

# NOAA-NGI Diversity Internship

Sandra Huynh

**Mentor:** Dr. Frank Hernandez

**Location:** University of Southern Mississippi

Gulf Coast Research Laboratory

703 E. Beach Drive

Ocean Springs, MS 39564

# Introduction

# About me

- \* Recent graduate of the University of South Alabama
- \* University Honors Program
- \* B.S. in Biology
  - \* Concentration in Marine biology
  - \* Minors in geology and related sciences



# My mentor: Dr. Frank Hernandez



- \* Ph.D. from LSU
- \* NOAA- Beaufort
- \* DISL
- \* GCRL

## **Research interests:**

Fisheries oceanography

- Early life stages of fishes
- Biological and physical processes that influence recruitment dynamics (e.g., vertical distribution behaviors, cross- and along-shelf transport)
- Larval fish ecology
- Ichthyoplankton identification and taxonomy.

# Gulf Coast Research Lab

- Located in Ocean Springs, MS
- University of Southern Mississippi (USM)
- Marine/coastal research/education

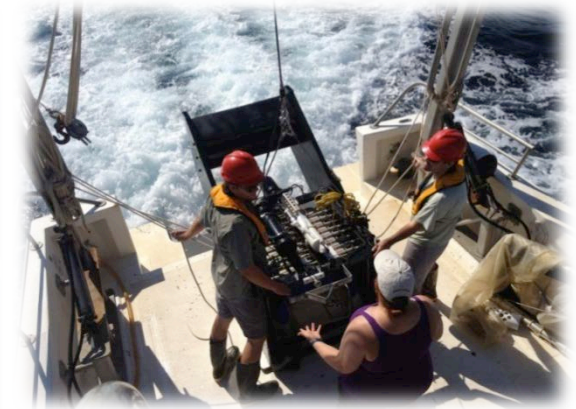




# Fisheries Oceanography Lab

## Current Projects:

- \* **GoMRI**- Deepwater Horizon Impacts on Ichthyoplankton and Zooplankton
- \* **Lenfest**- Developing ecosystem-based management metrics for forage fish using jellyfish
- \* **NRDA**- Sample processing for plankton and Sargassum injury assessment



# Projects

# Outreach

- \* Working with early life stages of fishes can be hard to translate to the general public.



Summer  
Speaker  
Series



Every Monday at 11 am – June 10<sup>th</sup> through August 26<sup>th</sup>



Dr. Frank Hernandez

“Sargassum – Seaweed Islands in the Gulf”

July 22<sup>nd</sup>

Sargassum doesn't only thrive in the Bermuda Triangle, it is also abundant in the Gulf of Mexico and provides vital habitat for a host of unique sea life and many commercially important fish. Join us to see real specimens and learn more about this fascinating environment.

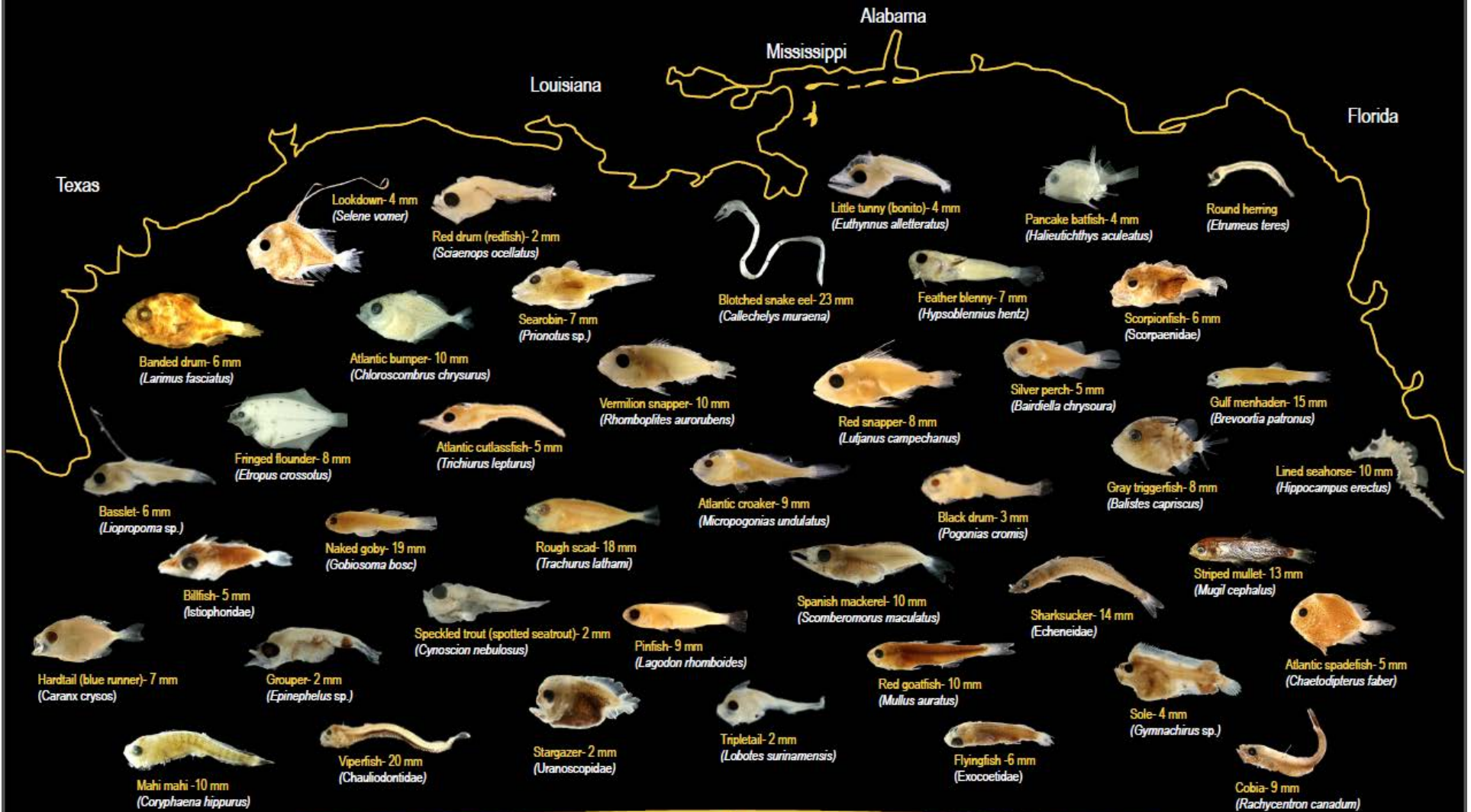


*Discoveries worth talking about!*

[www.visitinfinity.com](http://www.visitinfinity.com)



# EARLY LIFE STAGES OF FISHES IN THE NORTHERN GULF OF MEXICO



Fisheries Oceanography Lab  
Department of Coastal Sciences  
Gulf Coast Research Laboratory



NORTHERN GULF INSTITUTE  
A NOAA COOPERATIVE INSTITUTE



This poster was made by  
Sandra Huynh with support by the  
NOAA-NGI Diversity Internship Program 2013.

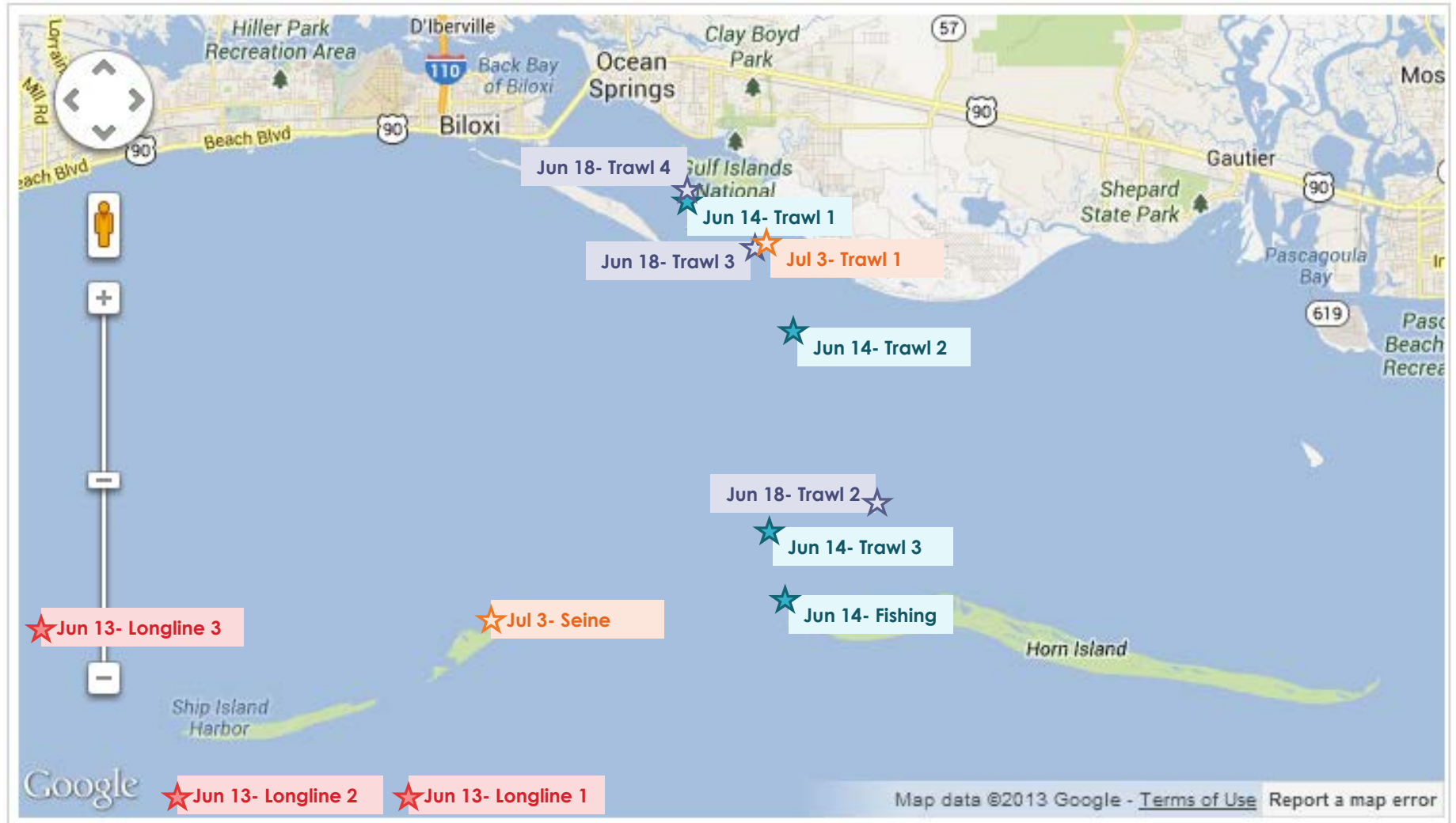
# Lenfest

- \* Lenfest Foundation
  - \* Gastrological Understanding of Teleost Species (GUTS)
    - \* Food web
    - \* Background research found:
      - \* Studies of species in other regions
      - \* Outdated research



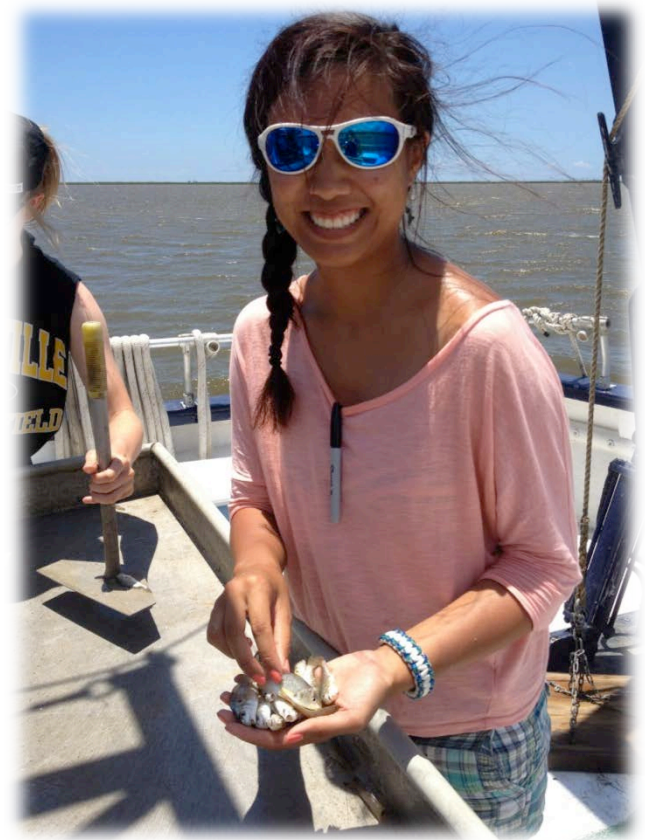


# Methods



# Methods

- \* Field summer program trips
  - \* Specimen collection
    - \* Trawling, seining, cast netting
  - \* Process in lab



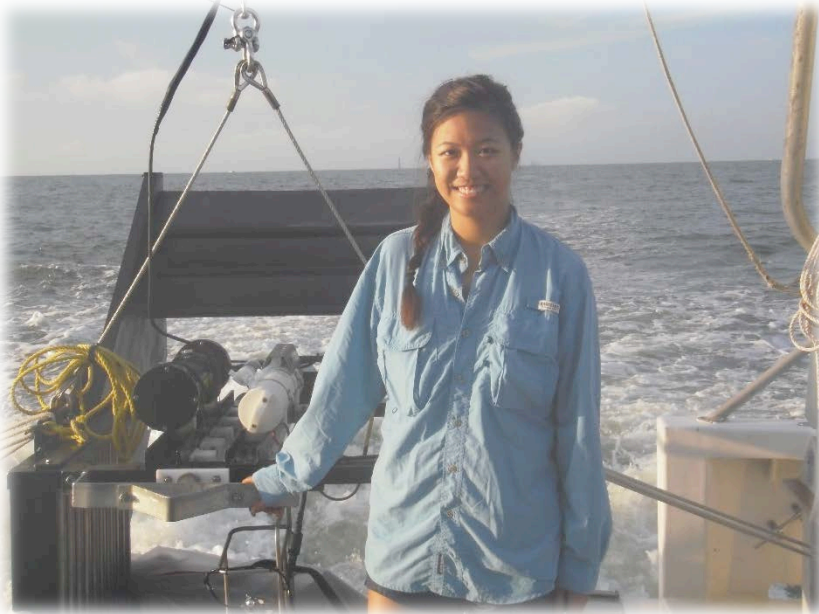
# Results

- \* Preliminary results
  - \* teleost fishes and crustaceans
  - \* majority of the gut contents are unidentifiable.
- \* Future molecular data?





# GoMRI



- \* Started in 2013
- \* Deepwater Horizon impacts
- \* Comparison to 6-year study (FOCAL)
- \* Sorting ichthyoplankton and zooplankton
- \* Ongoing project
- \* Initiating metadata record for project

# Summary

# Skills learned



- \* Larval fish image capture and poster design
- \* Gut content analysis
- \* Zooplankton sorting and ID
- \* Various field skills
- \* Metadata



# Challenges encountered

- \* Rained-out boat trips...there were plenty!
- \* Tracking larval fish from data base for pictures
- \* Poster designs and guidelines
- \* Delay on GUTS project
  
- \* Resisting unhealthy snacks brought into lab!

The overall

# NOAA-NGI Diversity Internship Experience



# NOAA-NGI Diversity Internship Program Goals 2013

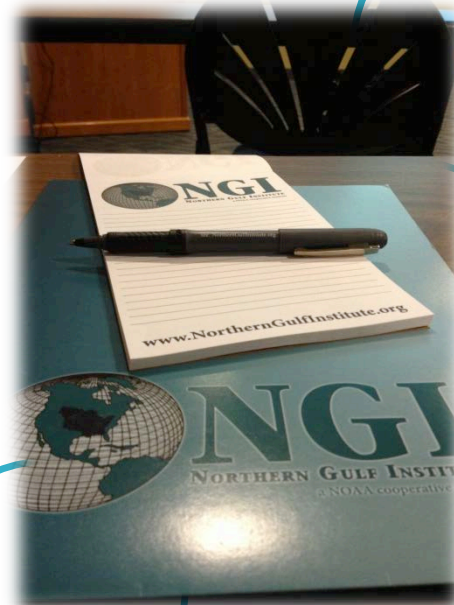
- \* Awareness of NOAA, NOAA entities, and their missions ✓
- \* Awareness of NGI and DISL ✓
- \* Awareness of careers with NOAA ✓
- \* Metadata familiarity ✓
- \* Development of research skills ✓
- \* Oral presentation skills ✓
- \* Networking ✓
- \* Gulf of Mexico literacy ✓



# Orientation



- \* New friends
- \* Mosquitoes
- \* First four program goals
  - \* Awareness of NOAA, NOAA entities, and their missions
  - \* Awareness of NGI and DISL
  - \* Awareness of careers with NOAA
  - \* Metadata familiarity



# Outside of the lab



**Shark longlining**





# Outside of the lab

## Class field trips



Squid flashing chromatophores

Dolphins following trawls



Summer student Ryan Parker holding a pregnant crab



# Candid pictures



Silly lab picture!



Mara and I in New Orleans



**Left:** Lab girls hanging out



**Right:** Amy, Sandra, Mara at orientation



# Future directions

- \* Employment?
- \* Gaining more experience through internships
- \* Graduate school
- \* Education coordinator



# Acknowledgements

- \* **NOAA-NGI**
- \* **JoAnn Moody** and **Dr. Tina Miller-Way**, DISL
- \* Gulf Coast Research Lab (**GCRL**)
  - \* **Fisheries Oceanography Lab**
    - \* **Dr. Frank Hernandez**, Carla, Jana, John, Suzette, Lanora, Hazel, Madalyn, Anne, Sarah, Jesse, Jason
    - \* Interns: Christopher, Natasha, Adriona
  - \* **GCRL Summer Field Program**



**NORTHERN GULF INSTITUTE**  
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# Thank you!

