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**A review of the hyperiidean amphipod families  
Mimonectidae and Proscinidae  
(Crustacea: Amphipoda: Hyperiidea: Scinoidea)**

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## Abstract

A taxonomic review of the hyperiidean amphipod families Mimonectidae and Proscinidae, superfamily Scinoidea, is presented, based predominantly on collections held by the Zoological Museum, University of Copenhagen, Denmark. Prior to this review the family Mimonectidae consisted of two genera, *Mimonectes* with five species and *Pseudomimonectes* with one species, and the family Proscinidae consisted of three genera, *Proscina* with five species, *Mimoscina* with two species and *Cheloscina* with one species. The five nominal species of *Mimonectes* are also recognised in this review with the addition of three new species, *M. alexanderi* **sp. nov.**, *M. colemani* **sp. nov.** and *M. neosphaericus* **sp. nov.** No more specimens of *Pseudomimonectes* were found, and this genus is still known only from the unique type. A critical review of the family Proscinidae is presented arguing that its taxonomic distinction from the family Mimonectidae cannot be maintained. Amongst the genus *Proscina*, *P. scinoides* (Woltereck, 1906) is considered a species of *Mimoscina* and *P. magna* Stephensen and Pirlot, 1931 a junior synonym of *Mimonectes loveni* Bovallius, 1885. The remaining three species are considered valid for the time being and are transferred to the genus *Mimonectes*. Thus, eleven species of *Mimonectes* are recognised in this review. *Cheloscina*, still known only from the unique type, is also similar to *Mimonectes*, apart from the morphology of the first antennae, and is here included in the family Mimonectidae. *Mimoscina* however possesses several characters distinguishing it from other members of the Mimonectidae and a new family, Mimoscinidae **fam. nov.** is proposed to accommodate it. The two nominal species of *Mimoscina* are also recognised in this review with the addition of one new species, *M. galbraithae* **sp. nov.** Amongst the extensive *Dana* collections is one specimen that clearly belongs with the Scinoidea but possesses several unique characters that preclude it from all other currently recognised families. Thus, a new family, Microscinidae **fam. nov.** is proposed to accommodate this new genus and species, *Microscina rostrata* **gen. et sp. nov.** Keys are provided for all families, genera and species, together with diagnoses, and all species are illustrated.

**Key words:** Amphipoda, Hyperiidea, Mimonectidae, Proscinidae, Mimoscinidae **fam. nov.**, Microscinidae **fam. nov.**, *Mimonectes*, *Pseudomimonectes*, *Proscina*, *Cheloscina*, *Mimoscina*, *Microscina* **gen. nov.**, review, taxonomy, new species

## Introduction

The superfamily Scinoidea currently consists of three families, Scinidae, Mimonectidae and Proscinidae. The former, represented mainly by the genus *Scina*, is the most speciose of all the hyperiidean families, providing many taxonomic difficulties and thus will be the subject of a separate study. This paper then is the first of two reviewing the systematics of the superfamily.

Members of Mimonectidae and Proscinidae are rarely collected because they tend to be deep-water species (> 200 m), and most are known only from very few specimens in museum collections. Thus, this review is limited by the material available. In addition, distinguishing species is made more difficult because of morphological variations due to sexual dimorphism and the generally poor descriptions and illustrations provided in the literature.

Vinogradov *et al.* (1982) provide a summary of recent knowledge of the two families 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 and that of the Musée Océanographique, Monaco, which does not loan types, and I could not afford the charges for loans from the Aquarium-Muséum de l'Université de Liège.

The family Mimonectidae currently consists of two genera, *Mimonectes* Bovallius, 1885 and *Pseudomimonectes* Vinogradov, 1960. The latter is monospecific, distinguished from *Mimonectes* mainly by having a mandible with a one-articulate palp which is absent in *Mimonectes*. Five nominal species of *Mimonectes* were recognised prior to this study (Vinogradov *et al.* 1982). Three new species are described here, and another three are transferred to this genus from *Proscina*, resulting in the recognition of eleven species of *Mimonectes*.

The family Proscinidae currently consists of three genera, *Proscina* Stephensen and Pirlot, 1931, *Mimoscina* Pirlot, 1933 and *Cheloscina* Shih and Hendrycks, 1996. The latter is monospecific and is readily distinguished by the chelate gnathopods, which are very similar to that of *Mimonectes sphaericus* Bovallius, 1885. *Proscina* is very similar to *Mimonectes* and currently consists of five nominal species, each known only from very few specimens. *Mimoscina* is characterised by the retractile dactyls of pereopods 5–7, similar to that found in some species of the Lanceoloidea. It currently consists of two species, each known only from three specimens prior to this study. The