



## Review of the genus *Neotetricodes* Zhang et Chen (Hemiptera: Fulgoromorpha: Issidae) with description of two new species

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### Abstract

Two new species of the issid genus *Neotetricodes* Zhang et Chen (Hemiptera: Fulgoromorpha: Issidae): *Neotetricodes longispinus* Chang et Chen **sp. nov.** (China: Yunnan) and *Neotetricodes xiphoideus* Chang et Chen **sp. nov.** (China: Yunnan) are described and illustrated. The generic characteristic is redefined. A checklist and key to the species of the genus are provided. The female genitalia of the genus are firstly described.

**Key words:** Fulgoroidea, *Neotetricodes longispinus* Chang et Chen **sp. nov.**, *Neotetricodes xiphoideus* Chang et Chen **sp. nov.**, taxonomy, morphology, planthopper, Oriental region

### Introduction

The oriental planthopper genus *Neotetricodes* was established by Zhang & Chen (2012) based on the male specimens of *N. quadrilamina* and *N. kuankuoshuiensis*, all from Guizhou Province of China. Chen *et al.* (2014) summarized this genus, and described additional species *N. clavatus*, also from Guizhou Province. But no drawings and discussion on the female genitalia structures are given.

The purpose of this paper is to describe two new species, to add information on the female genitalia and to provide a key to the species in the genus.

### Material and methods

Dry specimens were used for descriptions and illustrations. External morphology was observed under a stereoscopic microscope. Measurements are given in millimeters. The genital segments of the examined specimens were macerated in 10% KOH, washed in water and transferred to glycerine. Photographs of the types were taken with a KEYENCE VHX-1000C. Observations and drawings were done under stereomicroscope OLYMPUS CX41 and LEICA M125. Illustrations were scanned with Canon CanoScan LIDE 100 and imported into Adobe Photoshop 8.0 for labeling and plate composition.

The morphological terminology of the head and body follows Chan & Yang (1994), the venational patterns follows Bourgoïn *et al.* (2015) and the terminology of male and female genitalia follows Gnezdilov (2002) and Gnezdilov (2003). The type specimens and other examined material are deposited in the Institute of Entomology, Guizhou University, Guiyang, China (IEGU) and The Natural History Museum, London, UK (BMNH).