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**Do we need to change the rank of the higher taxa of Scale insects
(Hemiptera: Sternorrhyncha: Coccoidea)?**

(abstract)

We will briefly review the history of names that have been used for the scale insects as a group, and also the relationships of scale insects to other Hemiptera. We maintain that the name Homoptera (for a grouping of the Sternorrhyncha plus Auchenorrhyncha) should be abandoned because that taxon is paraphyletic and as such is an unnatural unit. In particular we will address the question: "What should be the rank of the taxon that contains all scale insects?". Coccidologists cannot decide this issue alone because the rank given to scale insects has repercussions for all other sternorrhynchans and for all other hemipterans. We will argue that it is unnecessary and undesirable to elevate the scale insects to suborder status and, further, that there is no justification for the scale insects to be an order in their own right. The possession of many unique features is irrelevant to the question of rank - what is important is the relationships of scale insects to their relatives, the rank of their relatives, and the stability of names and rank. In the interests of nomenclatural stability, the Sternorrhyncha should be retained as a suborder and the scale insects as a superfamily. Within the superfamily rank, however, coccidologists are free to recognize informal higher taxa.

In 1974, Dr Jan Koteja first proposed a phylogeny and classification of the scale insects that, among other things, gives family rank to a number of groups currently placed as subunits (subfamilies and tribes) of the Margarodidae. More recently, he has described several new families and presented fossil data to suggest that archaeococcoids (= archeococcids = at least margarodids *sensu lato* plus ortheziids) represent the relics of an ancient radiation. The morphological disparity of these various higher taxa, their great age in the fossil record and also the difficulty of reconstructing their interrelationships suggest that we should re-examine the higher classification of margarodids *s.l.*

REFERENCES

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