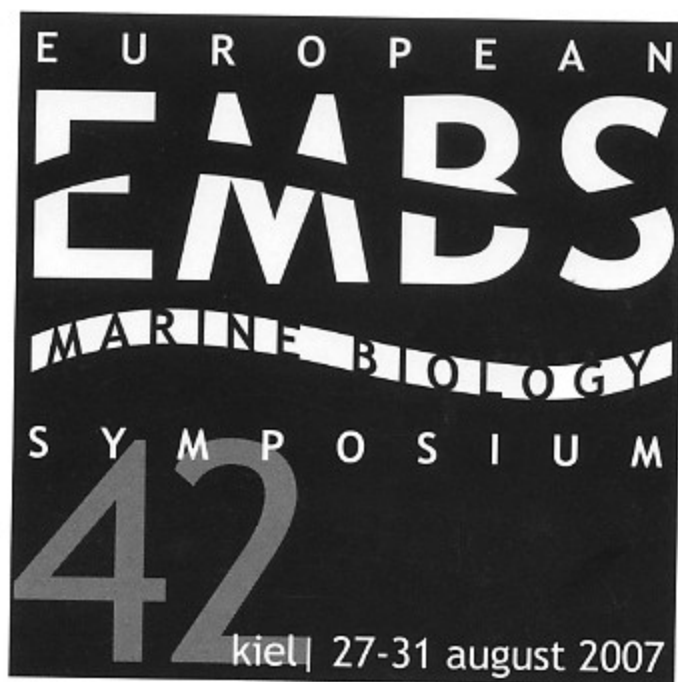


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ABSTRACTS



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Population and community level effects of exploitation of rocky intertidal grazers

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Abstract

Established human populations have a tradition of local exploitation of marine resources including those in the littoral. Organism exploitation can cause extensive declines in these populations and its effects may be scaled-up to ecosystem levels through cascading effects through the web. To a certain degree, these effects may be anticipated depending on the identity of the species exploited. In the Azores archipelago there is a long tradition of local limpet exploitation, which has caused extensive reductions of these populations. These islands differ in the level of human population and development hence providing a suitable study system to examine the effect of exploitation across a range of different exploitation regimes. In the present study, we used an integrative approach combining both a large-scale survey and experimental manipulation to examine the effect of grazer exploitation on community structure and function. The broad-scale survey considered 4 islands and indicated a significant reduction in limpet density and concomitant changes in the structure of these populations with increasing exploitation. In addition, variations at the community level were also evident indicating an increase in macroalgal cover and a reduction in barnacle density. These changes are ecologically meaningful and suggest that limpet exploitation may have shifted the community to an alternative state where primary producers dominate in detriment of filter-feeders. Following the survey, a manipulative experiment was established to experimentally test the hypothesis that a reduction in limpet density as a consequence of overexploitation pushes the community to an alternative state and to investigate whether this alternative state is reversible in the event of exploitation cessation.

Human modification on kelp epifauna

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Abstract

Degradation of natural...
substantial cause of the...
cities, natural habitats an...
pilings, jetties and seaw...
kelp *Ecklonia radiata*...
particular, the abundanc...
pilings than on that gro...
several locations in Sy...
be caused by differen...
between pilings and ro...
on each habitat (or bot...
to rocky reefs and fro...
showed that properties...
the type of kelp that...
about the physical an...
and natural habitats th...
blades, such as sha...
experiments to deter...
discussed.