



Taxonomic revision of the Australian Eucarpiini (Hemiptera: Fulgoromorpha: Cixiidae) with the description of nine new species

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Abstract

The Australian planthopper tribe Eucarpiini is revised taxonomically. Five genera are recognised in the Australia fauna: *Bajauana* Distant 1907, *Dilacreon* Fennah, 1980, *Kirbyana* Distant, 1906, *Neocarpia* Tsaour & Hsu, 2003 and *Nesochlamys* Kirkaldy, 1907. Except for *Bajauana* all of these represent new records for Australia. *Eucarpia* Walker, 1857 is declared absent from Australia. Twelve species, nine of which are new, are recognised in the Australian fauna: *Bajauana acuminata*, **sp. nov.**, *Dilacreon akethe*, **sp. nov.**, *D. ispi*, **sp. nov.**, *Neocarpia rhizophorae*, **sp. nov.**, *Nesochlamys capensis*, **sp. nov.**, *N. contrarius*, **sp. nov.**, *N. jubatus*, **sp. nov.**, *N. pandikros*, **sp. nov.** and *N. yiralli*, **sp. nov.** Except for *Bajauana austrina* (Kirkaldy, 1907) and *D. (D.) granulinervis*, all species are endemic to Australia. Lectotypes are designated for *Australoma austrina* Kirkaldy, 1907, *Ptoleria australis* Muir, 1913 and *P. granulinervis* Muir, 1913. New combinations proposed are: *Dilacreon (Dilacreon) granulinervis* (Muir, 1913) comb. nov. (from *Eucarpia*), *Kirbyana australis* (Muir, 1913) comb. nov. (from *Eucarpia*) and *Leptolamia praetextata* comb. nov. (from *Bajauana*, transfer from Eucarpiini to Cixiini). All Australian species of Eucarpiini are described and illustrated and identification keys to genera and species are provided.

Key words: Homoptera, planthopper, morphology, distribution, identification

Introduction

The planthopper family Cixiidae is distributed worldwide with its highest diversity in the tropics (Emeljanov 2002). Comprehensive revisions of the Australian taxa in the tribes Gelastocephalini (Löcker, *et al.* 2006a), Pentastirini (Löcker, *et al.* 2006b), Mnemosynini (Löcker, *et al.* 2006c) and Andini (Löcker, *et al.* 2007a) and in the genus *Innobindus* Jacobi, 1928 (Brixiini) (Löcker, *et al.* 2007b) have resulted in the discovery of 22 new genera and 101 new species and have more than doubled the number of Australian genera and tripled the number of Australian species previously known in these tribes.

Eucarpiini is one of eight tribes recorded from Australia and was created by Emeljanov (2002) to accommodate ten genera from the Palaearctic, Ethiopian, Oriental, Australian and Oceanic Regions (Holzinger *et al.* 2002). Fennah (1980) reassessed the status of several genera of the *Eucarpia* group and defined them as a complex of seven relatively weak genera for which he also provided an identification key: *Dystheatias* Kirkaldy, 1907, *Caneirona* Distant, 1916, *Eucarpia* Walker, *Kirbyana* Distant, *Phytoceptor* Fennah, 1980, *Dilacreon* Fennah, 1980 and *Bajauana* Distant, 1907. Our current study investigates how the Australian Eucarpiini fits into the generic concepts proposed by Fennah (1980) and more recent authors such as Tsaour and Hsu (2003).

Previously, the following Australian species and subspecies were listed under Eucarpiini (Fletcher, 2009): *Bajauana austrina* (Kirkaldy, 1907), *B. praetexta* (Jacobi, 1928), *B. praetexta* var. *obscura* (Jacobi, 1928) and *Eucarpia australis* (Muir, 1913). Examinations of specimens held in Australian and overseas collections revealed the presence of several new species of Australian Eucarpiini which are described in this paper.

Material and methods

The morphological terms applied here follow Löcker *et al.* (2006b) with the following exception. Counts of apical cells follow Mead and Kramer (1982) and not Löcker *et al.* (2006b), in order to make this manuscript easier to compare with other works published on Eucarpini, e.g. Tsaour & Hsu (2003). This means that total numbers of apical cells are in general increased by one compared to the counting used in Löcker *et al.* (2006b).

The following is a list of the measurements taken in this study:

body length: tip of head to posterior margin of forewing
length of forewing: base to posterior margin of forewing
width of forewing: at level of apex of clavus
length of vertex: in midline