



***Neogreenia lonicera* sp. nov., a new species of Margarodidae *sensu lato* (Hemiptera: Coccoidea) from China, with a key to species of *Neogreenia* MacGillivray and placement of the genus in the family Kuwaniidae**

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Abstract

A new species, *Neogreenia lonicera* Wu & Nan, is described and illustrated based on the adult female, second-instar female and first-instar nymph. This new species was collected at Helan Mountain, Inner Mongolia, China, in bark crevices of *Lonicera microphylla* (Caprifoliaceae). A key is provided to separate the five species now known in *Neogreenia* MacGillivray. A cladistic analysis of morphological data from adult females and first-instar nymphs of 28 archaeococcoid genera has *Neogreenia* in a clade with *Jansenus* Foldi and *Neosteingelia* Morrison and usually also with *Kuwania* Cockerell, and thus *Neogreenia* should be placed in the family Kuwaniidae. A key to distinguish the adult females of the four genera of the Kuwaniidae is provided.

Key words: Margarodidae, *Neogreenia*, new species, China, cladistic analysis.

Introduction

Neogreenia MacGillivray (Hemiptera, Coccoidea, Margarodidae) was established as a monotypic genus by MacGillivray (1921), with *Monophlebus zeylanicus* Green (1896) as type species. However, Green (1922) did not accept this new genus and placed *M. zeylanicus* in *Kuwania* Cockerell. Morrison (1928) discussed *M. zeylanicus*, questioned its assignment to *Kuwania*, but did not assign it to a position in his Margarodidae system. Foldi (2001) listed *M. zeylanicus* both in *Kuwania* as *K. zeylanica* (Green) and in *Neogreenia* as *N. zeylanica* (Green). Tang and Hao (1995) and Hao *et al.* (1995) accepted *Neogreenia* as a valid genus, placed both it and *Kuwania* in the tribe Kuwaniini, subfamily Kuwaniinae, and described a new species *N. zizyphi* Tang on *Ziziphus sativus* (Rhamnaceae). Wu and Cheng (2006) described a further new species, *N. sophorica* Wu, on *Sophora japonica* (Fabaceae), and transferred *Kuwania osmanthus* Yang & Hu to *Neogreenia*. Ben-Dov (2005, 2011) also considered *Neogreenia* to be a valid genus, but placed it in Margarodidae *sensu stricto* of his Margarodidae *sensu lato* rather than in the same family as *Kuwania*. Morrison (1927, 1928) placed both *Kuwania* and *Neosteingelia* Morrison in his tribe Kuwaniini, which was elevated to family level by Koteja (1974). The family Kuwaniidae has been accepted by recent authors (e.g., Hodgson & Foldi, 2006; Gullan & Cook, 2007) and the close relationship of *Kuwania* and *Neosteingelia* is supported by data from the nuclear small subunit ribosomal RNA gene (Gullan & Cook, 2007).

In this paper, we reconsider the family placement of *Neogreenia* based on a cladistic analysis of morphological data from adult females and first-instar nymphs, and we describe a new species of *Neogreenia* under the bark of *Lonicera microphylla* (Caprifoliaceae) from Helan Mountain, Inner Mongolia, China. *Neogreenia* has a Palaearctic-Oriental geographic distribution, with one species (*N. zeylanica*) recorded from Sri Lanka and the other four species from China.