



Three new species of the apterous Carventinae genus *Vietnamaptera* (Hemiptera: Heteroptera: Aradidae) from China

XIAOSHUAN BAI¹, ERNST HEISS^{2,4} & WANZHI CAI³

¹Institute of Life Science and Technology, Inner Mongolia Normal University, Zhaowuda Road 81, Huhhot 010022, Inner Mongolia, China

²Tiroler Landesmuseum, Josef - Schraffl-Strasse 2a, A-6020 Innsbruck, Austria

³Department of Entomology, China Agricultural University, Yuanmingyuan West Road, Beijing 100193, China

⁴Corresponding author. E-mail: aradus@aon.at

Abstract

The monotypic genus *Vietnamaptera* Zhang *et al.* 2010 was erected for the conspicuous apterous Carventinae species *V. bogiessa* from Vietnam. Aradid collections from Yunnan Province in China contained three new species belonging to this genus, which are described and figured. A key to the four species is given and photos of the hitherto unknown male of *Signocoris kaszabi* Hoberlandt 1958 are presented.

Key words: Hemiptera, Heteroptera, Aradidae, Carventinae, apterous, new species, *Vietnamaptera*, *Signocoris*, China

Introduction

As a result of recent collecting activities in Yunnan Province using the method of sifting leaf litter, several new apterous Aradidae were found. Among them are three new species of the apterous genus *Vietnamaptera*, so far only known from the male holotype from Vietnam. All of them share the essential characters, e.g., the structure of head and antennae, shape of pronotum, and the median bulbous dorsal elevations on thorax and abdomen, but are distinctive in others. They are described below as *V. secunda* n. sp., *V. tertia* n. sp., and *V. quarta* n. sp. A key to the four known species is given.

Material and methods

The specimens upon this study is based are preserved in the Entomological Museum of the China Agricultural University Beijing (CAU), the collection of the second author (CEHI) and the Canadian National Collection of Insects Arachnids and Nematodes, Ottawa, Canada (CNCO).

For the study of body structures the mostly incrustate specimens were cleaned. Photos (1-11) were taken through an Olympus SZX 10 binocular microscope with Olympus E 3 digital camera and processed with Helicon Focus 4.3 software and using Adobe Photoshop and Lightroom 2.3.

Measurements were taken with a micrometer eyepiece, 20 units = 1 mm.

When citing the text on the labels of a pin attached to the specimens / separates the lines and // different labels. Abbreviations used: deltg = dorsal external laterotergite (connexivum), mtg = mediotergite, vltg = ventral laterotergite, pe-angle = posteroexterior angle (of deltg).