

Study of mitotic index in Nayband bay coral reefs

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Abstract

Coral reefs which are one of the most significant marine ecosystems have symbiosis with zooxanthella for their growth and survival. Today zooxanthella and coral symbiosis is in the danger of anthropogenic and global climate changes. A better understanding of the mitosis cycle of the cell in symbiotic algae leads to a quantitative assessment of stress in corals and a clear presentation of the effect of the relationship between mitotic division and pollutants. To conduct this study in the first investigation, the best concentration of live coral reefs was selected by using Manta Tow method. The coral sampling of the region was conducted by scuba diving from dominant genus of the region through one year in three seasons including cold, moderate and warm season. By extracting zooxanthella with air brush machine, counting the dividing zooxanthella under microscope and forming a simple proportion to the total counted zooxanthella mitotic index was obtained. Eventually it was determined that mitotic index has significant alteration between warm and cold season with moderate season.

Keywords: mitotic index, zooxanthella, coral reefs, Nayband