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Abstract

A taxonomic review of the superfamily Lanceoloidea is presented, based predominantly on collections held by the Zoological Museum, University of Copenhagen, Denmark. Prior to this review the superfamily consisted of three families, Lanceolidae with five genera, Chuneolidae with one genus and Microphasmidae with three genera. The family Lanceolidae is here restricted to two genera, *Lanceola* and *Scypholanceola*. The other three genera previously included in this family, *Prolanceola*, *Metalanceola* and *Megalanceola* all have characters that differ significantly from *Lanceola* (and *Scypholanceola*) as well as from each other; characters which are considered important enough to warrant their removal from the family. Thus, three new families are proposed to accommodate them; Prolanceolidae **fam. nov.** for *Prolanceola*, Metalanceolidae **fam. nov.** for *Metalanceola* and Megalanceolidae **fam. nov.** for *Megalanceola*. In addition, a new genus, *Megalanceoloides* **gen. nov.** is proposed for *Megalanceola remipes* (Barnard, 1932) because it possesses characters that differ significantly from *M. stephensi* (Chevreux, 1920), the type species of the genus *Megalanceola*. *Lanceola* is the most speciose genus with fourteen species recognized in this review, including two new species, *L. gruneri* **sp. nov.** from the Tasman Sea and *L. galathea* **sp. nov.** from the tropical north-eastern Indian Ocean. *Scypholanceola* consists of two species and *Prolanceola*, *Metalanceola*, *Megalanceola* and *Megalanceoloides* **gen. nov.** are currently all monospecific. The family Chuneolidae remains unchanged, with one genus and three species. The family Microphasmidae is here restricted to two genera, *Microphasma* and *Microphasmoides*; both are monospecific. The genus *Mimonecteola* is removed from Microphasmidae and placed in a new family, Mimonecteolidae **fam. nov.**, because it possesses several significant characters that set it apart from *Microphasma* (and *Microphasmoides*). Six species of *Mimonecteola* are recognized in this review, including *M. macronyx* Barnard, 1932 which is considered a valid species based on an examination of the type, and additional material from the *Dana* collections, and one new species, *M. carlsbergi* **sp. nov.**, from the Atlantic and Indian Ocean off South Africa. Keys are provided for families, genera and species and all species are illustrated.

Key words: Amphipoda, Hyperioidea; Lanceoloidea, Lanceolidae, Chuneolidae, Microphasmidae, Prolanceolidae **fam. nov.**, Metalanceolidae **fam. nov.**, Megalanceolidae **fam. nov.**, Mimonecteolidae **fam. nov.**, *Lanceola*, *Scypholanceola*, *Prolanceola*, *Metalanceola*, *Megalanceola*, *Megalanceoloides* **gen. nov.**, *Chuneola*, *Microphasma*, *Microphasmoides*, *Mimonecteola*, review, taxonomy, new species

Introduction

The superfamily Lanceoloidea was proposed by Bowman and Gruner (1973) to replace the old subtribe name Lanceoliformata, proposed by Stephensen and Pirlot (1931), to encompass the families Lanceolidae, Chuneolidae and Microphasmidae. This morphologically diverse group is united by a combination of several characters. Mainly the relatively large coxae, the relatively strong first gnathopoda with the carpus broadened distally, the retractile and hooded dactyls of pereopods 6 & 7 (and sometimes also other pereopods, but simple in Microphasmidae), the relatively short first antennae (except *Metalanceola* and Microphasmidae) and the morphology of the mandibles which have a strong palp (absent in Chuneolidae), a broad incisor, a large tooth adjacent to the incisor (except *Prolanceola*) and a reduced lacinia mobilis (except *Prolanceola*, *Megalanceola*, *Megalanceoloides* **gen. nov.** and Chuneolidae).

Members of Lanceoloidea, apart from some species of *Lanceola*, are rarely collected because they tend to be deep-water species (generally > 200 m) and some species are only known from very few specimens in the collections of the world's museums. Thus, this review is limited by the material available, making it difficult to study the variability and speciation within the group.

Vinogradov *et al.* (1982) provide a summary of recent knowledge of the superfamily but this is the first attempt to review the systematics of the group utilizing information gained from specimens in collections of some major museums, particularly that of the Zoological Museum, University of Copenhagen (ZMUC). Unfortunately, I have been unable to gain access to the important collections held by Russian museums. Prior to this review the superfamily consisted of three families, Lanceolidae, Chuneolidae and Microphasmidae.

The family Lanceolidae is the most diverse and prior to this review included five genera. *Lanceola* Say,