

COASTAL EXPLOITATION ON ISLA MUJERES

REPORT ON PRELIMINARY FINDINGS
RUFFORD FOUNDATION SMALL GRANTS



Field Season January–March 2021

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For our Rufford Grant, we are documenting small-scale fisheries exploitation on Isla Mujeres (Fig. 1). We are expanding our interdisciplinary methodology approach developed on Holbox Island, which integrates fishers' traditional knowledge to determine how coastal exploitation activities contributed to declining fishery resources.

Isla Mujeres is situated where the Gulf of Mexico and the Caribbean Sea meet, about 13 kilometers off the Yucatan Peninsula. Isla Mujeres is ~ 7 kilometers long and 650 meters wide. Reefs between Isla Mujeres and Cancun were declared a flora and fauna reserve in 1973 and later a National Park “Parque Nacional Costa Occidental de Isla Mujeres, Punta Cancún y Punta Nizuc” in 1996 (Comisión Nacional de Áreas Naturales Protegidas 2019). This Park harbors the “Gran Cinturón de Arrecifes del Atlántico Occidental,” which belongs to the Mesoamerican Barrier Reef System.

Isla Mujeres's proximity to Cancun has turned this tiny island into a growing hotspot for international sun and sand tourism since the late 1970s. In 2019 the island received about 944,477 tourists (SEDETUR 2019). The ever-increasing tourism economy has transformed the island's natural landscapes and the local culture.



FIGURE 1 STUDY SITE

Multispecific small-scale fisheries have historically occurred on the island. Local fishers are grouped in fishing cooperatives. For our first field season from January to March 2021, we were able to interview fishers from 4 of the 5 cooperatives on the Island: Patria y Progreso, Por la Justicia Social, Caribe, and Pescadores de laguna Makax. Until now, we have collected 60 fishers' surveys with a spatial component from elder (n= 35), middle-age (n=23), and young fishers (n=2) (Fig 2). From these fishers' surveys, we obtained 77 common names of species in different species groups which fishers mentioned were common in the past. Some of the main species groups that populated nearshore waters of Isla Mujeres and were highly fished include lobsters, groupers, sharks, and sea turtles (Figures 3 and 4).

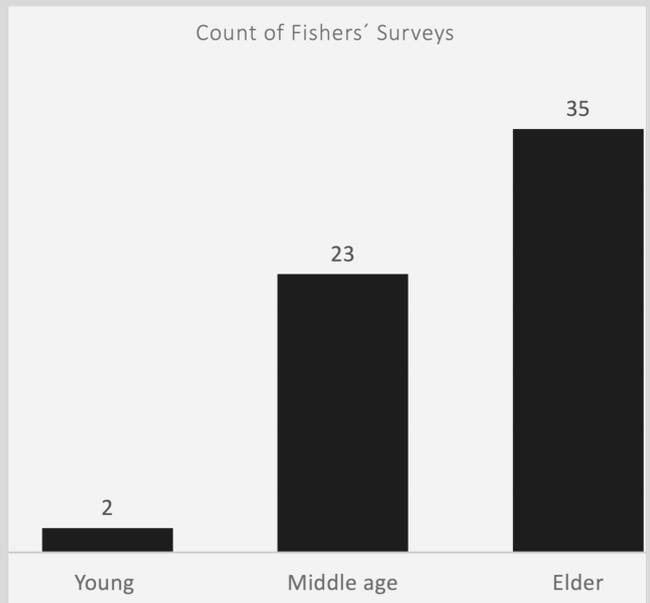


FIGURE 2 COUNT OF FISHERS' SURVEYS



Sea turtle fishery on Isla Mujeres. Picture from the archive of Isla Mujeres. The date is around 1960.

FIGURE 3 HISTORICAL PICTURE OF THE SEA TURTLE FISHERY ON ISLA MUJERES

We are still working on the species data since we compare species within Isla Mujeres and Isla Holbox (where we have developed earlier work). Surveys results will allow us to build maps with baseline information of long-term coastal exploitation on the island. Preliminary results identify over 50 fishing sites that were once very productive over the past 50 years.

In our future field trips, we will investigate the small but essential fishing fleet focused on shark fishing, which has the highest production in the region and operates yearly except during the shark fishing ban months in May and June.

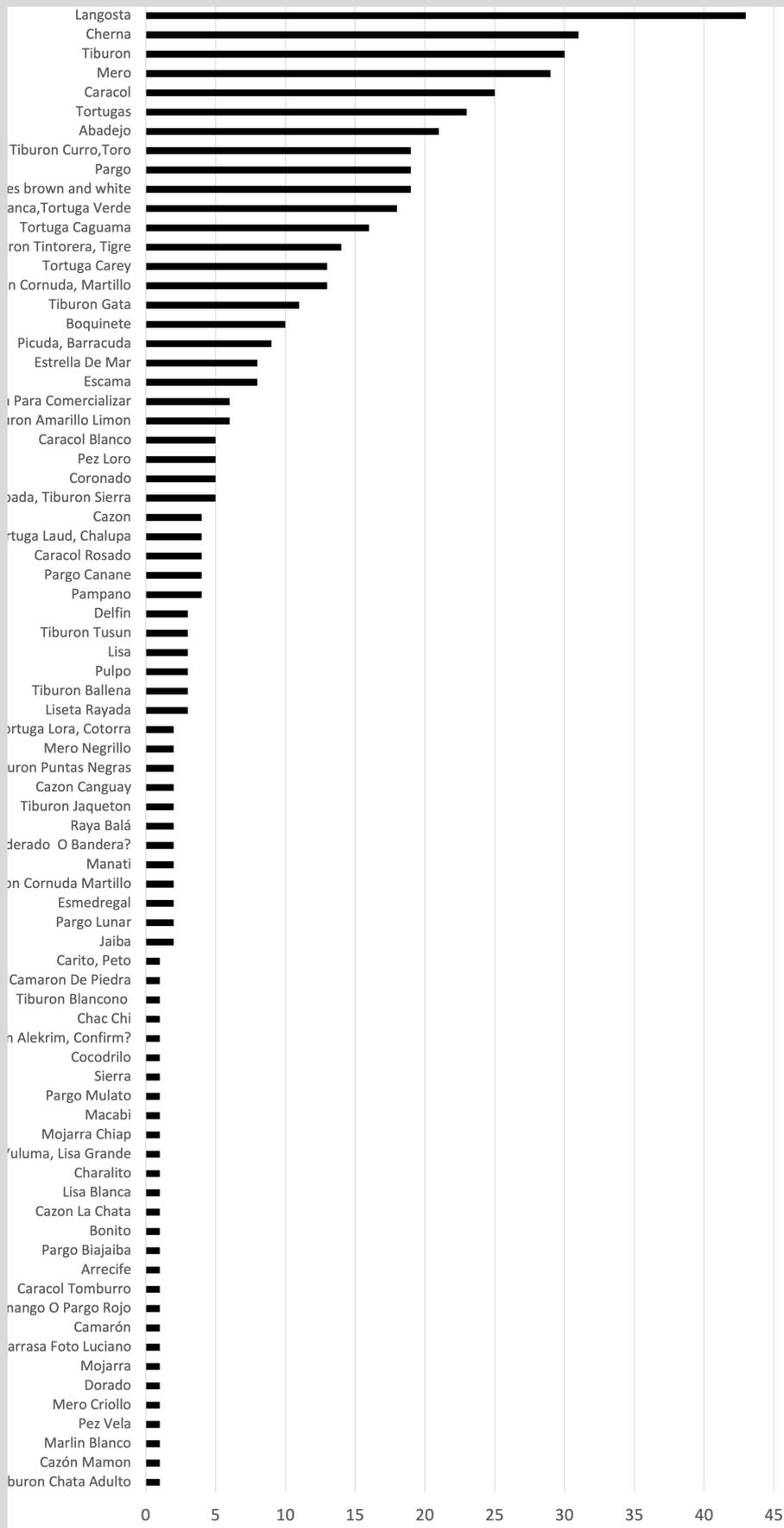


FIGURE 4 COMMON NAMES OF MARINE RESOURCES DOCUMENTED IN FISHERS' SURVEYS

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