



## New species of the genus *Archimonocelis* Meixner, 1938 (Proseriata, Archimonocelididae) from southern Apulia (Italy)

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### Abstract

A survey of the composition of the genus *Archimonocelis* Meixner, 1938 in southern Apulia (Italy) revealed the presence of four species, three of which are new. *Archimonocelis scopulicola* n. sp. has a straight stylet, provided with a girdle of 18 copulatory spines, and a chromosome set with  $n=10$ . In both *A. cygnicollis* n. sp. and *A. parastaresoi* n. sp., an accessory glandular organ, provided with spines, is present. *A. cygnicollis* n. sp. is provided with a unique double-walled stylet. *A. parastaresoi* n. sp. is similar to the western Mediterranean *A. staresoi* Martens & Curini-Galletti, 1993; size and shape of accessory spines are the main discriminating features between the two species. In addition, numerous specimens of *A. carmelitana* Martens & Curini-Galletti, 1993 were found. A comprehensive discussion of the new species is given.

**Key words:** taxonomy, marine biodiversity, meiofauna, Mediterranean, *Archimonocelis*, new species

### Introduction

The Archimonocelidae Meixner, 1938, as redefined by Curini-Galletti (2001) includes two genera only: *Archimonocelis* Meixner, 1938, and *Mediama* Marcus, 1946. However, the recent description of "*Archimonocelis*" *rohdei* Miller & Faubel, 2003 (whose anatomy does not justify its inclusion in the genus) witnesses the existence of a higher diversity of the family, yet to be described. The genus *Archimonocelis*, with 21 species known (Martens & Curini-Galletti, 1993; Curini-Galletti & Cannon, 1997), is the most species-rich of the family. Most species of the genus come from warm temperate or tropical littoral habitat. However, the only deep water samples (600–700 m deep) from where Proseriata were retrieved, collected off western Norway, yielded two *Archimonocelis* species (Karling, 1966a) and the distribution, both latitudinal and bathymetrical, of the genus may be thus far wider than understood at present. Members of the genus feed on mesopsammic Cnidaria, whose cnidae are stored in special structures ('cnidosacs') arranged in one longitudinal row on the dorsal surface of the worm (Karling, 1966a); in cultures, they do not even attempt to feed on alternative preys, such as crushed crustaceans, which are readily taken by most Proseriata (pers. obs.). *Archimonocelis* species are usually easily identifiable on good-quality whole mounts, as they possess complex and species-specific sclerotized structures of the copulatory organ; an accessory glandular organ, provided with spines, may also be present. The karyotype is usually species-specific, and may aid identification (Martens & Curini-Galletti, 1993).

The genus is represented in the Mediterranean by five species, mostly found in sheltered, mixed sediments (coarse sand with silt) (Martens & Curini-Galletti, 1993). However, with a few exceptions, they occur at very low densities, and fully mature specimens, on which diagnostic characters are present, can be sometimes frustratingly rare. A series of recent samplings, performed in the framework of the project 'BIOIMPA'