



Taxonomy of the vector leafhopper genus *Nesoclutha* Evans (Hemiptera: Cicadellidae: Deltocephalinae) in China, with description of a new species

YALIN ZHANG¹ & LIN LU

Key Laboratory of Plant Protection Resources and Pest Management, Ministry of Education, Entomological Museum of Northwest A & F University, Yangling, Shaanxi 712100, China

¹Corresponding author. E-mail: yalinzh@nwsuaf.edu.cn

Abstract

The leafhopper genus *Nesoclutha*, a known vector of plant pathogens, currently comprises four species worldwide. In this paper, one new species added from China, *N. concavipennis* **sp. nov.**, is described and one new record, *N. phryne* (Kirkaldy) (= *N. pallida* Evans) from China is given. A checklist and a key to all known species in the genus are provided.

Key words: taxonomy, Homoptera, Auchenorrhyncha, Macrostelini, checklist, vector

Introduction

Vector leafhoppers have the potential to reduce production of economic plants through their natural spread of pathogens (Nielson, 1968). *Nesoclutha obscura* Evans (Deltocephalinae: Macrostelini), was first reported as a vector of a plant virus related to grasses and cereals by Grylls (1963). It is a vector of cereal chlorotic mottling rhabdovirus, chloris striate mosaic geminivirus, paspalum striate mosaic geminivirus and the causative agent of maize wallaby ear (Grylls, 1963). It transmits viruses to wheat, oat, barley, corn and other grasses (Nielson, 1968).

Nesoclutha was established by Evans (1947), with *Nesoclutha obscura* Evans from Australia as its type species. Linnavuori (1960) described *Nesoclutha declivata*, and transferred *Irinula erythrocephala* Ribaut to this genus; Evans (1966) synonymised *N. obscura* with *N. phryne* (Kirkaldy) and transferred *Eusceloscopus pallidus* Evans to the genus. Logvinenko (1977) described *Nesoclutha concolor* and Knight & Webb (1993) included *Nesoclutha* in a comprehensive morphological review of the Macrostelini on a global scale, together with a phylogenetic tree of the tribe based on 81 morphological characters. Finally, *N. pallida* was synonymised with *N. phryne* by Day & Fletcher (1994), see checklist note.

Material and methods

This paper describes one new species in the genus *Nesoclutha* as well as one new record for China. A checklist and a key for all known species of the genus are provided. The type specimen is deposited in the Entomological Museum, Northwest A&F University, Yangling, Shaanxi, China. Terminology follows Zhang (1990) and Knight & Webb (1993). The material examined is deposited in various institutions abbreviated in the text as follows:

NWAUF Entomological Museum of Northwest A&F University, Shaanxi, China
JAU Jiangxi Agriculture University, Jiangxi, China
BMNH The National History Museum, Cromwell Road, London, UK