Finfish Advisory Panel

November 29, 2018 - 6PM
Richmond Hill City Hall Council Chambers
40 Richard Davis Dr, Richmond Hill, GA 31324
(5:45PM - Assemble to serve dinner)

6:00 Welcome

6:05 Approve Agenda and April 2018 Meeting Summary

6:10 MFS Updates:
Personnel
FishSmart Initiative
Habitat License Plate Funds

6:30 SAFMC Updates:
2018 Red Snapper Mini-Season Data Collection
Black Sea Bass
For-Hire Permit Modification
For-Hire Weekly Electronic Logbooks

7:00 Cobia:
Stock ID Workshop & SEDAR Timeline
ASMFC Interstate FMP Implementation

7:15 2018 Red Drum & Spotted Seatrout Netting Summary

7:45 NMFS Recreational Fishing Effort Survey

8:00 Adjourn

FAP members in attendance

Stan Allen	Bryan Fluech	David Newlin	Charlie Phillips
John Rogers	Brooks Schoen	Bill Weeks	Lee Barber

FAP members not in attendance

Wendell Harper (excused absence)	Trey Leggett	Phil Jarriel

GADNR staff in attendance

Carolyn Belcher	Karl Burgess	Julie Califf	Jared Flowers
Dawn Franco	Ryan Harrell	Doug Haymans	Chris Kalinowsky
Kathy Knowlton	Sgt. Phillip Scott		

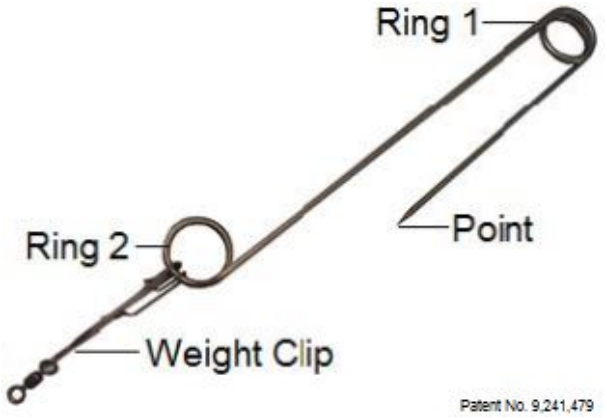
Red Snapper & Red Drum Conservation Project

Reduce fishing mortality of released fish

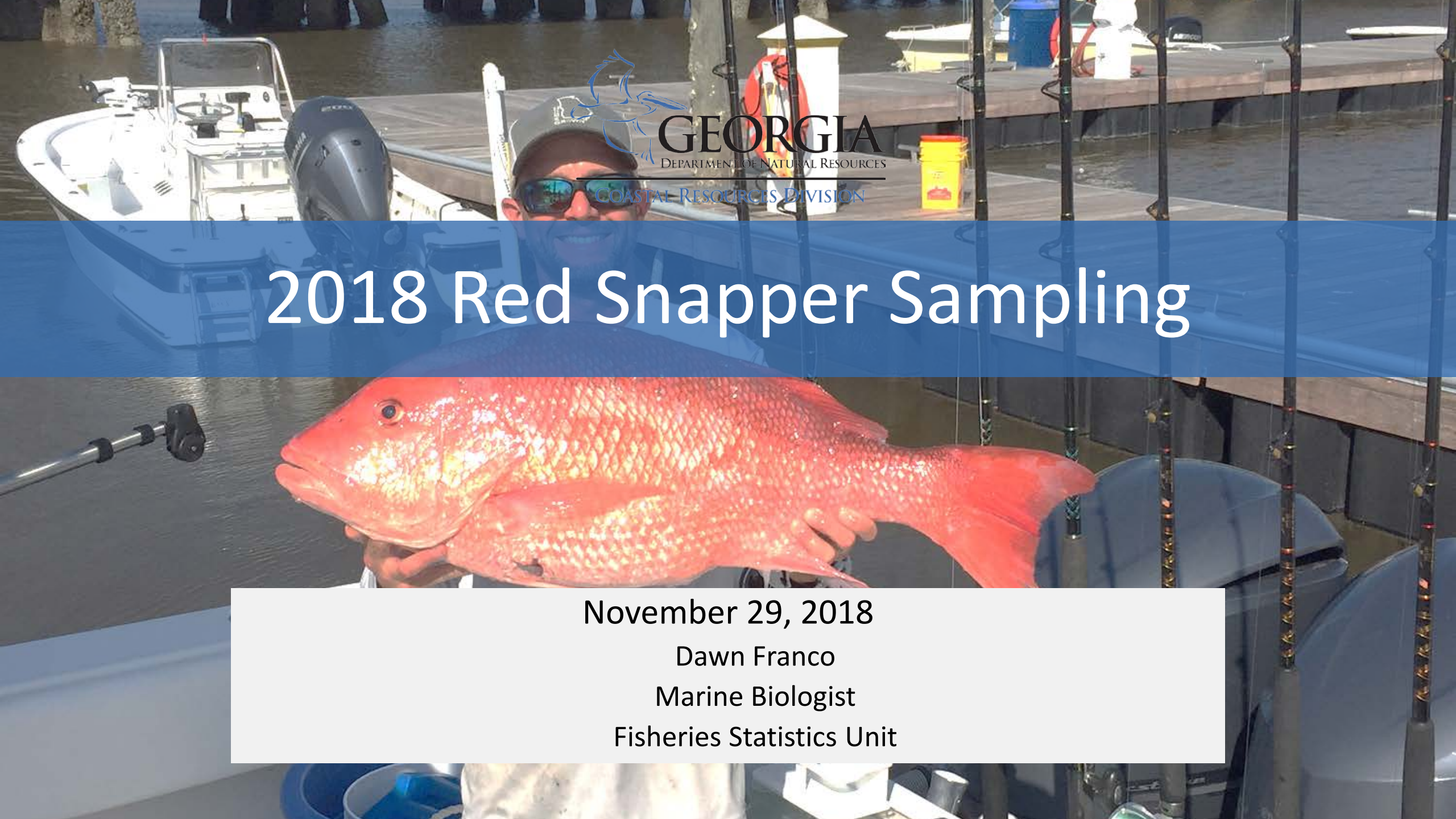
- Understand & use release “Best Practices”
- Access to descending devices & short leader rigs

SeaQualizer Descending Device

Shelton Fish Descender



Capt. Roy’s Fish Saver Device



GEORGIA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESOURCES DIVISION

2018 Red Snapper Sampling

November 29, 2018

Dawn Franco
Marine Biologist
Fisheries Statistics Unit

Management History

- 1992 : 20” TL, 2 fish limit
- 2009: December - Emergency rule recreational and commercial closure
- 2010: Amendment 17A annual closure, ACL = 0
- 2012: Emergency rule allowing harvest of red snapper
  - 2012 season = 6 days in September (no size limit; 1 fish per person)
- 2013: Amendment 28 – allow limited annual harvest
  - 2013 season = 3 days in August
  - 2014 season = 8 days in July
  - 2017 season = 6 days in November & 3 days in December
  - 2018 season = 6 days in August

2018 Data Collection Efforts

- For Hire calls to captains with Federal Snapper Grouper Permit
  - Monday following each weekend
  - Hours fished, area, number of anglers, red snapper harvested/discarded/donated
- Carcass donations
  - Donations from 16 freezers
  - New carcass card
  - Card info plus biological samples (length, sex (if available),otoliths)
- Dockside collection Recreational and Commercial
  - 5 locations
  - Vessel info, fishing location, depth, length, weight, sex and otoliths
- Tournaments
  - Angler info, fishing location, length, weight, sex and otoliths

Carcass Program

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESOURCES DIVISION

Red Snapper Carcass Cards

Please place one card in **EACH** bag

Multiple bags?

Bag ____ of ____

Date: 8/10 8/11 8/12 8/17 8/18 8/19

Angler Name: _____

Address: _____

City: _____ State: _____

Zip: _____ T-shirt size (if selected): _____

Phone: _____

Email: _____

One angler can fill out card for entire vessel

Trip Type: ☐ Private/Rental ☐ Charter

Charter captain (if applicable): _____

Anglers: _____ Depth (ft): _____

Area fished: _____

Hours fished (time gear in water to nearest half-hour): _____

Red Snapper Catch (per vessel)

Released: _____ Descending device used: Y N

Harvested: _____ # Carcasses (in bag): _____

☐ Please check the box if we may contact you for more information about your trip

Did you participate in a dockside interview? Yes No

Will you report your fishing trip through MyFishCount.com? Yes No

Thank you for your participation. Your support in evaluating the health of the Red Snapper stock is appreciated!

2018 Data Collection Efforts

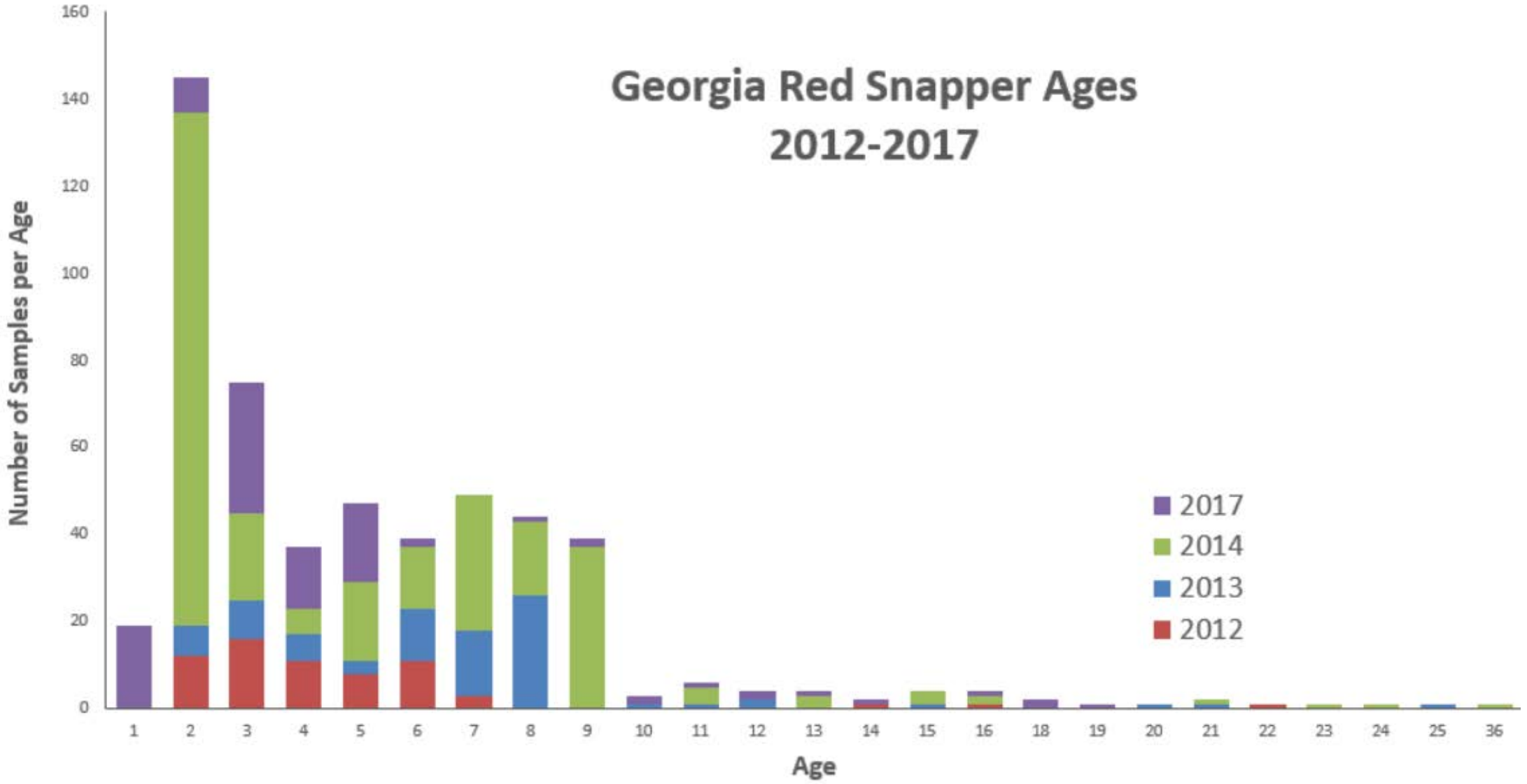
- For Hire calls to captains with Federal Snapper Grouper Permit
  - Monday following each weekend
  - Hours fished, area, number of anglers, red snapper harvested/discarded/donated
- Carcass donations
  - 14 freezers
  - New carcass card
  - Card info plus biological samples (length, sex (if available),otoliths)
- Dockside collection Recreational and Commercial
  - 5 locations
  - Vessel info, fishing location, depth, length, weight, sex and otoliths
- Tournaments
  - Angler info, fishing location, length, weight, sex and otoliths

Data Collected

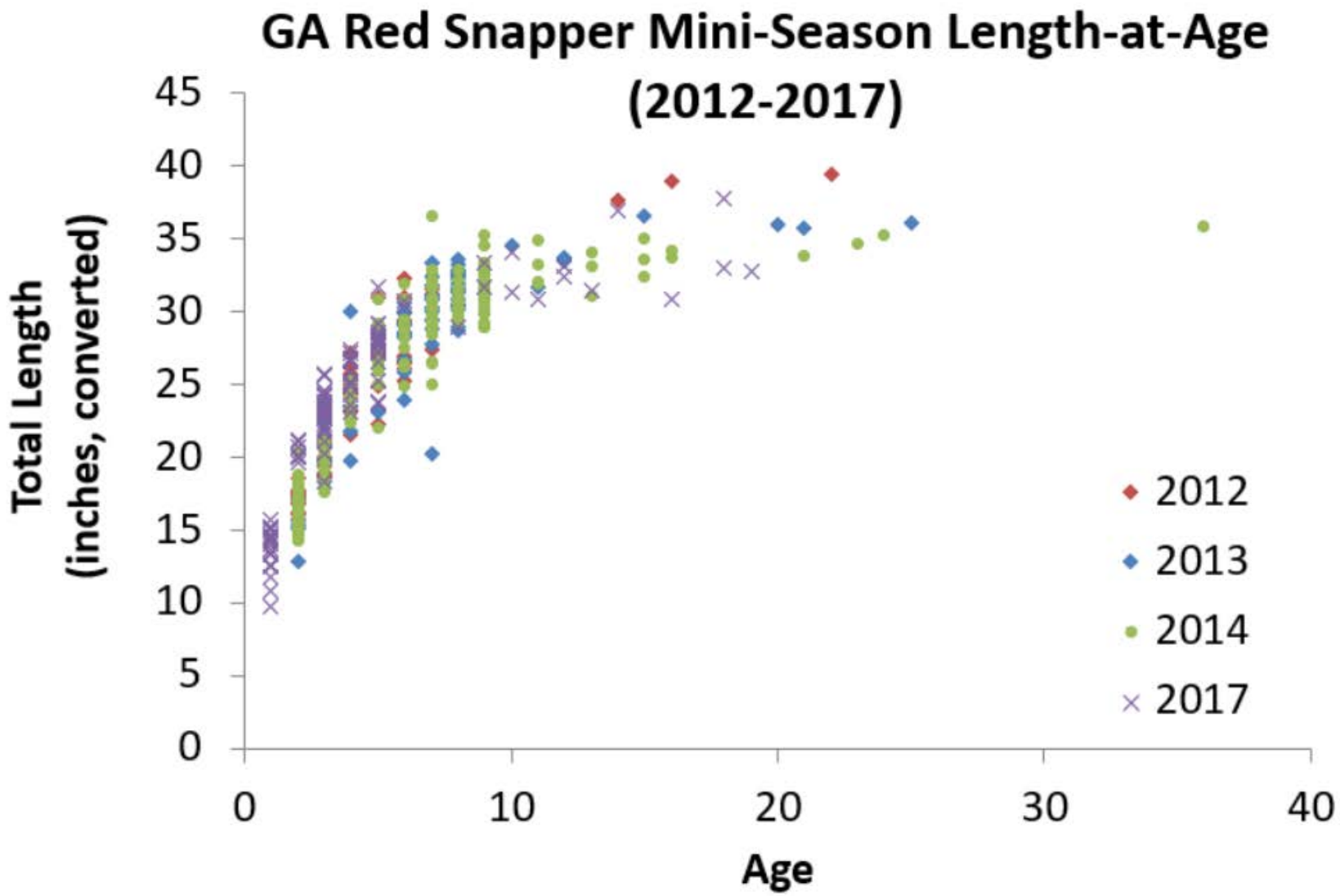
- Charter calls
  - 56 Charter trips
  - Reported Harvest =253
  - Reported Releases = 255

- Biological samples = Total of 401
  - Carcass donations
    - PR = 133 fish
    - CH = 49 fish
  - Dockside sampling
    - CH = 122 fish
    - HB = 76 fish
    - PR = 19 fish
  - Commercial sampling
    - 2 fish

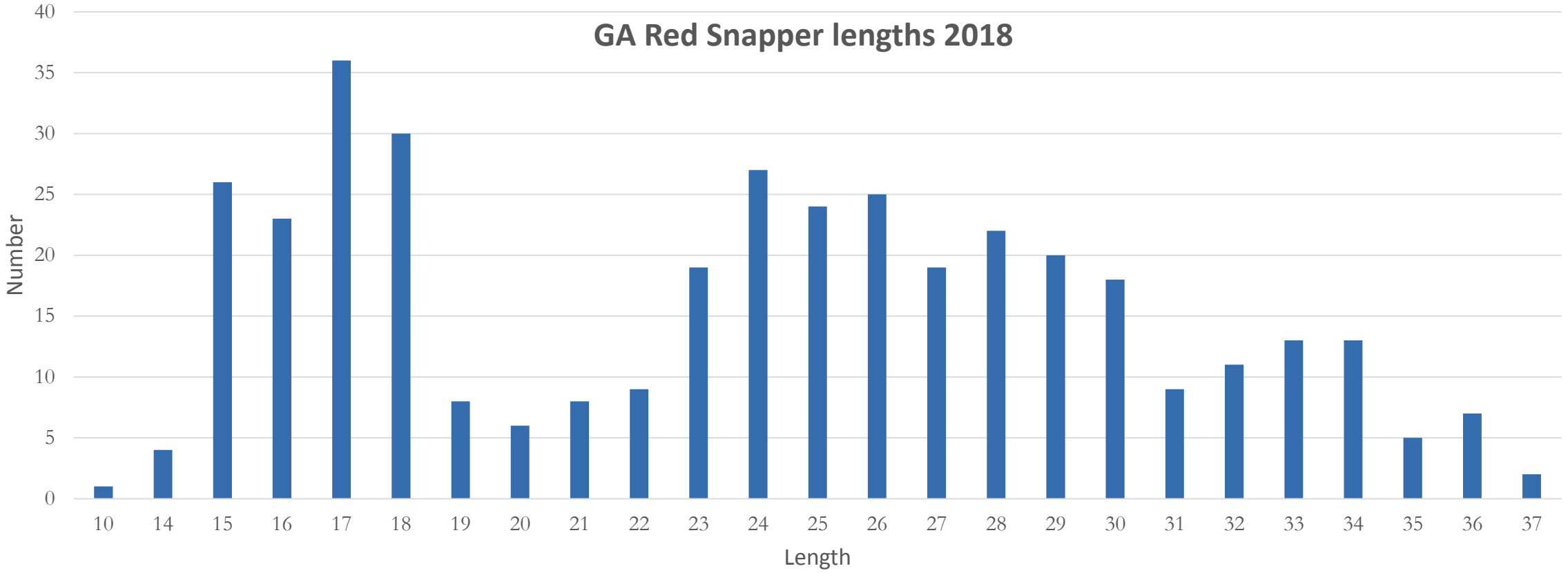
Ages


Georgia Red Snapper Ages
2012-2017
Number of Samples per Age
160
140
120
100
80
60
40
20
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
18
19
20
21
22
23
24
25
36
Age
2017
2014
2013
2012

Length at age



2018 Available Data



Lengths ranged from 10 - 37 in

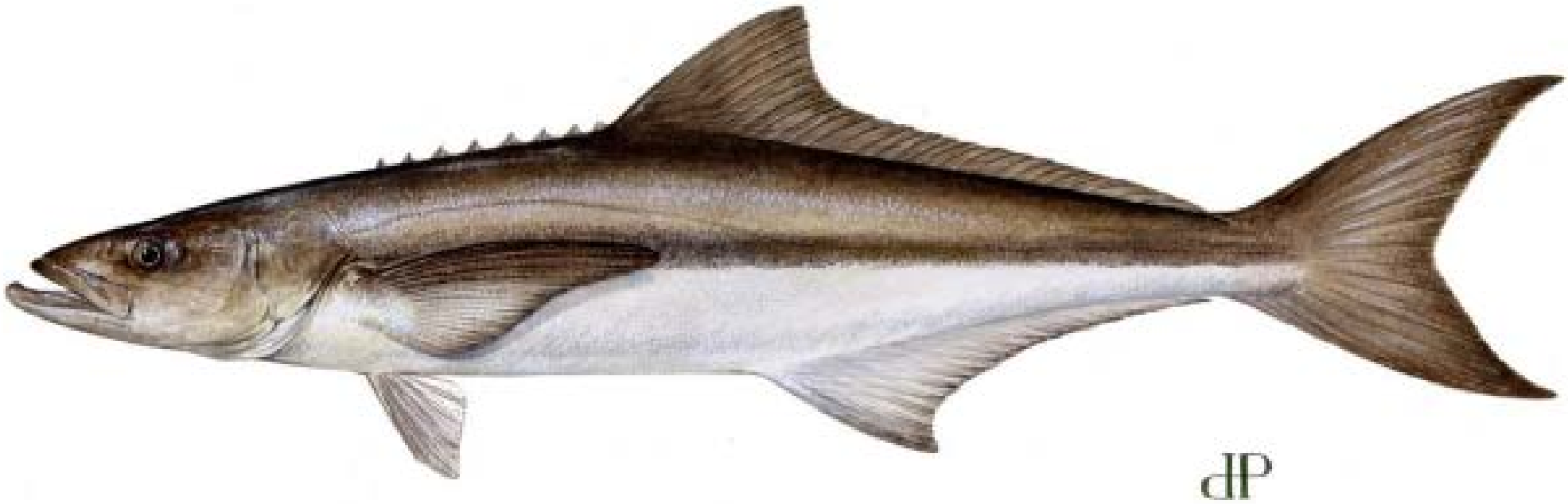
Average length = 23.42 in

Average weight was 8.04 lbs

Maximum weight = 31.4 lbs

Questions?

Atlantic Cobia



COBIA

Rachycentron canadum

NOAA FISHERIES
Southeast Fisheries Science Center

SEDAR 58 Atlantic Cobia Benchmark Assessment:

Cobia Stock ID Workshop Overall Recommendations

SEDAR 58 Atlantic Cobia

Stock ID Review Workshop June 5, 2018

Addressing the Stock ID Workshop ToRs

Workshop Goal: Review cobia stock structure and unit stock definitions and consider whether changes are required.

- Given the SEDAR 28 South Atlantic Cobia Stock Assessment, which assessed Cobia north of the Florida-Georgia border, we focused on resolving whether changes to this boundary were required (i.e. warranted)
  - Is there evidence for stock structure at the regional scale (i.e. separation between the Gulf of Mexico and Atlantic) and if so, is there reason to change the dividing line from the Florida-Georgia border?

Stock ID Workshop

- 2018 April 10-12th Stock ID Workshop (2.5 days long)
  - Reviewed the data we had decided to consider during the data scoping webinar
  - Reviewed working papers and relevant literature
  - Discussed evidence of stock structure at the regional scale and definition of boundary between Gulf of Mexico and Atlantic stocks for each of three data categories
  - Worked to relate patterns in data between data categories and reconcile a single set of regional scale boundaries (consumed the better part of two days of the workshop)
  - Discussed how to react to sub-regional structure in the Atlantic, suggested by genetic and spatial data
    - Generally agreed that while sub-regional structure was worthy of further research, specific definitions of biological stock structure at this scale are still developing and not defined well enough to adequately define assessment stock units

Recommendations on Biological Stock Structure

GENETICS

- Genetics data, suggested two distinct spawning stocks at the regional scale: the Gulf of Mexico (extending up to Fort Pierce, FL) and the Atlantic (VA to Port Royal Sound, SC).
- Genetics data suggested a spawning stock transition zone within the range from Savannah, GA through Brevard County, FL (Brevard/Indian River county line).

LIFE HISTORY

- Life history data were generally insufficient to provide information on stock structure of Cobia.

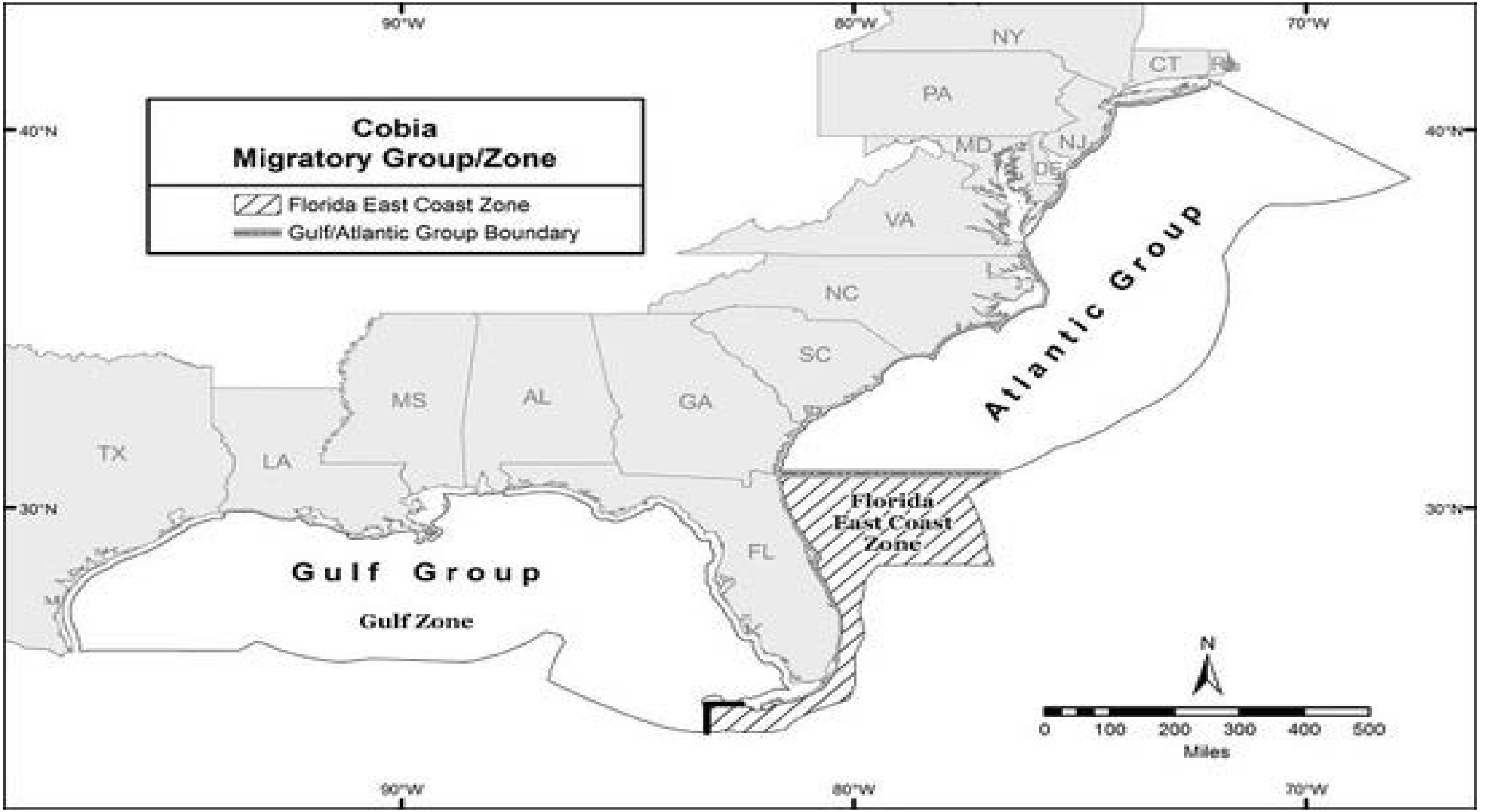
SPATIAL

- Spatial tagging data also suggested the existence of two distinct biological stocks at the regional scale: the Gulf of Mexico stock (south of Brevard County, FL) and the Atlantic stock (from north of Brunswick, GA).
- Consistent with the conclusions of the Genetics Working Group, spatial tagging data suggested a transition zone between Brevard County, FL and Brunswick, GA

Recommendations on Assessment Unit Stock Structure

OVERALL

- The Panel recommended that Cobia be considered two assessment unit stocks: the Gulf of Mexico stock and the Atlantic stock. Data support a separation within a transition zone between Brevard County, FL to Glynn/Camden County, GA. However the data did not identify a specific boundary within this transition zone separating the two biological stocks. The current management boundary at the FL/GA line lies within the transition zone, thus the Panel recommends the use of the FL/GA line as a boundary between the Gulf of Mexico and the Atlantic assessment unit stocks.


Cobia
Migratory Group/Zone
Florida East Coast Zone
Gulf/Atlantic Group Boundary
90°W
80°W
70°W
40°N
30°N
NY
CT
RI
PA
MD
NJ
DE
VA
NC
SC
GA
FL
AL
MS
LA
TX
Atlantic Group
Florida East Coast Zone
Gulf Group
Gulf Zone
N
0
100
200
300
400
500
Miles

SEDAR Timeline

Step	Anticipated Date
Schedule & ToRs (Terms of Reference) Approved	June, 2018
Workshop Appointments	June, 2018
Stock ID	
Stock ID Workshop	**April, 2018**
Final Stock Resolution	August, 2018
Data Workshop	
Data Scoping Webinar (For the upcoming data workshop)	August, 2018
Data Deadline	September, 2018
Data Webinar	October, 2018
Data Workshop Working Paper Deadline	December, 2018
Pre Data Workshop Conference Call	January, 2019
Data Workshop (Charleston SC)	**January, 2019**
1st. Draft Data Workshop Report	January, 2019
Post Data Workshop Webinar	January, 2019
Final Data (to compilers)	January, 2019
Draft Data Workshop Report for review	February, 2019
Fianl Data Workshop Report due to SEDAR	February, 2019
Assessment	
Pre Assessment Webinar	March, 2019
Assessment Milestone I Webinar (Discuss model options and assessment methods)	April, 2019
Assessment Milestone II Webinar	May, 2019
Assessment Workshop working paper deadline	May, 2019
Assessment Milestone III Webinar	June, 2019
Assessment Milestone IV Webinar	June, 2019
Assessment Milestone V Webinar	July, 2019
Assessment Report Draft for panel review	August, 2019
Final Assessment Report to SEDAR	**August, 2019**
Review	
Review working paper submission	August, 2019
Final Assessment Report distribution	August, 2019
Pre Review Conference Call	September, 2019
Review Panel Conference Call	September, 2019
Review Workshop (Atlantic Beach, NC)	September, 2019
Draft Review Report	September, 2019
Review Workshop reports due to SEDAR	October, 2019
Final Complete Assessment Report Submitted to Councils	**October, 2019**

South East Data, Assessment, and Review (SEDAR Timeline)

Step	**Anticipated Date**
Schedule & ToRs (Terms of Reference) Approved	June 2018
Workshop Appointments	June 2018
Stock ID Workshop	**April 2018**
Final Stock Resolution	August 2018
Data Scoping Webinar (For the upcoming data workshop)	August 2018

South Atlantic Fishery Management Council Timeline

Step	**Anticipated Date**
CMP Amendment 31 (Remove cobia from CMP FMP) Approved for review	June 2018
Transmitted for formal secretarial review	July 13, 2018
Proposed rule published by NMFS	November 9, 2018
Comment Period ***Current step***	Ends Dec 10, 2018
Final Rule Pending	?

Atlantic States Marine Fisheries Commission Timeline

Step	**Anticipated Date**
CMP Amendment 31 (Remove cobia from CMP FMP) Approved for review	June 2018
Transmitted for formal secretarial review	July 13, 2018
Proposed rule published by NMFS	November 9, 2018
Comment Period ***Current step***	Ends Dec 10, 2018
Final Rule Pending	?

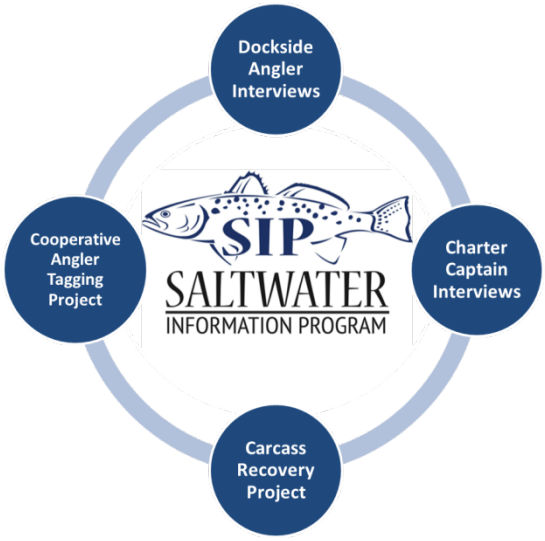
Saltwater Information Program
Marine Recreational Fisheries
Catch and Effort Surveys

2016

Prepared by Kathy Knowlton,
Ryan Harrell and Donna McDowell
November 19, 2018

Georgia Department of Natural Resources
Coastal Resources Division
One Conservation Way
Brunswick, GA 31520

Marine recreational finfish data in coastal Georgia are collected through the Saltwater Information Program (SIP) by staff from the Georgia Department of Natural Resources Coastal Resources Division (GADNR CRD). The SIP is a suite of data collection programs reliant upon cooperating anglers and charter captains. Participants are surveyed dockside, as well as by telephone and mail, to determine their catch, harvest and effort (number of trips). This information is used along with biological data collected from donated fish carcasses and tagged fish to manage Georgia's recreational fisheries. Participation in all surveys is voluntary, thus we rely heavily on cooperation with the recreational fishing community. High levels of participation result in more precise and accurate catch and effort estimates necessary for sound fishery management, as well as conservation at both the state and federal level. Currently these programs are 100% federally and privately funded, with no directed State funds.

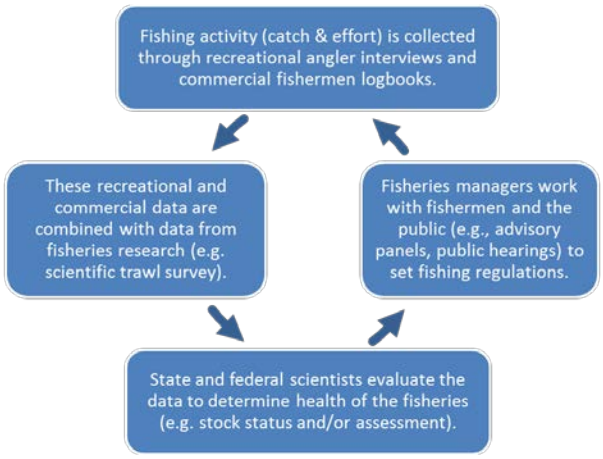


CRD staff works in conjunction with the federal National Oceanic and Atmospheric Administration's (NOAA) Fisheries to conduct surveys of coastal Georgia anglers and for-hire charter and headboat captains. These surveys are part of NOAA Fisheries' Marine Recreational Information Program (MRIP), and are used to produce estimates of finfish catch (including fish released and those retained as harvest) as well as numbers of angler fishing trips (effort). Every three to four years, angler expenditure questions are included to estimate the economic impact of marine recreational fishing. These data, along with commercial fisheries and other research data, are used to track trends in fishing effort and landings, determine appropriate regulations (e.g., size and bag limits), provide catch data for evaluating the health of the fisheries, and inform fishery management plans.

MARINE RECREATIONAL INFORMATION PROGRAM

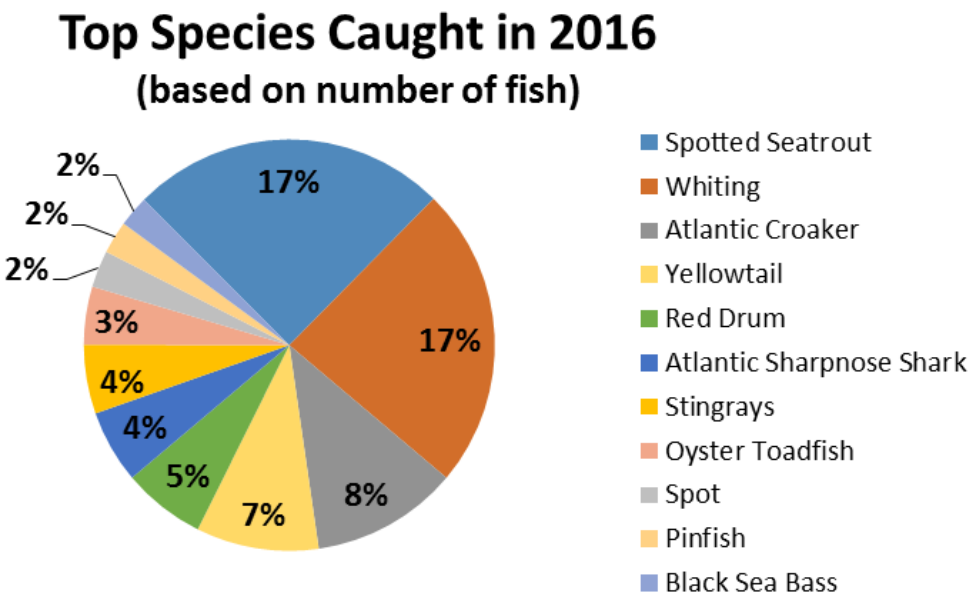
Marine Recreational Fisheries - Catch

Saltwater anglers returning to public access sites after fishing are asked to participate in a dockside survey. The interview takes just a few minutes to complete, is conducted by CRD staff, and consists of two major categories 1) Fishing Trip and 2) Catch Information.



1) Fishing Trip: fishing mode (shore, charter or private boat), number of anglers, hours spent fishing, general area fished (inshore vs. offshore), fish species targeted, angler's county, and state of residence.
2) Catch: finfish catch, including species, and number of fish released plus those kept (harvested). For released fish, staff asks whether the fish were used for bait, or released alive or dead. Anglers are also asked if their retained harvested fish can be measured and weighed.

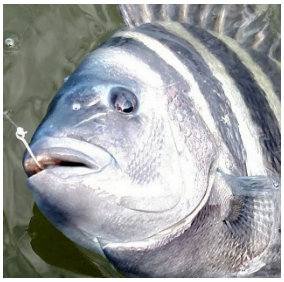
Of the approximately 2,100 annual angler interviews, about 50% are conducted at boat ramps and marinas. The remaining interviews are split between anglers who are returning from a charter fishing trip and those who are fishing from the shore (e.g., pier, dock, creek bank). From March through December, staff conducts interviews on weekdays and weekends at access sites throughout the six Georgia coastal counties. Estimates of marine recreational fishing in Georgia are not generated for January and February as saltwater fishing activity is limited. CRD staff also conducts at-sea observer trips aboard for-hire headboats to collect lengths of discarded catch.

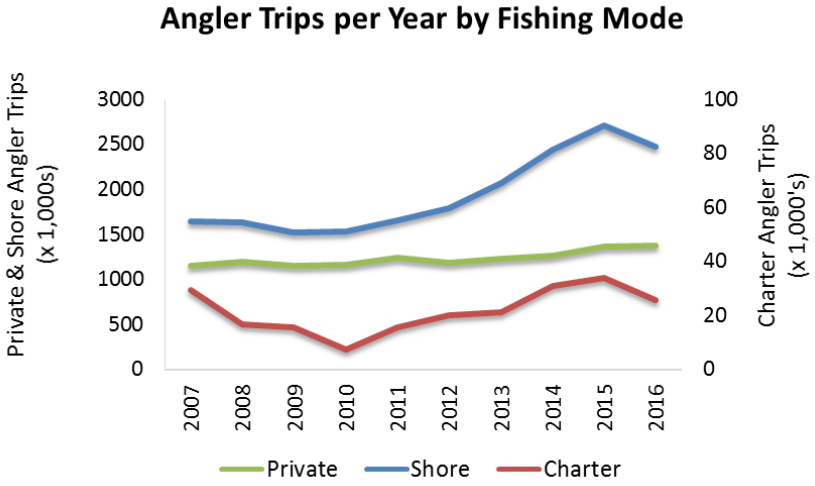


Marine Recreational Fisheries – Effort

NOAA Fisheries conducts a separate survey to determine whether residents within a contacted household have participated in saltwater fishing during the preceding two months. If they answer yes, a series of questions is asked which allows an estimate of the effort (number of trips) of those anglers fishing from private boats or shore sites to be calculated. NOAA Fisheries recently transitioned from contacting households via landline telephone to a mail-based Fishing Effort Survey (FES). With the increase in cell phone-only households, landline telephone surveys became highly inefficient. The United States Postal Service address database provides a far more accurate and thorough listing of households. Pilot surveys indicated a very high response rate and timely turn-around for mail surveys. To further improve the efficiency of the FES, the majority of the surveys is mailed to licensed marine recreational anglers. In Georgia, saltwater anglers are identified via the free annual SIP Permit. The telephone and mail surveys were conducted side-by-side (i.e., "benchmarked") from 2015-2017 such that calibrations could be applied to estimates prior to 2018 when the FES was formally adopted as the method to estimate marine recreational fishing effort. Data included in this report are based on calibrated estimates.

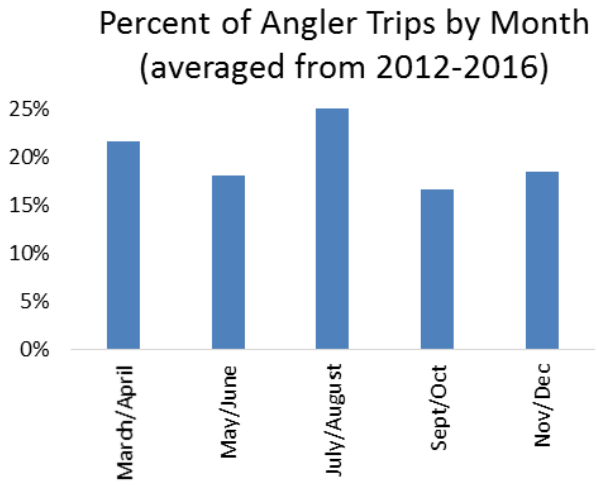
Since anglers on charter fishing trips are often from noncoastal counties or out of state, a different survey is used to estimate effort in the charter sector. Every week, 10% of Georgia's active marine fisheries charter captains are selected to participate in a telephone survey. Captains report number of fishing trips, number of anglers per trip, general area fished, and whether any finfish species were specifically targeted. From these telephone interviews, an estimate of the effort (number of trips) of those anglers fishing from charter boats is calculated. This telephone survey is conducted by CRD staff in conjunction with NOAA Fisheries.





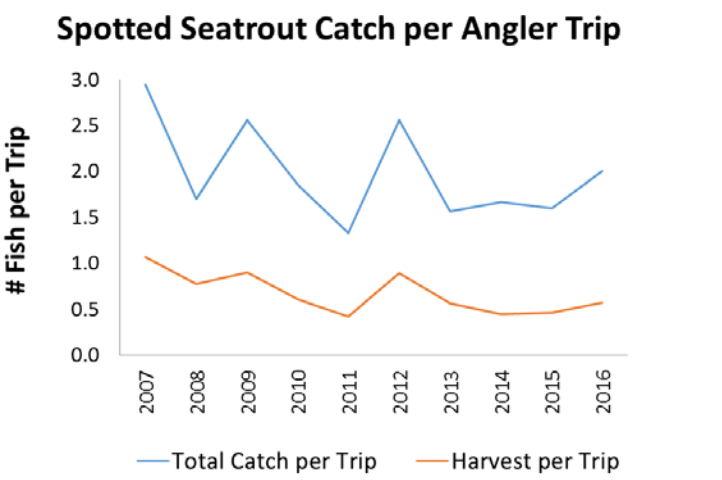
Angler Trips by Area Fished (averaged from 2012-2016)		
Area	# Angler Trips	% Angler Trips
Inshore (rivers & sounds)	2,561,380	71%
Ocean <3 Mi.	955,553	26%
Ocean >3 Mi.	90,245	3%
Total	3,607,178	

Anglers by Residency Type (averaged from 2012-2016)		
Residency	# Anglers	% Anglers
Coastal	109,742	42%
Non-Coastal	90,212	34%
Out-of-State	63,350	24%
Total	263,304	

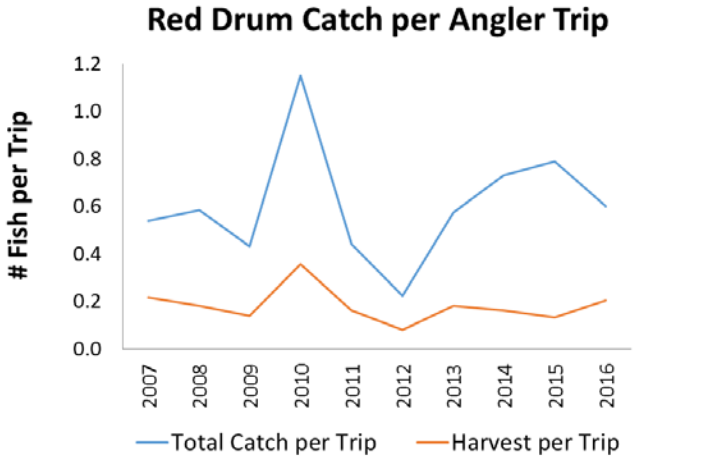


Catch Per Unit of Effort

Data from the various surveys are combined to produce catch statistics such as the catch and harvest per unit of effort graphs below. Catch or harvest (measured in number of fish) per angler trip (i.e. effort) can then be compared across years as one indicator of stock status for popular sportfish such as Spotted Seatrout and Red Drum. For the years represented in the graphs, catch per angler trip (including released fish) has been more variable while harvest per angler trip has been fairly consistent.



Note: These data represent landings and effort estimates from only the private/rental (PR) vessel fishing mode. The majority of total catch (85%) and total harvest (77%) during the most recent 10 years are from the PR fishing mode.

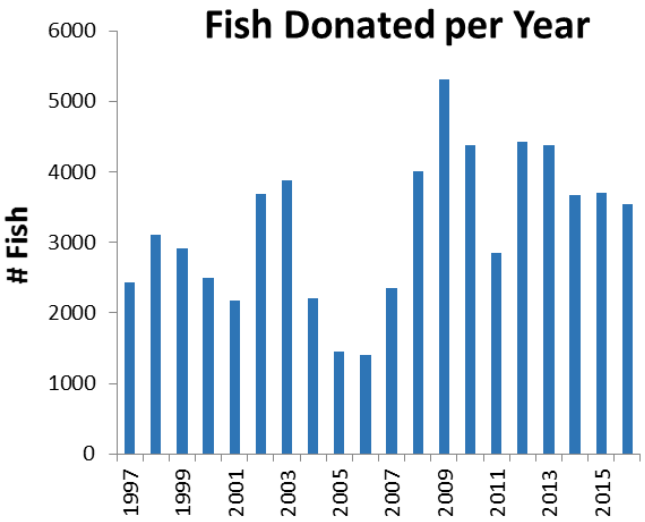


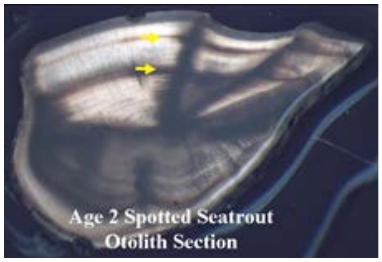
Note: These data represent landings and effort estimates from only the private/rental (PR) vessel fishing mode. The majority of total catch (94%) and total harvest (96%) during the most recent 10 years are from the PR fishing mode.

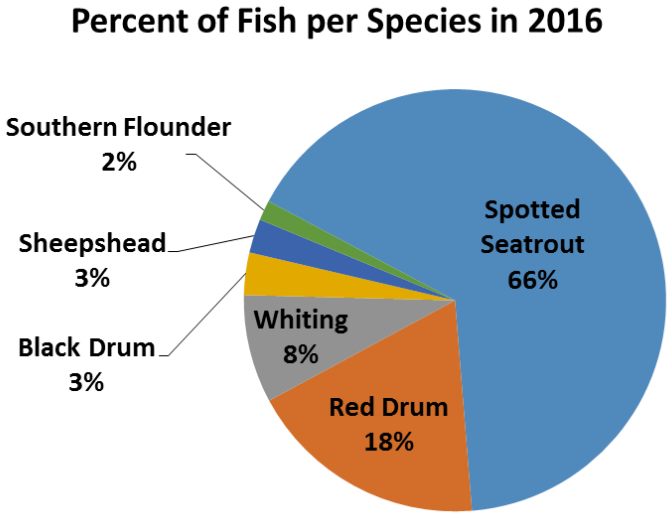
Carcass Recovery Project

The Marine Sportfish Carcass Recovery Project takes advantage of the fishing efforts of hundreds of anglers by turning filleted fish carcasses, which would normally be discarded, into a source of much needed data on Georgia's marine sportfish. The project is a true partnership of saltwater anglers, charter captains, marine businesses, conservation groups, and CRD. The Georgia Power Foundation has also been instrumental in providing supplemental funding.

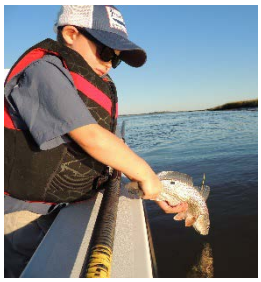
Chest freezers are placed near fish cleaning stations at select locations along the Georgia coast. Each freezer is marked with an identifying sign and a list of target fish species. Cooperating anglers and charter captains place filleted carcasses and a completed information card in a bag, and then place the bag in the freezer. CRD staff collects the frozen carcasses, and later identify each to species, measure length, determine sex when possible, and remove otoliths (i.e., "ear bones"). The otoliths are then analyzed using computer-aided image analysis to determine the age of the fish. This is accomplished by taking a thin cross section of the otolith and counting the rings (similar to counting the rings on a tree cross section to determine age). The age-at-length data from the carcass recovery program can then be used to estimate the ages of harvested fish of various lengths collected through the MRIP and other surveys. These age and length data provide estimates of reproductive spawning potential (i.e., approximately how many eggs a female fish of a given length produces in an average spawning season). These are critical pieces of data used for assessing the status of fishery stocks and to develop appropriate management recommendations. Since 1997, a total of 64,362 carcasses have been donated by anglers and processed for information. In 2016, CRD staff processed a total of 3,547 sportfish carcasses from nine finfish species.



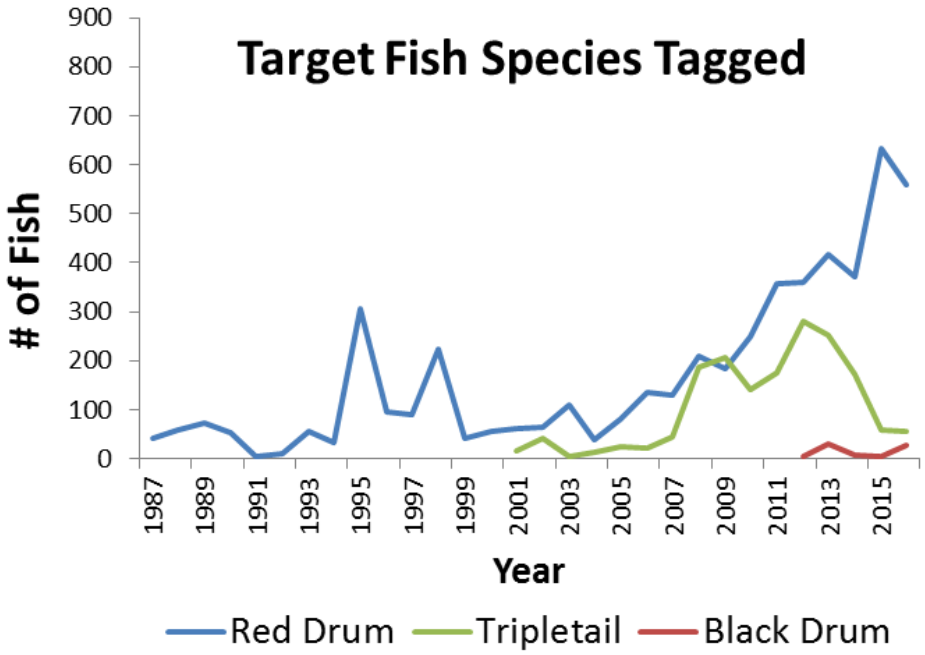




Cooperative Angler Tagging Project



The cooperative endeavors between anglers, charter captains and CRD continue through the Cooperative Angler Tagging Project. CRD staff enlists participants to tag species of concern and gather information on growth, habitat preference and movement. Hook and line anglers are instructed in proper fish handling and tagging techniques. When a tagged fish is recaptured, data collected include length and status (e.g., released, harvested). This information is used to calculate the number of days at large, growth during the time at large, as well as total distance traveled (including north/south, east/west, and seasonal movement). Targeted species include primarily Red Drum, Tripletail, and Black Drum. Since 1987 the project has enlisted over 190 participants to tag and release more than 6,800 fish representing eight species. This effort has resulted in over 500 recapture events.



Additional Information

- ✓ Average expenditures from marine recreational anglers in Georgia account for $238M in annual sales impacts to the economy of Georgia (during the time period 2011-2015).
- ✓ Of the roughly 257,000 SIP permits obtained in 2016 by recreational anglers, 90% were Georgia residents.
- ✓ Spotted Seatrout is the #1 targeted marine sportfish in Georgia, followed by Red Drum and whiting (Southern Kingfish).

Pertinent Websites

❖ GADNR Coastal Resources Division	coastalgadnr.org
❖ Saltwater Information Program (SIP) permit	coastalgadnr.org/SIPPermit
❖ MRIP recreational fisheries data & queries	countmyfish.NOAA.gov
❖ Atlantic Coastal Cooperative Statistics Program	accsp.org
❖ South Atlantic Fishery Management Council	safmc.net
❖ Atlantic States Marine Fisheries Commission	asmfc.org

GADNR CRD Marine Fisheries Section staff contact information

Carolyn Belcher - Chief of Marine Fisheries, Carolyn.Belcher@dnr.ga.gov
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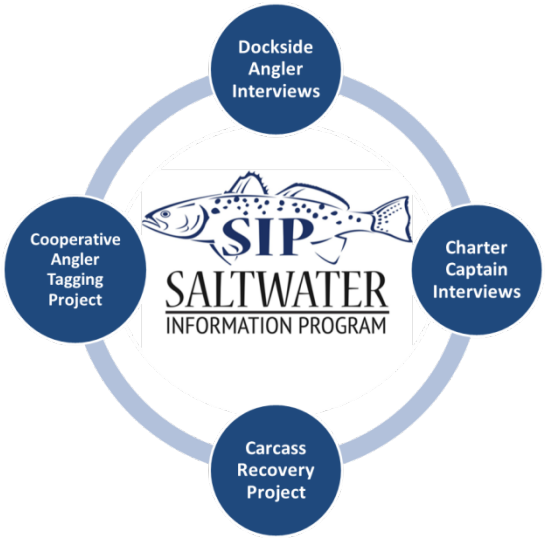
Saltwater Information Program
Marine Recreational Fisheries
Catch and Effort Surveys

2017

Prepared by Kathy Knowlton,
Ryan Harrell and Donna McDowell
November 19, 2018

Georgia Department of Natural Resources
Coastal Resources Division
One Conservation Way
Brunswick, GA 31520

Marine recreational finfish data in coastal Georgia are collected through the Saltwater Information Program (SIP) by staff from the Georgia Department of Natural Resources Coastal Resources Division (GADNR CRD). The SIP is a suite of data collection programs reliant upon cooperating anglers and charter captains. Participants are surveyed dockside, as well as by telephone and mail, to determine their catch, harvest and effort (number of trips). This information is used along with biological data collected from donated fish carcasses and tagged fish to manage Georgia's recreational fisheries. Participation in all surveys is voluntary, thus we rely heavily on cooperation with the recreational fishing community. High levels of participation result in more precise and accurate catch and effort estimates necessary for sound fishery management, as well as conservation at both the state and federal level. Currently these programs are 100% federally and privately funded, with no directed State funds.

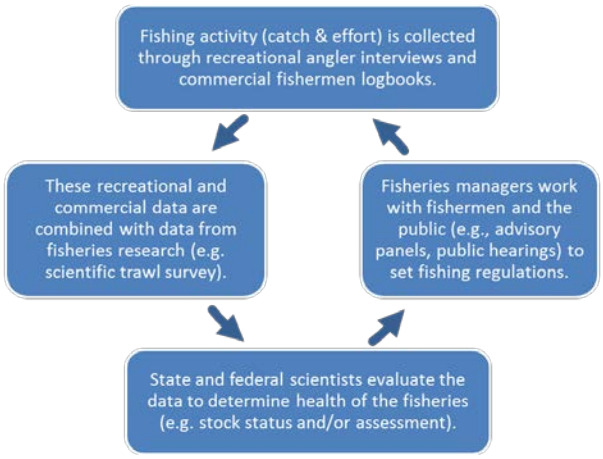


CRD staff works in conjunction with the federal National Oceanic and Atmospheric Administration's (NOAA) Fisheries to conduct surveys of coastal Georgia anglers and for-hire charter and headboat captains. These surveys are part of NOAA Fisheries' Marine Recreational Information Program (MRIP), and are used to produce estimates of finfish catch (including fish released and those retained as harvest) as well as numbers of angler fishing trips (effort). Every three to four years, angler expenditure questions are included to estimate the economic impact of marine recreational fishing. These data, along with commercial fisheries and other research data, are used to track trends in fishing effort and landings, determine appropriate regulations (e.g., size and bag limits), provide catch data for evaluating the health of the fisheries, and inform fishery management plans.

MARINE RECREATIONAL INFORMATION PROGRAM

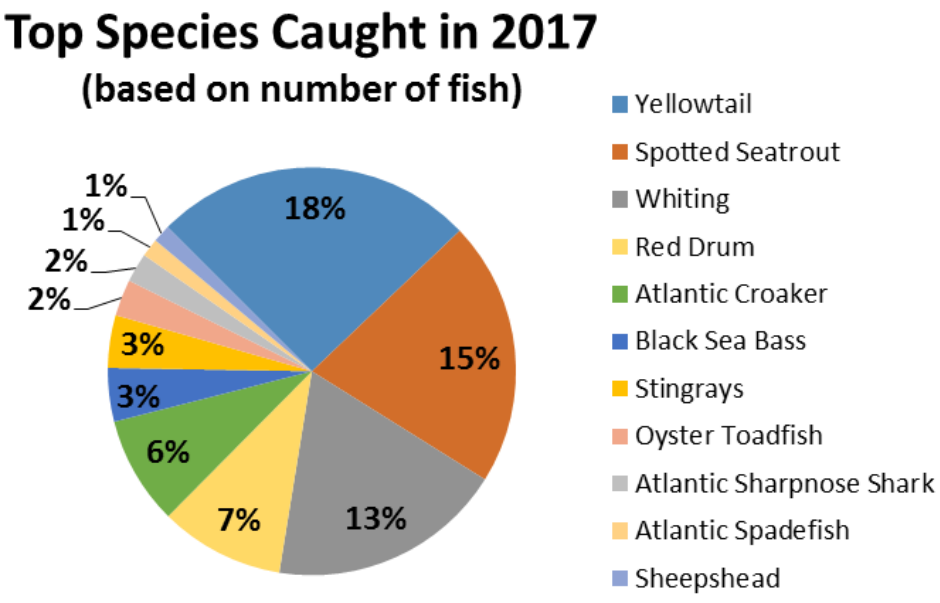
Marine Recreational Fisheries - Catch

Saltwater anglers returning to public access sites after fishing are asked to participate in a dockside survey. The interview takes just a few minutes to complete, is conducted by CRD staff, and consists of two major categories 1) Fishing Trip and 2) Catch Information.



1) Fishing Trip: fishing mode (shore, charter or private boat), number of anglers, hours spent fishing, general area fished (inshore vs. offshore), fish species targeted, angler's county, and state of residence.
2) Catch: finfish catch, including species, and number of fish released plus those kept (harvested). For released fish, staff asks whether the fish were used for bait, or released alive or dead. Anglers are also asked if their retained harvested fish can be measured and weighed.

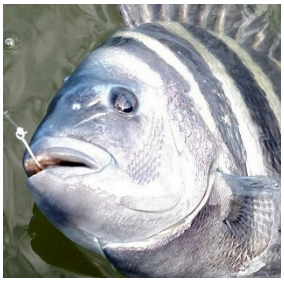
Of the approximately 2,100 annual angler interviews, about 50% are conducted at boat ramps and marinas. The remaining interviews are split between anglers who are returning from a charter fishing trip and those who are fishing from the shore (e.g., pier, dock, creek bank). From March through December, staff conducts interviews on weekdays and weekends at access sites throughout the six Georgia coastal counties. Estimates of marine recreational fishing in Georgia are not generated for January and February as saltwater fishing activity is limited. CRD staff also conducts at-sea observer trips aboard for-hire headboats to collect lengths of discarded catch.



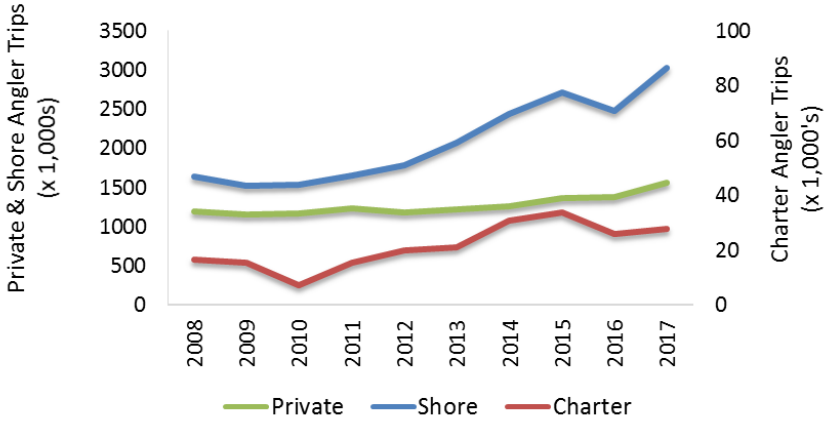
Marine Recreational Fisheries – Effort

NOAA Fisheries conducts a separate survey to determine whether residents within a contacted household have participated in saltwater fishing during the preceding two months. If they answer yes, a series of questions is asked which allows an estimate of the effort (number of trips) of those anglers fishing from private boats or shore sites to be calculated. NOAA Fisheries recently transitioned from contacting households via landline telephone to a mail-based Fishing Effort Survey (FES). With the increase in cell phone-only households, landline telephone surveys became highly inefficient. The United States Postal Service address database provides a far more accurate and thorough listing of households. Pilot surveys indicated a very high response rate and timely turn-around for mail surveys. To further improve the efficiency of the FES, the majority of the surveys is mailed to licensed marine recreational anglers. In Georgia, saltwater anglers are identified via the free annual SIP Permit. The telephone and mail surveys were conducted side-by-side (i.e., "benchmarked") from 2015-2017 such that calibrations could be applied to estimates prior to 2018 when the FES was formally adopted as the method to estimate marine recreational fishing effort. Data included in this report are based on calibrated estimates.

Since anglers on charter fishing trips are often from noncoastal counties or out of state, a different survey is used to estimate effort in the charter sector. Every week, 10% of Georgia's active marine fisheries charter captains are selected to participate in a telephone survey. Captains report number of fishing trips, number of anglers per trip, general area fished, and whether any finfish species were specifically targeted. From these telephone interviews, an estimate of the effort (number of trips) of those anglers fishing from charter boats is calculated. This telephone survey is conducted by CRD staff in conjunction with NOAA Fisheries.



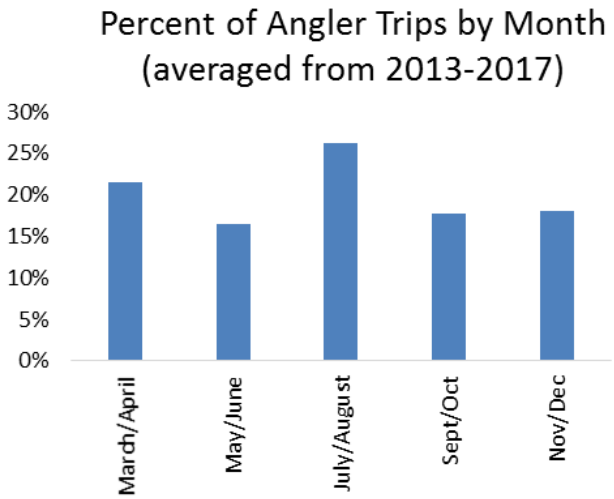
Angler Trips per Year by Fishing Mode



Angler Trips by Area Fished (averaged from 2013-2017)		
Area	# Angler Trips	% Angler Trips
Inshore (rivers & sounds)	2,757,105	70%
Ocean <3 Mi.	1,073,553	27%
Ocean >3 Mi.	103,411	3%
Total	3,934,069	

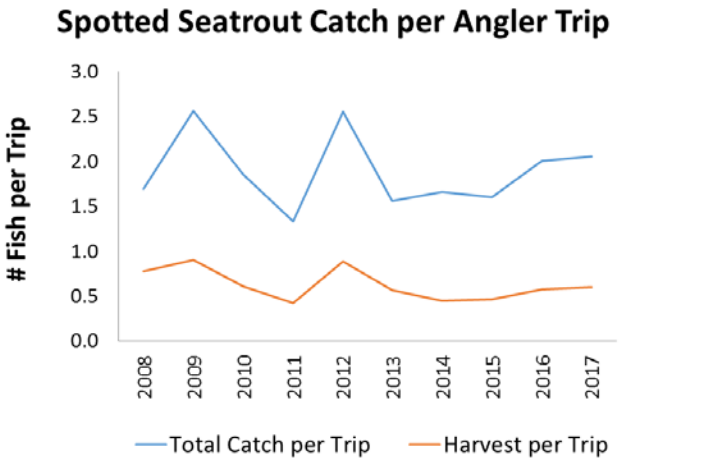
Anglers by Residency Type (averaged from 2012-2016*)		
Residency	# Anglers	% Anglers
Coastal	109,742	42%
Non-Coastal	90,212	34%
Out-of-State	63,350	24%
Total	263,304	

* estimate for most recent year not available at publication date

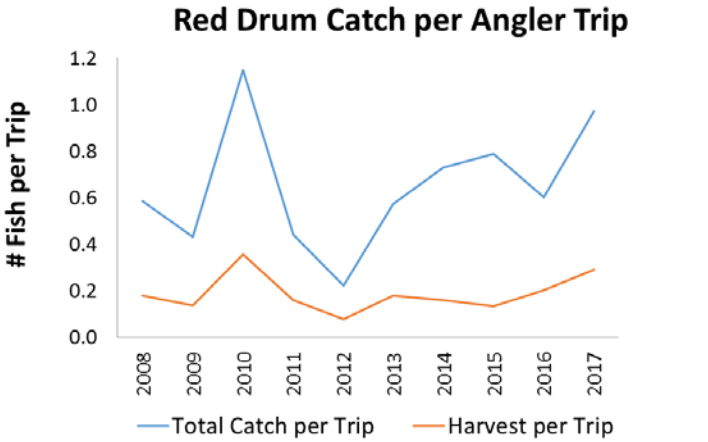


Catch Per Unit of Effort

Data from the various surveys are combined to produce catch statistics such as the catch and harvest per unit of effort graphs below. Catch or harvest (measured in number of fish) per angler trip (i.e. effort) can then be compared across years as one indicator of stock status for popular sportfish such as Spotted Seatrout and Red Drum. For the years represented in the graphs, catch per angler trip (including released fish) has been more variable while harvest per angler trip has been fairly consistent.



Note: These data represent landings and effort estimates from only the private/rental (PR) vessel fishing mode. The majority of total catch (85%) and total harvest (77%) during the most recent 10 years are from the PR fishing mode.



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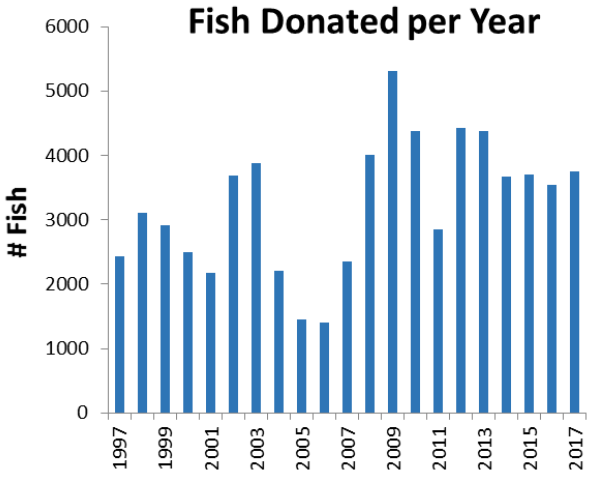
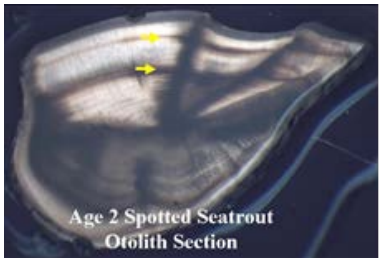
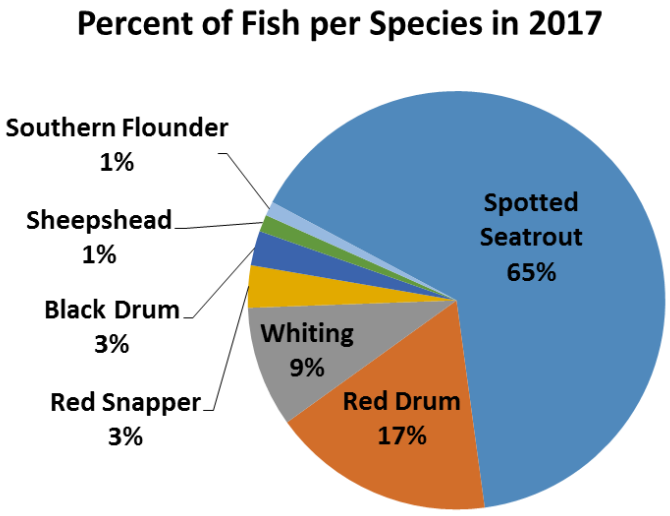
Carcass Recovery Project

The Marine Sportfish Carcass Recovery Project takes advantage of the fishing efforts of hundreds of anglers by turning filleted fish carcasses, which would normally be discarded, into a source of much needed data on Georgia's marine sportfish. The project is a true partnership of saltwater anglers, charter captains, marine businesses, conservation groups, and CRD. The Georgia Power Foundation has also been instrumental in providing supplemental funding.

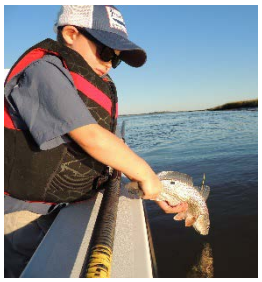
Chest freezers are placed near fish cleaning stations at select locations along the Georgia coast. Each freezer is marked with an identifying sign and a list of target fish species. Cooperating anglers and charter captains place filleted carcasses and a completed information card in a bag, and then place the bag in the freezer. CRD staff collects the frozen carcasses, and later identify each to species, measure length, determine sex when possible, and remove otoliths (i.e., "ear bones"). The otoliths are then analyzed using computer-aided image analysis to determine the age of the fish. This is accomplished by taking a thin cross section of the otolith and counting the rings (similar to counting the rings on a tree cross section to determine age). The age-at-length data from the carcass recovery program can then be used to estimate the ages of harvested fish of various lengths collected through the MRIP and other surveys. These age and length data provide estimates of reproductive spawning potential (i.e., approximately how many eggs a female fish of a given length produces in an average spawning season). These are critical pieces of data used for assessing the status of fishery stocks and to develop appropriate management recommendations. Since 1997, a total of 68,106 carcasses have been donated by anglers and processed for information. In 2017, CRD staff processed a total of 3,744 sportfish carcasses from ten finfish species.



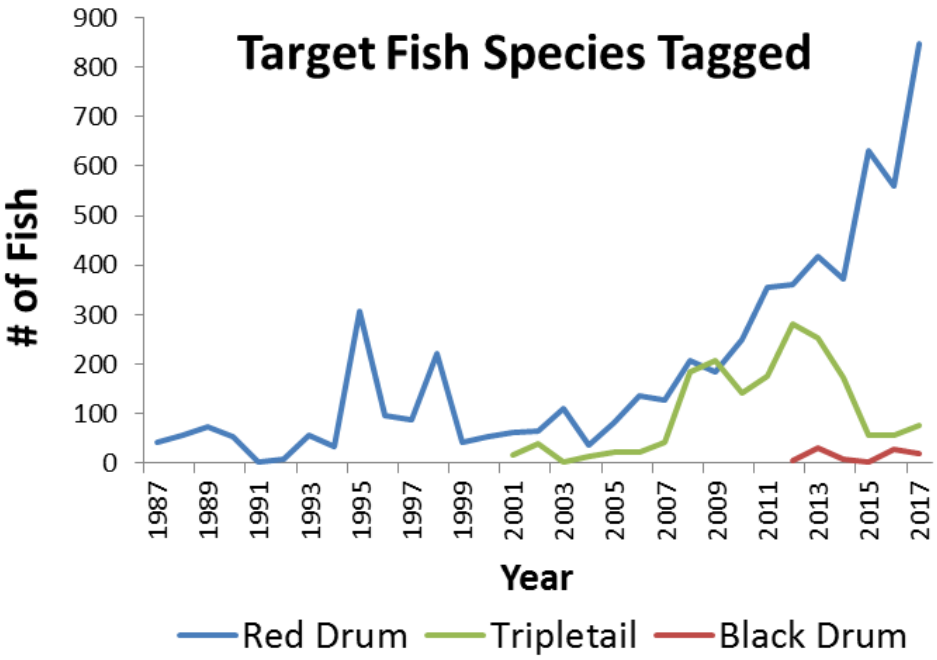




Cooperative Angler Tagging Project



The cooperative endeavors between anglers, charter captains and CRD continue through the Cooperative Angler Tagging Project. CRD staff enlists participants to tag species of concern and gather information on growth, habitat preference and movement. Hook and line anglers are instructed in proper fish handling and tagging techniques. When a tagged fish is recaptured, data collected include length and status (e.g., released, harvested). This information is used to calculate the number of days at large, growth during the time at large, as well as total distance traveled (including north/south, east/west, and seasonal movement). Targeted species include primarily Red Drum, Tripletail, and Black Drum. Since 1987 the project has enlisted over 190 participants to tag and release more than 7,800 fish representing eight species. This effort has resulted in over 500 recapture events.



Additional Information

- ✓ Average expenditures from marine recreational anglers in Georgia account for $238M in annual sales impacts to the economy of Georgia (during the time period 2011-2015).
- ✓ Of the roughly 220,000 SIP permits obtained in 2017 by recreational anglers, 92% were Georgia residents.
- ✓ Spotted Seatrout is the #1 targeted marine sportfish in Georgia, followed by Red Drum and whiting (Southern Kingfish).

Pertinent Websites

❖ GADNR Coastal Resources Division	coastalgadnr.org
❖ Saltwater Information Program (SIP) permit	coastalgadnr.org/SIPPermit
❖ MRIP recreational fisheries data & queries	countmyfish.NOAA.gov
❖ Atlantic Coastal Cooperative Statistics Program	accsp.org
❖ South Atlantic Fishery Management Council	safmc.net
❖ Atlantic States Marine Fisheries Commission	asmfc.org

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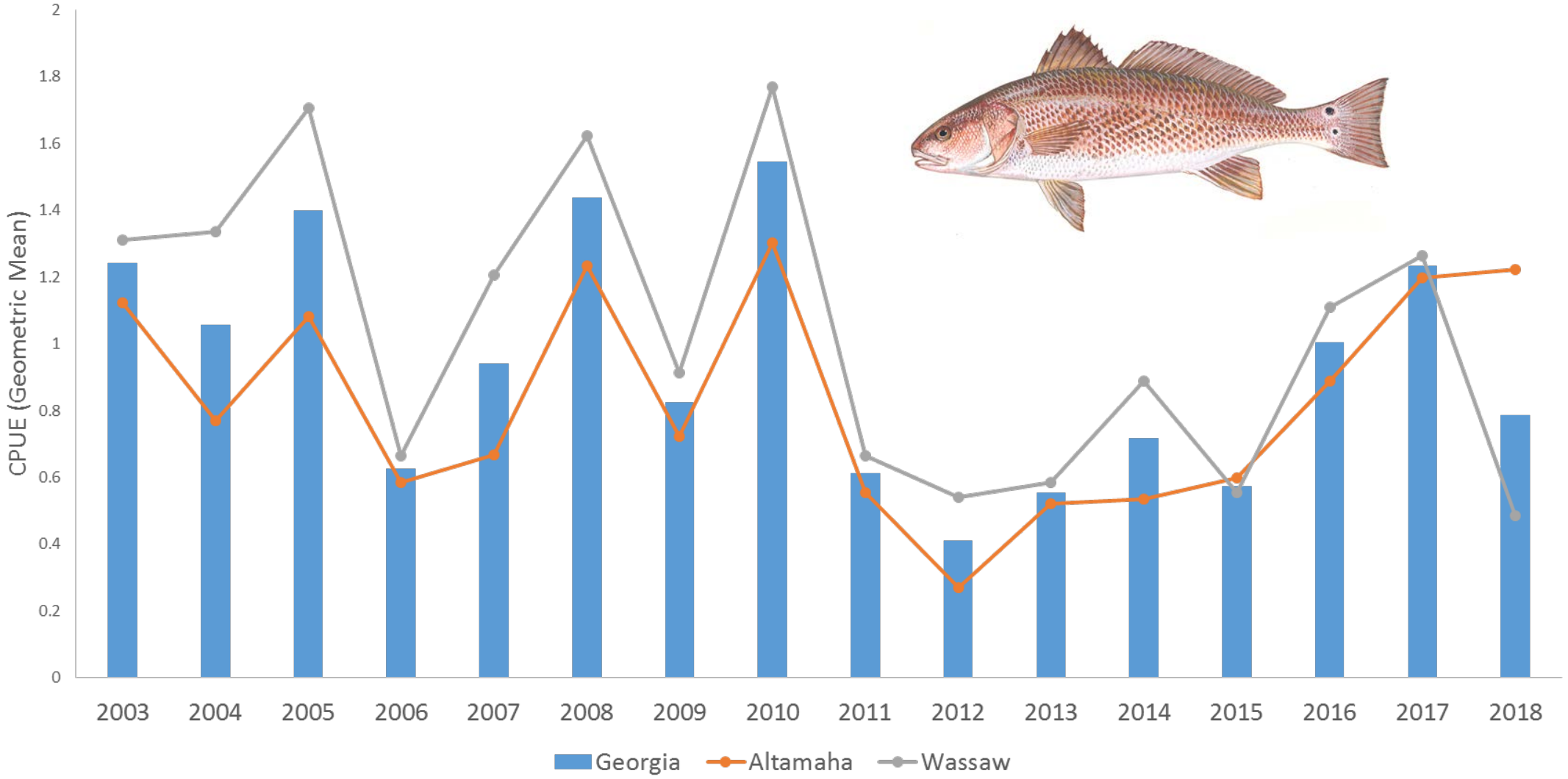
GEORGIA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESOURCES DIVISION

2018 Red Drum and Spotted Seatrout Results

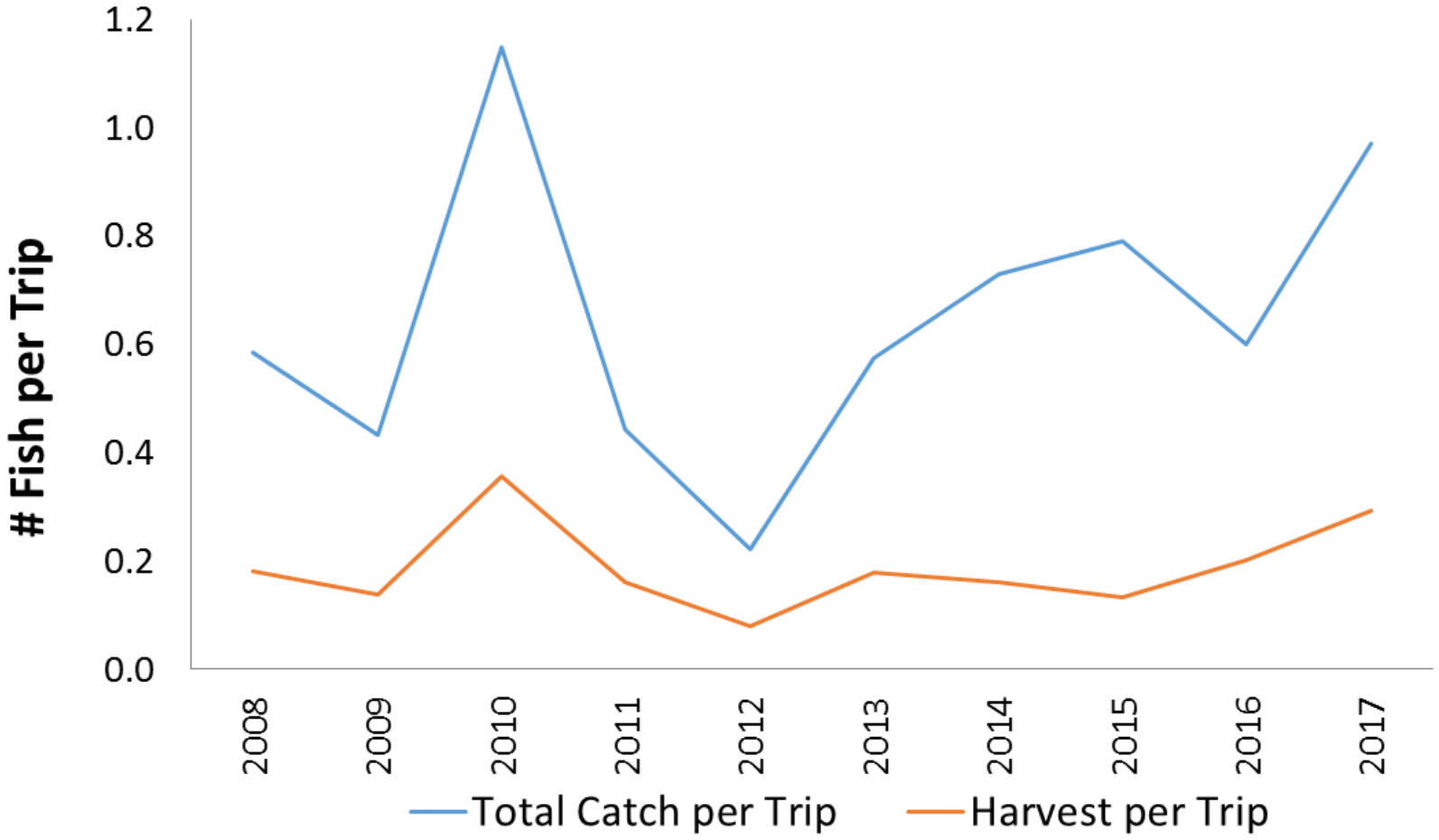
November 2018

Finfish Advisory Panel

MSPHS YOY Red Drum Gill Net Survey



Red Drum Catch per Angler Trip (MRIP)



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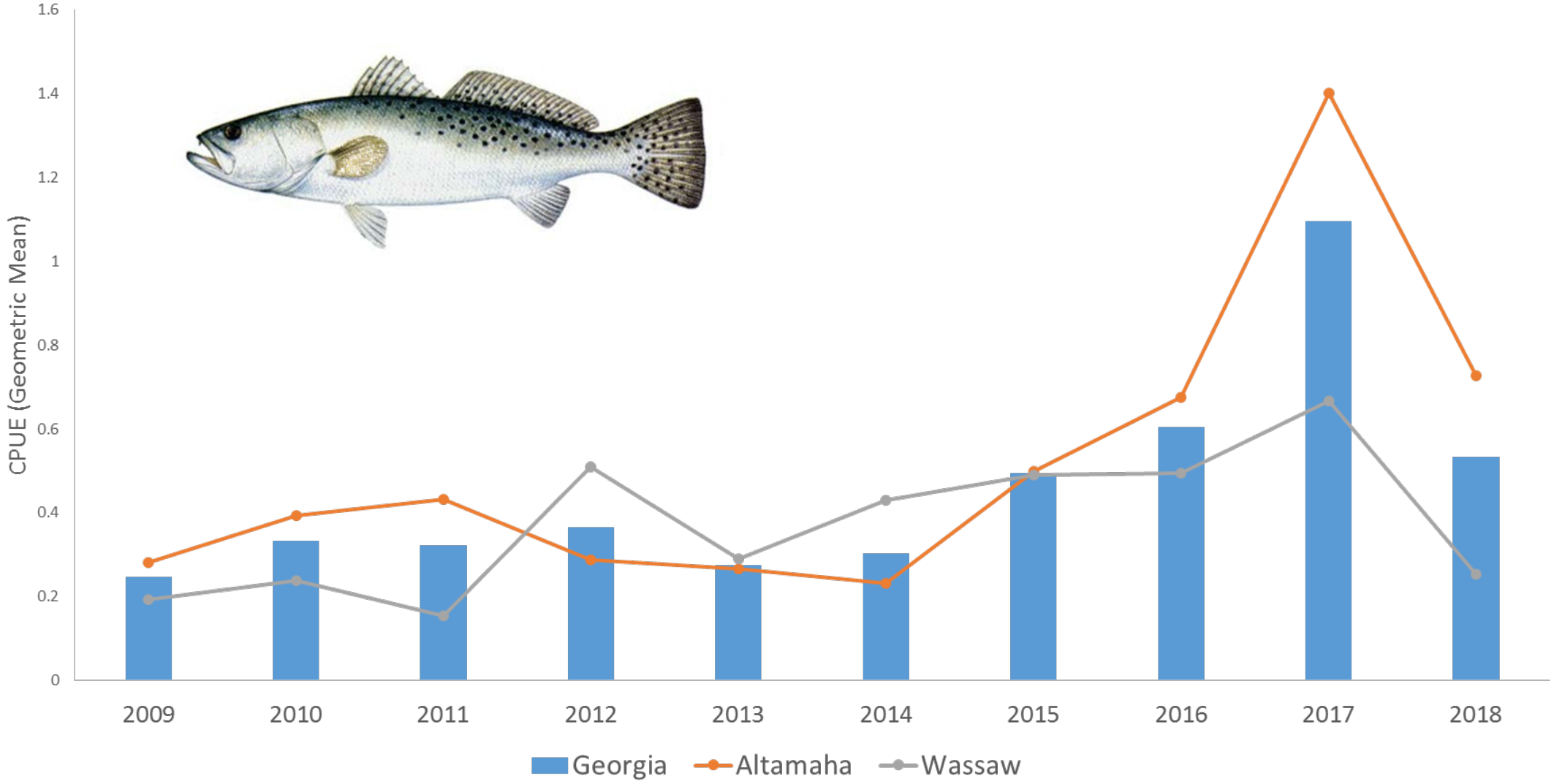
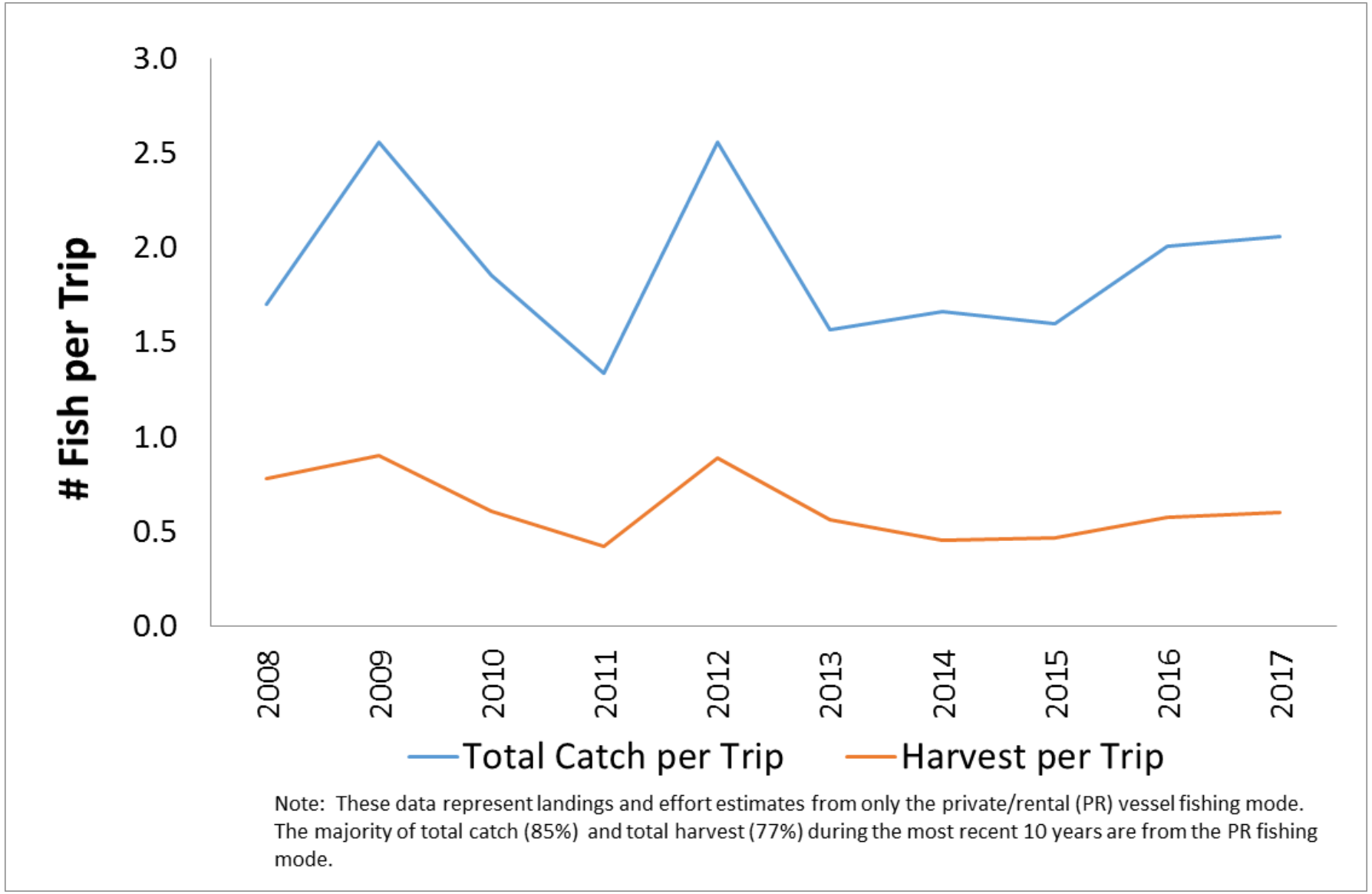
MSPHS Spotted Seatrout Trammel Net Survey



Spotted Seatrout Catch per Angler Trip (MRIP)



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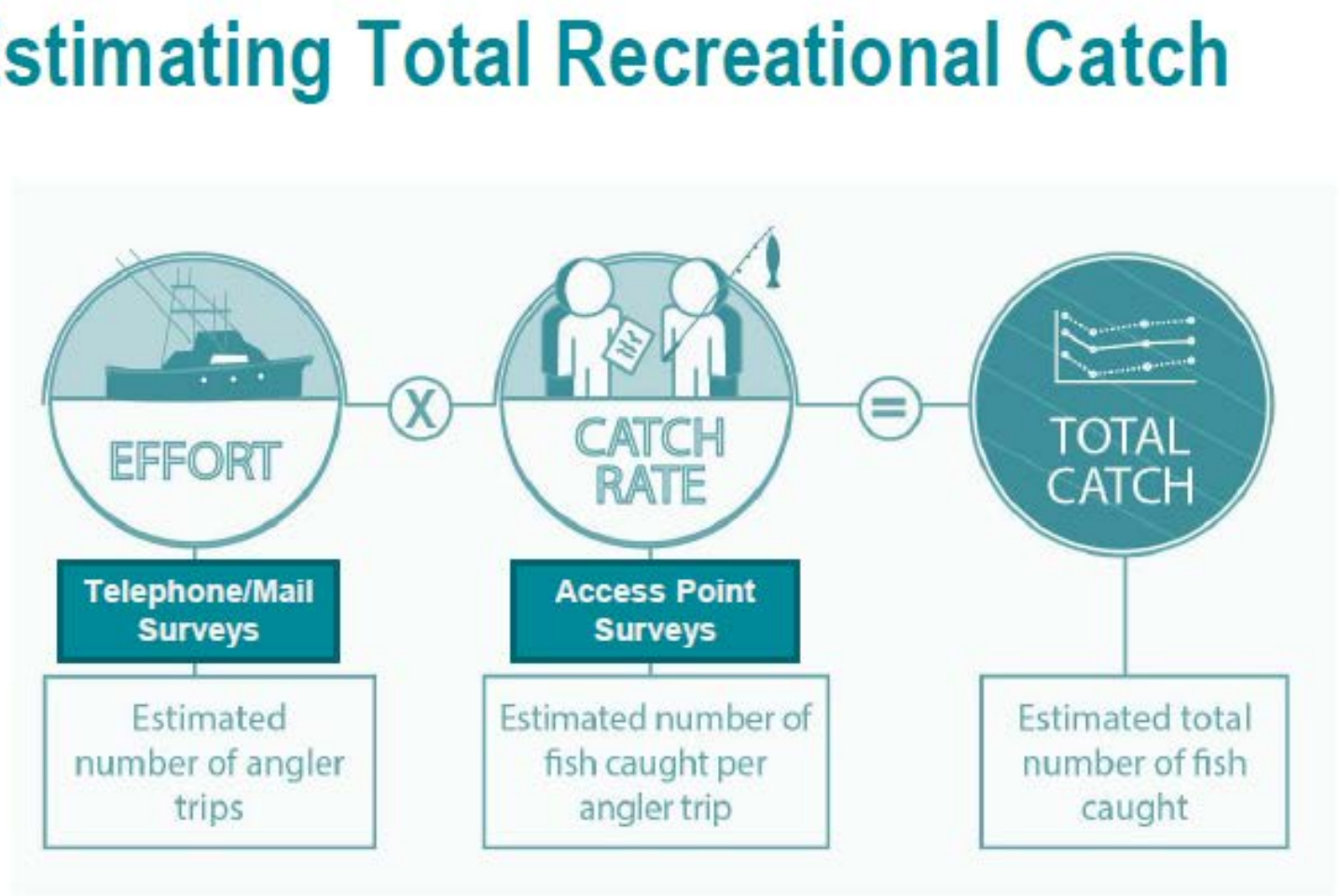
GEORGIA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESOURCES DIVISION

Fishing Effort Survey

November 29, 2018

Dawn Franco
Marine Biologist
Fisheries Statistics Unit

How estimates are created



Comparison of effort surveys

Coastal Household Telephone Survey (CHTS)

- Estimate shore and private boat trips
- Random digit dial
- Coastal residents with landlines (no cell phones)

Fishing Effort Survey (FES)

- Estimate shore and private boat trips
- Mail based
- USPS database and SIP permit holders

What's new and how is FES better?

We're reaching more anglers.

Respondents have time to provide more complete answers.

The surveys get into the right hands.

More people open our specially designed questionnaire.

The FES gets three times the response rate of the phone survey.

Peer review

Extensive Testing and Peer Review

"**The [Fishing Effort Survey] methodologies**, including the address-based sampling survey design, are **major improvements**."

The National Academies of SCIENCES ENGINEERING MEDICINE

MRIP Calibration Model Peer Reviews

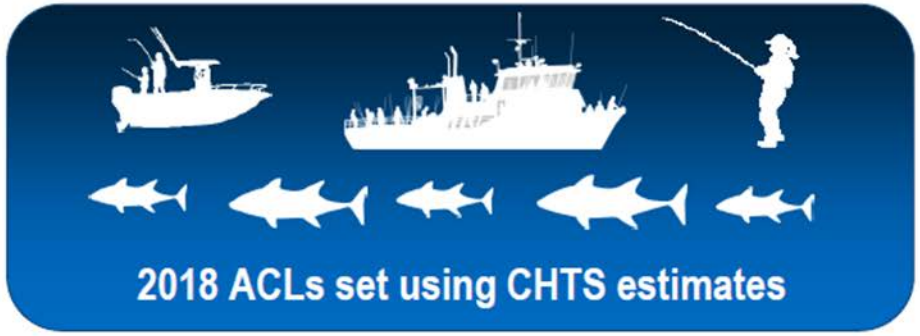
Fishing Effort Survey

- June 27-29, 2017 workshop in Silver Spring, MD.
- Reviewers unanimously endorsed the proposed FES/ CHTS calibration model.

- 2015 – 2017 Benchmarking
- Calibration model created
- Historical estimates adjusted = same currency

When will new estimates be used?

2018 Annual Catch Limits



FES ⟷ CHTS

Calibration model converts both directions

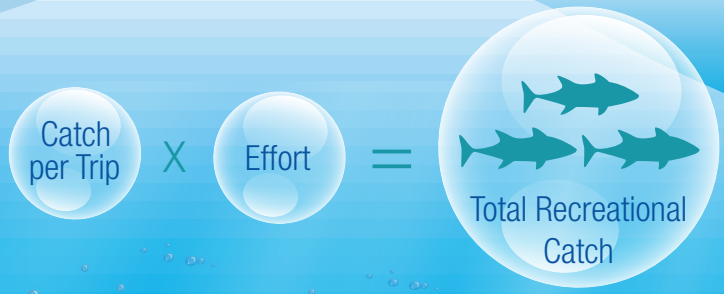
Questions?

NOAA FISHERIES

Fishing Effort Survey
Stakeholder Guide

We use the FES to estimate the number of **fishing trips** taken by shore and private boat anglers on the Atlantic and Gulf coasts.

We combine this information with estimates of catch per trip—gathered through a separate survey—to develop total recreational catch estimates.



Total recreational catch is one important source of data that scientists and managers use to ensure healthy, productive fisheries.

What's new?

The Fishing Effort Survey uses U.S. Postal Service records, supplemented by state-based saltwater recreational angler license and registration information, to more effectively reach fishermen.

The FES provides a **more accurate** picture of how many trips recreational anglers are taking. Here are some reasons why:

We're reaching more anglers.

Respondents have time to provide more complete answers.

The surveys get into the right hands.

More people open our specially designed questionnaire.

The FES gets three times the response rate of the phone survey.

"The [FES] methodologies, including the address-based sampling survey design, are major improvements from the original Coastal Household Telephone Survey."

National Academies of Sciences, Engineering, and Medicine
2017 Review of the Marine Recreational Information Program

What's changing?

The FES replaces our telephone survey. Now we're working to compare the estimates from the two surveys. Here's how:

Model—A **calibration model** allows us to make an apples-to-apples comparison between the estimates.

Calibrate—We'll use the model to adjust the effort data back to 1981 and share updated estimates in July 2018. We're also updating our catch per trip estimates to account for improvements we made to that survey in 2013.

Assess—The updated numbers will be used in **stock assessments** that are scheduled on a species-by-species basis.

Manage—As stock assessments are completed, the regional fishery management councils and commissions will review the outcomes and develop annual catch limits and other management measures.

How will this affect recreational fishermen?

The FES estimates are several times higher than those from the telephone survey. This may result in changes to stock abundance estimates, which could lead to corresponding management measures. Factors influencing this process include:

- The **calibration model**, which shows more fishing dating back to 1981, not a recent increase in activity.
- The fact that recreational fishing data is only one component in **stock assessments**.

Depending on the outcome of new stock assessments, the higher FES numbers will potentially impact:

What's next?

2018

Revised total catch estimates will be available in July for use in planned stock assessments.

2019

Preliminary management changes may be made for re-assessed stocks.

Calibrated statistics will be incorporated into additional stock assessments.

2020

Based on new stock assessments, management changes could occur for a number of species.

Learn more at www.countmyfish.noaa.gov

MARINE RECREATIONAL INFORMATION PROGRAM