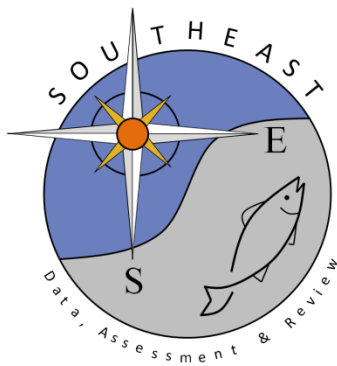


Size Composition Data Availability Overview of the HJR Reefscaping and MER Caribbean Spiny Lobster Size Selectivity Surveys in the U.S. Caribbean

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Size Composition Data Availability Overview of the HJR Reefscaping and MER Caribbean Spiny Lobster Size Selectivity Surveys in the U.S. Caribbean

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SEDAR 103: US Caribbean Application of Alternate Assessment Methods

Summary

The HJR Reefscaping and MER Caribbean Spiny Lobster size selectivity survey data can be utilized to study the size composition and gear selectivity of the Caribbean spiny lobster trap fishery within Puerto Rican waters.

I. Introduction

In preparations for the SouthEast Data, Assessment, and Review (SEDAR) 103: U.S. Caribbean Application of Alternate Assessment Methods; the Southeast Fisheries Science Center, Sustainable Fisheries Division (SEFSC), Caribbean Fisheries Branch conducted data triage of the HJR and MER Caribbean Spiny Lobster Size Selectivity Surveys. This document summarizes data collected by these surveys from 2021 to 2023.

II. Sampling Method

The HJR Reefscaping and MER surveys conducted at-sea sampling of Caribbean Spiny Lobster. The goal of the MER survey was “to field test and compare size selectivity properties of standard trap designs relative to the size structure of the in water population of spiny lobsters in Puerto Rico” (Soto and Gedamke, 2024). In a collaborative effort with commercial fishermen, samplers utilized cameras mounted on boats’ decks and above sorting/dumping tables to take pictures of catch and digitally analyze the captured frames to measure carapace lengths within a millimeter.

A. Sampling Years

The HJR Reefscaping survey sampled from November 2021 through September 2022. The MER survey sampled from September 2021 through October 2023.

B. Geographic Range

The HJR Reefscaping survey targeted habitats located in depths shallower than 30m in the waters surrounding Puerto Rico. The MER survey targeted waters surrounding four ports around the Puerto Rican coast (Figure 1).

C. Sample Size

The HJR Reefscaping survey collected 808 Caribbean spiny lobster lengths across 10 months between 2021 and 2022. The MER survey collected 4,202 Caribbean spiny lobster lengths across 25 months between 2021 and 2023 (Table 1).

D. Variables or Data Types Collected

The HJR Reefscaping survey collected biological data including length, weight, sex, and condition of each specimen as well as the date of collection. The MER survey collected the length of each specimen with the port county associated with the sampling site and the date of collection.

III. Results

The Caribbean spiny lobster size selectivity data was summarized by survey. The number of months samples were taken at-sea over the course of the surveys and the count of unique lengths captured were tallied (Table 1).

IV. Discussion

Based on the sampling methods and breadth of data, the HJR Reefscaping and MER Caribbean Spiny Lobster size selectivity survey data can be utilized to study the size composition and gear selectivity of the Caribbean spiny lobster trap fishery within Puerto Rican waters.

V. References

Soto, D., & Gedamke, T. (2024). Cooperative Lobster Survey and Port Sampling Follow-up Work (pp. 1–61). University of Miami and NOAA's Fisheries Southeast Fisheries Science Center.

VI. Tables and Figures

Table 1. Summary of Puerto Rican Caribbean Spiny Lobster data collected by the HJR and MER surveys from 2021 to 2023.

Island	Survey	Species	Gear	First Year	Last Year	Months of Data	Lengths
Puerto Rico	HJR	Caribbean Spiny Lobster	TRAPS, LOBSTER	2021	2022	10	808
Puerto Rico	MER	Caribbean Spiny Lobster	TRAPS, LOBSTER	2021	2023	25	4,202



Figure 1. Map of Puerto Rico Archipelago showing home ports for study sites and associated fishing grounds. A) Rincón, B) Juana Díaz, C) Ceiba, D) Vieques. (Soto & Gedamke, 2024)