



<http://dx.doi.org/10.11646/zootaxa.3793.2.2>

<http://zoobank.org/urn:lsid:zoobank.org:pub:51F711DA-EF6A-49AF-B427-2AE02049468F>

Two new species and three new records of the genus *Aphelocheirus* (Hemiptera: Heteroptera: Aphelocheiridae) from China

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Abstract

Two new species of the genus *Aphelocheirus* (Hemiptera: Heteroptera: Aphelocheiridae), *A. longlingensis* **sp. nov.** from Yunnan and *A. motuoensis* **sp. nov.** from Xizang (Tibet) Autonomous Region are described in this paper. *A. similaris* Polhemus & Polhemus, 1989, *A. nawae* Nawa, 1905 and *A. tuberculipes* Zettel & Tran, 2009 are reported from China for the first time. A key to Chinese species of *Aphelocheirus* is given. Dorsal habitus photographs of the species are provided, accompanied by illustrations of male genitalic structures, inner projection and female ventral aspect of posterior abdominal segments.

Key words: Hemiptera, Aphelocheiridae, new species, new records, China

Introduction

The family Aphelocheiridae is distributed exclusively in the Old World and reaches its greatest species richness in the Oriental Region (Sites *et al.*, 2011). It is represented by a single genus *Aphelocheirus*, with 98 species described in the world (Liu & Zheng, 1994, 2000; Liu & Ding, 2005a, 2005b; Nieser & Millán, 1989; Nieser & Chen, 1991, 2004; Polhemus, 1994, 2013; Sites, 2005; Sites *et al.*, 2011; Thirumalai, 2007, 2008; Zettel, 1993, 1998, 1999a, 1999b, 2000, 2001, 2003, 2012; Zettel *et al.*, 2008; Zettel & Tran, 2009; Zettel & Pangantihon, 2010). Biological knowledge of Aphelocheiridae is mostly based on the European species *Aphelocheirus aestivalis* (Fabricius, 1794), which feeds on the larvae of chironomid diptera, hydropsychid trichoptera and various molluscs belonging to the genera *Viviparus*, *Cyclas* and *Pisidium* (Thorpe, 1965). By contrast, knowledge of the biology and ecology of tropical and subtropical species of *Aphelocheirus* is very scarce (Polhemus & Polhemus, 1989; Chen *et al.*, 2005). Up to now, 19 species of the genus *Aphelocheirus* are known from China (Liu & Zheng, 1994, 2000; Liu & Ding, 2005a, 2005b). In the present paper, *A. longlingensis* **sp. nov.** from Yunnan Province and *A. motuoensis* **sp. nov.** from Xizang (Tibet) Autonomous Region are described as new to science. *A. similaris* Polhemus & Polhemus, 1989, *A. nawae* Nawa, 1905 and *A. tuberculipes* Zettel & Tran, 2009 are reported from China for the first time. So, the genus *Aphelocheirus* represents 24 species in China and 100 in the world.

Material and methods

Illustrations of the male genitalia were examined in glycerol, using an Olympus SZX7 microscope. All measurements are in millimeters. A summary of measurements for new species is given in table 1. The digital photographs of specimens (Figs. 1A–F) were taken with Zeiss Discovery V20 camera. All the studied specimens are deposited in the Institute of Entomology, Nankai University (NKU), Tianjin, China.

Aphelocheirus nawae Nawa, 1905

(Fig. 1F)

Aphelochira nawae Nawa, 1905: 56; Matsumura, 1905: 54; Polhemus & Polhemus, 1989: 257.

Aphelocheirus variegatus Kiritshenko, 1925: 40 (syn. Kiritshenko, 1952: 208).

Material examined. CHINA, **Anhui Province:** 1♂1♀, Shexian County (N29.52°, E118.25°), 8. IV. 1989, Chang-hai SUN leg.. **Fujian Province:** 1♂, Daiyun Mountain Nature Reserve (N25.64°, E118.14°), Dehua County, 12.IX. 2002, Wan-liang ZHANG leg.. **Jiangxi Province:** 41♂9♀, Meiling (N28.79°, E115.75°), Nanchang County, 3. VII. 1996, Jian-guo WANG leg.; 2♂1♀, Hengkengshui (N24.57°, E114.46°), Mt. Jiulian, 16. VII. 2002, Wan-liang ZHANG & Jian-hua DING leg.. **Sichuan Province:** 1♀, Xichang (N27.88°, E112.22°), Yi nationality Autonomous Prefecture of Liangshan, 5. X. 1939, Yao ZHOU, Feng-ying ZHENG & Tian-he HAO leg..

Distribution. China (Anhui, Fujian, Jiangxi, Sichuan); Japan; Korea.

Aphelocheirus tuberculipes Zettel & Tran 2009

Aphelocheirus tuberculipes Zettel & Tran 2009: 221.

Material examined. CHINA, **Yunnan Province:** 1♂1♀, Longjie (N24.61°, E100.88°), Jingdong County, 24. IV. 2001, Chang-fa ZHOU leg..

Distribution. China (Yunnan); Vietnam (Cao Bang).

Acknowledgements

We would like to express our sincere thanks to Dávid Rédei (Nankai University) for providing references, reviewing the manuscript and providing valuable comments. We also would like to thank Kai Dang (Nankai University), Robert W. Sites (University of Missouri, USA), Herbert Zettel (Natural History Museum, Vienna) for providing references. This study is supported by the specialized research fund for the doctoral program of higher education (No. 20110031110021).

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