

ENVIRONMENTAL HETEROGENEITY AND BIODIVERSITY IN SUBTIDAL SEDIMENTS OF TODOS OS SANTOS BAY (NORTHEAST BRAZIL)*

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The Todos os Santos Bay (TSB), which has an area of 940 Km² (12°35' to 13°07' S - 38°29' to 38°48' W), is the second largest coastal indentation in Brazil. This work is part of a Doctoral thesis research and intends to present an evaluation of the biological diversity of bottom sediments of the TSB. A total of 32 stations were sampled during summer and autumn of 1997. Water and sediment samples were obtained using van Dorn bottle and van Veen grab, a rectangular dredge was also used. The collected stations ranged from 1,5 to 62 meters in deep, their salinity from 27 to 36 ‰, the dissolved oxygen from 5,4 to 10,4 mg/l and the water surface temperature from 26 to 29°C. A total of 34 taxonomic groups were found in the survey area, including grab and dredge samples. Polychaete worms, bivalve mollusks, decapod crustaceans and ophiuroids exhibit frequencies higher than 50%. The biodiversity, evaluated as taxonomic groups richness, ranged from 2 to 23. The higher values were found in the area between the Itaparica Island and the west coast of the TSB. This area presents a highly variable sediment texture and composition. On the other hand, the lower biodiversity values occurred on the north of the TSB, which has muddy bottom with very low carbonate content. These results illustrate the fact that biodiversity increases concurrently with the structural heterogeneity of the environment.*(Financial support was provided by WWF - Project CSR 085/97).