



Description of *Asiothrixus* gen. nov. (Hemiptera: Aleyrodidae) and two new species with diagnoses and a puparial key to species

ANIL KUMAR DUBEY¹, CHIUN-CHENG KO^{1,3} & JON H. MARTIN²

¹Department of Entomology, National Taiwan University, Taipei 106, Taiwan.

²Department of Entomology, Natural History Museum, Cromwell Road, London SW7 5BD, U.K.

³Corresponding author. E-mail: kocc2501@ntu.edu.tw

Abstract

A new Asian genus is diagnosed, *Asiothrixus*, with *Aleurothrixus antidesmae* Takahashi as type species, together with *Asiothrixus smilaceti* (Takahashi) **comb. nov.**, *Asiothrixus silvestris* (Corbett) **comb. nov.**, *Asiothrixus specialis* **sp. nov.** and *Asiothrixus unicus* **sp. nov.** Lectotypes are designated for both *A. antidesmae* and *A. smilaceti*. Characteristics of the new genus are discussed, and puparial diagnoses and illustrations for the species provided, together with a puparial key to species.

Key words: Aleyrodidae, *Aleurothrixus*, *Asiothrixus*, new genus, key

Introduction

In 2007 the whitefly fauna of the world comprised 1556 described species grouped in 161 genera (Martin & Mound, 2007). Since then Martin (2008) proposed two new genera, *Aleuroctarthrus* and *Palaealeurodicus* for the Old World species formerly placed in *Aleurodicus* Quaintance & Baker (Aleyrodicinae), and synonymised the genus *Lecanoideus* Quaintance & Baker with *Aleurodicus* Douglas. Recently, Dubey *et al.* (2009) synonymised the genus *Lipaleyrodes* Takahashi with *Bemisia* Quaintance & Baker.

Quaintance & Baker (1914) described the genus *Aleurothrixus* for a New World species *Aleyrodes howardi* Quaintance which was later synonymised with *Aleurothrixus floccosus* (Maskell) by Costa Lima (1942). *Aleurothrixus* currently includes 20 species (Martin & Mound, 2007), all from the New World apart from three Asian species, plus *A. floccosus* that has invaded the Old World. Martin (1988, 1999) indicated the South East Asian species in *Aleurothrixus* were not congeneric with the New World species. Hence, a study was undertaken of these Old World species to appraise their generic position. Three previously described, and two new, Asian species are placed into a new genus *Asiothrixus*, and 17 New World species remain in *Aleurothrixus*.

The puparia of *Asiothrixus* resemble those of *Siphoninus* Silvestri, with most individual puparia possessing glandular dorsal siphons (Figs 3, 6, 15, 31), but differ in having wax secreting glands at the base of the marginal teeth (often erroneously referred to as double row of marginal teeth), in having only two pairs of siphons present (on abdominal segment II and III), and in having the lingula almost obscured by the operculum. In *Siphoninus*, the dorsal siphons are much more numerous, with often a medially-placed siphon present on abdominal segment II, the marginal teeth are without glandular bases and the lingula is exposed but included within the confines of the orifice. *Asiothrixus* differs from *Aleurocanthus* Quaintance & Baker in having marginal teeth with glandular bases, and in the absence of paired stout spines on the submargin and subdorsum surface. The bases of abdominal siphons in the new genus are “glandular” as seen in the species of *Aleurocanthus*, however, the siphon apex is broad and open, forming a concavity as in some *Aleurocanthus* species. For example, the dorsal spines in *Aleurocanthus imperialis* Cohic (1968) are apically expanded. It is possible that the apically widened glandular siphons or spines serve the purpose of secretion of liquid wax.