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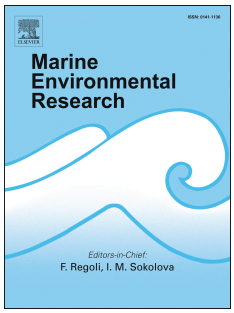

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Are submarine groundwater discharges affecting the structure and physiological status of rocky intertidal communities?

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Abstract

This study evaluated the impacts of submarine groundwater discharges (SGD) on a rocky intertidal community of South Portugal, during April-November 2011. Chlorophyll-a concentration was higher at the SGD site in respect to the Reference site. Epibenthic community structure differed between sites, with an increase in *Chthamalus* spp. and a decrease in macroalgae coverage at the SGD site. The abundance and body size of *Mytilus galloprovincialis* were consistently higher at the SGD site. During mid-spring, under potentially higher SGD and less favorable conditions for coastal phytoplankton, the ecophysiological condition of *M. galloprovincialis* and *G. umbilicalis* was also higher at the SGD site. These beneficial effects on filter-feeders and herbivores probably resulted from local increases in prey availability, supported by SGD-driven nutrient inputs. Conversely, *P. depressa* was not