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Leafhopper genus *Kolla* Distant (Hemiptera: Cicadellidae: Cicadellinae) with descriptions of four new species from China

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Abstract

Four new species of the genus *Kolla* from China, *Kolla emphysematosa*, *K. prolongata*, *K. procerula* and *K. petalina* spp. nov. are described and illustrated. A key to the males of Chinese species and a checklist of the known species worldwide are provided.

Key words: Homoptera, Auchenorrhyncha, morphology, taxonomy, checklist

Introduction

The leafhopper genus *Kolla* was established by Distant (1908) with *K. insignis* as its type species. *Kolella* Evans, 1966 was considered as its synonym (Young, 1986). Young (1986) revised the genus and included 29 species. Yang and Li (2000) studied Chinese fauna and recorded 31 species over the world. Wilson *et al.* (2009) recorded 32 species, of which 14 are from China. So far, 42 known species of *Kolla* are recorded from Afrotropical, Australian, Palearctic and Oriental Regions.

Kolla can be identified by the following combination of traits: head weakly produced, without a carina at transition from crown to face; ocelli on or behind a line between anterior eye angles; transclypeal suture usually obsolete medially; male pygofer moderately produced, posterior margin smoothly convex; pygofer processes arising basiventrally, extending posterad; plates slender and triangular, with macrosetae uniseriate or multiseriate, most species with median margin concave; connective 'Y'-shaped with arms widely divergent and manubrium long; aedeagus with basal sclerite, but not always distinctly delimited, aedeagal shaft with a pair of lamelliform lobes.

Material and methods

Morphological terminology follows Young (1986) and Zhang (1990). Habitus photos were taken by using a Scientific Digital micrography system. The body measurements are from vertex to apex of forewing. Abdomens were removed and placed in 8–10% NaOH solution heated for about 3 minutes, rinsed in water and stored in glycerine. A Nikon SMZ1500 microscope and Olympus BH-2 microscope were used to view the specimens and draw figures. All specimens examined are deposited in the Entomological Museum, Northwest A&F University, Yangling, Shaanxi, China (NWFU).

Checklist of valid species of the genus *Kolla*

(see Young (1986) and Wilson *et al.* (2009) for synonymies)

K. atramentaria (Motschulsky, 1859): Australia, China, Japan, Korea, Myanmar, Russia