



On some linyphiid spiders from Taiwan (Araneae: Linyphiidae)

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Abstract

Seven linyphiid species are recorded from Taiwan, three of which are new: *Maculoncus orientalis* n. sp., *Oreonetides taiwanus* n. sp. and *Tapinocyba formosa* n. sp. Three species, *Micrargus herbigradus* (Blackwall, 1854), *Oia imadatei* (Oi, 1964) and *Solenysa longqiensis* Li & Song, 1992, are new to the Taiwanese fauna. Based on the new data, the linyphiid fauna of Taiwan is known to contain 20 linyphiid species.

Key words: Palaearctic, China, new species, new records

Introduction

Taiwan is a large volcanic island of only about 5 Mya with an area of 36,000 sq km and lies some 150 km east of mainland China. The island occupies a highly interesting geographical position, lying at the border between two major biogeographical regions, the Palaearctic and the Oriental, and that fact makes its fauna extremely important in zoogeographic studies.

Much of its land fauna has long been shown to have arrived there from the nearby mainland via land bridges (e.g., apes; Fooden & Wu 2001), rafting and/or aerial dispersion, often in repeated waves (e.g., Lin *et al.* 2002). The latter pathway seems to have been especially true of spiders as a group of actively spinning animals, although it is beyond doubt that human-mediated dispersal has also been massive.

Unfortunately, the spider fauna of Taiwan is still rather poorly known, including the diversity of linyphiid spiders. Only 14 linyphiid species have hitherto been listed from the island: eight species by Song *et al.* (1999), i.e. *Aprifrontalia mascula* (Karsch, 1879), *Erigone koshiensis* Oi, 1960, *Erigone prominens* Bösenberg & Strand, 1906, *Hylyphantes graminicola* (Sundevall, 1830), *Neriere albolicmbata* (Karsch, 1879), *N. oidedicata* van Helsdingen, 1969, *N. radiata* (Walckenaer, 1841), *Ummeliata insecticeps* (Bösenberg & Strand, 1906); and one species, *Solenysa protrudens* Gao, Zhu & Sha, 1993, by Tu & Li (2006b). Five of the species have been described from Taiwan: *Callitrichia formosana* Oi, 1977 (Oi 1977), *Gongylidioides angustus* Tu & Li, 2006 (Tu & Li 2006a), *G. diellipticus* Song & Li, 2008 (Song & Li 2008), *Solenysa lanyuensis* Tu, 2011 and *S. yangmingshana* Tu, 2011 (Tu & Hormiga 2011).

A small collection of linyphiid spiders taken from Taiwan, and kept in the Muséum d'histoire naturelle, Geneva (MHNG), contains seven identifiable species, three of which are new (undescribed) and another three new to the Taiwanese fauna. About a dozen species are left unidentified, being represented only by females. Taking into account the new information, the linyphiid spider fauna of Taiwan currently amounts to 20 species. However, this number surely strongly underestimates the real diversity of Linyphiidae on the island. Owing to a vertical partitioning of the island territory and the preserved mountain forests one would expect an abundance of the Palaearctic linyphiid fauna or their derivatives in the highlands; the lowlands have mostly anthropogenically modified biotopes and plant communities, and probably have a mix of the Palaearctic, Oriental and Pacific partly introduced faunistic elements.