



<http://dx.doi.org/10.11646/zootaxa.3616.4.2>

<http://zoobank.org/urn:lsid:zoobank.org:pub:351A064C-8CEC-4A85-A466-0E2F139856BB>

Family-group names in the scale insects (Hemiptera: Sternorrhyncha: Coccoidea)—a supplement

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Abstract

Williams (1969) published a list of the family-group names in the Coccoidea (scale insects) recognised at that time. The present paper supplements this earlier list and includes all nominal genera that have had family-group names based on them, including those in the earlier paper, in case it is not readily available to some workers. Nominal genera and their family-group names are listed alphabetically in catalogue form. There are now 49 families generally recognised in the scale insects, of which 16 are only known as fossils. Furthermore, 180 nominal genera have now had family-group names based on them. As stated in the 1969 list, all categories in the family group are deemed to be of co-ordinate status in nomenclature.

Key words: archaeococcoids, neococcoids, ranks, genera

Introduction

The following list of family-group names in the superfamily Coccoidea or scale insects is a supplement to the earlier list in Williams (1969). When the first list was compiled, most scale insect workers recognised fewer than 20 extant families. This figure has now risen to 33 with the newest addition Rhizoecidae as shown in the database of scale insects (Ben-Dov *et al.* 2012). Furthermore, the total excludes 16 families only known from fossils that have been described in recent years, so the total of all families is now 49. Moreover, a little over 100 of the nominal genera listed in Williams (1969) had family-group names based on them; there are now 180 in the present list. There are probably far too many families for a group the size of the scale insects.

In recent years, there have been many developments in the study of scale insects. It was shown by Koteja (1974, a, b) from studies based on the mouthparts, that many of the subfamilies and tribes established in the family Margarodidae (*sensu* Morrison, 1928), should be raised to distinct family level. Some later phylogenetic studies based on morphological and molecular data (Hodgson, 2002; Cook *et al.* 2002; Gullan & Cook, 2007; Hodgson & Foldi, 2005, 2006) have shown that Koteja's action was justified. A new extinct family Naibiidae Shcherbakov and the subfamily Naibiinae based on the nominal genus *Naibia* Shcherbakov, described by Shcherbakov (2007) and purporting to be a scale insect stem group, is so far excluded because the position and relationships of the family to scale insects is uncertain (Gullan & Cook, 2007).

At present, the scale insects are divided into two major informal groups, the archaeococcoids and the neococcoids. These names are not formally recognised using the "The International Code of Zoological Nomenclature" but they were derived from the names Archaeococcoidea and Neococcoidea of Bodenheimer (1953). Borchsenius (1949) preferred the name Paleococcoidea for the archaeococcoids. Unfortunately, these names were not based on nominal genera. The archaeococcoids comprise the Ortheziidae, all the families elevated from the lower ranks in Morrison (1928), and some other families, mostly with a plesiomorphic sex chromosome system XX-XO (Hughes-Schrader, 1948; Yokogawa & Yahara, 2009). Based on adult male morphology, the archaeococcoid group includes many of the families only known as fossils. The neococcoids contain all the other families, mostly with a sex chromosome system based on paternal genome elimination (PGE) as discussed by