



Update on the Invasive Lionfish (*Pterois spp.*) in Louisiana

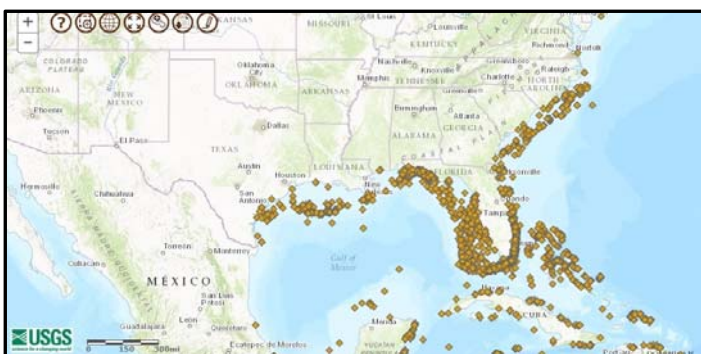
*presented at the Gulf of Mexico Fishery Management Council Meeting August 7, 2017
San Antonio, Texas*

Chris Schieble - Marine Fisheries Section

Lionfish (*Pterois volitans*) Presentation Given to Louisiana Legislature in 2017.



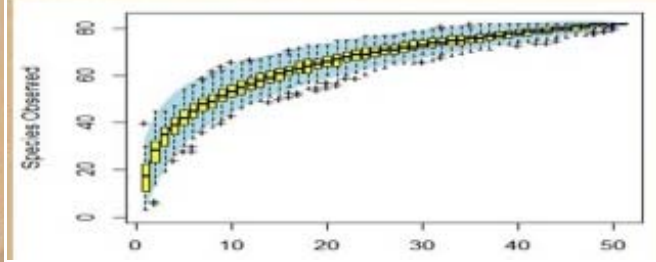
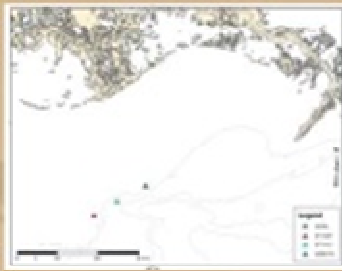
- Monitoring their occurrences (spread) – LDWF, Academia, NOAA, USGS.
- Lionfish reproduce year round. Mature females (>1 year old) release 50,000 eggs.
- Lionfish have no natural predators in their invasive range.
- We have found Lionfish at many locations offshore of Louisiana.



Assessment of Fish Assemblages on Northern Gulf of Mexico Manmade Structures



| Common Name | Scientific name | D | %SF | A |
|------------------------|------------------------------------|------|------|------|
| Cocoa Damsel | <i>Stegastes variabilis</i> | 2.56 | 100% | 2.57 |
| Bicolor Damselfish | <i>Stegastes partitus</i> | 2.44 | 96% | 2.35 |
| Blue Runner | <i>Caranx crysos</i> | 3.58 | 96% | 3.44 |
| Atlantic Spadefish | <i>Chaetodipterus faber</i> | 3.21 | 92% | 2.96 |
| Sharpnose Puffer | <i>canthigaster rostrata</i> | 2.32 | 85% | 1.96 |
| Rock Hind | <i>Epinephelus adscensionis</i> | 1.72 | 75% | 1.29 |
| Spanish Hogfish | <i>Bodianus rufus</i> | 2.33 | 75% | 1.75 |
| *Mangrove Snapper | <i>Lutjanus griseus</i> | 2.59 | 75% | 1.94 |
| Spotfin Butterfly Fish | <i>Chaetodon sedentarius</i> | 1.89 | 67% | 1.27 |
| Spotfin Hogfish | <i>Bodianus pulchellus</i> | 2.2 | 67% | 1.48 |
| *Lionfish | <i>Pterois volitans</i> | 1.64 | 63% | 1.04 |
| Creole Fish | <i>Clepticus parrae</i> | 2.25 | 62% | 1.38 |
| *Red Snapper | <i>Lutjanus campechanus</i> | 2.94 | 60% | 1.75 |
| Almaco Jack | <i>Seriola rivoliana</i> | 2 | 58% | 1.15 |
| Sergeant Major | <i>Abudefduf saxatilis</i> | 2.73 | 58% | 1.58 |
| Great Barracuda | <i>Sphyraena barracuda</i> | 1.97 | 56% | 1.1 |
| *Grey Triggerfish | <i>Balistes capricus</i> | 1.81 | 52% | 0.94 |
| Lookdown | <i>Selene vomer</i> | 2.73 | 50% | 1.37 |
| *Greater Amberjack | <i>Seriola dumeril</i> | 2.28 | 35% | 0.79 |
| *Cobia | <i>Rachycentron canadum</i> | 1.36 | 21% | 0.29 |
| *Gag Grouper | <i>Mycteroperca microlepis</i> | 1.5 | 15% | 0.23 |
| *Scamp | <i>Mycteroperca phenax</i> | 1.67 | 12% | 0.19 |
| *Vermillion Snapper | <i>Rhombopites aurorubens</i> | 2.4 | 10% | 0.23 |
| *Yellowmouth Grouper | <i>Mycteroperca interstitialis</i> | 1.6 | 10% | 0.15 |

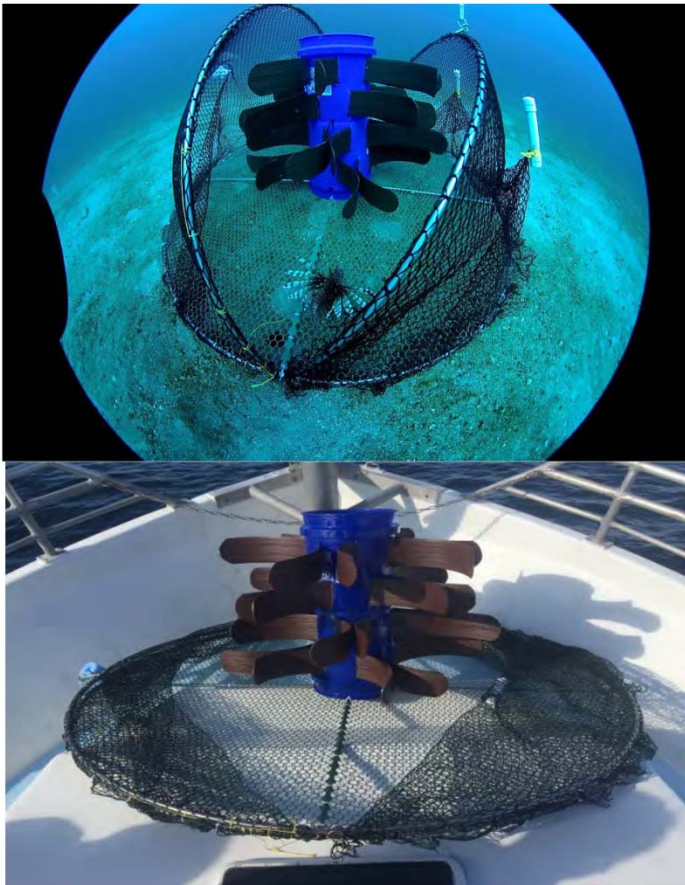


- Invasive lionfish were first confirmed at shelf-edge banks along the Louisiana coast in September 2010
- Biologists conducted dive surveys at offshore SE LA oil field structures in 2012 & 2014 using Roving Diver Technique (RDT)
- Red snapper were observed in 60% of surveys, lionfish in 63% of surveys.
- Lionfish were the 11th most frequently observed reef fish at standing platforms.

D – Density scores – weighted to account for SFMA
 %SF - Percent sightings frequency
 A – Abundance
 SFMA (1=single, 2-10=Few, 11-100=Many, >100=Abundant)



Application For Experimental Gear Permit for Purse Lionfish Trap.



- Reef savers, a non-profit founded to help control the Lionfish population in the southeast has requested Experimental Gear Permit.
- Experimental permit has passed biological review.
- LDWF added a few requirements to address bycatch and some reporting requirements.
- LDWF is interested in the bycatch data to check the usefulness of the gear.
- Sampling from North Carolina to Texas at depths from 90ft – 500ft.
- Exploits the lionfish's attraction to structure to lure it in to a hinged purse which closes around the structure as it's lifted up to the surface.
- Experimental design to establish the appropriate soak-time to minimize bycatch and maximize harvest of lionfish.
- Lionfish harvested will be sold to licensed seafood wholesalers.
- Average soak time. Is 15 – 30 days, however; the proportion of potentially catchable fish within the trap perimeter achieved nearly maximum levels (>75%) within about 18 days.
- Tentatively, LDWF plans for this permit to be approved in August.

LDWF Lionfish Reporting

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