



Minimizing discard mortality in the red snapper fishery in the Gulf of Mexico

Greg Stunz, Ph.D.

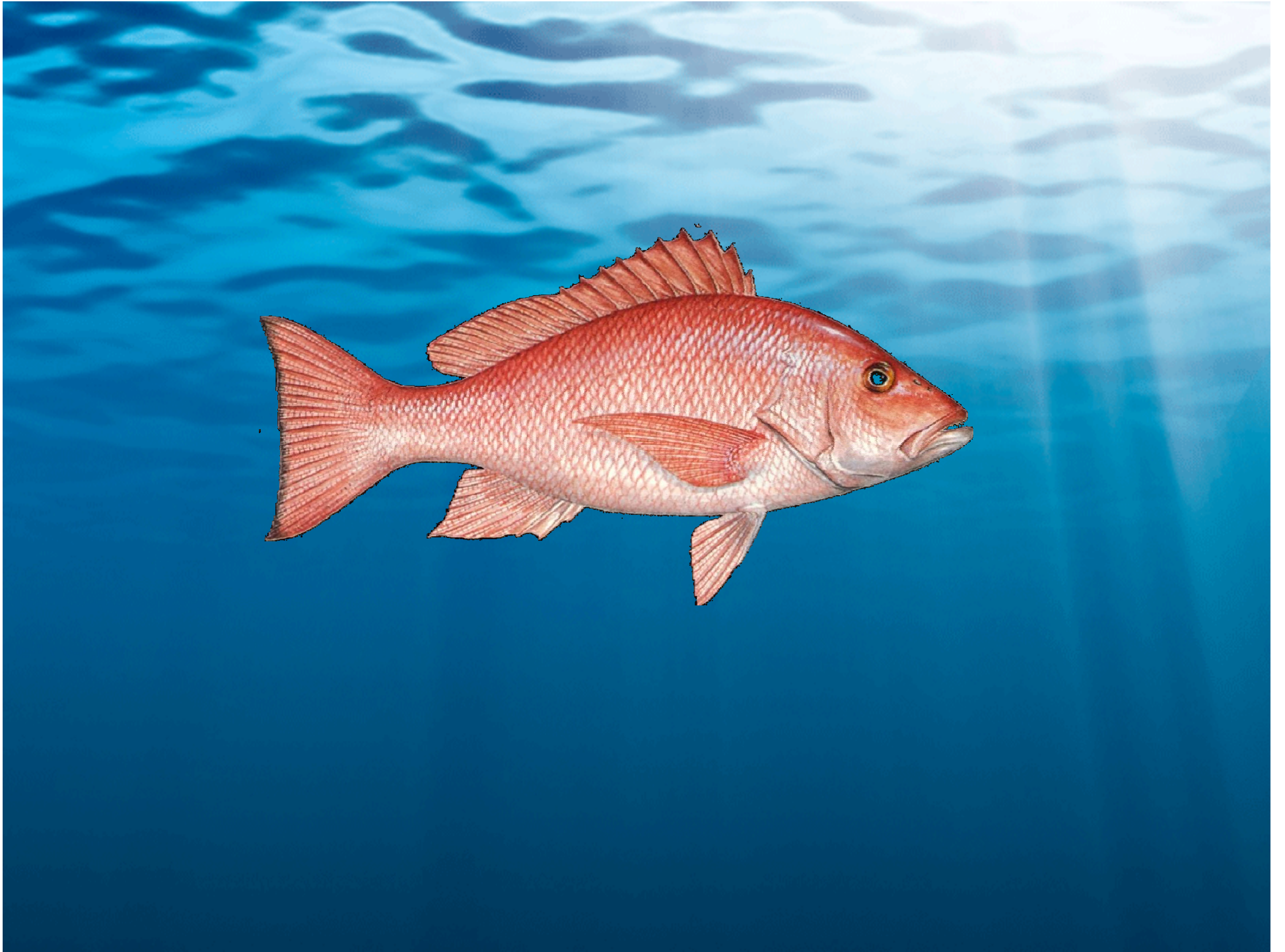
**Endowed Chair for Fisheries and Ocean Health, and
Professor of Marine Biology
Texas A&M University-Corpus Christi**



The Sport-fish Research Group at HRI

Goal: Provide sound science for maintenance and rebuilding of sport-fisheries for future generations





“iSnapper”

An innovative tool for
collecting data in the
For-Hire Fishery
(aka charters)

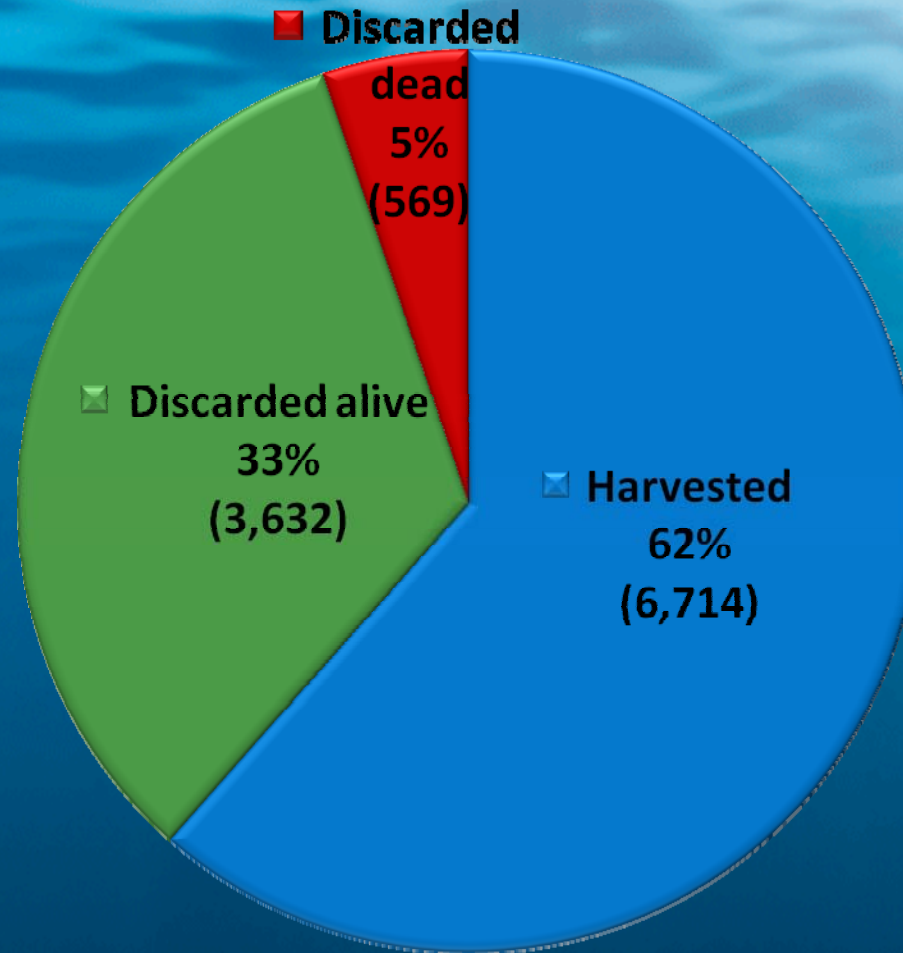




Elemental Methods

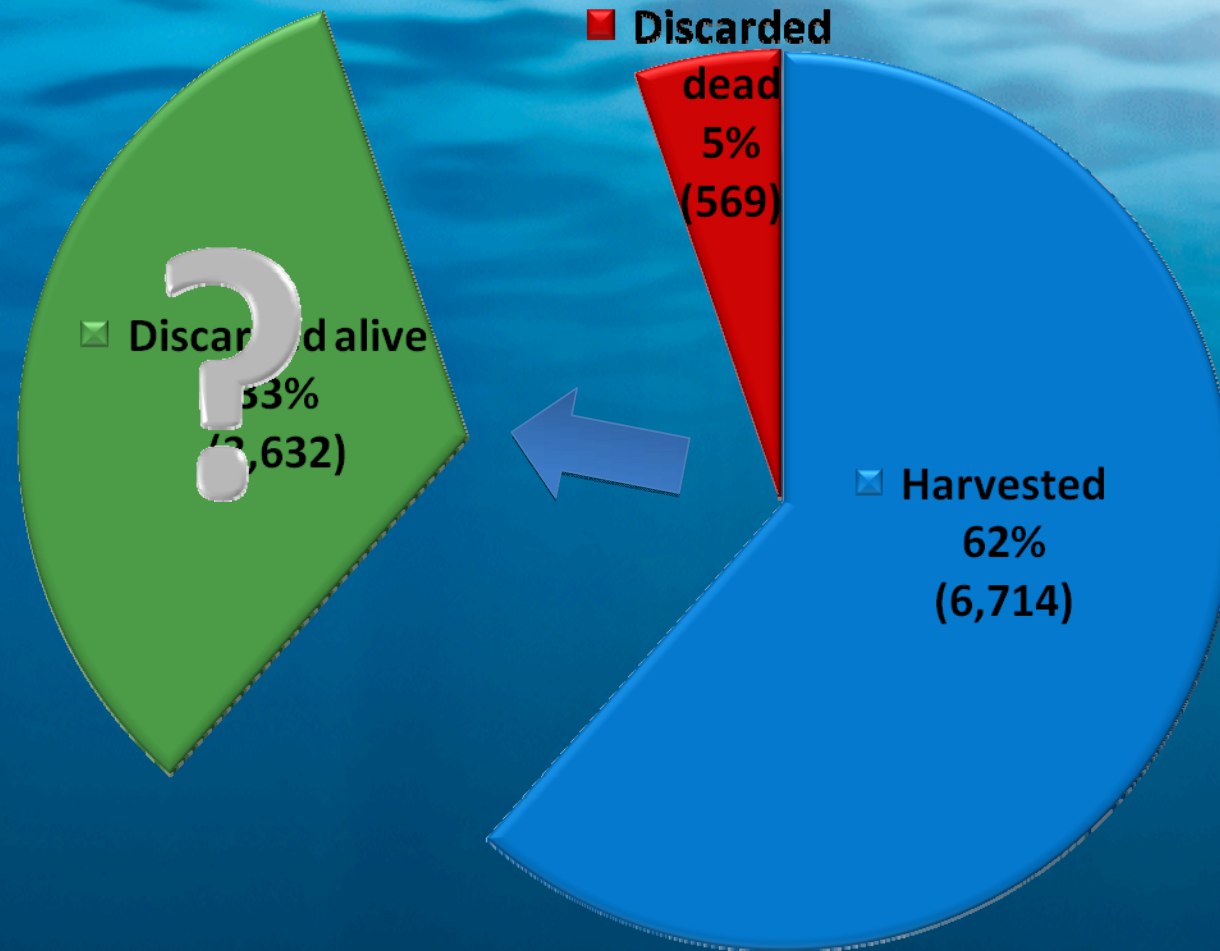
Red Snapper Recreational Catch

Source: iSnapper Pilot Data, Summer 2011



Red Snapper Recreational Catch

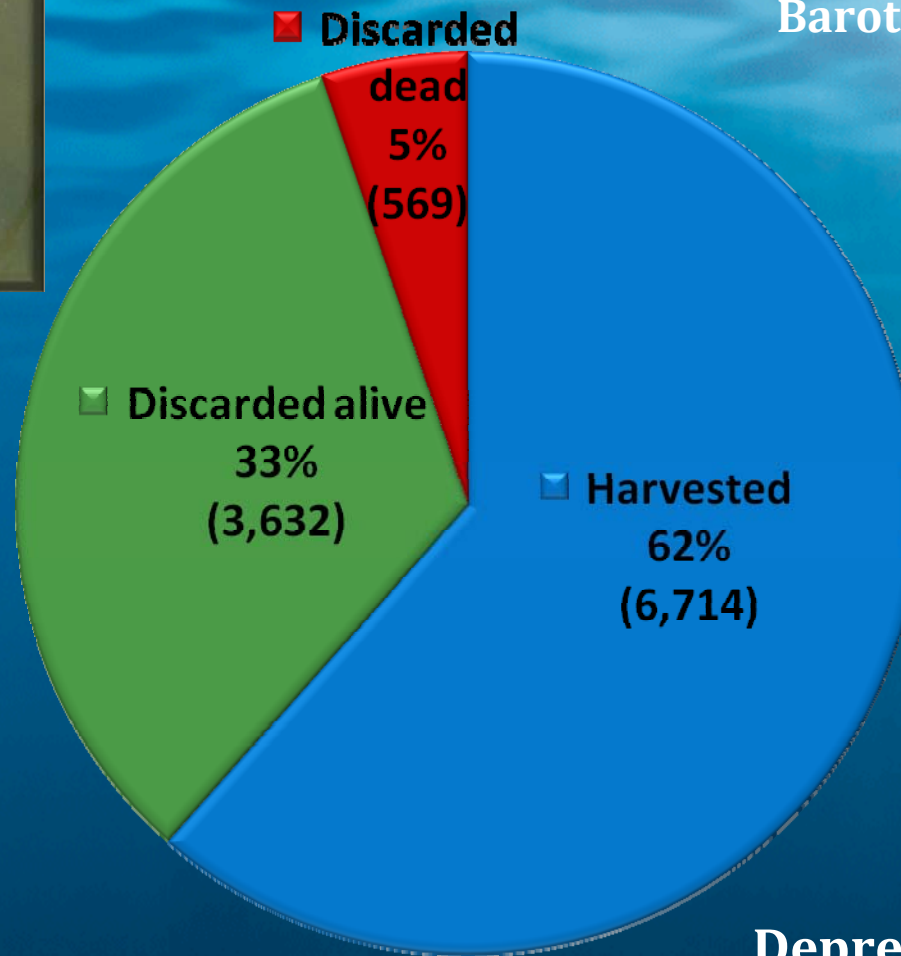
Source: iSnapper Pilot Data, Summer 2011



The "Discarded Alive" Slice



Reduced foraging ability



Lingering Barotrauma



Depredation





hitech-dolphin.com

Acoustic Deterrent Devices (ADD):



**AQUAmark 200 Cetacean
Deterrent Device**

Photo credit: ChrisPederick.com

Pilot Study

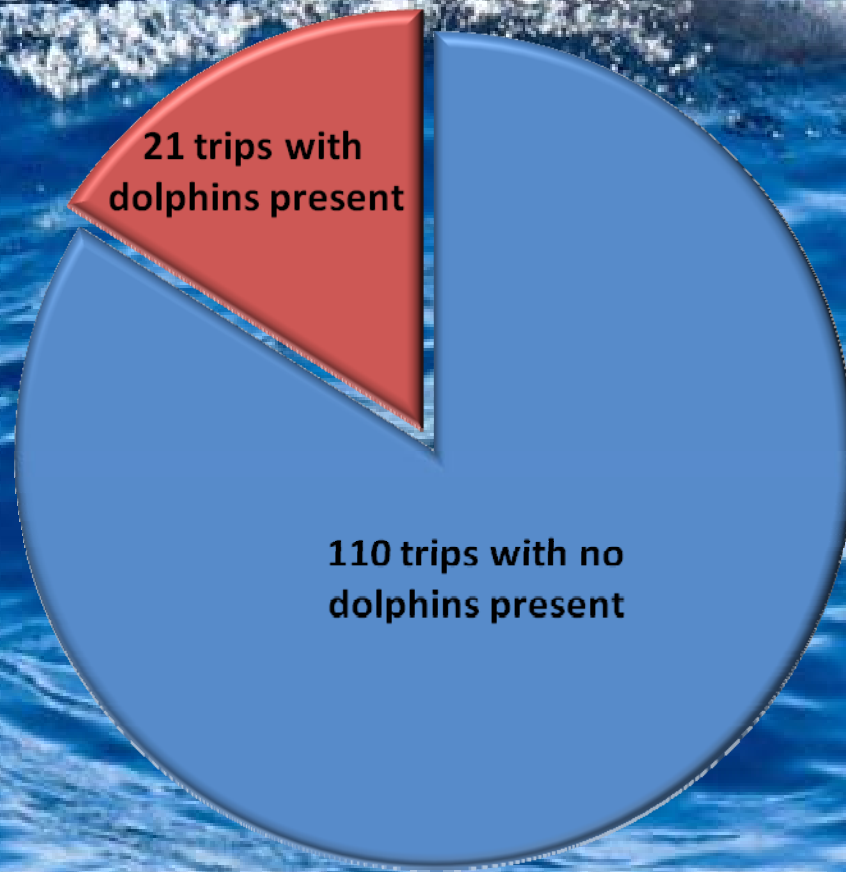
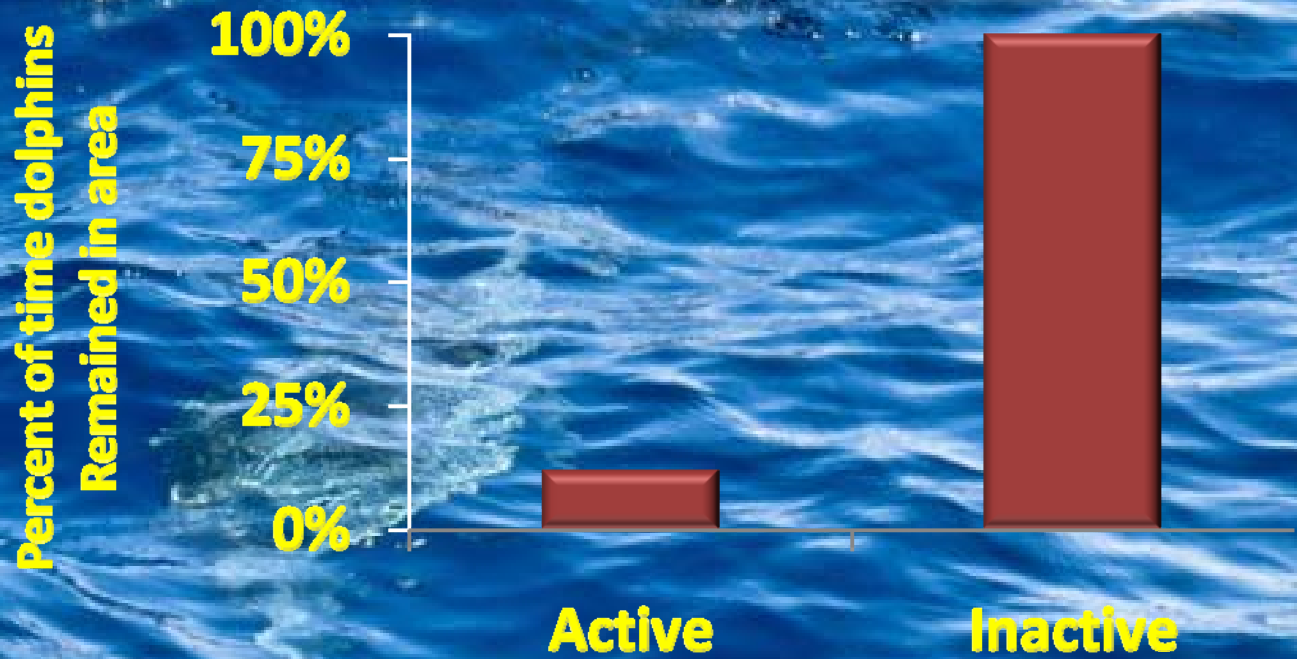
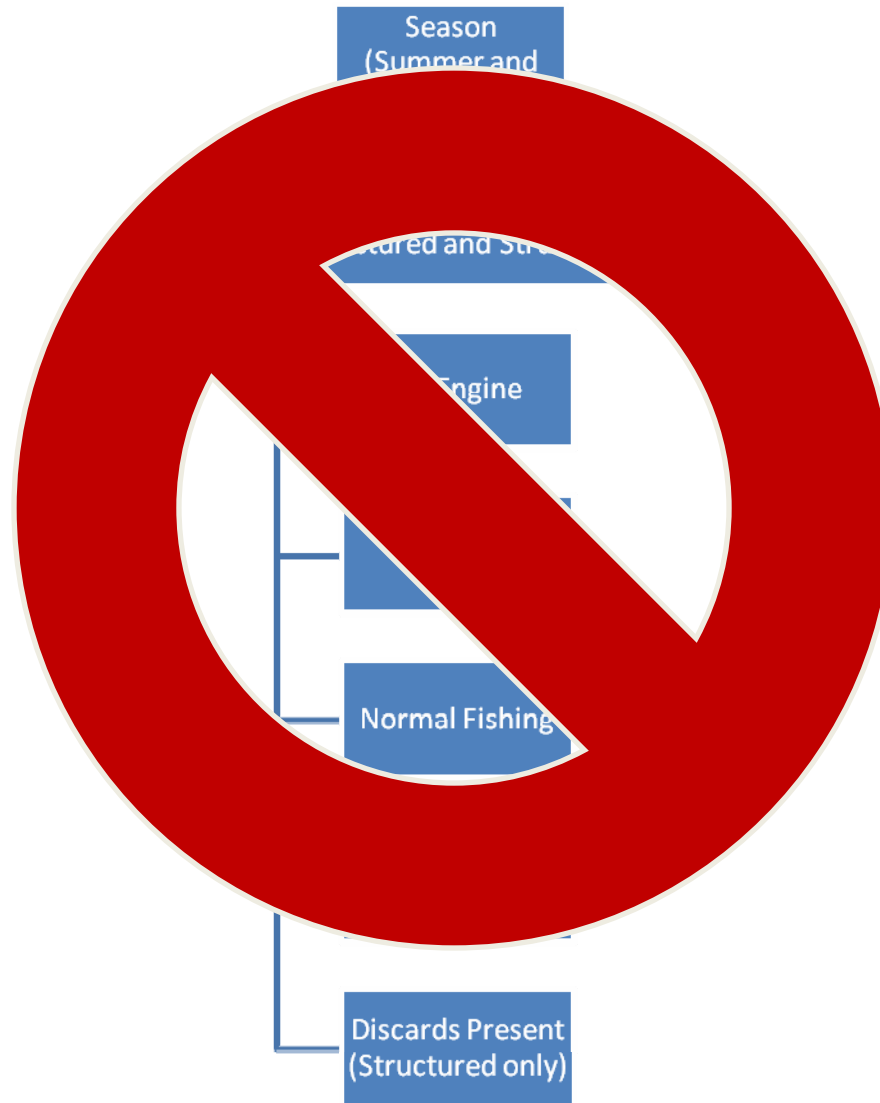


Photo credit: ChrisPederick.com

ADD in Action



Experimental Design



Future?

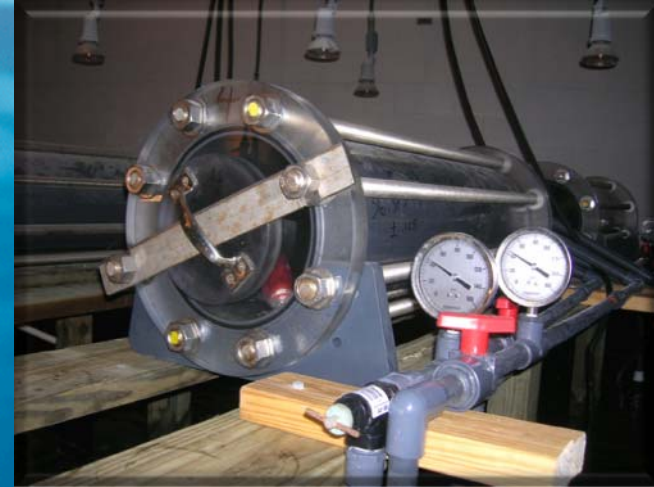


Photo credit: ChrisPederick.com

Recent Barotrauma Studies



Field Conditions



Controlled Laboratory Conditions

- Vent vs non-vent
- Depth effects
- Rapid recompression

Results:



Vented



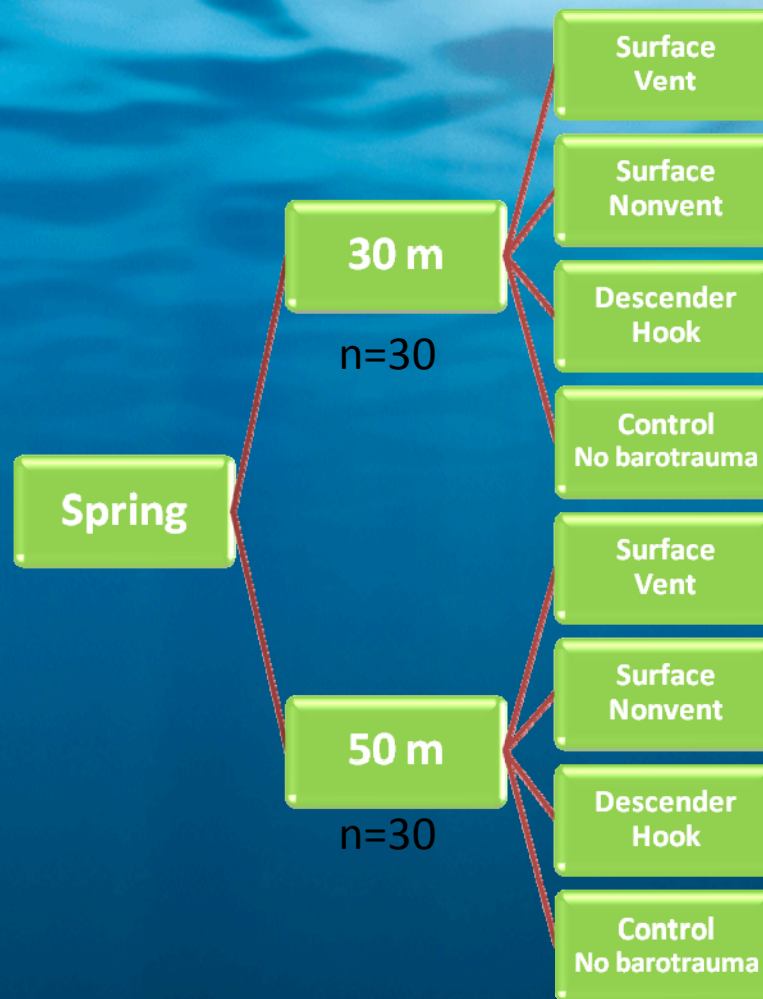
Non-Vented



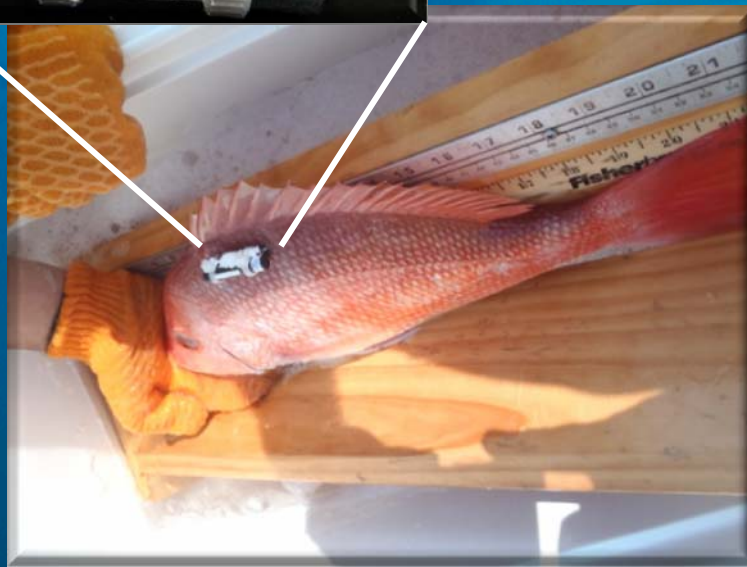
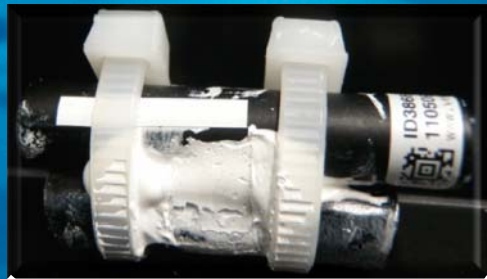
Release Treatments:



Design:

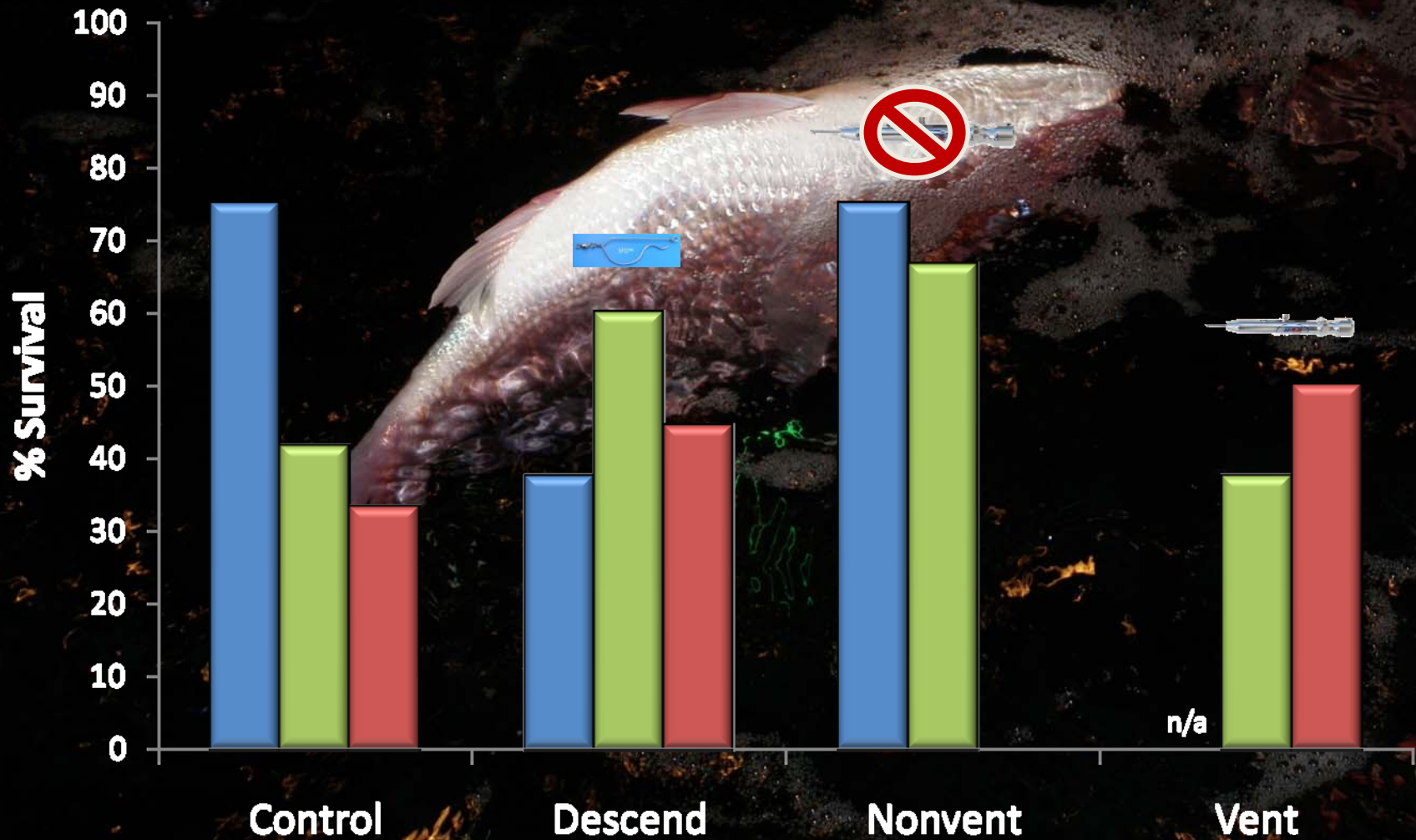


Methods:

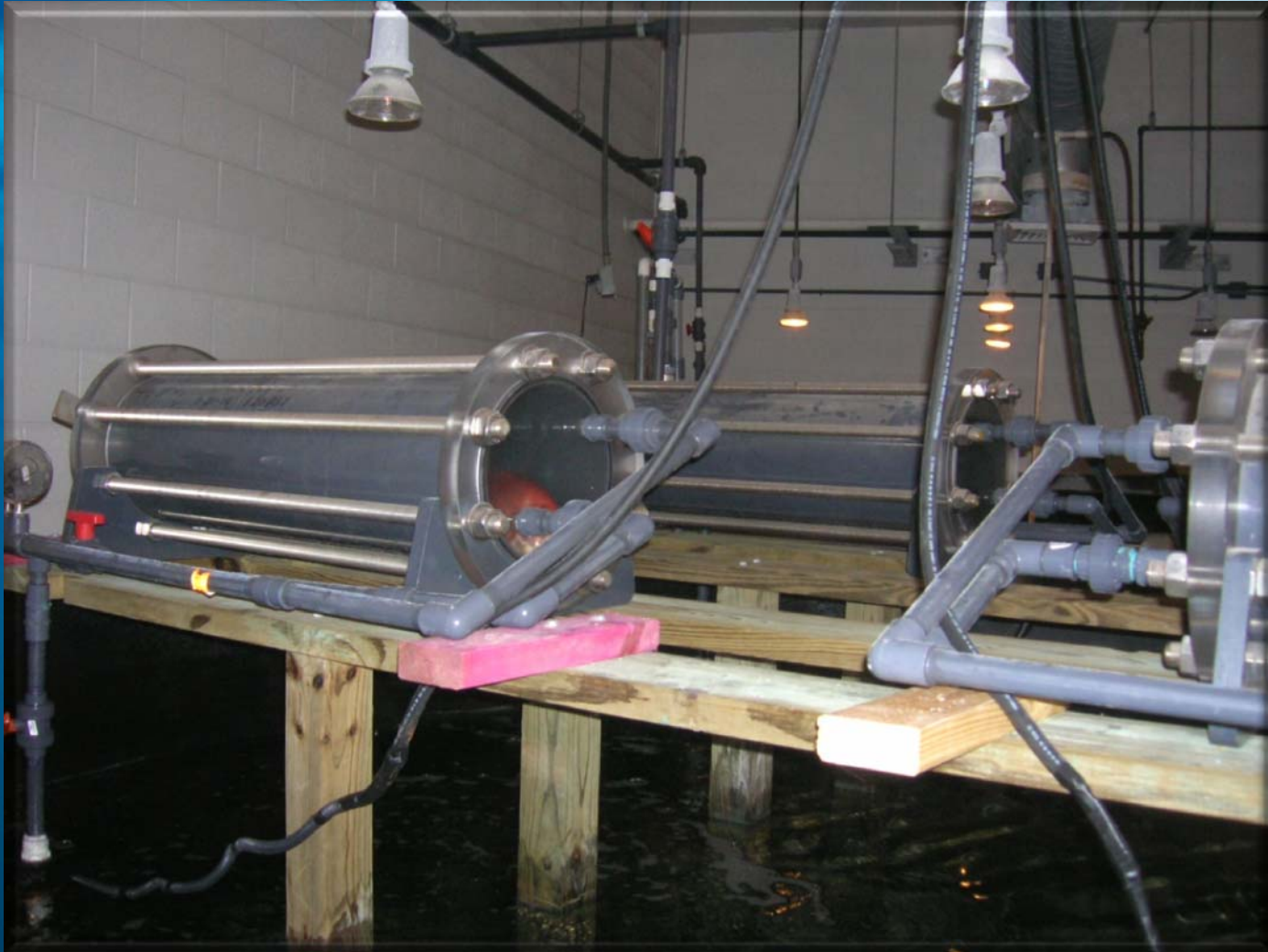


Seasonal Field Survival

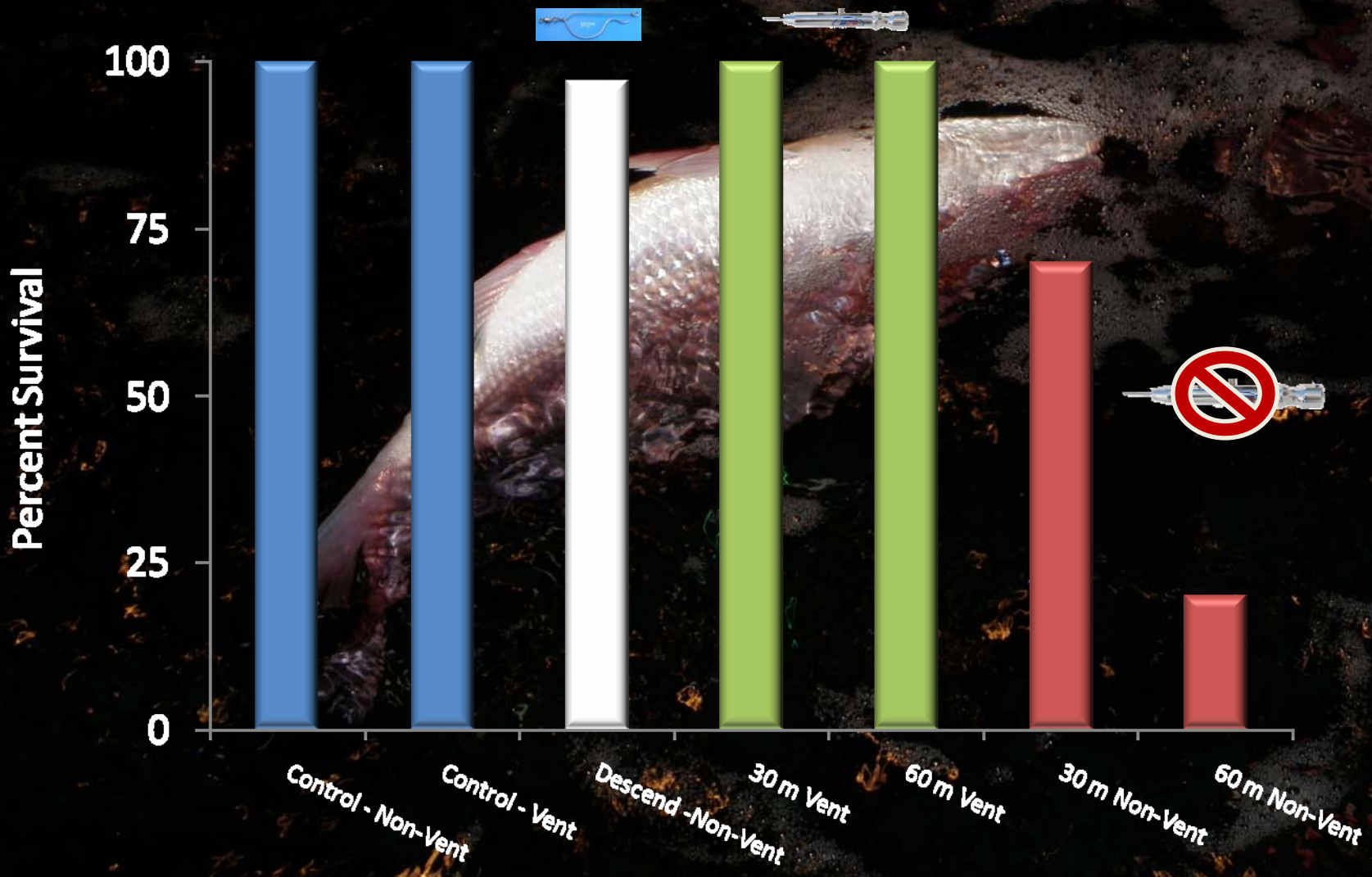
■ Winter ■ Spring ■ Summer



Methods:







Summary

- **ADD, venting, and recompression all show promise**
- **A clear seasonal effect on mortality**
- **We would recommend venting, especially during summer**
- **More work to be done**

Future ADD Studies

- **Better characterize this “problem” in the Gulf of Mexico?**
- **What are the root causes of depredation events?**
- **How useful are ADDs as a technique to mitigate depredation by dolphins and increase discard survival?**
- **Fin recognition program, are the problem pods of dolphins?**
- **Is there a “dinner bell” effect?**
- **Work with marine mammalogists that can better understand behavioral responses.**

Acknowledgements



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NOAA – Cooperative Research Program



Harte Research Institute for Gulf of Mexico Studies



Texas A&M University – Corpus Christi



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Judd Curtis

Matt Johnson

Peter Young

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Greg Stunz Ph.D.

Associate Professor of Marine Biology




CURRENT PROJECTS

- Ecology of sharks at Padre Island National Seashore
- Effects of hypoxia on estuarine fishes in their nursery habitats
- Stock structure assessment of spotted seatrout along the Texas coast
- Catch and release mortality of spotted seatrout
- Closure of Port Mansfield Channel: Impacts to fisheries in the Lower Laguna Madre
- Access to estuarine nursery habitat: Recruitment dynamics of nekton through tidal inlets (Packery Channel)
- Oyster reef as essential fish habitat
- Effects of propeller scarring on seagrass-associated fauna


more

PEOPLE



Currents Graduate Students

[Laura Bivins](#)
[Judd Curtis](#)
[Istis Dominguez](#)
[John Froeschke](#)
[Jason Stocua](#)
[Jason Williams](#)



Fisheries Links

LAB INTERESTS

The Fisheries Ecology Lab focuses on the marine biological sciences, particularly marine ecology. Our research is field-oriented, and we spend considerable time collecting data in the marine environment. Specifically, our research interests focus on understanding the relative value of habitat for aquatic organisms emphasizing marine and estuarine fishes. Much of this research is directed toward determining temporal and spatial distributions of fishes as well as the causes and consequences of the habitat use in terms of age, growth, and mortality.



The FEL is a part of the Harter Research Institute for Gulf of Mexico Studies. Please visit the HRI webpage for more information on our lab activities.

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WHAT'S NEWFRIENDS of HRI

TOP STORIES

- HRI Post-doctoral Position Available
- Read Our New Newsletter Released 3/8
- Tunnell Honored for Conservation Efforts
- Conserving Bays Workshop Results
- Gulf Coast Claims Report

Seminar Series



The seminar speaker for Friday, April 8 will be Steve Farmerter (read more >)

Spotted Seatrout Research



HRI researchers are tagging spotted seatrout to determine movement patterns (read more >)

GULF OF MEXICO MATTERS >



Beyond the Horizon

A Special Series of Special Issues Papers published in the *Journal of Geophysical Research* on the subject of the Gulf of Mexico

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