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Revision of the Australian species of *Aka* White, 1879 (Fulgoromorpha: Cixiidae) with the description of a new genus

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Abstract

The Australian species of the genus *Aka* White are revised. Seven new species are described: *A. balma* **sp. nov.**, *A. dobsonensis* **sp. nov.**, *A. gwana* **sp. nov.**, *A. issidopsis* **sp. nov.**, *A. kuraka* **sp. nov.**, *A. pirri* **sp. nov.**, *A. sorellensis* **sp. nov.** Adding to those the 5 species solely occurring in New Zealand, we have a total number of 14 species in *Aka*. The types of *A. hardyi* Muir, 1931 and part of the type series including the holotype of *A. tasmani* Muir, 1931 are declared lost. However, based on the original descriptions and the remaining type material, these species have been matched with new material examined and are redescribed in this paper. Neotypes are designated for *A. hardyi* and *A. tasmani*. A new monotypic genus *Yanganaka* **gen. nov.** is described from Australia. Based on characters such as the general shape of the body as well as a forked frontal carina it appears to be closely related to *Aka* and the New Zealand genus *Chathamaka* Larivière, 1999. *Yanganaka ariecornia* **sp. nov.** is described and illustrated. An identification key to differentiate between the two genera occurring in Australia, *Aka* and *Yanganaka*, is provided. Information on how to distinguish *Chathamaka* from the latter two genera, as well as a key to identify all Australian species of *Aka* is presented. Host plant associations are discussed which support the hypothesis that *Aka* is a Gondwanan relict.

Key words: Australia, New Zealand, Gondwana, planthopper, identification, *Nothofagus*, *Atherosperma*, *Chathamaka*, morphology

Introduction

The genus *Aka* was created by White (1879) to accommodate the New Zealand species *Cixius finitimus* (Walker, 1858). Muir (1931) added two species from Tasmania, *A. hardyi* Muir, 1931 and *A. tasmani* Muir, 1931. Four additional species, *A. dunedinensis* Larivière, 1999, *A. duniana* (Myers, 1924), *A. rhodei* Larivière, 1999 and *A. westlandica* Larivière, 1999 have since been described from New Zealand. Material of *Aka* held in Australian and overseas collections has been investigated and revealed the presence of new species. Further, a new Australian genus, sharing several features with *Aka* and the New Zealand genus *Chathamaka* Larivière, 1999 is described in this paper. This paper focuses on the Australian species of *Aka*, since the New Zealand fauna has been revised in detail by Larivière, 1999.

Material and methods

Males were dissected by softening the entire specimen for 1–2 days in a humid chamber: a plastic box containing a paper towel soaked with vinegar to prevent mould. Mounted specimens were pinned on a piece of Styrofoam and put in the humid chamber. After softening, the specimens were demounted and the pygofer carefully removed using forceps and pins. The specimens were then remounted and the pygofer transferred to a beaker containing hot soapy water for few minutes to be softened further before examination. For the short-term, genitalia were stored in cavity slides (square piece of plexiglass, with a hole drilled into it, glued onto a microscopic slide) containing glycerol. For long-term storage, the genitalia were transferred into micro-vials containing glycerol.