## Terceira Sessão: Conservação e áreas afins – Pôsteres

### Marine thermal events observed in the sheltered face of the Alcatrazes Archipelago

Corrêa, Ana L T (1); Carvalho, Breylla C (1); Lira, Camila L (1); Ciotti, Áurea M (1)

(1) Centro de Biologia Marinha da Universidade de São Paulo, CEBIMar/USP, São Sebastião, SP.

High (HSWT) and low (LSWT) sea water temperature events have been reported worldwide and their frequency and intensity have increased in recent years, and their effects on the structure and functioning of marine biodiversity need to be better understood worldwide, especially if they surpass the surface. Here we investigated the occurrence of HSWT and LSWT events in Alcatrazes Archipelago, a marine protected area on São Paulo coast, which receives episodically, near the bottom, the South Atlantic Central Water mass (SACW), that influences the vertical distribution of temperature. Loggers (HOBO TidbiT MX2203 Temperature 400' Data Logger) were deployed on six sites of the sheltered side of the Archipelago between February/2022 and February/2023 at different depths, acquiring data at 10 minute intervals. HSWT and LSWT events were detected when temperatures were higher than the 90th percentile and lower than the 10th percentile of the time series respectively, and lasted more than five days. Results showed four events of HSWT at 3 meters depth and five events at 8 meters depth, characterized as moderate to strong. Furthermore, we computed the maximum of five events of LSWT at 3 meters depth and five events at 8 meters depth, characterized as moderate to severe. During 2022-2023 Alcatrazes Archipelago was subjected to HSWT and LSWT events year round but different sites showed different degrees of influence at a given time. The high frequency of observations and fine vertical scale allowed it to detect anomalous warm water (up to 27.46 degrees) and cold water (up to 16.57 degrees) at 3-8 meters during the events. Furthermore, it is important to observe the alternations between warm water periods and significant decreases in sea water temperatures. Strong gradients in surface temperature in the warmer months are related to the presence of SACW at lower depths.

**Financiamento: FAP Unifesp, Petrobras**
**O trabalho foi desenvolvido com o uso da infraestrutura do CEBIMar? Sim**