



<http://dx.doi.org/10.11646/zootaxa.3878.6.3>

<http://zoobank.org/urn:lsid:zoobank.org:pub:7ADAE88A-0003-41FC-8795-8897001001B2>

## Revision of Chinese Dilaridae (Insecta: Neuroptera) (Part II): Species of the genus *Dilar* Rambur from Tibet

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### Abstract

Three species of the genus *Dilar* Rambur, 1838, are recorded and described from Tibet in southwestern China, including *Dilar geometroides* H. Aspöck & U. Aspöck, 1968, *Dilar harmandi* (Navás, 1909), and *Dilar tibetanus* Yang, 1987, with the former two species recorded in Tibet for the first time. All three species are redescribed. *Dilar aspersus* Yang, 1988, and *Dilar pusillus* Yang, 1992, are synonymized with *Dilar geometroides* Aspöck & Aspöck, 1968, and *Dilar tibetanus* Yang, 1987, respectively. A key to the *Dilar* species from Tibet is provided.

**Key words:** Dilaridae, *Dilar*, Tibet, China

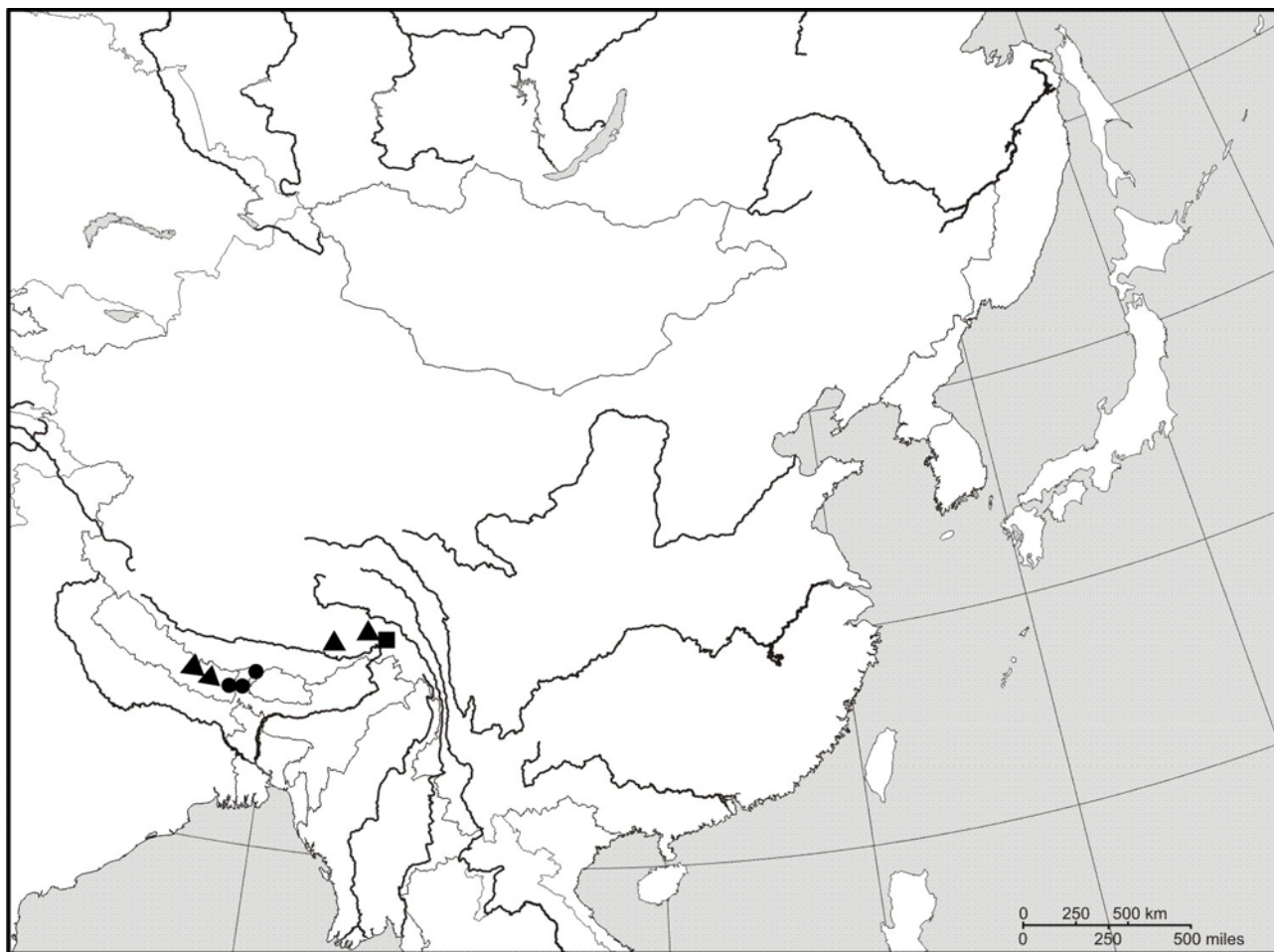
### Introduction

Tibet, also known as the Xizang Autonomous Region, is a plateau region in Asia, northeast of the Himalayas in China and is commonly cited as the highest region on Earth, with an average elevation of 4,900 meters. (Yang 1987). The insect fauna in Tibet is particularly rich, but still poorly known. Remarkably, southeastern Tibet, containing tropical and monsoon rainforest, provides a variety of habitats to numerous Oriental insect species, a large number of which are endemic to this area (Huang & Han 1988; Yang *et al.* 2004). Hitherto, the lacewing family Dilaridae is known from Tibet with only three species, i.e. *Dilar aspersus* Yang, 1988, *Dilar pusillus* Yang, 1992, and *Dilar tibetanus* Yang, 1987 (Yang 1987, 1988, 1992; Oswald 2013). These species were described based on only external morphology but not genitalic characters, which are crucial for the specific identification. During our study of Dilaridae from Tibet, three species of the genus *Dilar* Rambur, 1838, were found. Based on the examination of the male genitalia, *D. pusillus* Yang was found to be conspecific with *D. tibetanus* Yang, while *D. aspersus* Yang is conspecific with *D. geometroides* Aspöck & Aspöck, 1968, which has previously been recorded from Nepal (Aspöck & Aspöck 1968). In addition, *Dilar harmandi* (Navás, 1909), which has previously been described from northeastern India (Navás 1909), is recorded from Tibet and Nepal for the first time. In the present paper, these three species of *Dilar* are re-described. In addition a key to the species of *Dilar* from Tibet is given. The present study on Dilaridae of Tibet is part of a revision of the family Dilaridae of China, which was started with a publication on the Dilaridae of northern China (Zhang *et al.* 2014).

### Material and methods

Specimens for the present study are deposited in the Entomological Museum of China Agricultural University

Up to now, seven species of Dilaridae have been described from the areas around the Himalayas (including Nepal, northeastern India, and Tibet), and all the complexes of male gonocoxite 9, 10 and 11 of these species are obviously different from each other (Aspöck & Aspöck 1968; McLachlan 1869; Monserrat 1989; Nakahara 1963; Navás 1909). Some of the species need revision, however, more species of this enigmatic lacewing family remain to be discovered in the future from this area.



**FIGURE 20.** Geographic distribution of the species of *Dilar* from Tibet, China. ▲: *Dilar geometroides* Aspöck & Aspöck; ●: *Dilar harmandi* (Navás); ■: *Dilar tibetanus* Yang.

## Acknowledgements

We thank Dr. Xiaoyan Liu (Wuhan) for collecting specimens from Tibet. We also thank Dr. Utsugi Jinbo (NSMT, Tsukuba), Dr. Masaaki Tomokuni (NSMT, Tsukuba), Dr. Meicai Wei (Changsha), and Dr. Gengyun Niu (Changsha) for processing the loan of specimens in their collections. We gratefully thank Dr. Heinz Wundt (ZSM, Munich) for the loan of the Dilaridae of the ZSM, and Dr. Jean Legrand (MNHN, Paris) for the loan of the holotype of *D. harmandi*. This research was supported by the National Natural Science Foundation of China (Nos. 31322051 and 31320103902), the National Key Basic Research Program of China (973 Program) (No. 2013CB127601), and the Foundation for the Author of National Excellent Doctoral Dissertation of PR China (No. 201178).

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