



Three new species of *Goniagnathus* (Hemiptera: Cicadellidae) from the Indian subcontinent with description of a new subgenus

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Abstract

Tropicognathus **subgen. nov.** of *Goniagnathus* is described with *Goniagnathus fumosus* Distant as the type species. Three new species, *Goniagnathus (Tropicognathus) anufrievi* **sp. nov.** (India: Karnataka), *Goniagnathus (Tropicognathus) nepalicus* **sp. nov.** (Nepal: Kathmandu) and *Goniagnathus (Tropicognathus) zeylanicus* **sp. nov.** (Sri Lanka) are described and illustrated. *G. bicolor* Distant is placed as a junior synonym of *G. fumosus* Distant. A key to the subgenera and species of *Goniagnathus* from the Indian subcontinent is also given.

Key words: Homoptera, morphology, classification, key, distribution

Introduction

The deltocephaline leafhoppers of the genus *Goniagnathus* Fieber (tribe Goniagnathini) are common inhabitants of grassland ecosystem in the Oriental, Afrotropical and Palaearctic regions and have recently also been reported from the Australian region (Fletcher and Zahniser, 2008). They are robust, squat leafhoppers readily recognized by short and broad heads, fused male subgenital plates, male style with membranous fracture at midlength, connective short and fused with aedeagus (Linnavuori, 1978, Fletcher and Zahniser, 2008). Fused subgenital plates are also found in some genera of the tribes Scaphytopiini (Viraktamath and Murthy, 1999; Viraktamath, 2004), Opsiini (Viraktamath and Viraktamath, 1980) and in the subfamily Acostemminae (Zahniser and Dietrich, 2008). Species of the tribe Goniagnathini differ from these in being more robust with short and broad heads. Emeljanov (1999) recognized four subgenera for the Palaearctic species of the genus. Dash and Viraktamath (2001) reviewed the genus for the Indian subcontinent and dealt with nine species, four of which were new to science and also provided a key for the species.

Examination of leafhopper material collected from India, Nepal and Sri Lanka revealed the presence of three undescribed species of *Goniagnathus* and this opportunity is taken to describe these species. In addition, these species and all but one of the previously described Indian species are placed in a new subgenus of *Goniagnathus*. This brings the known species of the genus to 52 for the world, and 12 for the Indian subcontinent. The aedeagus of the holotype male *Goniagnathus concavus* Dash & Viraktamath is illustrated to correct the discrepancy in the original illustration of the aedeagus and the description given by Dash and Viraktamath (2001).

The institutions and their abbreviations used in the text where the material studied will be deposited are as follows.

NHM The Natural History Museum, London, United Kingdom

IARI National Pusa Collection, Indian Agricultural Research Institute, New Delhi, India