

## **RECRUITMENT AND SUCCESSION ON VERTICAL AND HORIZONTAL SUBSTRATA OF ROCKY SEA SHORE**

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There is evidence from the literature and from observations that very different kind of assemblages are present on vertical and horizontal substrata on rocky sea shores. Macroalgal cover is consistently greater on subtidal horizontal substrata and cover of sessile invertebrates is greater on subtidal walls (rocky substratum with approximately 90° orientation from horizontal) in a variety of benthic habitats. The reasons for such differences range from the different exposure to waves, to the different degrees of illumination, to the different orientation to the sea front. All these factors, and others, can have effects on the recruitment of organisms and on the post-recruitment processes that regulate the ecological succession on the two substrata of different slope, structuring the late assemblage.

With our study we are trying to address two issues: (i) confirm and quantify the differences between assemblages present on vertical and horizontal substrata of rocky shore in two coast of the North of Portugal, (ii) test hypothesis about the recruitment and the following succession stages on the two different substrata.

The experiment started with a sampling survey at the end of March 2006. Quadrats of 20x20cm were sampled on vertical and horizontal rock substrata in each of two sites of two rocky shores of the North of Portugal (Viana do Castelo and Amorosa). Immediately after the sampling, quadrats were randomly allocated to different treatment: removal of organisms with hammer and chisel and control. A second sampling of the established experimental plots has been done after one month. In the seminar I present preliminary results of these two sampling dates.