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P2.08

Patterns of anthropogenic activities in the rocky intertidal od São Miguel (Azores)

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Human populations negatively influence coastal ecosystems in several ways. The present study examined patterns of spatial and temporal exploitation of the rocky intertidal of São Miguel. Visual census of people's activities were done to quantify exploitation intensity whereas questionnaires were used to have a general characterization of people's profile. There were significant spatial differences in coastal exploitation with Caloura receiving a far greater number of visits than Lagoa during the two periods of the year. Generally, the two shores examined differed in intensity of exploitation in the several groups of activities. At the first period, the activities most frequented at Lagoa were walking and catch crabs whilst at Caloura people were recurrently seen walking and fishing; at the second annual period, Lagoa and Caloura were most visited to sunbathing and walking. Analysis of the questionnaires revealed that the standard person exploiting these shores is 40-45 years old male who prefers the low-tide, good weather conditions and shows a regular activity throughout the year. Fish were comprised the main catch although a large percentage of people had a desire to harvest limpets. There was reasonable awareness that marine resources are diminishing in abundance and size. Illegal harvesting of limpets occurred even though people were aware of legislation. Our results show that there is considerable variability in the exploitation of coastal resources even among locations within an island suggesting that understanding the factors that determine people's preferences for a particular shore should be included and inform the design and management of marine coastal areas.

P2.09

Does observation scale affect our perception of habitat distribution in a brackish water ecosystem?

Möller T, Kotta J, Martin G

Habitat loss and isolation associated with land conversion for human activities pose perhaps the most severe threat to the earth's biological diversity. The EU Habitat Directive is a Community legislative instrument in the field of nature conservation that establishes a common framework for the conservation of wild animal and plant species and natural habitats of Community importance. The valuable benthic habitats listed in the habitat directive have high structural variability at local and landscape scales and this variability is closely linked with physical setting. Therefore the mapping studies should incorporate the relevant scales of variability in space and time in order to understand factors and processes generating patterns in biotic and abiotic components of ecosystems. Using a remote underwater video device we estimated the spatial patterns of benthic habitats across a wide range of spatial scales in the northern Baltic Sea. Our estimations on the distribution patterns of habitats and relevant key species largely depended on the methods applied (random vs uniform sampling) and scale considered. In general random sampling produced better estimates of distribution of habitats and key-species. There was a significant variability of patterns at largest spatial scales that was not deducible from local variability whereas landscape-scale patterns were mainly due to local patterns. The study suggests that complex interactions between a variety of processes across several spatial scales may limit the extent to which habitats are correlated with landscape-scale structure, even if strong relationships exist between structure and key species.

P2.10

Seasonal variations of meiofaunal community structure affected by fishfarms in Tenerife (Canary Islands, NE Atlantic Ocean)

Monterroso Ó, Riera R, Rodríguez M, Pérez Ó, Ramos E

An environmental monitoring was carried out in two fish farms located in the west coast of Tenerife (Canarian archipelago, NE Atlantic Ocean). This study started in June 2003 and ten sampling campaigns were done (June 2003, October 2003, February 2004, August 2004, March 2005, July 2005, June 2006, December 2006, June 2007 and December 2007). Eight stations were selected, three of them under the fish farms (impact group, LG-1, LG-2 and LG-3), two conformed the influence group (LG-4 and LG-6) and the remaining ones the control group (LG-5, LG-7 and LG-8). The study site was dominated by a high variety of soft-bottoms (eel garden assemblages, sabellids fields, *Cymodocea nodosa* meadows, sandy bare bottoms,etc.). In general, nematodes reached higher abundances in sediments under the fishfarms compared to influence and control stations. Nematodes dominated overwhelmingly the interstitial community structure in all stations. The remaining taxonomic groups (tanaids, copepods, polychaetes, oligochaetes, ostracods, etc.) were scarce in all sampling campaigns. Additional abiotic factors (granulometry, organic matter and phosphorus) were recorded and interrelationships between these parametres and abundance data were analyzed. In short, there is a located impact in the study area, restricted to the sediments under the fish concesion (< 15 m around) and characterized by the presence of fine sands.

P2.11

Space and temporary variations of *Caulerpa racemosa* var. *cylindracea* in Los Cristianos and Igueste de San Andrés, Tenerife, Canary Islands

Moreira-Reyes A, Gil-Rodríguez MC

Caulerpa racemosa var. *cylindracea* (Sonder) Verlaque, Huisman et Boudouresque is a green alga from South West Australia. Different authors consider this variety as an invasive alga. It has been reported that this taxon is increasingly abundant in the Canary Islands sublithoral, growing in the proximity of the *Cymodocea nodosa* (Ucria) Ascherson prairies. It has also been reported to grow with other marine phanerogams, such as *Halophila decipiens* Ostenfeld. The areas selected for this study were the localities of Los Cristianos and Igueste de San Andrés (Tenerife). The methodology used consisted of monthly coverage and density studies for a year. In order to estimate the coverage of the studied species, a grid of $1m^2$, divided in four sub-grids of 50x50 cm, was used. The cover was considered indicating the percentage of space that occupied each one of the species in the corresponding sub-grid. For the density data acquisition the used grid is one of the sub-grids of 50x50 cm in which the grid of 1 m^2 is divided into. The density of each taxon is determined counting the number of individual present in the grid of 50x50 cm. The analysis of the data obtained showed that *C. racemosa* var. *cylindracea* increases its coverage and density during spring in both localities.