

U.S. Gulf of Mexico and South Atlantic Penaeid and Rock Shrimp Fisheries Observer Program

NOAA Fisheries Service
Galveston Laboratory

General Overview of Objectives

Objectives of the program

Design of the Vessel Selection Process

Bycatch Characterization Protocol (Historical to Present)

Obtaining Access to Summarized Data Update

Shrimp Trawl Bycatch Observer Program



Objectives:

- Refine catch rate estimates of finfish and shrimp by area and season for use in stock assessments (SEDARs)
- Bycatch Reduction Device (BRD) and Turtle Excluder Device (TED) evaluation. Estimate protected species bycatch

Since 1992:

- Annual coverage approx. <math><1\%</math> to $\sim 2\%$ of total shrimp effort
- Mandatory Coverage in 2007 (Gulf) and 2008 (SA)

Shrimp and Reef Bycatch Observer Programs - Management Interrelated



July 2006 (Reef)

July 2007 (Shrimp – Gulf, 2008 –SA)

- Collect biological and gear data aboard commercial vessels in the US Gulf of Mexico and
 - mandatory (\$25)
 - federal fishing permits
 - required to take an observer if selected
- Bycatch reduction
 - voluntary (\$200)

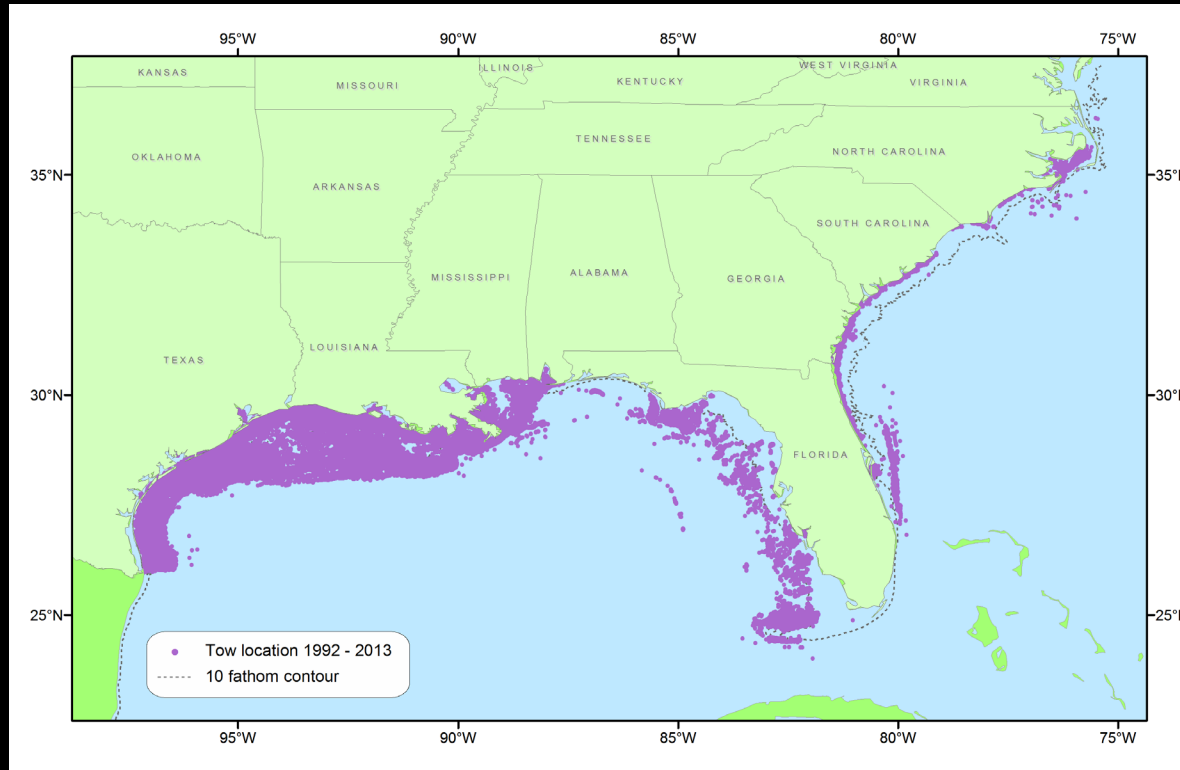
Selection Process

Shrimp Trawl Bycatch Mandatory Observer Program

Selected randomly – based on previous year of landings/effort (from NMFS data)

- Stratified by:
 - Area (states)
 - Depth
 - Season
 - January - April
 - May - August
 - September - December
- Sea Day Coverage
 - 80% Gulf of Mexico
 - 20% South Atlantic

Shrimp Trawl Tow Locations



- Trip Length (1 to 62 days)
- Coverage ~2% of annual directed effort; varies – funding

Question #1:
Species Identification and
Sampling Process

Historic Bycatch Characterization



- Total weight of one randomly selected net
- Total shrimp, red snapper
- ~ 20% sample to species level
- 30 specimens of each species in sample measured
- **Early years (1990,s early 2000's)**

Current –BRD / TED Evaluation and Mandatory Shrimp



- Two outboard nets (experimental vs. control)
- Total weight
- Total shrimp, red snapper
- Basket sample - species groupings



- Adult red snapper are taken in the directed fishery
- Juveniles taken as bycatch in the shrimp fishery
- All red snapper are counted, measured, as well as total weight

Species characterization list

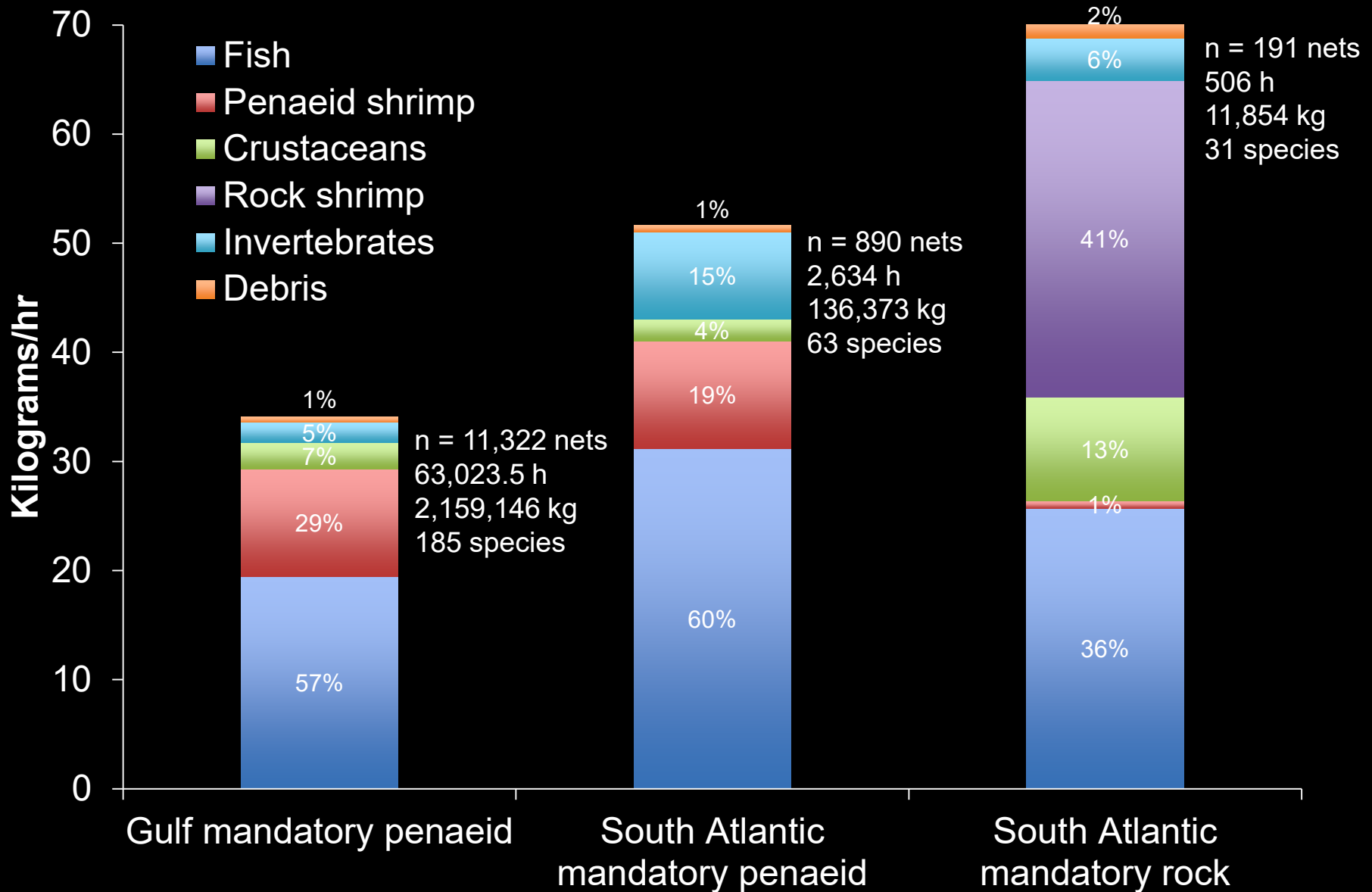
- Brown, white, pink shrimp, panaeus discard
- Crabs, lobsters, etc.
- Other inverts

- Sharks: blacknose, spinner, finetooth, blacktip, atlantic sharpnose, bonnethead, smooth dogfish, florida smoothhound, lemon, other sharks not listed

- Fish: Trout, Snapper (other), Lane, Croaker, Southern Flounder, Black Drum, Cobia, Vermilion, Red Drum, Spotted seatrout, King Mackerel, Spanish Mackerel, Longspine Porgy, Other finfish grouped

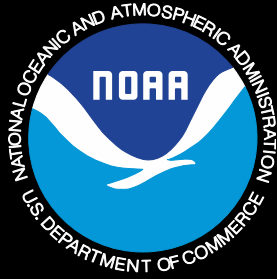
- Debris
- Dominants/Others not listed

Major Species Categories



Shrimp Trawl Bycatch Observer Program

Vessels	1,500(Gulf); 500 (S. Atlantic) federal (~2000 Federal Vessels) Steel Hull/Freezer Capacity (Gulf) Wooden/Ice (SA)
Vessel Length	31 - 98 ft (Avg. = 74 ft) Gulf (Smaller 64 ft SA)
Crew	1 to 5
Trips	1-62 days •Avg. = 13.8 days (Gulf); •Avg. = 2.9 days (S. Atlantic)
Tow Depth	0.5 - 65 fms (Avg. = 16.4 fms) Gulf (4.8 SA) (34 Rock) (222 RR)
Tow Time	0.1 to 20.5 hrs •Gulf - 5.2 hours •South Atlantic - 2.8 hours



NMFS. 2020. Characterization of the U.S. Gulf of Mexico and southeastern Atlantic otter trawl and bottom reef fish fisheries. Observer Training Manual. NMFS, Southeast Fish. Sci. Cent., Galveston Laboratory, Galveston, Tex. (avail. at <http://galveston.ssp.nmfs.gov/research/fisherymanagement>)

Question #2: Getting Access to Summarized Data

Warehouse Transfer

- SEFSC staff has been working diligently over the last year to get the shrimp database transferred from Galveston (ACCESS+ORACLE) into the Warehouse/SEFSC Fisheries Reporting System.
- Recent staff turnover and limited staff have slowed down this process recently.
- Currently in the translation/import phase...i.e. 2nd to last phase
- When completed, reports and summaries will be made to complement various purposes: analysis, Council summaries, etc.