



## Notes on three poorly known *Arctosa* species from China (Araneae: Lycosidae)

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### Abstract

Three species of the genus *Arctosa* are revised and their relationship with *A. cinerea*, the type species of the genus, is discussed. *Arctosa binalis* Yu & Song, 1988 is a junior synonym of *A. depectinata* (Bösenberg & Strand, 1906). Males of *Arctosa gougu* Chen & Song, 1999 and *Arctosa vaginalis* Yu & Song, 1988 are described for the first time. All specimens examined were collected from the Yunnan Province, China. Morphological illustrations, photos, descriptions and SEM photographs of the male bulbus of all species are given. Stridulatory files on chelicerae in Lycosidae are reported for the first time.

**Key words:** Taxonomy, wolf spiders, morphology, redescription, distribution

### Introduction

The wolf spider genus *Arctosa* C.L. Koch, 1847 with 171 species (Platnick 2012), is one of the largest genera of Lycosidae. The genus has been relatively well revised in Europe (Lugetti & Tongiorgi 1965), the Nearctic (Dondale and Redner 1983) and Japan (Tanaka 2009). In this genus, 78 species are known from only one sex (16 from males and 62 from females). Although the genus has an almost global distribution and is absent only in Australia, most of the inadequately known species were described from Africa, South America and Southeast Asia. In China, 10 of 31 *Arctosa* species are known from a single sex, three from males (*A. binalis* Yu & Song, 1988; *A. liujiapingensis* Yin *et al.*, 1997; *A. tridentata* Chen & Song, 1999) and seven from females (*A. gougu* Chen & Song, 1999; *A. ningboensis* Yin, Bao & Zhang, 1996; *A. pichoni* Schenkel, 1963; *A. schensiensis* Schenkel, 1963; *A. swatowensis* (Strand, 1907); *A. vaginalis* Yu & Song, 1988; *A. ziyunensis* Yin, Peng & Bao, 1997). One species, *A. kansuensis* (Schenkel, 1936), is known from the juvenile holotype only and therefore is to be considered *nomen dubium*.

While working with wolf spiders from the Yunnan Province, we found samples that contained both sexes of two species previously known only from females (*A. gougu* and *A. vaginalis*) and one species previously known only from males (*A. binalis*). Therefore, we decided to redescribe these three species. While redescribing *A. binalis*, we recognized that both females and males show no differences with *A. depectinata* (Bösenberg & Strand, 1906), a species known from Japan and China (Chen & Song 1999) and came to the conclusion that the two species should be synonymised. The aim of our paper is to provide detailed descriptions of *A. gougu*, *A. depectinalis* and *A. vaginalis*, and compare them with the type species of the genus, *A. cinerea* (Fabricius, 1777).

### Material and methods

All specimens are preserved in 75% ethanol and were examined, illustrated, photographed and measured using a Leica M205C stereomicroscope equipped with a drawing tube, a Leica DFC425 Camera and LAS software (Ver.