Terceira Sessão: Conservação e áreas afins – Pôsteres

Biotic homogenization in artificial marine habitats. Global standards and alternatives to minimize the introduction of exotic species

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Globalization has brought significant benefits to humanity, but also big impacts on ecosystems. One of these impacts is the introduction of exotic species, whether intentional or accidental. These introductions have led to a drastic reduction in native biodiversity, resulting in the homogenization of biota in human-altered habitats worldwide. Numerous strategies have been implemented to combat and mitigate the introduction of exotic species. Some focus on preventing potential vectors of exotic species, while others aim to control species that have already invaded predominantly man-made structures. Sun corals (Tubastraea spp.) are examples of exotic species that have been spreading along the Brazilian coast for many years, causing a significant loss of diversity. Previous studies have shown that manually removing sun corals is an effective short-term approach. Likewise, a recent study using PVC panels demonstrated the long-term efficacy of pre-colonization by a native organism. Based on these findings, we removed sun corals from thirty 25x25 cm areas of a recreational marina's wall. We then implanted pieces of the native sponge Mycale angulosa into twenty of these areas, varying densities, to determine the minimum effort required for the successful establishment of these sponges against sun coral invasion. Two months later, 89% of the sponges were alive and growing. In sponge-present areas, sun corals were absent regardless of density. So far, sponges have proven effective in preventing sun coral establishment. However, we acknowledge potential changes over the next two years of the experiment, during which we will evaluate community diversity. We believe that manual sun coral removal, combined with the pre-colonization by M. angulosa, can be an effective long-term strategy to prevent sun coral establishment.

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