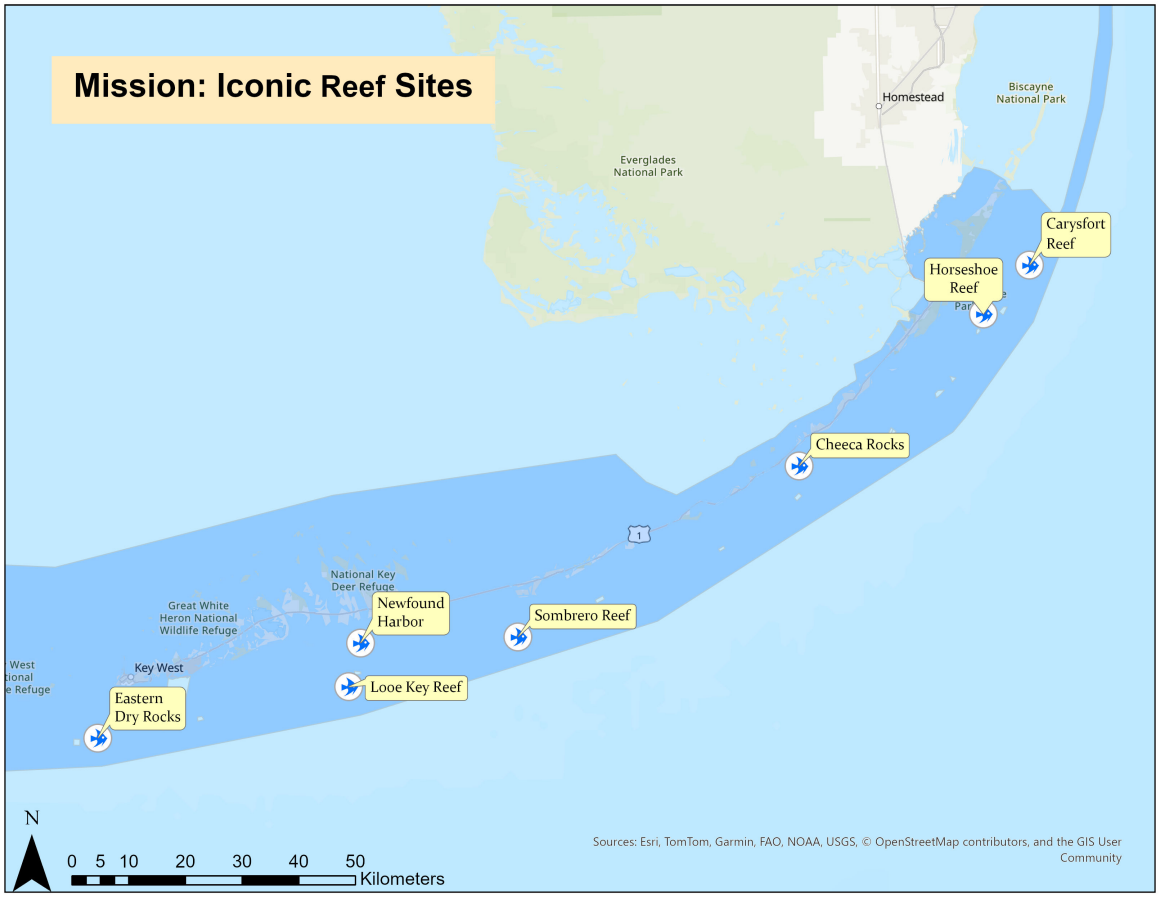
Mission: Iconic Reef



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1 The Data

The RVC, stationary-point-count method is modified from Bohnsack and Bannerot (Bohnsack and Bannerot 1986) and is conducted on shallow (<100ft), hardbottom coral reef habitats. Field surveys use a one-stage design to sample 50 m x 50 m grid cells selected using a stratified-random sampling allocation. This data set represents sample locations in the Florida Keys. Only those strata types found within the MIR areas were considered (table 1).

Table 1: Table 1. Number of sites sampled.

Study Area	Strata Name	Strata Description	Sample Number
Outside	FK01	inshore reefs, all depths	15
Outside	FK02	mid-channel patch reefs, all depths	170
Outside	FK03	offshore patch, all depths	96
Outside	FK04	forereef, low rugosity, <12m	181
Outside	FK05	forereef, high rugosity, <12m	167
Inside	FK01	inshore reefs, all depths	12
Inside	FK02	mid-channel patch reefs, all depths	25
Inside	FK03	offshore patch, all depths	15
Inside	FK04	forereef, low rugosity, <12m	20
Inside	FK05	forereef, high rugosity, <12m	125

2 Fish Species

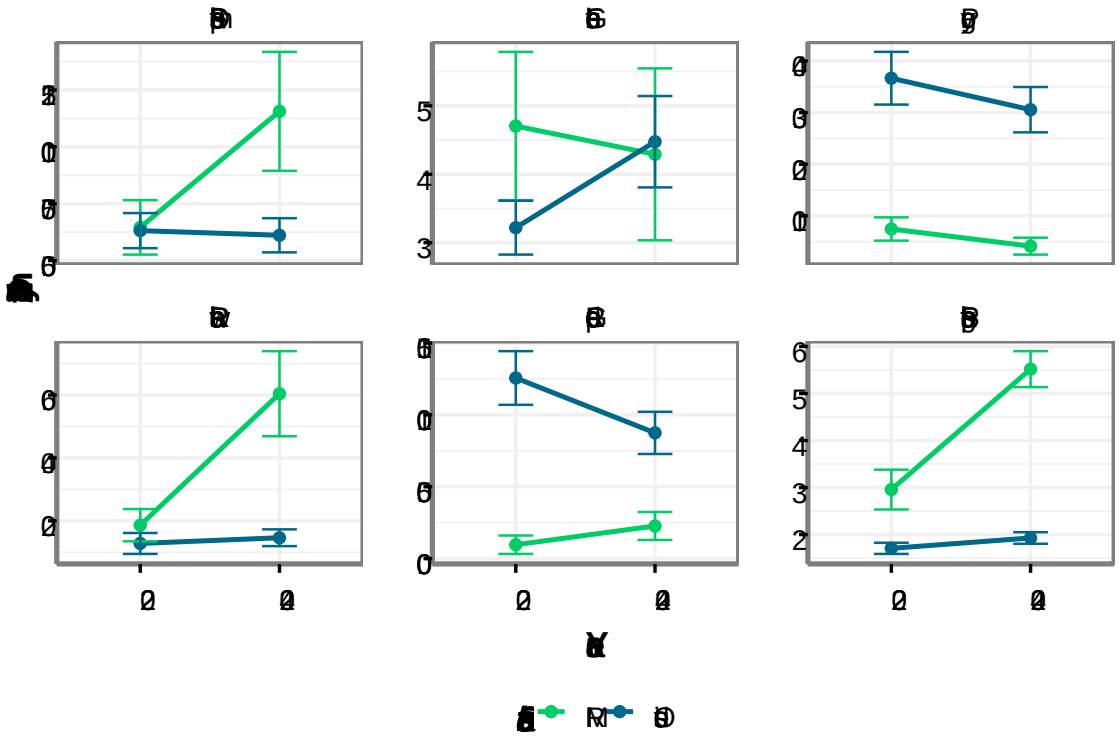
A selection of fish species were chosen to represent different trophic levels and functional roles.

Table 2: Table 2. Fish species. For analysis, both porgy species were combined.

Species Code	Common Name	Scientific Name
HAE FLAV	French Grunt	*Haemulon flavolineatum*
SPA VIRI	Stoplight Parrotfish	*Sparisoma viride*
SCA GUAC	Rainbow Parrotfish	*Scarus guacamaia*
STE PLAN	3-Spot Damselfish	*Stegastes planifrons*
CAL CALA	Porgy	*Calamus calamus*
CAL NODO	Porgy	*Calamus nodosus*
EPI MORI	Red Grouper	*Epinephelus morio*

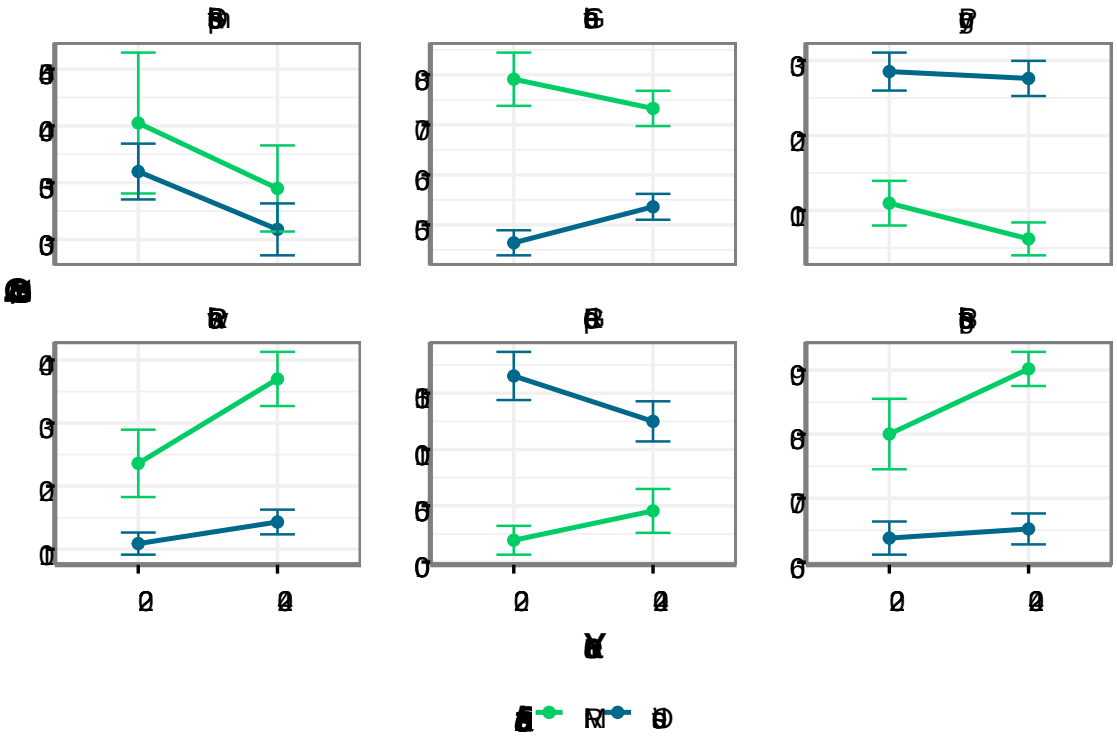
3 Density

NCRMP's comprehensive sampling design strategy provides a broad, population-level perspective on the reef fish community. NCRMP surveys capture a snapshot of these coral reef fish populations. Reporting temporal trends provides a comprehensive perspective of changes in reef fish populations. In particular, trend data can provide insight into how species respond to management actions including targeted restoration efforts within M:IR sites. Density is represented as the number of individuals per 177 m^2 $\pm$ SE.



4 Occurrence

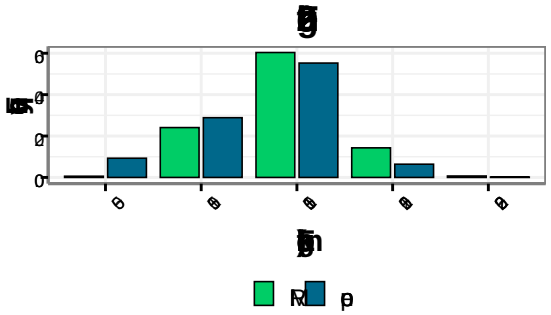
Occurrence measures how often a species is detected across surveyed sites, providing insight into its distribution within and outside M:IR areas. It reflects presence regardless of abundance, helping to identify widespread versus rare species. Survey occurrence is shown within MIR sites and outside ± SE.

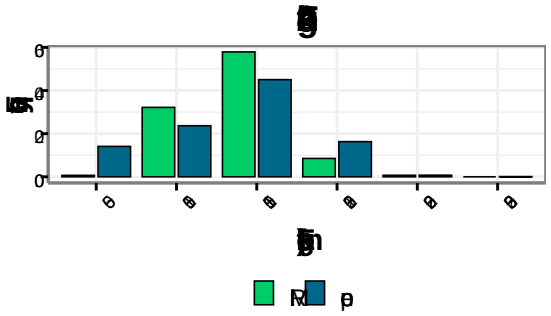


5 Length Frequency

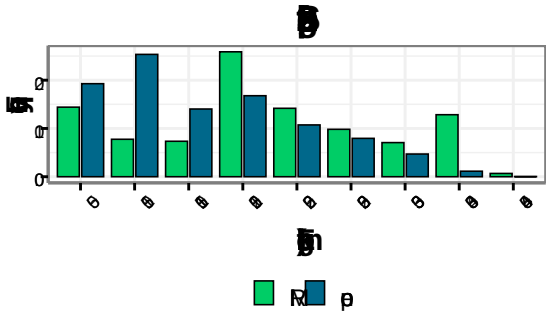
Length compositions provide a detailed description of a selected fish's population structure. These highly informative figures can show the length at which a fish species recruits to the coral reef from their nursery habitat, length classes that are selected by the local recreational and commercial fisheries, and the success of management practices. Relative length frequency are shown of species within MIR sites and outside

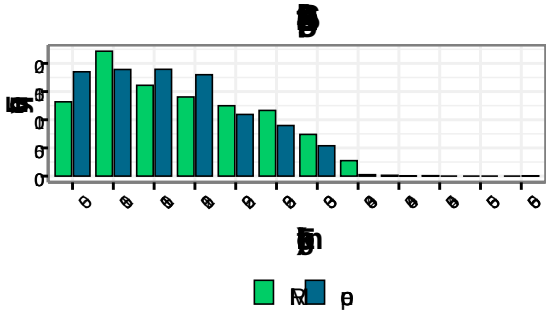
5.1 French Grunt



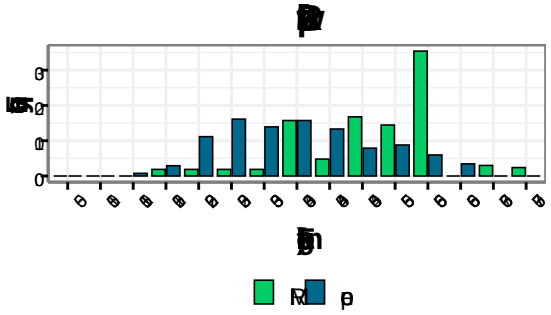


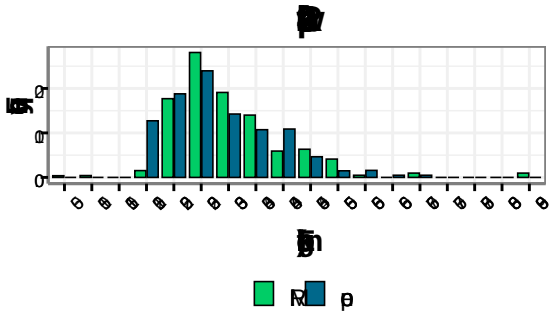
5.2 Stoplight Parrotfish



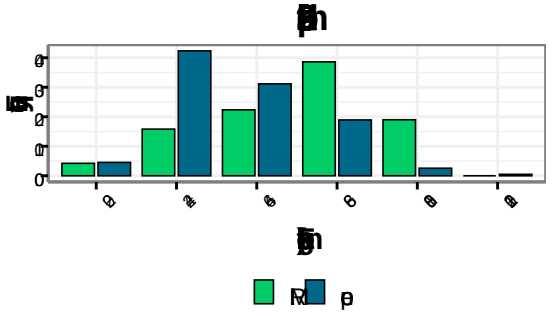


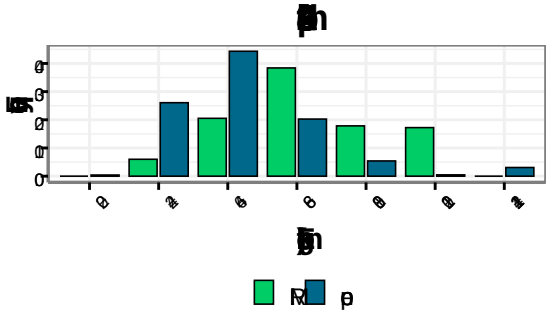
5.3 Rainbow Parrotfish



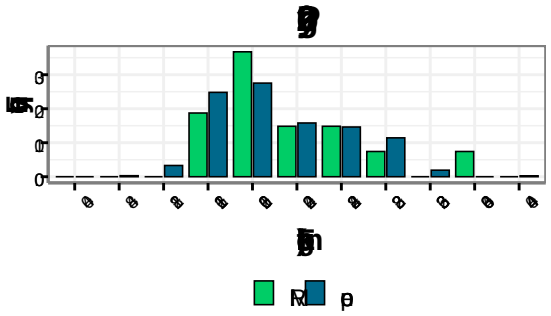


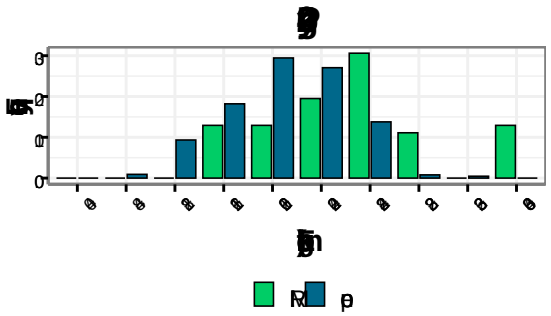
5.4 3-Spot Damselfish



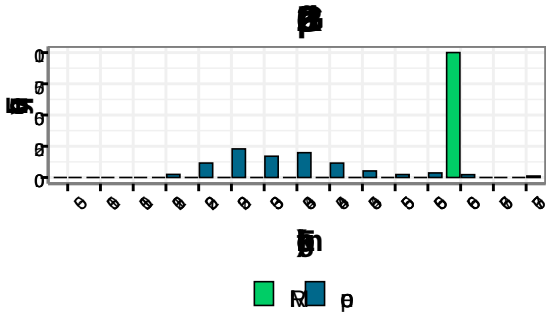


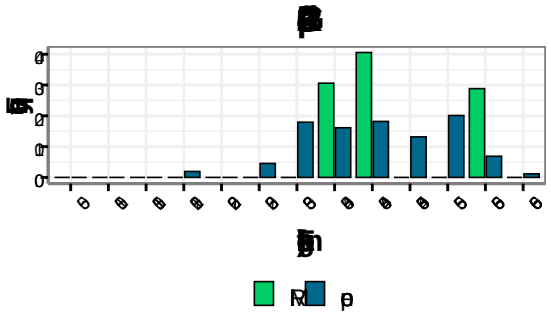
5.5 Porgy





5.6 Red Grouper





Bohnsack, James A., and Scott P. Bannerot. 1986. "A Stationary Visual Census Technique for Quantitatively Assessing Community Structure of Coral Reef Fishes." *NOAA Technical Report* NMFS (41).