



## Notes on the spider genus *Lathys* Simon, 1884 (Araneae: Dictynidae), with description of four new species from China

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### Abstract

Four *Lathys* species of the family Dictynidae have been previously recorded from China. Our study showed that they were either wrongly placed or misidentified. In this paper, four new *Lathys* species are described: *L. borealis* **sp. nov.** (male, female), *L. spiralis* **sp. nov.** (female) *L. subalbertya* **sp. nov.** (male, female) and *L. subhumilis* **sp. nov.** (male, female). Photos of the North American species *L. alberta* Gertsch, 1946 are provided for comparison purposes.

**Key words.** Misidentification, distribution, taxonomy

### Introduction

The dictynid spider genus *Lathys* Simon, 1884 consists of 40 species known from North Africa, Europe, Asia and North America (Platnick 2012). The recent studies on this genus include Chamberlin & Gertsch (1958) who described eight species from North America, Marusik *et al.* (2009a, 2009b) who described four species from Europe, and Ono & Ogata (2009) who recorded five species from Japan. The existence of intraspecific variation made the revision of *Lathys* difficult (Lehtinen 1967).

Four *Lathys* species were recorded from China: *L. changtunensis* Hu, 2001 from Tibet (female), *L. chishuiensis* Zhang *et al.*, 2009 from Guizhou (both sexes), *L. humilis* (Blackwall, 1855) from Gansu, Shanxi, Shandong and Hebei (Schenkel 1936, Zhu & Shi 1983, Hu 1984, Song *et al.* 2001), and *L. stigmatisata* (Menge, 1869) from Taiwan, Anhui, Zhejiang and Xinjiang (Lee 1964, Wang & Xu 1987, Chen & Zhang 1991, Hu & Wu 1989). The examination revealed that they were misidentified or wrongly placed. *L. changtunensis* and *L. chishuiensis* should be excluded from *Lathys*, the former is a member of *Ajmonia* Caporiacco, 1934. So-called “*L. humilis*” and “*L. stigmatisata*” from China are different from those from Europe redescribed by Marusik *et al.* (2009a, 2006a). No true *L. humilis* and *L. stigmatisata* could be identified from China, and we assume that they do not occur in China. In this study, four new *Lathys* species are recorded. Three of them, *L. borealis* **sp. nov.**, *L. subhumilis* **sp. nov.** and *L. subalbertya* **sp. nov.** are described based on both sexes and *L. spiralis* **sp. nov.** is described only by females. *L. borealis* **sp. nov.**, *L. spiralis* **sp. nov.** and *L. subhumilis* **sp. nov.** are assigned to the *L. humilis* group (Marusik *et al.* 2009a) and *L. subalbertya* **sp. nov.** to the *L. stigmatisata* group (Marusik *et al.* 2006b). Additionally, the genus *Lathys* is diagnosed and described.

### Material and methods

All specimens were examined, illustrated, photographed and measured using a Leica M205C stereomicroscope equipped with a drawing tube, a Leica DFC420 Camera and LAS software (version 3.8). The distribution map was created using ArcGis software (version 9.3). Male palps and epigynes were examined and illustrated after they were dissected. Epigynes were cleared in 90% lactic acid. Eye sizes are measured as the maximum diameter from