



Acidiella longipennis Hendel, the type species of *Acidiella* Hendel (Diptera: Tephritidae: Trypetini), with recognition of two new allied species from Myanmar

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Abstract

The type species of the genus *Acidiella* Hendel is *A. longipennis* Hendel, which is known as a widely distributed species in South East Asia. Specimens of *A. longipennis* are rarely found in insect collections, but I was able to examine a number of Myanmar specimens collected by R. Malaise during the Swedish Expedition in 1934, and reported as *A. longipennis* by M. Hering in 1938. As a result, three related species were sorted out from these specimens. They look very much alike except for the dorsal abdominal patterns (difficult to see in dried specimens) and postabdominal structures. I here provide detailed descriptions of and a key to *A. longipennis*, *A. spinipennis*, **sp. nov.**, and *A. kambaitiensis*, **sp. nov.** They are here defined as the *A. longipennis* species group based on a single synapomorphy: vesica of glans ventrally with 7–9 tiny spines. This is a unique characteristic never found in any other species of the tribe Trypetini as well as the family Tephritidae. I am providing this information as a starting point to refine the currently confused concept of the genus *Acidiella*.

Key words: Diptera, Tephritidae, Trypetini, *Acidiella*, redescription, Myanmar

Introduction

In a key to the numerous tephritid genera, Hendel (1914) erected the genus *Acidiella* based on a single new species from Taiwan, *Acidiella longipennis*, without a proper description and type locality information. Even though this nomenclatural action was legal at that time, Hendel (1915) again proposed *A. longipennis* as a new species in more formal manner with a description and the type specimen data. This time he added another Taiwanese new species, *A. persimilis*, and defined the genus further by comparing it with several related genera.

Since then, the taxonomic status of *Acidiella* has been much confused. In more recent treatment of the tribe Trypetini, Hardy (1987) regarded *Acidiella* as a synonym of *Myoleja*, which is only remotely related. The former, therefore, is now placed in the subtribe Trypetina and the latter in the subtribe Chetostomatina (Han, 1992, 1999). In these studies, *Acidiella* was suggested as a monophyletic group based on a single synapomorphy: posterior surstylar lobe reduced and anterior surstylar lobe expanded and bent inward. In addition to this genitalic structure, most *Acidiella* species can be identified to genus without dissecting the male genitalia by their similar wing patterns (Han, 1999). Some *Vidalia* species have similar wing patterns but they are easily distinguished by having only one orbital seta as well as enlarged male frontal setae. As a result, 36 Oriental and Eastern Palaearctic species are currently placed in the genus *Acidiella* (Han, 1992; Norrbom *et al.*, 1999). Han (1999), however, indicated that some of the currently included species based on the wing pattern did not possess the genitalic synapomorphy and required more careful study involving both morphological and molecular analyses. A preliminary molecular testing of the generic status (Han and Ro, 2002) revealed that there were at least three independent lineages among the included species of *Acidiella*, and, thus, the generic concept needed to be refined further. It is, therefore, important to provide a detailed redescription of the type species as well as to recognize species closely related to it. The type species, *A. longipennis*, is currently known as a widely distributed species in South East Asia (Norrbom *et al.*, 1999).