *Belisana* from caves in Shuicheng County, Zhijing County, Xishui County and Yanhe County, all Guizhou Province, southwestern, sub-tropical China. Males and females of all species are described.

Guizhou has the country's longest (Shuanghe Cave, Suiyang County) and biggest (Getuhe Cave, Ziyun County) caves in China, roughly grouped into three major regions: Northern Guizhou, Southern Guizhou and Southwestern Guizhou. Because climate and geology in this area tend to produce caves that are more voluminous and better decorated than elsewhere in the country, Guizhou has the greatest number of caves in