

Taxonomic and phylogenetic revision of the Australian Cixiidae

Birgit Löcker¹, Marie-Claude Larivière², Murray J. Fletcher^{1,3}, Geoff M. Gurr^{1,4}, Holger Löcker^{1,4} and Werner E. Holzinger⁵

¹ Pest Biology & Management Group, University of Sydney, AUSTRALIA, ² Landcare Research, Auckland, NEW ZEALAND, ³ Department of Primary Industries, Orange Agricultural Institute, AUSTRALIA, ⁴ Charles Sturt University, AUSTRALIA, ⁵ Ökoteam, Institute of Faunistics and Zooecology, Graz, AUSTRIA

Correspondence: B. Löcker, University of Sydney, Pest Biology & Management Group, Leeds Parade, Orange, 2800 NSW, AUSTRALIA; birgit.loecker@agric.nsw.gov.au

The family Cixiidae is one of the largest families within Fulgoromorpha and is distributed worldwide. Some cixiids are known to be vectors of phytoplasmas, which cause yellows diseases. Prior to this project 59 cixiid species distributed among 23 genera were recognised in Australia, but the group has never been comprehensively revised. Some important recent studies have reviewed cavernicolous species (Hoch & Howarth 1989a, Hoch & Howarth 1989b, Erbe & Hoch 2004) and the higher classification (Emeljanov 2000, Emeljanov 2002, Holzinger et al 2002) only.

Our studies focussed initially on the tribe Gelastocephalini (see Fig. 1) which is currently known from Australia and New Caledonia. Our revision of the tribe has increased the number of genera from 7 to 27 and the number of species from 9 to 60. A cladistic analysis of morphological data has been performed to test the monophyly of the genera.



Fig. 1. *Dysoliarus unicornis* Fennah

Results from a current examination of the Australian Pentastirini (see Fig. 2) will be presented, including a three-fold increase in the number of species as opposed to an almost seven-fold increase in Gelastocephalini.

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Fig. 2. *Oliarus felis* Kirkaldy

