

# Characterizing an artisanal elasmobranch fishery in the remote Miskito Cays of Honduras

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## Introduction

- Honduras is one of 17 Shark Sanctuaries worldwide
- Shark fishing is banned in the country's EEZ as well as trade, possession and consumption
- Rays are not protected by the legislation and are targeted.
- In 2016, an amendment to the legislation fueled an elasmobranch fishery in the remote Miskito Cays
- The Lenten season generates demand for fins and dry meat known as “cecina”.
- All catches, including threatened and CITES listed species remain unreported and unregulated.

## Methods

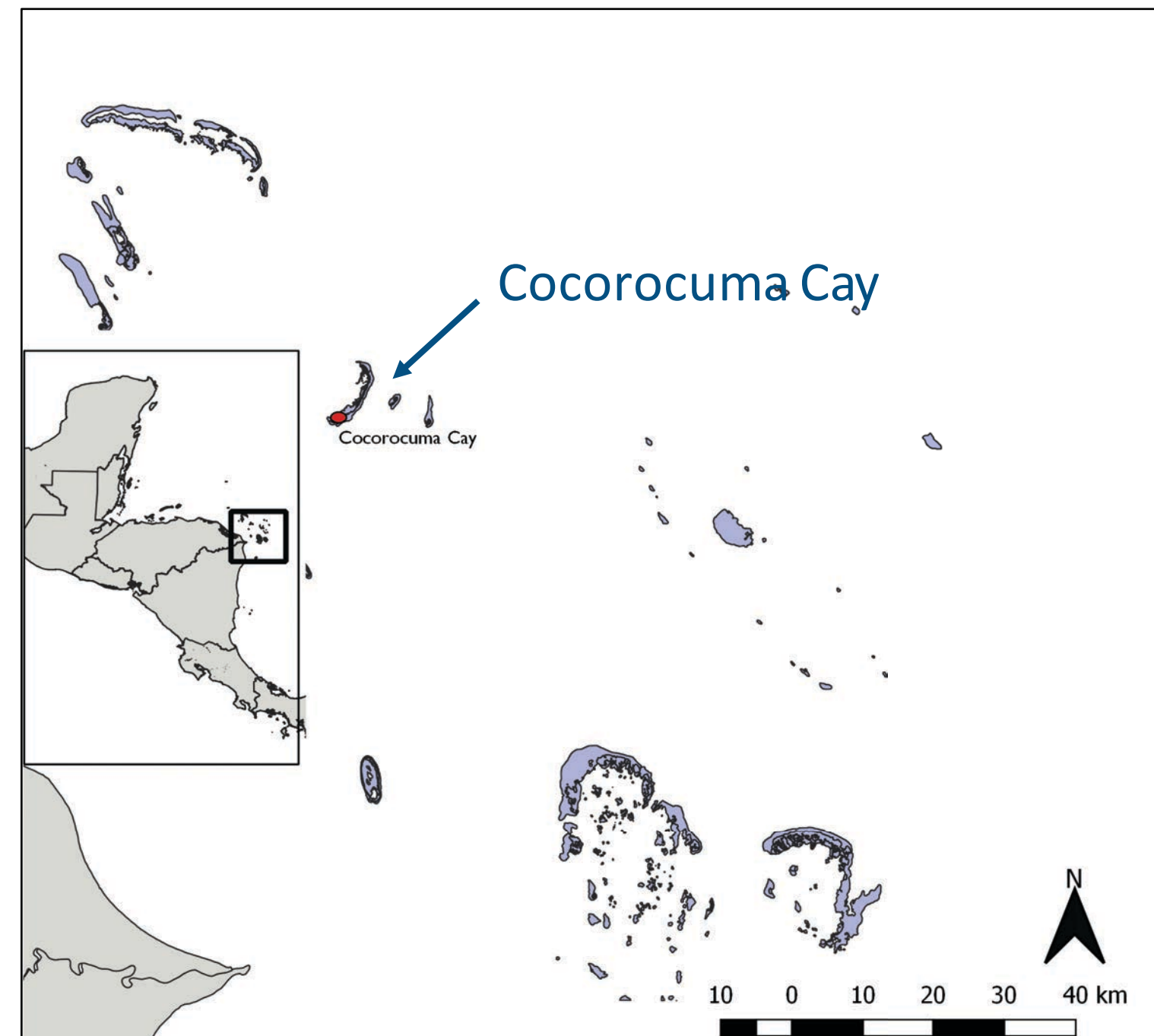
- Landings were conducted for 6 days in Cocorocuma Cay (Fig. 3 and 4)
- Species landed were identified to the lowest taxonomical level, photographed, sexed, weight and measured using CL



**Figure 1.** Shark fillets and fins drying in the sun in a fishing camp in the Miskito Cays



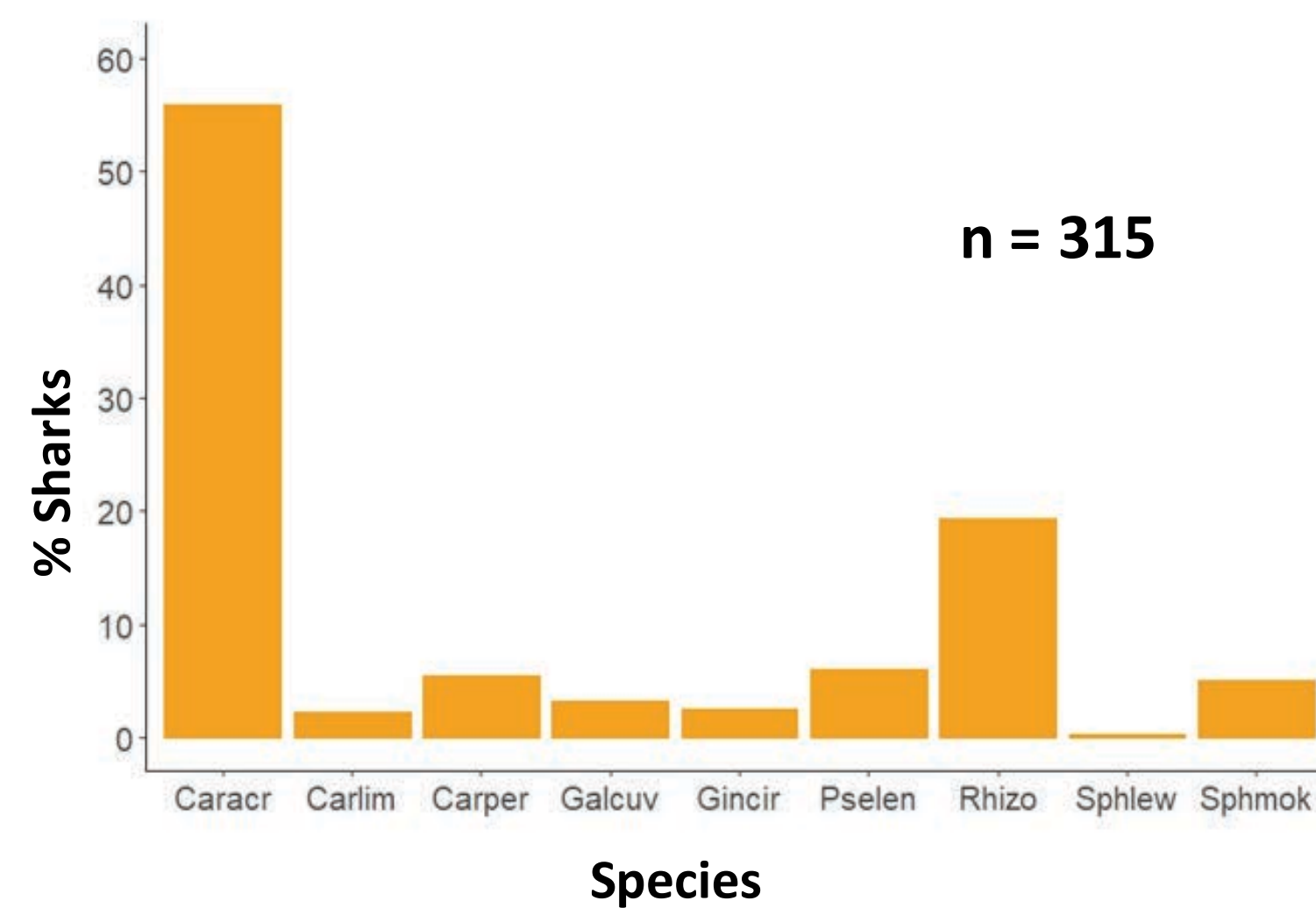
**Figure 2.** Great hammerheads landed in the Miskito Cays



**Figures 3 & 4.** Photo of Cocorocuma Cay and Map showing the location of the Miskito Cays reef system and Cocorocuma Cay. The archipelago is comprised of 49 small coral islands and sand bars spanning an area of 750 km².

## Results

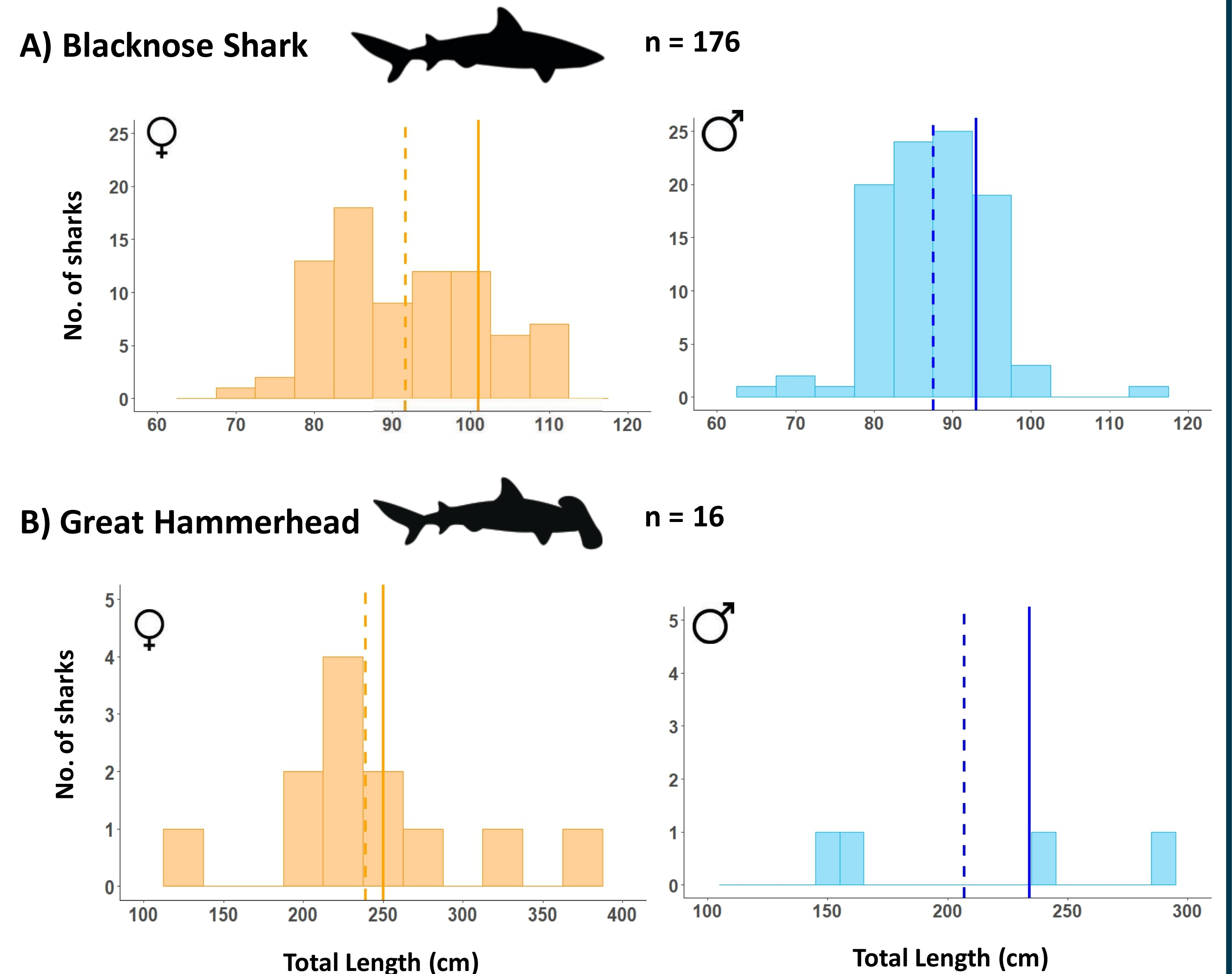
- A total of  $n = 315$  sharks belonging to 9 species and 4 families were identified in the landings (Fig. 5)
- Captures were dominated by blacknose (*Carcharhinus acronotus*) and sharpnose sharks (*Rhizoprionodon sp.*) followed by atlantic guitarfish (*Pseudobatos lentiginosus*) (Fig. 5)
- The majority of sharks landed were under the known length of sexual maturity (Fig. 7)



**Figure 5.** The main shark species landed in Cocorocuma represented in percentages



**Figure 6.** Blacknose sharks (*Carcharhinus acronotus*)



**Figure 7.** Size-frequency of A) Blacknose shark (*Carcharhinus acronotus*) and B) Great hammerhead (*Sphyrna mokarran*) landed in Cocorocuma Cay in 2017. Dashed lines represent the mean TL and solid lines represent known minimum TL at maturity (Ebert et. al 2013) for females and males.

## Conclusions

- Captures were dominated by blacknose (*C. acronotus*) and sharpnose sharks (*Rhizoprionodon sp.*)
- Fishers targeted great hammerheads (*S. mokarran*) using atlantic guitarfish (*P. lentiginosus*) as bait
- Artisanal fishers primarily used gillnets and also longlines- gears that are illegal in Honduras
- The Shark Sanctuary legislation has no effect on the fishery in the Miskito Cays
- Protected species, including the globally endangered hammerheads, are targeted and their meat commercialized
- Urgent need for information on elasmobranch populations, fishing effort, and trade to support management decisions and regulate unregulated fishing

## Next Steps...

- Establish a fisheries-independent baseline, using BRUVs and longlines, to measure changes in abundance and diversity in relation to enforcement regimes
- Conduct fisher surveys to determine fishing effort, gear preferences, seasonality of captures and markets
- Continue landings in 2019 and expand to other Cays known to be used by artisanal fishers