



Photo by Jason Arnold



Lionfish in Florida

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Today's Presentation

- Brief Florida Background
- Current and Future Efforts in Florida
- Next Steps
- Gaps?



Photo by Bob Cox



Lionfish in Florida

- Exotic invasive species
- First reported near Dania Beach in 1985
- Additional reports from Florida and Bermuda in the 1990's
- Population spread rapidly after 2000
- Currently distributed throughout the U.S. Southeast coast, Bermuda, Bahamas, Caribbean, South America, and the Gulf of Mexico
- Concerns of this species span
 - Impacts to native species and habitats
 - Impacts to the economy
 - Social impacts



Map by USGS



Outlook

- Complete eradication of lionfish is unlikely
 - Population is widespread throughout the Atlantic, Gulf of Mexico, and Caribbean
 - Lionfish found in deep water are difficult to harvest
 - Deepwater lionfish repopulate shallow reefs
- Localized removal efforts can significantly reduce densities
- Harvest by divers is currently the primary means of lionfish removal
- Other means of removal include bycatch in other fisheries



Photo by Bob Cox





Recent FWC Efforts

Planning

- FWC Lionfish Team – staff from across the agency

In Progress: 2014-15 Florida Lionfish Control and Action Plan

Stakeholder Engagement

Goal: Encourage statewide public involvement and support in long-term lionfish control

- FWC Lionfish Summit 2013
- Cooperating with other Gulf Coast states, REEF, Sea Grant, and other organizations

In Progress: Long-term stakeholder engagement



Recent FWC Efforts

Regulatory Changes

Goal: Reduce regulatory barriers to enhance removal efforts

- Waived fishing license requirements for harvest by specific gears
- Removed the bag limit for recreational and commercial fishermen
- Removal of Collier County spearfishing ban
- Allowed rebreathers when harvesting lionfish
- Created a permit for tournaments/events allowing spearing in prohibited areas
- Prohibited importation of all species of *Pterois*
- Prohibited breeding of lionfish or aquaculture of larvae
(Effective November 24, 2014)

Proposed: Allowing Lionfish Caught in Tournaments to be donated to wholesale dealers



Recent FWC Efforts

Control Efforts

Goal: Encourage public involvement in a long-term control Initiative.

- Supporting and sponsoring localized removal efforts and derbies
- Developed Lionfish Workshops

In development: Reef Rangers

- *Similar to “Adopt-A-Highway” program*
- *Divers pledge to conduct lionfish removals at local reefs of their choice*
- *Develop a map of reef sites*
- *Participants recognized for their efforts*



Recent FWC Efforts

Outreach/Education

Goal: Educated public aware of the threats of nonnative species,

- Appropriated Lionfish Awareness FY 14/15 \$259,852
- Development of online and print publications
- Workshops and presentations
- Social Media Presence (Facebook, Twitter)
- Development of a reporting app
- Communication research (Cornell University)

In development:

- *Large -scale statewide awareness event/kickoff for Reef Ranger Program-May 2015*
- *Human dimensions study to evaluate public perception and knowledge of Lionfish (University of Florida)*



FWC Research

- Recreational lobster harvest surveys to gather information on lionfish encounters
 - Proportion of respondents observing lionfish increased from 2010-2011 then stabilized
 - Number of lobster fishermen that kill/remove lionfish increased from 2010-2013
- Recent research on mercury content of lionfish
- Study recolonization rates and species abundance and diversity after removal
- Tagging and acoustic tracking/video monitoring to observe behavior and movement
- Fishery independent trawl and camera surveys in the Gulf of Mexico
 - Identified presence in deepwater habitats



Long-term Management For Lionfish

- Responsiveness and proactive outreach
- Social science inquiry and data
- Population management and control
- Community co-management



Next Steps

Continue to implement an integrated approach for the control of lionfish by:

- Identifying additional outreach and education opportunities
- Continuing to coordinate control efforts
- Identifying innovative gear research and development
- Develop and implement an FWC Lionfish Control and Action Plan



Photo by Carol Cox



Gaps

- Appropriate Federal-State Nexus
- Port support
- Help identifying the next invasive species
- Effective control tools
- ?



Thank you!



