

## **BATHYMETRIC DISTRIBUTION OF THE PERACARIDA ALONG TWO DEEP-SEA TRANSECTS DOWN THE EUROPEAN CONTINENTAL SLOPE (ATLANTIC OCEAN)**

Vanquickenberghe Véronique and Magda Vincx

Ghent University (RUG), Biology Department, Marine Biology Section  
Krijgslaan 281/S8, B-9000 Gent, Belgium  
E-mail: Veronique.Vanquickenberghe@rug.ac.be

Many studies are focused on the distribution of populations and communities associated with environmental gradients. One of the greatest environmental gradients on this planet is that related to depth on the sloping parts of the floor of the ocean. However, the causes of the patterns found along these gradients remain one of the most difficult and elusive problems faced by deep-sea ecologists. Furthermore, there are few data on the depth-related distribution of the smaller animals.

The deep-sea benthic boundary layer (BBL) is enriched in biomass and numbers of species, relative to the overlying water column. It is inhabited by (1) pelagic species whose ranges are truncated by the seabed, (2) benthic species using this zone as a refuge, for dispersal and for locating their food and (3) species from a wide variety of taxonomic groups that seem to be specialized to the benthopelagic environment.

This study deals with the hyperbenthic component of the BBL fauna, defined as the small (1 - 20 mm) animals that swim in the vicinity of the seabed (Mees and Jones, 1997). The main representatives of the hyperbenthos are peracarid crustaceans, a group that shows a rich diversification in the deep sea often reaching high abundances. Since the last decade, evidence of their potential function in deep-sea trophic webs is growing.

During two Belgica expeditions in May 2000 and 2002 samples from the hyperbenthic fauna at two study areas (Porcupine Seabight and Meriadzek Terras) were collected. At each site a vertical transect of eight stations on the continental slope along a gradient from 200 to 1250 m depth were sampled by use of the hyperbenthic sledge in order to obtain information on the composition, the bathymetric distribution and the biodiversity of the hyperbenthos along this continental slope. Some interesting results of this research will be discussed in this presentation.

### References

- Mees J. and M.B. Jones. 1997. The hyperbenthos. *Oc. Mar. Biol. Annu. Rev.* 35 : 221-255.
- Sorbe J.C. 1983. Description d'un traîneau destiné à l'échantillonnage quantitatif étagé de la faune suprabenthique néritique. *Ann. Inst. Océanogr.* 59 : 117-126.