

Creation of *Acropora cervicornis* reefs via coral restoration has no effect on fish populations in Little Cayman



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Aim: Assess the influence of out-planted coral reefs on fish composition.

I- Modus operandi

- Out-planted *Acropora cervicornis* onto sets of 3, 1m², domes.
- Surveyed fishes using the stationary diver technique in a 5m cylinder around each dome set (n=5).
- Surveyed before, immediately after, and 85 days after installation

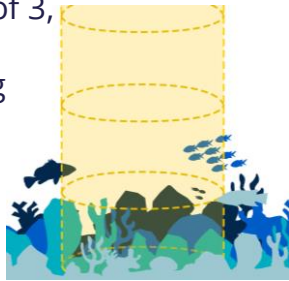


Fig1: survey method

II- Results

- No significant differences were found between out-planted and control sites regarding the fish biomass, abundance or species richness (Fig. 2).
- Species and trophic guild stayed constant throughout the 85 days.

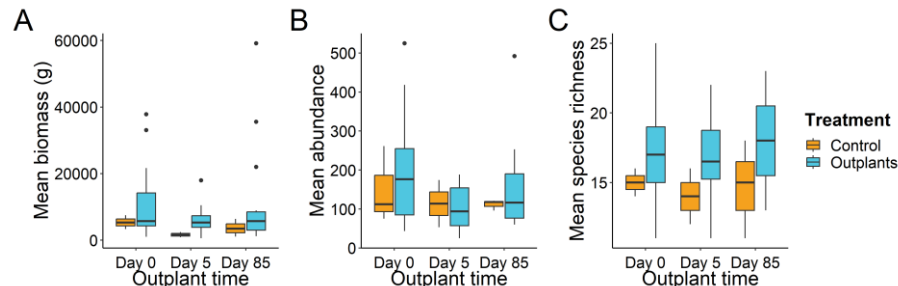
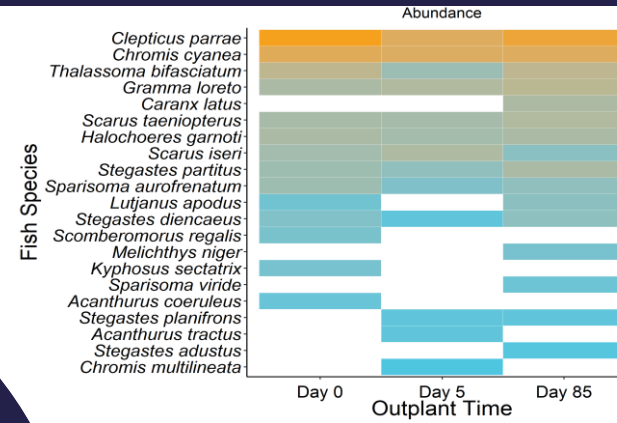


Fig2: No-significant differences between control and outplanted sites.

III- Discussion



We observed a negligible influence of short-term coral restoration on the fish community composition on the isolated and well protected reefs of Little Cayman (Fig. 3).

Fig3: Heatmap of species abundances before and after out-planting.

Results suggest that coral restoration out-planting will likely not impact fish populations.

Fish populations are strongly influenced by anthropogenic pressure and food availability.

Reef state may influence this finding, where heavily degraded reefs may see more impact from restoration.

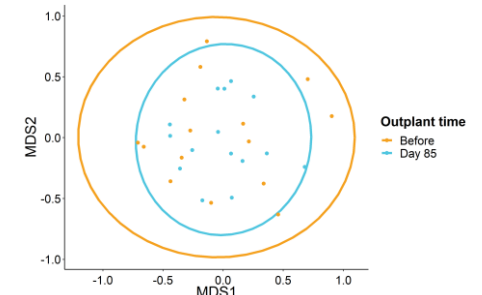


Fig4: Significant overlap when comparing control at day 0 and 85 days later.

IV- Conclusion

The lack of any difference in fish populations before and after out-planting as well as between the control and out-planted sites strongly suggests that out-planting *A. cervicornis* to create reef structures does not impact fish populations in Little Cayman.

