



## Review of the Grass Feeding Leafhopper Genus *Balclutha* Kirkaldy (Hemiptera: Cicadellidae: Deltocephalinae) in China

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## Abstract

The present paper treats 27 species and one species complex of the leafhopper genus *Balclutha* Kirkaldy from China, including descriptions of four new species, *Balclutha bidentifurcata*, *B. parapunctata*, *B. paralucida* and *B. tricornis* spp. nov., and gives six new records for China. One new synonymy, *B. fuscomaculatus* Dai, Li & Chen, 2004, as a junior synonym of *B. saltuella* (Kirschbaum, 1868), is proposed. A key to males of Chinese *Balclutha* species, together with a checklist and figures for the species is provided.

**Key words:** Homoptera, Auchenorrhyncha, taxonomy, Balcluthini, Macrostelini, new synonymy, new species, China

## Introduction

The cosmopolitan leafhopper genus *Balclutha* (Deltocephalinae: Macrostelini) is one of the most common and abundant deltocephaline groups in grasslands (Knight, 1987). It comprises over one hundred described species worldwide (Knight & Webb, 1993). Members of the genus can be most readily recognized by their frequently green to stramineous color, small delicate appearance and by the generally short, parallel margins of the vertex. However this rather uniform appearance of the species makes their identification difficult and dependent in general on examination of their male genitalia.

The genus *Balclutha* was previously placed either in Balcluthini (Oman, 1949; Blocker, 1967; Ossiannilsson, 1983; Anufriev & Emaljanov, 1988; Oman, *et al.*, 1990) or Macrostelini (Ribaut, 1952; Linnavuori, 1959). Knight & Webb (1993), selecting 81 morphological characters, studied the phylogenetic relationships of 34 macrosteline genera and 28 non-macrosteline genera, and considered the tribe Macrostelini, including Coryphaelini and Balcluthini, as monophyletic. Based on morphological characters Zahniser & Dietrich (2008) also corroborated Knight and Webb's (1993) definition of Macrostelini. Blocker (1967) described 36 species from the Nearctic and Neotropical region. Revisionary work on the genus was published by Knight (1987) who treated 30 species from the Pacific area and provided a checklist of the 98 species of the genus known at that time and Webb & Vilbaste (1994) for the Oriental Region who treated *Balcluthina* Pruthi as a junior synonym of *Balclutha* and described 25 species from the region. In China, eight *Balclutha* species were described (from Taiwan) by Chiang (1996) and 20 species have been recorded by Dai *et al.* (2004). In this paper, we treat 27 valid species and one species complex, including four new species, give six new records for China, and provide a checklist and key to all Chinese species. For some of the species recorded from China by Dai *et al.*, (2004) we lack specimens (as noted in the text) and as they were not illustrated by these authors their identities need to be confirmed.

**Repositories.** The specimens examined are deposited in the Entomological Museum, Northwest A&F University, Yangling, Shaanxi, China (NWAFU), Agriculture University of China (CAU), Zhongshan University (ZSU), Guangdong Entomological Institute (GDEI), Jiangxi Forest Protection Institute (JXFPI) and the Institute of Zoology, Chinese Academy of Sciences (IZCAS), The Natural History Museum, London, UK (BMNH).

## Genus *Balclutha* Kirkaldy

*Gnathodus* Fieber, 1866: 505. Preoccupied name.

*Balclutha* Kirkaldy, 1900: 243. new name for *Gnathodus* Fieber 1866, not *Gnathodus* Pander, 1856. Type-species: *Cicada punctata* Fabricius, 1775

*Balcluthina* Pruthi, 1930: 46, synonymised by Webb & Vilbaste, 1994: 58

For additional synonyms, see Knight (1987).

**Selected references.** Fieber (1866), Kirkaldy (1900), Pruthi (1930), Blocker (1967), Knight (1987), Webb & Vilbaste (1994), Chiang (1996).

**Description. Length (including tegmen).** Male: 2.3–4.5 mm.

General color straw yellow, green to brown. Vertex and pronotum sometimes with brown or orange red longitudinal bands and spots.

Head as wide as pronotum, sometimes narrower or slightly wider. Vertex short, anterior margin broadly rounded, rarely protuberant anteromedially. Frontoclypeus narrow, laterofrontal sutures extending to ocelli.