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Discovery of a new species of *Formosatettix* Tinkham, 1937 (Orthoptera, Tetrigoidea, Tetrigidae) from China

FANG-QIANG ZHENG¹, JIANPING SHI² & ZHAN YIN^{3,4}

¹College of Plant Protection, Shandong Agricultural University, Taian, Shandong 271018, China

²Northwest Plateau Institute of Biology, Chinese Academy of Sciences, Xining, Qinghai 810001, China

³College of Life Sciences, Hebei University, Baoding, Hebei 071002, China

⁴Corresponding author. E-mail: yinzhan@hbu.edu.cn



Prof. Kailing Xia (1916–2013)

This paper is in memory of Prof. Kailing Xia (1916–2013), who is our teacher and a famous entomologist, on the centenary anniversary of his birthday.

Abstract

A new species of the genus *Formosatettix* Tinkham, 1937, namely *Formosatettix xiai* sp. n. is described and illustrated. The new species is allied to *Formosatettix wulaoshanensis* Zheng & Xu, 2010, but differs from the latter by the apex of pronotum reaching distal 2/3 of hind femur, width of frontal ridge equal to that of basal segment of antennae, length of a segment of antennae in the middle 3 times its width, lower margin of fore and mid femora straight, pronotum dorsally with one black spot on each side. The new species is also allied to *Formosatettix tianmushanensis* Zheng & Li, 2001, but the apex of pronotum reaching distal 2/3 of hind femur, the width of frontal ridge equal to that of basal antennal segment, length of upper ovipositor valve 3 times its width, length of a segment in the middle of antennae 5.0 times its width and pronotum dorsally with one black spot on each side. The type specimens are deposited in the College of Life Sciences, Hebei University, Baoding, Hebei, China.

Key words: Orthoptera, Tetrigoidea, Tetrigidae, *Formosatettix*, new species, China

Introduction

The genus *Formosatettix* Tinkham, 1937 (Orthoptera, Tetrigoidea, Tetrigidae) contains 56 valid species in the world, of which the majority (44 species) are distributed in China, with 12 additional species found in the neighboring countries of Nepal, Japan, Korea and Russian (Tinkham, 1937; B.-Bienko et Mistshenko, 1951; Storozhenko, 1981; Zheng, 1982; Zheng, 1988; Zheng & Yang, 1988; Liang, 1991; Zheng & Wang, 1991; Zheng, 1992a; Zheng, 1992b; Zheng, 1992c; Kostia, 1993; Storozhenko et Ichikawa, 1993; Niu *et al.*, 1994; Kostia, 1995; Jiang & Zheng, 1996; Zheng, 1997; Zheng & Mao, 1997; Zheng & Jiang, 1997a; Zheng & Jiang 1997b; Liang & Zheng, 1998; Zheng, 1998; Zheng & al, 1999; Azhar, *et al.*, 2000; Zheng & Zhong, 2000; Ingrisch, 2001; Uchida, 2001; Zheng & Li, 2001; Zheng & Mao, 2002; Zheng *et al.*, 2002; Zheng & Jiang, 2003; Ren *et al.*, 2003; Zhong & Zheng, 2003; Ichikawa, 2004; Liang & Jiang, 2004; Zheng & Ou, 2004; Zheng, 2005; Zheng & Zhong, 2005; Ingrisch, 2006; Yuan *et al.*, 2006; Deng *et al.*, 2007a; Deng *et al.*, 2007b; Zheng, 2009; Zheng et Ou, 2009; Zheng & Ou, 2010; Zheng & Xu, 2010; Cao & Zheng, 2011; Ou, 2011 and Zheng, 2012). The species *F. obtusus* Azhar, *et al.*, 2000, which has wings, has apparently been misplaced in the genus *Formosatettix* Tinkham, 1937. In this paper, we describe a new species *Formosatettix xiai* sp. n. found from the eastern coastal province Zhejiang of China.

Material and methods

Terms for description of surface sculpture were based on Tinkham (1937), Bey-Bienko (1951) and Liang & Zheng (1998). Descriptions and measurements were made under a stereomicroscope (Leica M 205 A, LAS V 4.0). All figures were made with a camera (Canon 5D Mark II) and Adobe Photoshop Version 9.0 software. Type specimens and other materials are deposited in the College of Life Sciences, Hebei University, Baoding, Hebei China.

Formosatettix xiai sp. n.

(Figs. 1–10)

Holotype: ♂, paratypes 4♂, 2 ♀, Zhejiang, Tianmushan, Qinglianfeng (N 30°06', E 119°01', 1600m), 2012-5-21, collected by Zhang Dezhi.

Male (Figs 1–7) Body small in size. Head shorter than pronotum. Frons oblique, frontal costa distinctly concave before lateral ocelli in profile, frontal ridge with percurrent longitudinal groove, width of frontal ridge equal to width of basal joint of antenna, anteriorly protruding between the bases of antennae and arched ventrally in profile. Vertex broad, flat, maximum width 2 times as wide as diameter of eye, slightly protruding anteriorly between eyes in profile. Eye not protruding above pronotum. Antennae slender, located in lower margin of eyes, length of a segment in the middle of antennae is about 5.0 times of its width. Median carina of pronotum reaching anterior margin, dorsally distinctly arcuate in profile, lateral carinae in prozona nearly parallel, anterior margin of pronotum protruding into obtuse angle, almost reaching the posterior margin of eye, posterior margin of lateral lobe of pronotum with only one hollow, inferior edge of hind pronotal process produced arcuately, lateral carinae of metazona also straight, the apex of pronotum acutely angular,