



***Aleurotrachelus* Quaintance & Baker (Hemiptera: Aleyrodidae) and allied genera from Taiwan**

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Abstract

Whitefly species from Taiwan of the genera *Aleurotrachelus* Quaintance & Baker, *Cohicaleyrodes* Bink-Moenen and *Crenidorsum* Russell are revised, based mainly on type specimens, together with keys to species, host-plant data, and puparial diagnoses of the genera. Five species are transferred from *Aleurotrachelus*: *Cohicaleyrodes caerulescens* (Singh) **comb. nov.**, *Co. rubi* (Takahashi) **comb. nov.**, *Co. taiwanus* (Takahashi) **comb. nov.**, *Crenidorsum alpinus* (Takahashi) **comb. nov.**, and *Cr. elatostemae* (Takahashi) **comb. nov.** Puparia are selected as lectotypes for each of the following species: *A. fissistigmae* Takahashi, *A. pyracanthae* Takahashi, *Co. rubi*, *Cr. elatostemae*, *Cr. micheliae* (Takahashi) and *Cr. turpiniae* (Takahashi). A neotype is designated for *Co. taiwanus* (Takahashi). *Aleurotrachelus anonae* Corbett and the genus *Cohicaleyrodes* Bink-Moenen are newly recorded from Taiwan. Drawings of the puparia, microscopic images and diagnosis of each species are given.

Key words: Aleyrodidae, Hemiptera, morphology, key, new hosts

Introduction

Quaintance & Baker (1914) described the genus *Aleurotrachelus* for *Aleurodes tracheifer* Quaintance from Mexico. This is a mainly Old World genus and, as one of the largest assemblages of whitefly species, has included hitherto 75 species (Martin & Mound, 2007). However, *Aleurotrachelus* shares characteristics with the genera *Cohicaleyrodes* Bink-Moenen and *Crenidorsum* Russell, and is possibly polyphyletic and in need of revision (Martin, 1999). Most species currently included in *Aleurotrachelus* are indeed from the Old World but when true relationships are established the true congeners of *A. tracheifer* (Quaintance) will likely prove to be New World species (pers. comm. Jon Martin). Many *Aleurotrachelus* species were described by Corbett (1935) whose types have never been traced, and it appears that they were probably lost in Singapore in the Second World War (pers. communication with Jon Martin). Recently, David *et al.* (2006) revised the Indian species of *Aleurotrachelus*, transferring *A. saklespurensis* Regu & David to *Cohicaleyrodes* and a further eight species to *Crenidorsum*. They also synonymised *Mohanasundaramiella rubiae* David with *Crenidorsum russellae* David & David, described two new species of *Cohicaleyrodes*, and transferred two *Mixaleyrodes* species to *Cohicaleyrodes*. However, Martin & Mound (2007) revived the combination *Aleurotrachelus multipapillus* (Singh, 1932), and retained the synonymy of *M. rubiae*. They synonymised *Cohicaleyrodes flacourtiae* Phillips & Jesudasan (2006) with *A. multipapillus*. Bink-Moenen (1983) pointed out that “*Aleurotrachelus* was a widespread and heterogeneric with many species.” The occurrence of several *Aleurotrachelus* species in Taiwan has led to this revisionary study, including the taxonomic positions and ambiguous puparial morphology of the species. In this study, three species are placed into *Cohicaleyrodes* and two species into *Crenidorsum*, with 70 species now remaining in *Aleurotrachelus*. However, it is clear that further studies are needed on this genus from other countries/geographical regions. *Aleurotrachelus* s. l. needs a major and well-organised study of as many species as possible, including the ones removed to other genera, using cladistics, a method proved suitable for whitefly puparia by Jensen (1999, 2001) and by Manzari &