Zootaxa 3774 (6): 578–588
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

http://dx.doi.org/10.11646/zootaxa.3774.6.6
http://zoobank.org/urn:lsid:zoobank.org:pub:31C3637B-E3AE-4719-8006-368762CB0989

Spiders of the genus *Utivarachna* from China (Araneae: Corinnidae)

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Abstract

The spiders of the genus *Utivarachna* from China are reviewed. These species belong to the *kinabaluensis* species group. A total of five species are reported including three new species, *Utivarachna arcuata* **sp. nov.**, *Utivarachna fabaria* **sp. nov.** and *Utivarachna gongshanensis* **sp. nov.** Descriptions of the new species and the differences between the new species and their related taxa in China are discussed.

Key words: Corinnidae, *Utivarachna*, new species, review, China

Introduction

The spider genus *Utivarachna* was established by Kishida (1940) based on its type species *Utivarachna fukasawana* Kishida, 1940. Thirteen species have been recorded so far, all from South East Asia, including two species, *U. gui* Zhu, Song & Kim, 1998 and *U. taiwanica* Hayashi & Yoshida, 1993, from China. While examining the specimens collected from Gaoligong Mountains, Yunan Province, China by the Sino-American Expeditions conducted from 1998 to 2008, three new species of the genus *Utivarachna* were identified and are described namely, *U. arcuata* **sp. nov.**, *U. fabaria* **sp. nov.** and *U. gongshanensis* **sp. nov.** Descriptions of these new species and diagnoses of the other species known from China are given in the paper.

Materials and methods

Specimens were kept in 75% ethanol, examined and measured using an Olympus SZ-11 and Jiangnan XTB-1B stereo microscope. Digital images were taken with a Nikon DS-Fi1 digital camera mounted on an Olympus SZX16 stereo microscope. Compound focus images were generated using Helicon Focus software. Palpal organ structures are illustrated and described from the left palp. The epigynum was illustrated and described before dissected. The vulva was cleared in lactic acid and examined using an Olympus SZ-11 stereo microscope. Distribution maps were generated using GIS ArcView version 3.2 software (ESRI). Leg measurements are given as: total length (femur, patella + tibia, metatarsus, tarsus). All measurements are given in millimeters (mm). The specimens are deposited in College of Life Sciences, Hunan Normal University (HNU).

Abbreviations used in text are as follows: Ab = anterior bursae, ALE = anterior lateral eyes, AME = anterior median eyes, At = atrium, CAS = California Academy of Sciences, USA, Cnd = connecting duct, Co = copulatory opening, Cd = copulatory duct, Em = embolus, Em B = basal portion of embolus, Em T= terminal portion of embolus, HUN = Hunan Normal University, KIB = Kunming Institute of Botany, Chinese Academy of Science, PLE = posterior lateral eyes, PME = posterior median eyes, Sd = sperm-duct, St = subtegulum.

 Accepted by M. Ramirez: 6 Dec. 2013; published: 11 Mar. 2014

Diagnosis. This species is similar to *U. fabaria* **sp. nov.** by the epigynum longer than wide, atrium posteriorly located, copulatory opening on the center of epigynum, arch-shaped, copulatory ducts long, almost straight, spermathecae located posteriorly, and anterior bursae above the top of spermathecae, but can be distinguished by having: (1) atrium longer than wide, almost as long as the epigynum (Song, Zhu & Chen, 1999: fig. 256C); (2) connecting ducts separated far away from each other (Song, Zhu & Chen, 1999: fig. 256D); (3) spermathecae spherical (Song, Zhu & Chen, 1999: fig. 256D); (4) copulatory duct with three spirals in *U. taiwanica* (Song, Zhu & Chen, 1999: fig. 256D).

Distribution. China (Taiwan).

Acknowledgements

We are grateful to Dr. Peter Fritsch (CAS) and Prof. Heng Li (KIB) for supporting the joint biodiversity survey of the Gaoligong Mountains. We thank Dr. Charles Griswold (CAS), Dr. David Kavanaugh (CAS), Prof. Chang-min Yin (HNU), Prof. Xian-jin Peng (HNU), Prof. Heng-mei Yan (HNU), Prof. Xin-ping Wang, Mr. Peng Hu (HNU), Mr. Ke-ji Guo (HNU), Mrs. Jia-fang Hu, Mr. Ming-wei Yang & Mr. Shao-xian He, Mr. Yu-yan Wang, Mr. Da-zhi Dong, Mr. Guang-xu Peng for collecting the specimens. Special thanks also should be given to Robin Lyle and Dr. Martín Ramírez for their comments and suggestions on this paper. This research was sponsored by the National Science Foundation of the USA through the grant "Biotic survey of the Gaoligongshan, a biodiversity hotspot in western Yunnan, China" (No. DEB-0103795). It is also partly supported by the National Natural Sciences Foundation of China (NSFC-30970327, 31272271, 31272272), and the Hunan Provincial Construct Program of the Key Discipline in Ecology.

References

Chami-Kranon, T., Likhitrakarn, N. & Wongsawad, C. (2007) *Utivarachna rama* sp. n., a new species of tracheline spiders (Araneae: Corinnidae) from Thailand. *Zootaxa*, 1446, 59–68.

Deeleman-Reinhold, C.L. (2001) *Forest spiders of South East Asia: with a revision of the sac and ground spiders (Araneae: Clubionidae, Corinnidae, Liocranidae, Gnaphosidae, Prodidomidae and Trochanterriidae [sic])*. Brill, Leiden, 591 pp.

Hayashi, T. & Yoshida, H. (1993) Three new species of the family Clubionidae (Arachnida: Araneae) from Taiwan. *Acta Arachnologica Tokyo*, 42, 47–53.

Kishida, K. (1940) Notes on two species of spiders, *Doosia japonica* and *Utivarachna fukasawana*. *Acta Arachnologica Tokyo*, 5, 138–145.
http://dx.doi.org/10.2476/asjaa.5.138

Song, D.X., Zhu, M.S. & Chen, J. (1999) *The Spiders of China*. Hebei Science and Technology Publishing House, Shijiazhuang, 640 pp.

Zhu, M.S., Song, D.X. & Kim, J.P. (1998) Two species of spiders of the genus *Trachelas* (Araneae: Corinnidae) from China. *Korean Journal of Systematic Zoology*, 14, 425–428.