

SEDIMENTARY PATTERN IN THE INNER CONTINENTAL SHELF OF SÃO SEBASTIÃO REGION

1R. L. Barcellos; 1V V Furtado; . 1-Instituto Oceanográfico, Universidade de São Paulo, São Paulo, Brazil.

The São Sebastião Island is a natural barrier to the marine hydrodynamic action in the adjacent continental inner shelf, conditioning the local sedimentary deposition and the organic matter content behavior. The sedimentary pattern westward and southwestward of the island is dominated by well-sorted fine and very fine sand deposition, due to the direct wave action in the bottom reworking the sediments. Meanwhile eastward and southeastward of the island there is the deposition of pelitic sediments with high contents of organic matter. The island, in this case, blocks the direct wave action and acts as a source of pelitic sediments and organic matter to the area. Pluvial and small fluvial drainage associated with an extensive vegetal cover, leads to an increase in the organic carbon content. The nitrogen content is related to a nutrient input through runoff and the primary production increasing. The São Sebastião island is also a barrier for two opposite current flows in the inner shelf, southwestward in the northern portion and northeastward in the southern portion, that also have influence in the local sedimentary pattern, acting in the sediment and organic matter distribution around the island.