

April 27th, 2020

Dr. Roy Crabtree
Director
Regional Administrator NOAA Fisheries Service,
Southeast Regional Office,
263 13th Ave South, St. Petersburg, FL 33701

Exempted Fishing Permit (EFP)

Dear Dr. Crabtree:

The NOAA National Marine Fisheries lab in Panama City, FL was recently awarded funding through the Cooperative Research Program to complete a project utilizing low cost methods to gain information regarding the deep water habitat and deep water snapper fishery in Puerto Rico.

The Caribbean Fishery Management Council (CFMC) has ranked investigations into this fishery at the highest priority level for deep water research in their region (NOAA Deep-Sea Coral Research and Technology Program, Priority Scoping Workshop for the Southeast Region, 2016-2019). All data collected is used to provide guidance and management recommendations to the Puerto Rico Department of Natural and Environmental Resources as well as the CFMC.

This project will utilize commercial fishing vessels for one year, starting August 1st, 2020 – August 1st, 2021. Remote stereo-video cameras will be deployed on deep-drop fishing gear to record and collect both size and abundance data for data poor species and imagery of benthic habitats in the western region of Puerto Rico. As part of the survey, sampling will be conducted in depths of 100 m-650 m, with the commercial vessels conducting the sampling within 1-12 miles of Puerto Rico's coast. Biological samples will also be collected from four commercially important, yet data poor species of snapper including: blackfin snapper (*Lutjanus buccanella*), queen snapper (*Etelis oculatus*), silk snapper (*Lutjanus vivanus*) and black snapper (*Apsilius dentatus*). Biological samples will be collected to conduct age, growth and reproductive studies due to little knowledge on their life history, despite the integral role they play in the deep water snapper fishery.

I have included all of the information requested in the EFP application below. If any further information is needed, please do not hesitate to contact me at 850 234 6541 ext. 205. In the event of a continued stay at home order due to COVID-19, I can be reached at my cell phone number 810 300 9731.

Cordially,
Katherine Overly
Fisheries Biologist
Riverside Technology Inc. Contractor
Reef Fish Survey
NOAA NMFS - Panama City Lab

1. The date the application is submitted and extent of time (research end date) needed to accomplish work.

- Submitted: April 27th, 2020
- Research start and end: August 1st, 2020 – August 1st, 2021

2. The applicant's and/or project coordinator's name, mailing address, telephone number, e-mail, and fax number, if available.

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3. A point of contact who can respond to any questions regarding the project that NMFS staff may have during consideration of your application.

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4. A statement of the purposes and goals of the activity for which an EFP is needed, including justification for issuance of the EFP.

This project seeks to create and implement a deepwater fishery independent survey in the US Caribbean using stereo video imagery coupled with catch data and collection of biological samples. The goal is to collect data that will give rise to defining essential fish habitat for data poor deepwater snapper species off the coast of Puerto in addition to providing building blocks for management decisions. Collecting biological samples from queen snapper (*Etelis oculatus*), blackfin snapper (*Lutjanus buccanella*), silk snapper (*Lutjanus vivanus*) and black snapper (*Apsilius dentatus*) will allow studies in annual reproductive cycle, growth estimations, age and size at sexual maturation, and age validation which will be either updated or conducted for the first time. The Caribbean Fishery Management Council (CFMC) has ranked investigations into this deepwater fishery at the highest priority level. The creation and implementation of a deepwater stereo video system will provide size and abundance data for data poor species, and diversity indices for the region, as well as provide groundtruthing for multibeam mapping data. Deepwater stereo video systems have never been implemented in the US Caribbean, and as such, the design and testing of the system alone will provide us with technology that will be directly transferable to other SEFSC regions, where it can be reproduced at low cost to gather data on distribution, abundance, and length composition for species of interest.

Samples for this project will be collected by a NOAA NMFS contractor and contracted commercial fishermen. A contracted fishery observer will be used to collect samples with the NOAA NMFS contractor is not present. They will be conducting 39 fishing trips total in the allotted year span.

5. A list of the specific regulations from which an exemption is being requested and why each exemption is required for the experiment to succeed.

- Fishing during the closed season for Snapper Unit 1 (SU1) from October 1st – December 30th. This is to collect blackfin, silk and black snapper otoliths, gonads and eyes throughout the year for age, age validation, and reproductive studies being conducted on these data poor species.
- Possible fishing during the closure of Bajo de Sico from October 1st through March 31st. A maximum of 25 sampling trips to this region during the closure, over the year of this project. This would be to collect stereo video data to determine habitat classification in this closed area, species diversity, minimum fish counts, fish ID, and fish length via the stereo video system. The data collected will be used to compare fish populations inside and outside of the protected area. Additionally, the collection of age and reproductive data from silk, blackfin, queen and black snapper via biological samples would provide samples from fish that may not be commonly found outside of Bajo de Sico.

6. The following catch information:

a. The species (target and incidental species must be clearly differentiated) expected to be harvested and/or discarded under the EFP.

- Target Species
 - Etelis oculatus* (queen snapper)
 - Lutjanus vivanus* (silk snapper)
 - Lutjanus buccanella* (blackfin snapper)
 - Apsilius dentatus* (black snapper)
- Incidental Species
 - Snapper Unit 1 (SU1) including: vermilion, and wenchman
 - Grouper Unit 4 (GU4) including: yellowfin, red, tiger, and black
 - Grouper Unit 5 (GU5) including: yellowedge
 - Grouper Unit 3 (GU3) including: red hind
 - Incidental collection of the prohibited species Nassau grouper (Grouper Unit 1) and goliath grouper (Grouper Unit 2) and Midnight, Blue, and Rainbow Parrotfish is unlikely, however, these species will be discarded or returned to the water with minimum harm.
 - Incidental species catch during closed seasons may occur.
 - Closures include:
 - SU1: October 1st-December 31st
 - GU4 and GU5: February 1st-April 30th
 - GU3: December 1st-February 28th

b. The number or weight, by species, of such harvest and/or discard anticipated to occur during the exempted fishing, regardless of whether or not it is retained for sale.

- *Etelis oculatus* (queen snapper): less than 150 specimens
- *Lutjanus vivanus* (silk snapper): less than 120 specimens
- *Lutjanus buccanella* (blackfin snapper): less than 120 specimens
- *Apsilius denatatus* (black snapper): less than 60 specimens
- Remaining SUI: less than 100 specimens
- GU3: less than 100 specimens
- GU4: less than 100 specimens

c. The expected disposition of all regulated species harvested under the EFP (e.g., what will be done with the fish once it is caught).

- Queen, silk, blackfin, and black snapper will have gonads, eyes, and otoliths removed. TL, FL, sex, and gonad weight will also be taken. If possible, after sampling, queen snapper will be retained by fishermen for sale or consumption.

Blackfin, silk, and black snapper will also be retained by fishermen if outside of the closed season.

- All other incidental catch during closed season will be measured and released
- Incidental catch of prohibited species will result in immediate return to the water with minimum harm, or discarded.

d. Any anticipated impacts on fisheries, marine mammals, endangered species, or Essential Fish Habitat.

- Although unlikely, there is a possible entanglement risk with soft corals and sponges and the fishing line, hooks and lead weight. There is also a possible entanglement risk with the stereo video system, although the system is lightweight and has a minimal footprint.
- Interaction with marine mammals and endangered species not anticipated. Any with hook and line will be disentangled immediately by fishers. Any sea turtle interactions will comply with Sea Turtle Safe Handling and Release Guidelines as published in the Federal Register on February 7, 2007 (72 FR 5633).

The following anticipated effort information for each vessel:

d. For fixed gear:

i. Type and size of gear to be used.

- Stereo-Baited Underwater Video System (S-BRUV) including two Sony cameras encased in a light weight, pressure tested housing mounted on an aluminum bar with the horizontal plane and two LED video lights mounted to the bar. Video system is encased in a lightweight triangular enclosure with a baited arm. The entire system is attached to the fisherman's vertical longline and has a minimal footprint on the seafloor.
- Fixed vertical deep drop fishing line deployed from commercial fishing vessel with a float attached at the surface. Twelve, #9 hooks will be tied on to the bottom 2 m of the line. Manual snapper reels will be used to retrieve line.

ii. Amount of gear to be used (e.g., number of pots, number of gillnets, etc.).

- Two vertical deep drop lines per site will be used. The first deployment will have a stereo video camera system and baited arm attached to the bottom portion of the line. The second deployment will target fishing and a maximum of 12 hooks and one lead weight will be attached to the bottom portion of the line.

iii. Number of gear hauls.

- One haul for stereo video system per site. One to five hauls within a 20 minute interval for the hook and line gear which allows for the repositioning of gear on the site in strong currents. A total of four to ten sites a day based on transit time and weather.

iv. Average soak time.

- 30 minute soak time for stereo video system, 20 minute soak time for hook and line fishing.

v. Sampling months/time of year.

- August 1st, 2020-August 1st, 2021 encompasses the entire allotted time frame to complete field work. Due to weather delays, some field work is expected to be conducted at random following the month of August.

vi. Sampling locations (including depth).

- Western region of Puerto Rico: from Isabella to Puerto Real, including Isla de Desecheo Marine Reserve, within 12 miles of any point of land in Puerto Rico, from depths of 100 m-650 m. This includes possible sampling in Bajo de Sico during the October 1st-December 31st closure.

8. Information for vessels to be used for the EFP as soon as the information is available and before operations begin under the EFP:

Capt. Edwin E. Font

a. Commercial Fishing Vessel: Mi Familia

b. State license: PR3394FF

c. Home port: Rincón

d. Owner/Capt.: Edwin Font, 2451 Ave Vista Mar Rincón, PR 00677, (787) 381-4498, edwinfontpescador@gmail.com

9. Principal Investigator's (including the applicant's and/or project coordinator's) CVs.

See included CVs

10. Signature of applicant.

Andrew N. David