



***Gadigaleyrodes froggatti*, a new genus and species of whitefly (Hemiptera: Aleyrodidae) from Australia**

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Abstract

A new monotypic genus of whiteflies (Aleyrodidae), *Gadigaleyrodes* **gen.n.**, is described and illustrated for *G. froggatti* **sp.n.** from New South Wales, Australia. Specimens were collected by W. W. Froggatt in 1899 on *Syncarpia glomulifera*, and subsequently by P. S. Gillespie on an unknown climbing plant. The genus has unusual morphological features with traits common to both Aleurodicinae and Aleyrodinae. The subfamily placement is discussed, and a key provided to discriminate this taxon from similar whitefly genera in Australia.

Key words: Aleurodicinae, Aleyrodinae, Australia, California Academy of Sciences, Froggatt, Sydney Botanical Gardens, taxonomy, key

Introduction

This paper describes and documents a previously undescribed species found in New South Wales, Australia. It was first collected in 1899 by Walter Wilson Froggatt in the Royal Botanic Gardens in Sydney, Australia. Froggatt spent much of his entomological life as chief entomologist for New South Wales Department of Agriculture (now ASCU) (McDonald, 1981). His taxonomic work was mainly on Coccoidea describing only two species of whiteflies (Martin, 1999). Froggatt exchanged insect samples with various entomologists around the world subsequently donating the sample of the new species described below to the California Academy of Sciences Collection (CASC). The first author of this paper recognized in 2008 that this sample possibly represented an undescribed genus and species and in the same year the second author collected a single post-emergence pupal case of the same species in New South Wales.

Dumbleton (1956) considered the Australian Aleyrodidae fauna overlooked recognizing only 29 described species. In contrast, Martin (1999) treated 104 described species from Australia and mentioned 66 undescribed taxa. Gillespie (2006) described a number of unusual whitefly taxa from Australia which do not clearly conform to current subfamily classifications. The new taxon described here exhibits certain morphological characteristics that are unlike that of any other genus of whiteflies, and the host plant has not previously been known to support any whitefly species.

Material and methods

Puparia were slide mounted using a method modified from Dooley *et al.* (2010). They were soaked in 5% KOH for 24–48 hours, placed in water to remove the potassium hydroxide, then transferred into Essig's aphid fluid for clearing (20 parts of lactic acid, 4 parts of glacial acetic acid, 2 parts of phenol, and 1 part of water). Two drops of double stain (lignin pink, acid fuchsin, lactic acid, and phenol) were added to Essig's aphid fluid for 10–15 minutes