

SUBTIDAL AMPHIPODA COMMUNITIES ASSOCIATED WITH ARTIFICIAL HARD SUBSTRATE ON THE BELGIAN CONTINENTAL SHELF

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The amount of artificial habitats in the marine environment has been continuously increasing during the last decades (Connell, 2001). Shipwrecks, among others, belong to the unplanned category of artificial habitat. Only a few studies described their epibenthic communities (van Moorsel *et al.* 1991, Massin *et al.* 2002, Zintzen *et al.* 2005) and their ecological impacts have been barely addressed. Further, the diversity pattern of different faunal groups for the Belgian continental Shelf (mainly macrobenthos and nematodes of soft sediments) has often only been discussed in relation to the type of sediment encountered. The epibenthic assemblages, which are characteristics of shipwrecks, offer the opportunity to look for a hypothetic onshore-offshore gradient with a relative independence of the sediment type. The abundance of 16 species of amphipoda from four shipwrecks located at increasing distance from the coast were analysed with multivariate techniques. Four amphipod communities were isolated each of them being characteristic of a single shipwreck. Moreover, the two species of the genus *Monocorophium* showed a remarkable pattern with *M. sextonae* being absent from the coastal zone and further increasing in abundance offshore while *M. acherusicum* showed an exactly opposite pattern. This gradient is further discussed in the light of the biology of these two species.

References

- Connell S.D. 2001. Urban structures as marine habitats: an experimental comparison of the composition and abundance of subtidal epibiota among pilings, pontoons and rocky reefs. *Marine Environmental Research*, 52: 115-125.
- Massin C., A. Norro and J. Mallefet. 2002. Biodiversity of a wreck from the Belgian continental shelf: monitoring using scientific diving. Preliminary results. *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique*, 72: 67-72.
- van Moorsel G.W.N.M., H.W. Waardenburg and J. van der Horst. 1991. Het leven op en rond scheepswrakken en andere harde substraten in de Noordzee (1986 t/m 1990) – een synthese. Bureau Waardenburg bv, Culemborg: 49 pp.
- Zintzen V., C. Massin, A. Norro and J. Mallefet. (in press). Epifauna inventory of two shipwrecks from the Belgian Continental Shelf. *Hydrobiologia*.