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SPATIO-TEMPORAL VARIATION OF THE BENTHIC COMMUNITY OF INFRALITTORAL AT ARRAIAL DO CABO (RJ), BRAZIL

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Rocky shores benthic community are characterized by ecological interactions between the biota and the environment, resulting in complex and heterogeneous ecosystems. The present work analyzed the distribution and the relative abundance of the benthic communities of infralittoral along different environmental gradients in Arraial do Cabo (RJ). In order to identify the spatial and temporal variations of the main components of this community, the sampling was performed every three months, from July 2017 to June 2019, at four sheltered (Anequim, Porcos, Pedra Vermelha and Saco do Gato) and two exposed sites (Franceses e Ingleses). The substrate coverage data was obtained by the photo-square method. The taxa were grouped by morphofunctional groups. Percentage coverage data was transformed to square root arcsine. The non-metric multidimensional scaling (nMDS), using the Bray-Curtis similarity matrix, was applied to identify the formation of groups based on the benthic community composition and abundance. The results evidenced that the dominance trend of “macroalgae” was inversely proportional to the presence of the “turf” and “articulate coralline algae”. The contribution of “turf” increased with depth in all sites, and during the winter at Anequim, Porcos and Pedra Vermelha. It was noticeable the differentiation between Franceses and the other sampled sites regarding to the “macroalgae” and “invertebrates” contribution. The nMDS analysis did not evidenced formation of groups. Therefore, further analysis concerning differences focused on specific groups may help depict finer scale patterns on spatial variation on benthic cover along studied gradients.