

## ORGANISMS ASSOCIATED WITH THE STRUCTURE OF THE COLONIES OF *TUBASTRAEA COCCINEA*.

**Priscila Ribeiro de Araújo<sup>1,2</sup>; Ricardo Coutinho<sup>1,2</sup>**

<sup>1</sup>Programa de Pós Graduação em Biotecnologia Marinha (IEAPM/UFF); <sup>2</sup>Departamento de Biotecnologia Marinha, Instituto de Estudo do Mar Almirante Paulo Moreira.

Despite of increase in the introduction of non-indigenous species, the knowledge about the ecological interactions between invasive species and invaded communities is still scarce. Invasive species may "facilitate", "inhibit" or not cause changes in the species diversity of the invaded communities. Invasive corals of the genus *Tubastraea*, known as sun coral, have increased their distribution in the Brazilian seas, mainly in the southwest of the country. In the marine environment corals are known to provide areas for refuge of other organisms that shelter in the structure of their colonies. In order to investigate the influence of *Tubastraea* on the benthic organisms of the invaded communities, this study aimed to characterize the benthic fauna associated with the colonies of *Tubastraea coccinea* and to verify if there is a relation between the number of individuals associated with the colonies with the number of polyps and the area of the colonies. In April 2016, 126 colonies of *T. coccinea* were collected manually, using a spatula and mallet, on the rocky shore of the Ilha dos Porcos, Arraial do Cabo. After collection, the colonies were immediately stored in sealed plastic bags and transported to the laboratory where the organisms associated with them were removed using tweezers. A total of 3 large groups were found: Polychaeta, Mollusca and Crustacea. The most abundant taxon was the Polychaeta composed of 192 individuals, followed by the Mollusca with 163 and the Crustacea with 36 individuals. Only the crustaceans were found on the polyps of the colonies. Poliquetas and molluscs took refuge in the base of the colonies in the middle of the calcareous structure. The number of polyps of the colonies of *T. coccinea* ranged from 9 to 50 polyps. The area of the colonies ranged from 7.7 to 55.0 cm<sup>2</sup>. Pearson's correlation coefficient was calculated to check if there was a relationship between the number of individuals associated with the colonies with the number of polyps and the area of the colonies. A weak correlation was found both to check the possible relationship with the number of polyps ( $r = 0.20$ ) and with the colony area ( $r = 0.15$ ). With the results obtained it is possible to conclude that because *Tubastraea* presents allelopathic substances, few species take refuge between the polyps of the colonies. In addition, the size of the colonies of *Tubastraea*, estimated by their quantity of polyps and their area, does not influence in the abundance of organisms associated to the colonies.