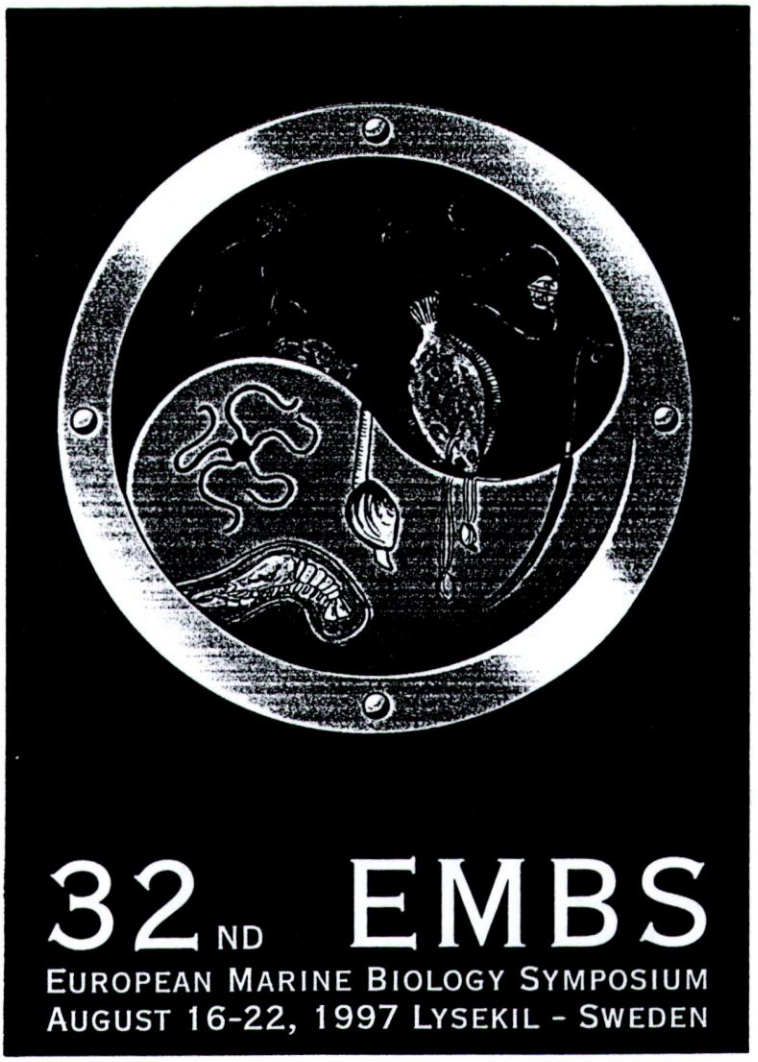
Programme & Abstract Volume



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HYDROIID SNAILS CONDITIONING GREEN ALGAE MATS (ENTEROMORPHA SPP.) IN THE NORTHERN HEMISPHERE

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For the last decades dense mats of filamentous green algae *Enteromorpha* spp. have regularly occurred worldwide on tidal flats. The development of green algal mats on intertidal flats is commonly achieved by overwintering and regrowth of adult plants or by the formation and detachment of propagules. Up to now the study of germlings as initiators of algal mats have received relatively little attention. It was known from one of our study sites (Königshafen Bay, Germany) that shells of living mudsnails (*Hydrobia ulvae*) serve as the main substrate of overwintering *Enteromorpha* spores and initiate in this way extensive growth of *Enteromorpha* mats in spring. We investigated the presence of *Enteromorpha* germlings attached on hydrobiid snails in different places of Canada, England, Germany, Portugal, Sweden and the United States between November 1995 and November 1996. At all investigation sites huge amounts of hydrobiid snails were present during the last years and and intensive growth of *Enteromorpha* occurred during the course of the season. - During winter 1995 /96 hardly any *Enteromorpha* germlings were found on the snail houses, but depending on the site, germlings developed on up to 60 % of hydrobiid snails during spring. It is obvious, that at least in some areas the germling development was related to overwintering of spores on snails, due to poor biomass of adult *Enteromorpha* plants during winter. In our study we could demonstrate that hydrobiid snails can play an important role in soft sediments for the successfull development of green algal mats in soft sediments.