

# Determining Moray Eel Presence on Coral Reefs Along a Predator Gradient

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# The Reason Why

- ▶ Generally understudied
- ▶ Not always prized in commercial or sports fisheries
  - ▶ Ciguatera poisoning
- ▶ Little information on the importance to humans



# Analyzing Global FinPrint Data

- ▶ Over 400 reefs in 58 countries
- ▶ Over 20,000 hours of video data
- ▶ What more can we do with this data?







FinPrint Scale



# Goal of Project

- ▶ Fill knowledge gaps on mesopredator presence in the Caribbean
- ▶ Gain an understanding of relationships with other predators and their habitats





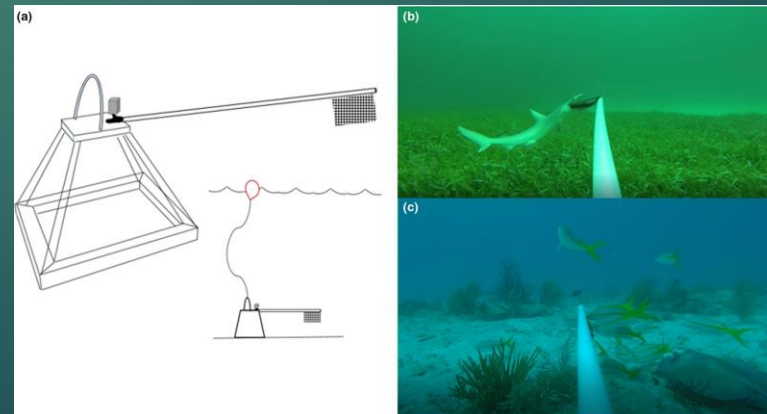
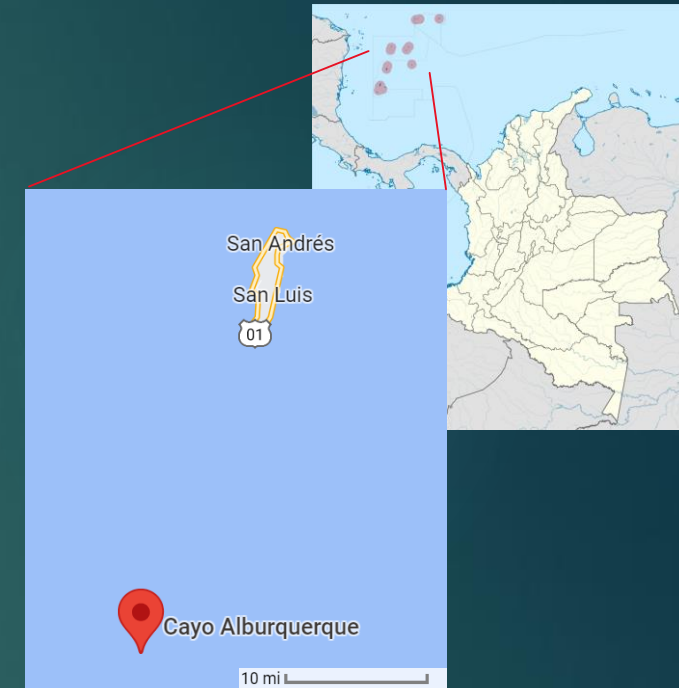
# Moray shifts

- ▶ Abundance shifts after shark removal
- ▶ Eel presence shown to be greater in areas where other predator abundance is depleted
  - ▶ *Do we see the same throughout the Caribbean?*

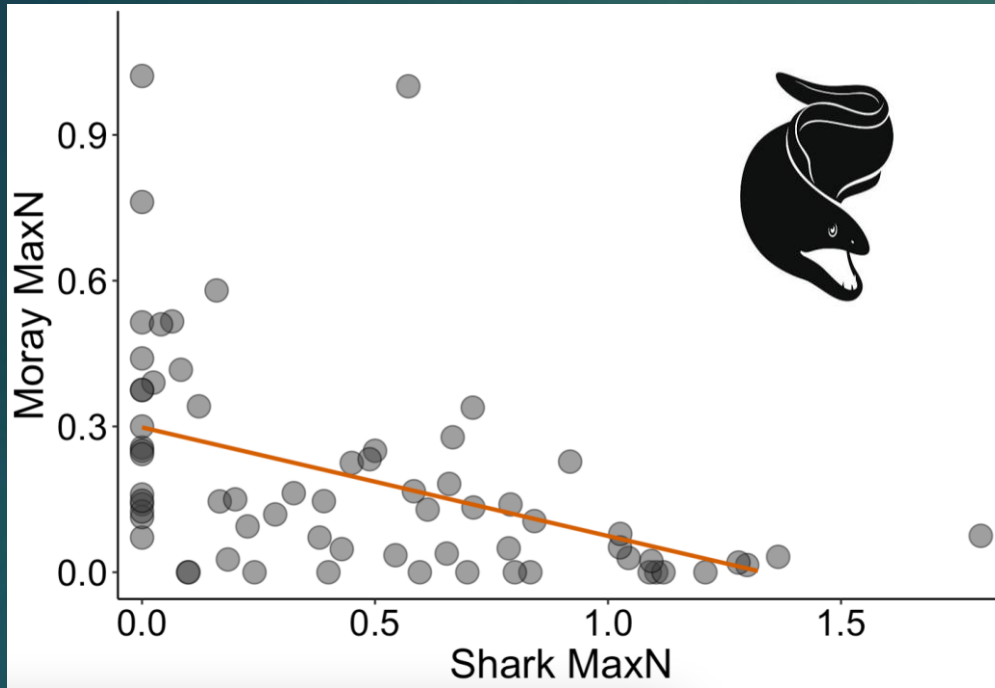


# Exploring Variation in Sites

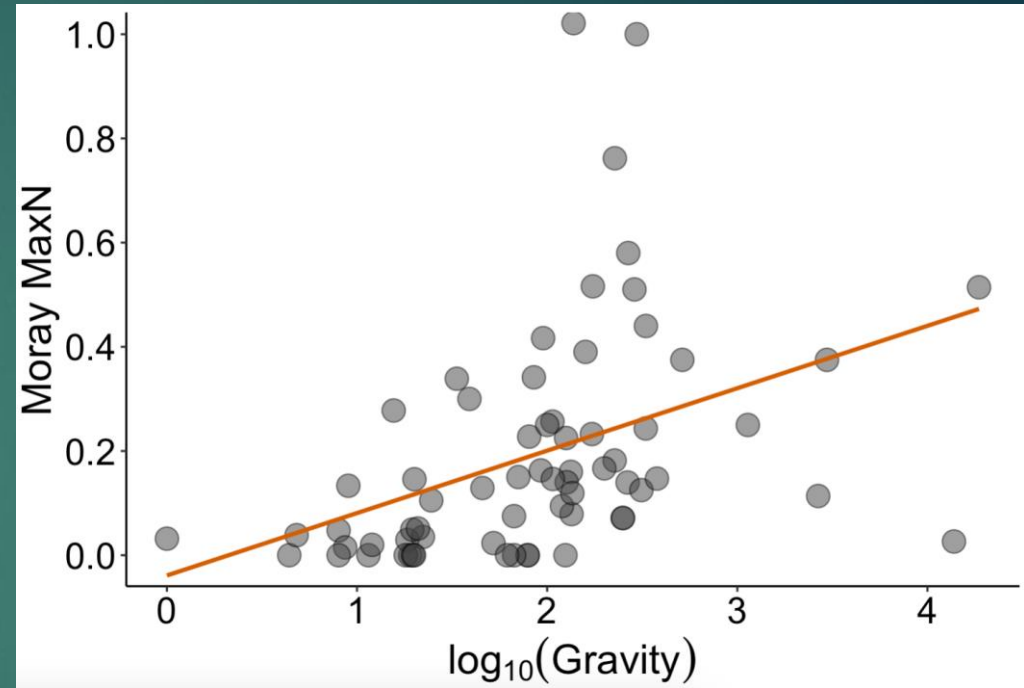
- ▶ 1. Remote site or inland?
  - ▶ Distance from land
- ▶ 2. Population Index
  - ▶ Populations near reefs
- ▶ 3. Human Development Index
  - ▶ The development of the towns near reefs
- ▶ 4. Eel Abundance
  - ▶ Average Abundance within BRUV videos throughout the project



# Results



An inverse relationship was shown between shark abundance and moray eel abundance...



While greater market gravity results in greater moray eel abundance on coral reefs.



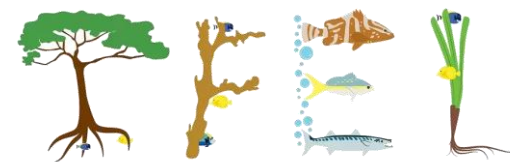
# What's Next?

- ▶ Can we do the same for barracuda?
- ▶ Explore other potential covariates
  - ▶ Fisheries management?
  - ▶ Is there more prey in high market areas?
  - ▶ Source or sink populations of prey?



# Acknowledgements

- ▶ National Science Foundation
- ▶ Florida International University,  
Institute of the Environment
- ▶ Tropical Fish Ecology Lab
- ▶ Beth Simmons & Brad Schonhoff
- ▶ Tahiry Millan & Marlene Severino



Tropical Fish Ecology Lab





Questions?❓

