Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed

1.1. Name of the Data, data collection Project, or data-producing Program:

Abundance and behavior of parrotfishes (Labridae, Scarinae) in the upper Florida Keys (NCEI accession 0127525)

1.2. Summary description of the data:

To better understand the functional roles of parrotfishes on Caribbean reefs we documented abundance, habitat preferences, and diets of nine species of parrotfishes (Scarus coelestinus, Scarus coeruleus, Scarus guacamaia, Scarus taeniopterus, Scarus vetula, Sparisoma aurofrenatum, Sparisoma chrysopterum, Sparisoma rubripinne, Sparisoma viride) on three high-relief spur-and-groove reefs (Molasses, Carysfort, and Elbow) offshore of Key Largo in the Florida Keys National Marine Sanctuary. On each reef, we conducted fish surveys, behavioral observations, and benthic surveys in three habitat types: high-relief spur and groove (depth 2 - 6 m), low-relief carbonate platform/ hardbottom (depth 4 - 12 m), and carbonate boulder/rubble fields (depth 4 - 9 m).In addition, fish surveys were also conducted on a fourth high-relief spur-and-groove reef (French). We estimated parrotfish abundance in each of the three habitat types in order to assess the relative abundance and biomass of different species and to quantify differences in habitat selection. To estimate parrotfish density, we conducted 20 to 30 minute timed swims while towing a GPS receiver on a float on the surface to calculate the amount of area sampled. During a swim the observer would swim parallel with the habitat type being sampled and count and estimate the size to the nearest cm of all parrotfishes > 15 cm in length that were encountered in a 5 m wide swath. To quantify parrotfish behavior, approximately six individuals of each species were observed at each site for 20 min each. Foraging behavior was recorded by a SCUBA diver while towing a GPS receiver (Garmin GPS 72) attached to a surface float, which obtained position fixes of the focal fish at 15 s intervals. Fish were followed from a close distance (~ 2 m when possible), and food items were identified to the lowest taxonomic level possible, with macroalgae and coral usually identified to genus or species. Many bites involved scraping or excavating substrate colonized by a multi-species assemblage of filamentous "turf" algae and crustose coralline algae (CCA). Thus, multiple species of filamentous algae, endolithic algae, and CCA could be harvested in a single bite, and it was impossible to determine the specific species of algae targeted. We also recorded the

type of substrate targeted during each foraging bout, categorizing each substrate as one of the following: (1) dead coral, (2) coral pavement, (3) boulder, (4) rubble, or (5) ledge. Dead coral included both convex and concave surfaces on the vertical and horizontal planes of three dimensional coral skeletons (primarily dead Acropora palmata) that were attached to reef substrate. Coral pavement was carbonate reef with little topographic complexity (i.e., flat limestone pavement). Boulder was large remnants of dead mounding corals not clearly attached to the bottom and often partially buried in sand. Coral rubble consisted of small dead coral fragments (generally < 10 cm in any dimension) that could be moved with minimal force. Ledges consisted entirely of the undercut sides of large spurs in the high-relief spur and groove habitat. In order to quantify the relative abundance of different food types, we estimated the percent cover of algae, coral, and other sessile invertebrates on each of the five substrates commonly targeted by parrotfishes (dead coral, coral pavement, boulder, rubble, or ledge) in 0.5 m x 0.5 m photoquadrats. We photographed a total of 8 haphazardly selected quadrats dispersed throughout the study site for each substrate type at each of the three sites (N = 24 quadrats per substrate type, N = 120 quadrats total). Each photoquadrat was divided into sixteen 12 cm x 12 cm sections which were individually photographed, and percent cover was estimated from 9 stratified random points per section (N = 144 point per quadrat).

1.3. Is this a one-time data collection, or an ongoing series of measurements?
One-time data collection

1.4. Actual or planned temporal coverage of the data:
2013-06-19 to 2013-07-30

1.5. Actual or planned geographic coverage of the data:
W: -80.38, E: -80.21, N: 25.22, S: 25
Molasses, Carysfort, and Elbow reefs offshore of Key Largo in the Florida Keys

1.6. Type(s) of data:
(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
Table (digital)

1.7. Data collection method(s):
(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)
Instrument: GPS (Global Positioning System)
Platform: Scuba Diver

1.8. If data are from a NOAA Observing System of Record, indicate name of system:

1.8.1. If data are from another observing system, please specify:

2. Point of Contact for this Data Management Plan (author or maintainer)

2.1. Name:
Dana E Williams

2.2. Title:
Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:
dana.williams@noaa.gov

2.5. Phone number:
305-767-3262

3. Responsible Party for Data Management

Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

3.1. Name:
Dana E Williams

3.2. Title:
Data Steward

4. Resources

Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?
No

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):
Unknown

5. Data Lineage and Quality

NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible

(describe or provide URL of description):

Lineage Statement:
Six individuals of each species were observed at each site for 20 min each. Foraging behavior was recorded by a SCUBA diver while towing a GPS receiver (Garmin GPS 72) attached to a surface float, which obtained position fixes of the focal fish at 15 s intervals. Fish were followed from a close distance (~ 2 m when possible), and food

items were identified to the lowest taxonomic level possible, with macroalgae and coral usually identified to genus or species.

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):
Data was checked as it was entered

6. Data Documentation
The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?
Yes

6.1.1. If metadata are non-existent or non-compliant, please explain:

6.2. Name of organization or facility providing metadata hosting:
NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:
https://www.fisheries.noaa.gov/inport/item/24177

6.4. Process for producing and maintaining metadata
(describe or provide URL of description):
Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf

7. Data Access
NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?
Yes

7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

7.2. Name of organization of facility providing data access:
NOAA National Centers for Environmental Information (NCEI)

7.2.1. If data hosting service is needed, please indicate:

7.2.2. URL of data access service, if known:
https://www.ncei.noaa.gov/archive/archive-management-system/OAS/bin/prd/jquery/accession/down

7.3. Data access methods or services offered:
Download from website

7.4. Approximate delay between data collection and dissemination:
365

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

8. Data Preservation and Protection

The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:
(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)
NCEI_MD

8.1.1. If World Data Center or Other, specify:

8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:

8.2. Data storage facility prior to being sent to an archive facility (if any):
National Centers for Environmental Information - Silver Spring, Maryland - Silver Spring, MD

8.3. Approximate delay between data collection and submission to an archive facility:
N/A

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection

Already Archived

9. Additional Line Office or Staff Office Questions

Line and Staff Offices may extend this template by inserting additional questions in this section.