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## Male description and intraspecific variations of *Cyrtopsis t-sigillata* (Orthoptera: Tettigoniidae: Meconematinae)

QIONG SONG, BAO-JIE DU & FU-MING SHI<sup>1</sup>

College of Life Sciences, Hebei University, Baoding, 071002, P. R. China

<sup>1</sup>Corresponding author. E-mail: [shif\\_m@126.com](mailto:shif_m@126.com)

### Abstract

The paper describes the male of *Cyrtopsis t-sigillata* Liu, Zhou & Bi, 2010 for the first time, and discusses individual variations in the species. It provides the photos of important morphological features, and offers a distribution map about the genus *Cyrtopsis* Bey-Bienko, 1962. The examined material is deposited in the Museum of Hebei University. Morphological images were acquired using Leica M205 A digital imaging system.

**Key words:** Orthoptera, Meconematinae, *Cyrtopsis t-sigillata*, male, individual variations

### Introduction

Bey-Bienko (1962) proposed the genus *Cyrtopsis*, with the type species *Cyrtopsis scutigera* Bey-Bienko, 1962. Gorochov (1998) supplementally described this species (type locality: Yunnan, China). Liu & Zhang (2007) reported one new species, i.e. *Cyrtopsis (Cyrtopsis) robusta* Liu & Zhang, 2007 (type locality: Longsheng, Guangxi). Liu *et al.* (2010) described another new species, namely *Cyrtopsis t-sigillata* Liu, Zhou & Bi, 2010 (type locality: Fengyangshan, Zhejiang). So far, the genus *Cyrtopsis* includes three species, which are distributed in China (Otte, 1997; Liu *et al.*, 2010; Eades *et al.*, 2015).

There was only one female specimen (holotype) known when Liu *et al.* (2010) described the species *Cyrtopsis t-sigillata*. In recent years, we collected three specimens of this species, including one male and two females. Although there are some differences between the type specimen and the three specimens in morphological characteristics, we consider they belong to the same species. These differences pertain to individual variations. This suggests that individual variations are generally existent in species of the tribe Meconematini.

### *Cyrtopsis t-sigillata* Liu, Zhou & Bi, 2010

<http://lsid.speciesfile.org/urn:lsid:Orthoptera.speciesfile.org:TaxonName:470391>

Figures 1–2, Map 1

*Cyrtopsis t-sigillata* Liu, Zhou & Bi, 2010. In: Xu, H.-C. & Ye, T.-X. (Eds.). *Insects of Fengyangshan National Nature Reserve*, 78, 87.

**Description. Male.** Body small, relatively stout. Fastigium verticis narrower than scape of antenna, conical, robust and short, apex obtuse, dorsum with a weak longitudinal furrow. Apical segment of maxillary palpi slightly longer than subapical one, apex rounded. Eyes spherical, obviously protruding outward. Pronotum slightly shorter than half of body, posterior transverse sulcus comparatively distinct, metazona slightly intumescent, anterior margin straight, posterior margin obtusely rounded; lateral lobes length as three times as height, obtusely triangular, posterior margin inclined, humeral sinus indistinct. Thoracic auditory spiracles free. Tegmen almost completely hidden under pronotum. Prosternum unarmed. All legs covered with dense hairs, all femora unarmed on ventral