



Management of Invasive Lionfish Hotspots: Conservation of Biodiversity on Mesophotic Coral Ecosystems in Bermuda

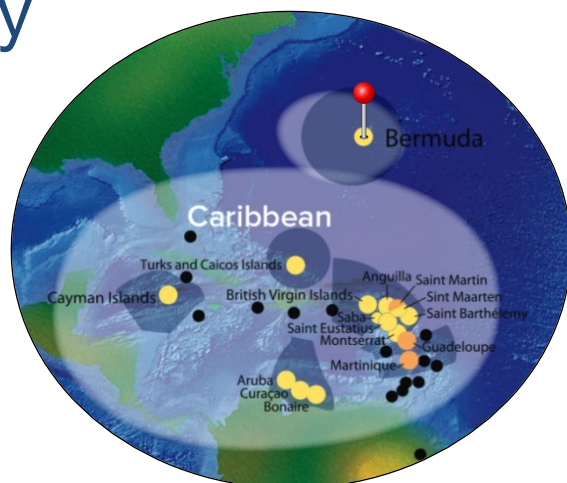
Targeted territory: Bermuda

Total project budget: 96,440 Euros

BEST 2.0 grant awarded: 96,440 Euros

Duration: July 2017 – December 2018 (18 months)

Lead organisation: Bermuda Institute of Ocean Sciences (BIOS)



Background:

Invasive lionfish have established populations throughout the Caribbean and Western Atlantic Ocean, consuming large quantities of small and juvenile fish. In its invaded range, the lionfish threatens native populations of economically and ecologically important fish species and has been identified as the key threat to marine biodiversity in Bermuda. Previous work in Bermuda has revealed densely concentrated populations at 60 metre depths, a region with high biodiversity that is often utilised as refuge habitat by shallow reef fish species.

Description of the Project:

This project aims to demonstrate that targeted removal of invasive lionfish will reduce the pressure on local fish populations, resulting in the preservation of localized reef fish diversity. This is of particular importance for fishery-targeted species, which utilise deep reefs as critical refuge habitat. In addition it aims to promote the creation of a sustainable lionfish fishery through provisions of lionfish to local restaurants followed by surveys to determine market demand. Results of this project will, therefore, indicate the efficacy of lionfish control through targeted removal, the impact of removal efforts to biodiversity, and the viability of a creating a lionfish fishery. These findings will be shared with stakeholders and other Overseas Countries and Territories through a variety of outreach activities, including social media, international conference attendance, and stakeholder events.



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Intended results:

- Establish a baseline for reef fish community composition (biodiversity and abundance) and lionfish density at three mesophotic reef sites.
- Reduce lionfish feeding pressure on native fish communities through targeted removal.
- Determine the effectiveness of lionfish removal to preserve biodiversity and on re-colonization rates by lionfish.
- Increase demand for lionfish as a food source.



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