

BIOGEOGRAPHY OF ANTARCTIC DEEP-SEA NEMATODES: SPECIES TURN-OVER IN DOMINANT GENERA OF THE FAMILY CHROMADORIDAE

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Antarctica, situated on the southern pole, is completely isolated from the rest of the world and possesses its own old, low temperature ecosystem. This is reflected in its specific fauna. The current study treats the meiobenthos.

The Antarctic meiobenthos (benthos in size class $32\mu\text{m}$ - 1mm) is in many aspects different from the rest of the world. This trend is observed at community level (total meiobenthos density, nematode abundance, genus diversity and individual nematode biomass are significantly higher in Antarctica than anywhere else in the world). In contrast to macrofauna, there is no sign of endemism at genus or higher taxonomic level (confirming the so-called meiofauna-paradox).

However, up to now scientific research on Antarctic meiobenthos has only focused on the littoral zone, continental shelf and upper slope. The Antarctic deep sea is an unknown area. This study treats the nematode fauna of the deeper slope (1000-2000m). Two nematode genera *Dichromadora* (Kreis, 1929) and *Neochromadora* (Micoletzky, 1924) are being studied. The species of both genera are described as they are all new to science.

A first reference and occurrence list of deep-sea nematodes is composed in order to deduce the biogeography of Antarctic deep-sea nematodes. The most important conclusion drawn from this list is that endemism at species level is high in the deep sea in general and probably extremely high in Antarctica. A similar trend was found for the harpacticoid copepods *Metahuntemannia* and *Talpina*. All the species of both taxa known today were found in their own topographic unit of the ocean floor suggesting a remarkable degree of endemism in Antarctica*.

Large differences in species composition among the stations suggest also a high species turn-over at local scale with a different composition of generalist and specialist species. The biggest contrast has been found between the Southern and the Arctic Ocean.

It can be concluded that the Antarctic deep sea can be seen as a very unique ecosystem.

* Dahms, H-U. & Pottek, M. (1992) *Microfauna Marina* 7, 7-78.