



First description of the male of *Diaea mikhailovi* (Araneae: Thomisidae)

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The genus *Diaea* Thorell, 1869 contains 75 known species with the type species *D. dorsata* (Fabricius, 1777). It is distributed worldwide, and about half of the species currently assigned to this genus are found in Australasia (Platnick 2014). Four *Diaea* species have been recorded from China, *D. subdola* O. P.-Cambridge, 1885, *D. suspiciosa* O. P.-Cambridge, 1885, *D. mikhailovi* Zhang, Song & Zhu, 2004 and *D. simplex* Xu, Han & Li, 2008 (Li & Wang 2014; Platnick 2014).

Diaea mikhailovi was originally described from a female specimen collected in Xiaowutai Mountains in Hebei Province, China (Zhang *et al.* 2004). While studying the thomisids collected from the same mountains in 2012–2013, we found 22 male and 27 female *Diaea* specimens. We identified the females as *D. mikhailovi*. The male specimens have habitus and markings similar to the females, and the palpal structures show the characters of the genus *Diaea* (Song & Zhu 1997). Therefore we consider both males and females conspecific, and the males of *D. mikhailovi* are described here for the first time.

All measurements are given in millimeters. All specimens are preserved in 75% alcohol and were examined, drawn, and measured under a Leica M205A stereomicroscope equipped with an Abbe drawing device. Photographs were taken using the Leica M205A. Epigynes were cleared in warm solution of potassium hydroxide (KOH). Leg measurements are given as total length (femur, patella, tibia, metatarsus, tarsus). All specimens used in this paper are deposited in the Museum of Hebei University, Baoding, China (MHBHU).

The following abbreviations are used: ALE, anterior lateral eyes; AME, anterior median eyes; AME–ALE, distance between AME and ALE; AME–AME, distance between AMEs; CD, copulatory ducts; CO, copulatory openings; E, embolus; EB, embolic base; FD, fertilization ducts; H, hood; MOA, median ocular area; PLE, posterior lateral eyes; PME, posterior median eyes; PME–PLE, distance between PME and PLE; PME–PME, distance between PMEs; RTA, retrolateral tibial apophysis; S, spermatheca; T, tegulum; VTA, ventral tibial apophysis.

Diaea mikhailovi Zhang, Song & Zhu, 2004

(Figs 1–10)

Diaea mikhailovi Zhang *et al.* 2004: 7, fig. 1 (♀).

Type material: Holotype (by original designation): female, Xiaowutai Mountains, Yu County, Hebei Province, China, 11 July 1999, Feng Zhang leg. (MHBHU, examined).

Other material examined. CHINA: Hebei Province: Yu County, Xiaowutai Mountains (N 39°58', E 114°49'), 8♂ 13♀, Shuigou Valley, 23 August 2012, Feng Zhang leg; 10♂ 10♀, Shuigou Valley, 14 August 2013, Long Liu leg; 4♂ 4♀, Zhengjiagou Valley, 2 September 2013, Zhi-Yue Li leg.

Diagnosis. This species is similar to *D. simplex* Xu, Han & Li, 2008 (Xu *et al.* 2008: 14, figs 1a–e) and *D. gyoja* Ono, 1985 (Ono 2009: 523, figs 274–277) in having similar RTA and VTA in the males, but can be distinguished from *D. simplex* by the absence of an intermediate tibial apophysis, and can be distinguished from *D. gyoja* by the embolus with an ear-shaped base that extends about two loops along the margin of tegulum. The female can be distinguished by the epigyne with a triangular hood anteriorly, the distinct, medially situated, contiguous copulatory openings, and the long and twisted copulatory ducts.

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References

- Li, S.Q. & Wang, X.P. (2014) *Endemic spiders in China*. Available from: <http://www.ChineseSpecies.com> (accessed 22 March 2014)
- Ono, H. (2009) *The Spiders of Japan with keys to the families and genera and illustrations of the species*. Tokai University Press, Kanagawa, xvi+739 pp.
- Platnick, N.I. (2014) The world spider catalog. Version 14.5. American Museum of Natural History. Available from: <http://research.amnh.org/entomology/spiders/catalog/index.html> (accessed 22 March 2014)
- Song, D.X. & Zhu, M.S. (1997) *Fauna Sinica: Arachnida: Araneae: Thomisidae, Philodromidae*, Science Press, Beijing, 259 pp.
- Xu, X., Han, X. & Li, S.Q. (2008) Three new spider species of the family Thomisidae from Hong Kong (Arachnida: Araneae). *Entomologica Fennica*, 19, 13–17.
- Zhang, F., Song, D.X. & Zhu, M.S. (2004) One new species and one newly recorded species of the family Thomisidae from Taihang Mountains, China (Arachnida, Araneae). *Acta Arachnologica Sinica*, 13, 7–10.