

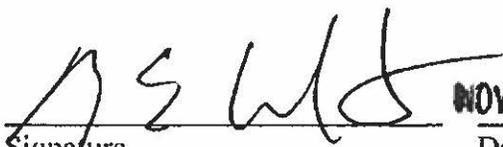
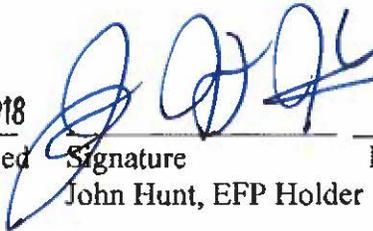
Florida Fish and Wildlife Conservation Commission Exempted Fishing Permit (EFP)

Maximizing Catch of Lionfish Through Modifications of Wire-Basket Spiny Lobster Traps

This EFP is issued to the Florida Fish and Wildlife Conservation Commission (FWC) in accordance with procedures established at 50 CFR 600.745(b). The EFP authorizes trap testing to target lionfish by the vessels listed in Appendix 1 and as described in the attached "Terms and Conditions" (Appendix 2). The National Marine Fisheries Service is aware that the FWC will be working within the Florida Key National Marine Sanctuary (FKNMS). The EFP exempts FWC's listed vessels from regulations at 50 CFR 622.9(c) (prohibited gear and methods-general, fish traps). This exemption applies to South Atlantic waters under federal jurisdiction with the exception of areas where trap fishing is currently prohibited under federal law to protect corals, or in areas where spiny lobster trap fishing is prohibited. Trap use may only occur in areas in which commercial spiny lobster fishing is permitted. **Activities occurring in FKNMS must also be authorized by the appropriate state and federal authorities.**

The EFP is valid from the date of issuance through December 31, 2021, when signed by both the Regional Administrator and the authorized representative of FWC, and becomes effective on the later of the two signature dates.

All vessels engaging in the activities authorized pursuant to this EFP must have a copy of this EFP onboard. As specified in 50 CFR 600.745(b)(9), failure to comply with any of the conditions in Appendix 2 may be grounds for revocation, suspension, or modification of the EFP with respect to all persons and vessels conducting activities under the EFP.

	NOV 13 2018		11/13/18
Signature	Date Signed	Signature	Date Signed
Roy E. Crabtree, Ph.D. Regional Administrator National Marine Fisheries Service		John Hunt, EFP Holder	

By signing this document, the EFP Holder agrees to comply with all terms and conditions, outlined in Appendix 2, of this permit, and all restrictions and relevant regulations. This includes agreeing that the owners and crews of the participating vessels identified in the attached Appendix 1 will comply with the terms and conditions, outlined in Appendix 2, of this permit.

Appendix 1

List of Participating Vessels and Participants in the Florida Fish and Wildlife Conservation Commission Exempted Fishing Permit

List of Participating Vessels

<u>Vessel Name</u>	<u>Owner/Operator</u>	<u>Coast Guard Documentation</u>
F/V Miss Barbara Ann	Glenn (Butch) Hewlett	609460

List of Participating Individuals

John Hunt
Tom Matthews
Christopher Sweetman
Dave Eaken
John Butler
Emily Hutchinson
Jason Spadaro
Erica Ross
Hanna Tillotson
Alan Pierce
Brent Roeder

Appendix 2

Terms and Conditions

Florida Fish and Wildlife Conservation Commission (FWC) Exempted Fishing Permit (EFP)

Maximizing Catch of Lionfish Through Modifications of Wire-Basket Spiny Lobster Traps

A. PURPOSE.

This EFP will allow FWC to examine the effectiveness and performance of modified trap designs for capturing lionfish. Per its application, FWC's goal in conducting the activities under the EFP is to identify the best modification to maximize lionfish catch while minimizing bycatch of other species and impacts to habitat.

B. BACKGROUND.

Two species of lionfish, *Pterois miles* and *P. volitans*, were introduced into the western Atlantic Ocean with first reports being recorded in the mid-1980s. Since the start of the invasion, lionfish have established populations in the southeastern United States, the Bahamas, and the Caribbean, although sightings have been as far north as Massachusetts and as far south as Brazil. Lionfish are capable of becoming sexually mature within their first year of life and will spawn throughout the year every three to four days, producing upwards of two million eggs annually. Adult lionfish are opportunistic carnivores and feed on nearly all small reef fish, including those of commercial, recreational, and ecological importance. Lionfish densities and their range have steadily increased since the beginning of the invasion, which can be attributed in part to low occurrences of natural predation, life history traits of the species, and the ability for lionfish to acclimatize to a wide range of physical habitats. The expanding range and increased densities of lionfish are adding pressure to already highly stressed coral reef ecosystems.

Current lionfish removals primarily occur by spear in diveable water depths and as incidental catch in commercial trap fisheries. This EFP allows FWC to conduct a project to target lionfish at greater depths. Data from the testing of traps to target lionfish could be relevant to resource managers in informing which methods are effective at reducing numbers of invasive lionfish.

C. SCOPE OF WORK.

Under the EFP, standard and modified wire spiny lobster traps will be fished in a trawl configuration (maximum of 32 traps per trawl, with no more than two surface buoys per trawl). The traps will have various funnel and escape gap dimensions and locations. Some traps will be outfitted with lionfish optical recognition technology. Modified traps will be compared to standard wire spiny lobster traps, which are the experimental controls. Sampling will occur in depths from 100-300 feet between Alligator Reef and Looe Key Reef in the Florida Keys. Sampling trips will occur approximately twice per month over the course of a year, with a maximum of 40 sampling trips per year, throughout the effectiveness of the EFP. Only areas in

which commercial spiny lobster fishing is permitted are included in the study area. No more than 100 traps will be deployed in the water at any given time and soak times will vary, but will not exceed 21 days per deployment. Bait will include live lionfish, plastic decoy lionfish, artificial lures, fish oil, and fish heads. As practicable, video and still photos of trap deployment and animal behavior in and near traps will be collected using cameras.

FWC will contract commercial trap fishermen with experience fishing within the study area. Additionally, the contractor must have demonstrable experience in the catch and handling of lionfish. The activities would be conducted from one federally permitted commercial fishing vessel. At least one FWC scientist will be on-board the vessel at all times.

Data to be collected per trip will include: gear configuration and fishing effort data (e.g., date and time of deployment and retrieval, latitude, longitude, and water depth of each deployed trawl, bait type used); soak time for each trawl; trap loss and movement from original set position; protected species interactions; bycatch species (amount, length, and disposition); and lionfish catch data for each trap type. Representative sub-samples of fish would be collected for species identification verification in the laboratory, as needed. Reporting requirements under the EFP are included in Section E, below.

D. PERMIT CONDITIONS/MITIGATION.

The National Marine Fisheries Service (NMFS) has the ability to modify the conditions of the EFP or to end the project, to address bycatch or other issues, as warranted.

Exemptions:

Fish trap prohibition (50 CFR 622.9(c)) with the following conditions and mitigation.

Conditions/Mitigation:

To avoid testing traps in areas with sensitive habitats and other resources, this EFP does not exempt the applicant from any regulations prohibiting the use of spiny lobster trap gear in particular areas (50 CFR 622.406) or from regulations prohibiting the use of traps in certain areas to protect corals (50 CFR 622.224). Trap use may only occur in areas in which commercial spiny lobster fishing is permitted.

Activities under the EFP must be in compliance with the scope of work, described in Section C, above, including:

- No more than 32 traps may be fished per trawl
- Each trawl will have no more than 2 surface buoys
- A maximum of 100 traps will be deployed in the water at any given time
- Soak times will not exceed 21 days per deployment
- No more than 40 sampling trips may be taken per year during the effectiveness of the EFP
- At least one FWC representative will be on board each vessel at any given time
- Sampling will occur in depths from 100-300 feet, between Alligator Reef and Looe Key Reef in the Florida Keys, subject to the limitations on testing locations below

The following conditions are specific to all trap testing under this EFP:

- No trap testing in waters less than 30 meters deep, to avoid Endanger Species Act (ESA)-listed corals.
- No trap testing around known historical resources (e.g., Eagle, Duane, Bibb).
- Spiny lobster traps used for testing must have a current endorsement, stamp, or certification.
- Bycatch species must be returned to the water as soon as possible, except as noted in the following bullet.
- Contracted commercial fishermen would be able to retain commercially viable species harvested in compliance with all applicable laws and regulations as commercial catch (e.g., permitted commercial fishermen may retain those species they would otherwise be able to legally retain, namely species harvested from allowable areas within the allowed season, size limits, gear requirements, vessel requirements, and any other requirements).
- Line length should not be longer than necessary for the depth fished.
- Lines must be outfitted with weights to prevent excess additional line from floating at the surface.
- Traps fished in a trawl configuration are limited to two vertical lines, one at the beginning and one at the end of the trawl.
- Line between traps fished in a trawl should be limited to the minimum length necessary.
- Traps must be weighted with a minimum amount of weight necessary to avoid trap movement after deployment.
- All traps are required to have a degradable panel to minimize adverse impacts from ghost fishing if trap is lost.
- Trap surface buoys are to be marked with "LF" to identify experimental lionfish traps.

Each vessel shall carry on board and prominently display the EFP. The EFP must be presented for inspection upon request of any authorized law enforcement officer.

**Collection efforts in the Florida Keys National Marine Sanctuary must also be authorized by the appropriate authorities.*

E. REPORTING REQUIREMENTS AND DATA DISSEMINATION.

The EFP holder shall annually submit the following information to NMFS in a report, by **January 1** each year, to the Regional Administrator, NOAA Fisheries, Southeast Regional Office, 263 13th Avenue South, St. Petersburg, Florida 33701-5505. The EFP holder and all participating vessels agree to the public release of aggregated information obtained as a result of activities conducted under this permit.

Gear

- Detailed description of trap type, construction material, and dimensions.
- Detailed descriptions of any modifications from standard specifications made to the trap (e.g. funnel size or shape).
- Provide the endorsement/certification/stamp number of each trap fished.
- Provide the numbers of each trap type and configuration of how trap(s) will be set (e.g. trawl).

- Approximate weight of each trap.
- Detailed description of line type, length of line, line material, and line breaking strength.
- Detailed description of buoy type, buoy size, and buoy amounts per trawl.
- Report lost or missing traps and/or gear.

Environmental Conditions

- Latitude and longitude of each individually set trap or, if a trawl, the starting and endpoints of traps. Coordinates should be taken at the time of trap deployment and at the time of trap retrieval.
- Water depths of each individual trap; if in a trawl, the starting and endpoints of traps.
- Information on sea state such as approximate wave height and any impending conditions (e.g., high winds).

Catch Information

- Bait type used, or specify if no bait is used.
- Numbers, lengths, and species ID of all fish and crustaceans captured by trap type.
- Numbers, lengths, and weights of all lionfish captured and retained.
- Soak time for each trap or trawl.

Protected Species

- Any ESA-listed species interactions must be immediately reported to the NMFS Protected Resources Division at 727-824-5312.
- If a live dolphin is found entangled in a trap line, immediately call the Marine Mammal Stranding Hotline at 1 877 WHALE HELP for further instruction.
- Any entangled marine mammal or incidental injury or mortality to a marine mammal should be reported to the Marine Mammal Authorization Program within 48 hours. Reporting forms can be found at <http://www.nmfs.noaa.gov/pr/interactions/mmap/>.

F. CONSERVATION RECOMMENDATIONS.

NMFS recommends the following best practices, but they are not required as a condition of this permit:

- Vertical or groundlines that are made of a sinking material or are negatively buoyant.
- Stiff vertical lines to reduce entanglement risk.
- White colored markings on sinking or negatively buoyant lines that are 12 inch in length every 25 feet along the length of the line. The white color marking should be permanently affixed on or along the line and the color code should be clearly visible when the gear is hauled or removed from the water. Methods that have been tested and found to work satisfactorily under normal conditions: 1) colored twine is seized around the line and woven between the strands and 2) the line is spray-painted when dry.
- If bait (other than lionfish) is utilized and then found to be ineffective, or it attracts protected species, it is recommended that bait-use is discontinued.
- Line breaking strength less than 1,400 pounds to help reduce the risk of serious injury or mortality if a large whale becomes entangled in trap gear.