

Coral Cover Evaluation Of Todos Os Santos Bay Reefs After The 2003 Mass Bleaching Event in Southwestern Atlantic

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Aiming to investigate the consequences of a mass coral bleaching event observed in Todos os Santos Bay in 2003, reefs were re-surveyed in 2007. The 2003 bleaching event affected $37.6 \pm 25.5\%$ coral cover, when sea surface temperature (SST) reached yearly maximum anomaly of about 0.75°C , between 04/01/2003 and 05/04/2003. In 2007 the same eight reef sites were surveyed applying a similar video-transect technique. Six, 20 m long and 0.21 m wide, belt-transects from each reef site were analyzed, and organisms were identified under 20 random points in each image (frame) in a total of 100 frames per transect. For comparing 2003 and 2007 coral cover, T-test was used with an $\alpha = 0.05$. The results show that living coral cover didn't change significantly ($X = 14.0 \pm 8.1\%$ in 2003 to $X = 13.1 \pm 10.2\%$ in 2007, $p = 0.836$). In 2007 bleaching was mild in Todos os Santos Bay affecting only $10.7 \pm 9.8\%$ coral cover of the investigated reefs. Coral reefs from Todos os Santos Bay have been suffering from changes in the bay water quality mainly caused by the increased runoff of pollutant and sedimentation, as well as over exploitation of reef resources using, sometimes, prohibited fishing practices, and coral bleaching seems to be an additional factor. Because of the persistence of Todos os Santos Bay fauna to all these environmental stresses, its coral fauna can be considered as a resilient one.