



A revision of the mealybug genus *Mirococcopsis* Borchsenius (Homoptera: Coccinea: Pseudococcidae) based on the structure of the adult females

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Abstract

Eleven species of the genus *Mirococcopsis* Borchsenius, 1948, including a new species *Mirococcopsis kalaginae* Gavrilov, are revised and illustrated. Lectotypes of *M. avetianae* Ter-Grigorian, 1964, *M. borchsenii* (Ter-Grigorian, 1964a), and *M. rubida* Borchsenius, 1948 are designated. In addition, *Eumirococcus* Ter-Gregorian, 1964a, **syn. nov.** is considered a synonym of *Mirococcopsis* Borchsenius, 1948; *Liucoccus* Borchsenius, 1960 is considered a subgenus of *Mirococcopsis*, and *M. brevopilosa* Matesova, 1982, **syn. nov.** is considered a synonym of *M. ammophila* Bazarov & Nurmamatov, 1975. Due to the presence of very characteristic oral collar tubular ducts on *M. stipae* Borchsenius, 1949, this species is transferred to the genus *Volvicoccus* Goux, 1945: *V. stipae* (Borchsenius), **comb. n.** Some aspects of the morphology of *Mirococcopsis* and of other related genera, combined here in a group of *Cryptoripersia* Cockerell in Ehrhorn, 1899, are briefly discussed.

Key words: scale insects, *Liucoccus*, *Volvicoccus*, new species, new combinations, lectotype designations

Introduction

In the world fauna of mealybugs, there are a lot of genera characterized by the absence of cerarii. In these genera, other morphological characters of the adult females, especially anal ring structures, are also often reduced or simplified. This reduction of the main morphological characters makes taxonomic work with this group of mealybugs difficult and hinders an adequate understanding of relationships between genera and species. Obviously, similar simplification took place in the ancestors of the two primary groups of mealybugs, the *Phenacoccini* and *Pseudococcini*, characterized by the presence or absence of a claw denticle. This character is very stable in mealybugs (the only exception known to me is *Fonscolombia tomlinii* (Newstead), which demonstrates a variation in this character) and indicates the relationships when the other traditional characters have changed as a consequence of the reduction. Thus, to the group with neither cerarii or a denticle on the claw and which probably arose from a *Pseudococcus*-like ancestor, the following taxa are referred: *Coleococcus* Borchsenius, 1962; *Cryptoripersia* Cockerell in Ehrhorn, 1899; *Glycycnyza* Danzig, 1974; *Humococcus* Ferris, 1953; *Inopicoccus* Danzig, 1971; *Metadenopsis* Matesova, 1966; *Metadenopus* Šulc, 1933; *Mirococcopsis* Borchsenius, 1948; *Nudicauda* Gavrilov, 2006; *Rhodania* Goux, 1935; *Ripersia* Signoret, 1875; *Volvicoccus* Goux, 1945, and probably some other genera not studied by me on account of the absence of the material. The genera *Ripersia* and *Cryptoripersia* were erected before the other genera mentioned above but, because the type species of *Ripersia* is now considered to be unrecognizable (Ben-Dov & Matile-Ferrero, 1995), I shall name these genera as a group of *Cryptoripersia*. Thus, species of *Humococcus* are very similar to *Mirococcopsis rubida* Borchsenius, the type species of *Mirococcopsis*, differing in the absence of cells and microspines on anal ring (new term, see below) while *Mirococcopsis* (as here understood) includes species