

Proposal for Funding made to:
Atlantic Coastal Cooperative Statistics Program
Operations and Advisory Committees
1050 N. Highland Street, Suite 200 A-N
Arlington, VA 22204

**Supplemental At-Sea Sampling for the Recreational Headboat Fishery on the Atlantic Coast of
Florida**

Submitted by:

ACCSP Recreational Technical Committee

Proposal for FY19 ACCSP Funding

Applicant name: ACCSP Recreational Technical Committee (RTC)

Project title: Supplemental At-Sea Sampling for the Recreational Headboat Fishery on the Atlantic Coast

Project type: Maintenance Project

Requested award amount: \$104,899

Requested award period: January 1 through December 31, 2020

Objectives

- 1) Continue to provide continuous long-term monitoring of the species composition and size distribution of regulatory discards in the recreational headboat¹ fishery along the U.S. Atlantic coast by filling the critical coverage gap in the South Atlantic region along Florida's Atlantic coast.
- 2) Continue to provide vital data needed to assess important managed fish stocks, particularly in the data poor South Atlantic region.

Need

For many important managed finfish stocks, regulatory discards make up all or a majority of the recreational catch. Size composition of recreational discards is an important fishery-dependent data need for management and age-based assessment of stocks throughout the U.S. Atlantic. These data cannot be collected using dockside sampling methodologies. Headboat mode is currently the only segment of the recreational fishery with consistent, long-term at-sea observer coverage, and these data serve as the sole source of information available on the size composition of recreational discards throughout the North, Middle, and South Atlantic regions².

In North and Mid-Atlantic states (ME through VA), the headboat segment of the recreational fishery is monitored through the Marine Recreational Information Program (MRIP), which provides catch statistics for all landed and discarded finfish. Catch data are collected by biologists as they ride along on trips and directly observe fish that are either harvested or discarded at-sea. The MRIP utilizes this survey to monitor catch-per-unit-effort (CPUE, needed to estimate total landings and discards) and the size composition of landed and discarded fish. In the South Atlantic (NC through FL), headboat catch and effort are monitored by NOAA Fisheries through the Southeast Region Headboat Survey (SRHS), instead of MRIP. The SRHS includes mandatory trip-level reporting (logbook reporting) and dockside sampling of landed catch. At-sea observer coverage in the South Atlantic region has been funded with support from ACCSP, and this important time-series provides biological data needed to monitor the species and size composition of released catch and validate self-reported logbook data for discards.

Coast-wide headboat observer coverage has been supported across all Atlantic coast states since 2005. Funds for base level sampling are provided through MRIP, and additional support through ACCSP has been requested by state partners annually to cover the cost of samples above the MRIP base (through this

¹ Headboats are a class of for-hire vessels that offer recreational fishing opportunities to large groups of individual anglers.

² Florida tested the use of observers on charter vessels on the Atlantic coast (2013-2015), but long-term funds were not available to continue coverage.

maintenance proposal). This additional sample has been requested to improve precision of catch and effort estimates in states where headboat mode is monitored through MRIP, and to extend coverage for biological sampling of discards in the South Atlantic region (NC-FL) where the headboat fishery is not monitored through MRIP. In 2016, ACCSP began coordinating the MRIP access point intercept survey for all modes (shore, private boat, charter, and headboat) from ME through GA, which allowed state partners to conduct surveys in the field in place of a federal contractor. Sampling efficiency has improved since the transition to state conduct, and existing MRIP funds are now able to cover headboat sampling at increased levels above base allocation without the need for additional assistance from ACCSP. In the South Atlantic region, where no base MRIP sample is allocated, three states (NC, SC and GA) are also able to conduct at-sea trips without the need for additional support from ACCSP. The only partner state that still relies upon ACCSP to support at-sea coverage is FL, where state conduct of the MRIP survey on the Atlantic and Gulf coasts has always been coordinated through Gulf States Marine Fisheries Commission (GSMFC). There are no funds in the Gulf region for headboat observer coverage on the Atlantic coast of Florida, and the state is requesting support from ACCSP to continue the headboat time series on the Atlantic coast in 2020 while alternatives are being explored. Florida is currently looking into methods to generate state funds that may be dedicated towards long-term monitoring of recreational fisheries for important managed species, including reef fishes; however, those funds are not anticipated to be available until after 2020.

Results and Benefits

Continued funding for this maintenance proposal will ensure coast-wide headboat observer coverage from ME through FL and continue the long-term time series that originated in 2005. Filling this important data gap along the eastern coast of FL is particularly important for assessment of important managed stocks in the South Atlantic region, such as red snapper, black sea bass, gray triggerfish, and others, that have stock boundaries between NC and Key West, FL. Length frequency data from recreational discards observed from headboats in NC through FL are routinely provided to NOAA Fisheries analysts for use in regional stock assessments conducted through the Southeast Data, Assessment and Review (SEDAR) process (for example, see working paper submitted for black sea bass SEDAR 56: http://sedarweb.org/docs/wpapers/S56_WP07_Lazarre_et al_HBAAtSea_12.18.2017.pdf). Mortality of recreational discards is a significant source of fishery removals in the South Atlantic region, and is also an important data need for stock assessments. At-sea observer data collected from the headboat fishery in FL directly contributed to the recommended mortality rate of 28.5% for red snapper, which was reduced from 37% before circle hooks were required in 2011 (Sauls et al. 2015, SEDAR 2016). Catch-per-unit-effort for discards directly observed in headboat surveys conducted at-sea from NC through FL has become an important index of abundance for stock assessments in the data poor region of the South Atlantic, where fishery independent monitoring is inadequate for some species.

Data Delivery Plan

Catch estimates, CPUE, and biological data for the Atlantic coast from ME through VA are available to the public through the Marine Recreational Information Program and files are shared with ACCSP's Data Warehouse. Data collected from NC, SC, and GA are also delivered to ACCSP and available through the Data Warehouse. In order to provide the higher resolution of data that is available from FL (additional trip and fish level details), the state provides data files directly to state and federal analysts for use in stock assessments. All lengths, weights, ages, and associated trip and station level data for sampled fish are housed in a relational database (SQL) on servers maintained by the Florida Fish and Wildlife Conservation Commission (FWC). The FWC's servers are secure and data are backed up daily. FWC research staff routinely participate in stock assessments webinars and data workshops conducted through the Southeast Data, Assessment and Review (SEDAR) process to share data and analyses from this project. The state of Florida's Sunshine Law also establishes an open-access policy that requires all non-confidential data be made available to the public upon request.

Approach

Headboat vessels are randomly selected each month from the for-hire vessel directory for each state using a weighted systematic draw methodology. Operators from selected vessels are contacted in advance to arrange for observers to be on board during a scheduled fishing trip. Dependent upon the number of customers on board, one or two biologists accompany passengers during the scheduled trip. The biologists observe all anglers whenever possible during each trip, and randomly selects a subsample if every angler cannot be observed. The observer will identify each fish to species, record length to the nearest mm, and record the disposition (including harvested, released alive, released dead). In Florida, additional details collected for individual fish, including capture depth, capture location (latitude and longitude), hook location, hook type and size, release condition at the surface (if discarded), release method (whether released at the surface unvented, vented, or recompressed), and barotrauma symptoms. Red snapper in Florida are also marked with a conventional tag prior to release, and when managed species are harvested biological samples, including age structures, may be collected at the dock.

Geographic Location

ACCSP support is requested for the Atlantic coast of Florida, from the border with Georgia (30.6 degrees N latitude) through southeast Florida (24.5 degrees N latitude). This support will ensure continuous at-sea observer coverage along the entire U.S. Atlantic coast from ME through FL.

Ranking Criteria Summary

- There are 11 ACCSP funding priorities for recreational fisheries as identified by the Recreational Technical Committee (RTC). The following priorities addressed by this proposal are all included in the top 5 funding priorities identified by the RTC:
 1. Comprehensive for-hire data collection and monitoring
 2. Improved recreational fishery discard and release data
 3. Biological sampling for recreational fisheries separate from MRIP APAIS
 4. Improved spatial resolution
- Primary Program Priority: Biological Data (80%)
 - Species in the top quartile of ACCSP's Biological Priority matrix affected by this proposal:
 - Black Sea Bass, Snowy Grouper:
 - High priority overall for ACCSP.
 - Biological sampling is inadequate.
 - Gag, Red Grouper, Scamp, Gray Triggerfish, Tilefish, Red Drum
 - High priority in the South Atlantic region.
 - Biological sampling is inadequate.
 - Red Snapper:
 - High priority in the South Atlantic region.
 - Recreational harvest is only open 0 to 9 days per year, and discard lengths from headboat at-sea surveys represent up to 100% of biological samples in some years for this species.
- Secondary Program Priority: Catch, effort and landings data (20%)
 - Trips sampled in the South Atlantic (NC through FL) contribute to validation of logbook data for discards.
 - Additional data elements collected in FL contribute to discard mortality, which is required to estimate total removals from combined landings and discards.

- Data Delivery Plan:
 - Catch estimates, CPUE, and biological data from ME through VA are available through:
 - The Marine Recreational Information Program public website
 - The ACCSP Data Warehouse
 - CPUE and biological data from NC through GA are available through:
 - The ACCSP Data Warehouse
 - Routinely shared for use in regional stock assessments.
 - CPUE and biological data (lengths, weights, ages, and associated trip and fish level data) from FL are:
 - Housed in a relational database (SQL) on servers maintained by the Florida Fish and Wildlife Conservation Commission
 - Servers are routinely backed up
 - Available on request (and required by Florida's Sunshine Law)
 - Routinely shared for use in regional stock assessments.
- Multi-Partner/Regional:
 - The following ACCSP partners will benefit from this supplemental data collection:
 - One state: Florida Fish and Wildlife Conservation Commission
 - Two regional Fisheries Management Councils: South Atlantic and Gulf of Mexico (for Gulf stocks with ranges that include east FL)
 - Two branches of NOAA Fisheries, National Marine Fisheries Service: Southeast Fisheries Science Center and Southeast Regional Office
- In kind Contribution: \$10,328 (9% of requested plus in-kind)
- Funding Transition Plan:
 - Earlier proposals for this maintenance project requested funds for 100% of add-on sample that was requested by up to 11 partner states from ME through FL.
 - Since ACCSP began coordinating state conduct of the MRIP Access Point Angler Intercept Survey (APAIS) in 2016, most state partners have transitioned to conducting add-on samples above base MRIP allocation at no additional cost.
 - FL is the only partner requesting ACCSP support in FY20. The state is exploring options that would potentially establish a dedicated funding stream to support monitoring of recreational fisheries targeting important reef fish stocks on the Gulf and Atlantic coasts. Funding will not be available in time to support this work in FY20, and ACCSP support is requested while the state continues to work towards a transition plan.
- Improvement in data quality/quantity:
 - This proposal requests funds to maintain a minimum level of data collection needed in the South Atlantic region by supporting 100% of headboat observer coverage on the Atlantic coast of Florida.
 - This proposal would ensure complete coverage of the Atlantic coast headboat fisheries from ME through FL for monitoring the size distribution of recreational discards.
- Impact on Stock Assessments:
 - Species impacted by this work are priorities for upcoming stock assessments, including:
 - Black Sea Bass, Scamp, Gray Triggerfish, White Grunt, Red Grouper, Vermilion Snapper, Red Snapper, Blueline Tilefish, Golden Tilefish, Black Grouper, Yellowtail Snapper, King Mackerel, Spanish Mackerel, and Greater Amberjack

are assessment priorities of the South Atlantic Fishery Management Council (SAFMC).

- Ranges for King Mackerel and Cobia stocks in the Gulf of Mexico include portions of the Atlantic coast of Florida, and these stocks are assessment priorities of the Gulf of Mexico Fisheries Management Council (GMFMC).
- Hogfish, Yellowtail Snapper, and Mutton Snapper stocks are assessment priorities of the state of Florida.
- At-sea observer coverage does not exist in any other segment of recreational fisheries along the Atlantic coast, and this project is the only source of representative information available to characterize the size composition of recreational discards.
- Fishery independent surveys in the South Atlantic are not adequate for assessing many stocks and do not extend through southeast Florida. Therefore, fishery dependent surveys are relied upon as a relative measure of stock abundance.
- Additional data collected in Florida have contributed to estimated discard mortality, including:
 - Capture depth
 - Proportions of discards that suffer hook injuries
 - Proportions of discards that are vented or floating at the surface
 - Proportions of tagged Red Snapper discards that are released in various conditions and later recaptured

Milestone Schedule

A monthly milestone schedule is provided in Table 1. Gulf States Marine Fisheries Commission will run monthly sample draws for Florida vessels, and FL FWC will schedule and conduct assignments in the field each month to meet established sample targets each wave. Data will be reviewed by a state supervisor each month prior to electronic data entry, visual proofing and automated QA/QC checks will be conducted on electronic data to flag potential errors for follow up. Final data are available within three months after the completion of a year. FL FWC will prepare semi-annual (30 days following month 6 and 12) and final progress reports (90 days following month 12) as specified in the ACCSP Funding Decision Process Document. Reports will be submitted through NOAA Fisheries Southeast Regional Office.

Project Metrics

Table 2 provides sample targets for each two month period (wave). Progress toward goals for this project will be measured in numbers of vessel trips sampled each wave. Should sample targets not be reached in a particular wave (e.g., weeks of inclement weather result in a large portion of the vessels to cancel trips), those vessel trips will be “rolled over” to subsequent waves within the calendar year, with the total obtained for the year not to exceed the requested annual allocation. Field productivity will be measured by numbers of anglers observed, numbers of discarded fish measured prior to release, numbers of harvested fish measured and weighed, and numbers of harvested fish sampled for age structures during each assignment.

Cost Details

Requested Funds

A total of \$104,899 is requested for this proposal. A summary of costs associated with this proposal for participating states is given in Table 3. Funds supporting at-sea headboat trips in Florida will be dispersed to NOAA’s Southeast Fisheries Science Center (and charged a 5% administrative fee) before being dispersed to the state to conduct the work.

Budget narrative for cost summary provided in Table 3:

1. Personnel (a): Costs listed are for part time personnel necessary to complete at-sea trips.
2. Fringe (b): Medicaid and FICA costs, expressed as a percentage of total personnel.

3. Travel (c): travel costs are requested to pay for mileage to and from headboat sample sites and cover regular or reduced headboat passenger fare, which is paid for each observer in order to secure space on limited capacity vessels. Florida also requires payment of headboat fare so that state employees are covered by liability insurance for the vessel. Other costs include parking and highway tolls.
4. Total Direct Charges (i). Total personnel, fringe and travel. No supplies, equipment, or contractual services are requested.
5. Indirect Charges (j). The state of Florida assesses an overhead charge to grants to cover the costs of administering the grant. For ACCSP, the overhead is capped at 25% of total direct charges.

In-Kind Contributions

In-kind contributions total \$10,328 or 9% of the total cost (requested funds and in-kind contributions, combined). Included in this amount is the cost of supplies (measuring boards, scales, and other equipment); pre-printed data collection forms on waterproof paper; staff time for data entry, quality control, and database management; and oversight of field data collections.

Project History

The funding history for this maintenance proposal is summarized in Table 5. This proposal has decreased from previous years' award amounts. A summary of costs for the previous year (2019) is provided in Table 6. Eight states no longer request additional funds to support headboat add-ons above base sampling levels (MA, RI, CT, NY, MD, VA, NC, GA), and three states (ME, DE, SC) have discontinued additional sampling above base. The last remaining partner requesting ACCSP support (FL) is currently exploring options for the future that would establish a dedicated funding stream to support monitoring of recreational fisheries targeting important reef fish stocks on the Gulf and Atlantic coasts.

Project PI

Beverly Sauls, Florida Fish and Wildlife Conservation Commission, will oversee the conduct of this work in Florida (C.V. attached).

References

Sauls, B., A. Gray, C. Wilson and K. Fitzpatrick. 2015. Size distribution, release condition, and estimated discard mortality of Red Snapper observed in for-hire recreational fisheries in the South Atlantic. SEDAR41-DW33. SEDAR, North Charleston, SC.

SEDAR (Southeast Data, Assessment and Review). 2016. SEDAR41 Stock Assessment Report South Atlantic Red Snapper. SEDAR, North Charleston, SC.

Sustainable Fisheries Branch, National Marine Fisheries Service. 2011. Standardized discard rates of U.S. Black Seabass (*Centropomus striata*) from headboat at-sea observer data. SEDAR25-DW13. SEDAR, North Charleston, SC.

Sustainable Fisheries Branch, National Marine Fisheries Service. 2015. Standardized catch rates of Red Snapper (*Lutjanus campechanus*) from headboat at-sea-observer data. SEDAR41-DW14. SEDAR, North Charleston, SC.

Table 1. Milestones by year and month.

	2020												2021
Task	1	2	3	4	5	6	7	8	9	10	11	12	1-3
At-sea sampling	X	X	X	X	X	X	X	X	X	X	X	X	
Data entry and QA/QC		X	X	X	X	X	X	X	X	X	X	X	X
Data finalized													X
Report writing and submission							X						X
Participation in SEDAR webinars and data workshops as scheduled	X	X	X	X	X	X	X	X	X	X	X	X	X

Table 2. Sample targets (in number of trips) by region and wave.

Region	Number of vessels in frame	Jan-Feb	Mar-Apr	May-Jun	July-Aug	Sep-Oct	Nov-Dec	Total
Northeast FL	9	5	10	10	10	10	5	50
Southeast FL	43	16	16	16	16	16	16	96
Total	46	21	26	26	26	26	21	146

Table 3. Cost summary for funds requested from ACCSP.

Description	Calculation	Requested from ACCSP
Personnel (a)		
Hourly biologists	8 hr/trip * \$16.50/hr * 146 trips * 2 staff	\$38,544
Fringe (b)		
Hourly biologists	35.45% of personnel	\$13,664
Travel (c)		
Mileage for sampling trips	\$0.445/mi x 146 trips * 80 mi * 2 staff	\$10,395
Headboat fares	\$70/trip * 146 trips * 2 staff	\$20,440
Parking and tolls	146 trips * \$3.00 per trip * 2 staff	\$876
Totals		
Total Direct Charges (i)	Sum of personnel, fringe, travel	\$83,919
Indirect Charges (j)	25% of total direct	\$20,980
Total (k)	Sum of direct and indirect	\$104,899

Table 4. Cost summary for in-kind contributions.

	In kind
Personnel (a)	
5% of time for one Research Administrator and two Assistant Research Scientists	\$6,500
Fringe (b)	
34.50%	\$2,243
Supplies (d)	
pre-printed forms on waterproof paper, measuring boards, scales	\$425
Other (h)	
Mailing, copying, cell phone service	\$1,160
Total	\$10,328
Percent of total requested (k) plus in kind	9.0%

Table 5. ACCSP Funding Related to the For-Hire Headboat Fishery: 1999-2019.

Year	Project Description	Funds Received	# At-Sea Trips	Data Delivery
FY99	Outreach with SC for-hire constituents prior to For-Hire Pilot Study	\$5,000		
FY00	For-Hire Pilot Study comparing three data methodologies in SC	\$94,082		
FY01	Independent evaluation of SC For-Hire Pilot Study	\$7,695		
FY02	Outreach with for-hire constituents & development of vessel directory prior to implementation of For-Hire Survey	\$66,000		
FY03	Increase charter and party/headboat sampling levels from ME through GA (100% increase)	\$418,972	456	X
FY04	Increase charter and party/headboat sampling levels from ME through GA (100% increase)	\$533,410	456	X
FY05	Increase charter and party/headboat sampling levels from ME through FL (100% increase in general, FL HB sampling added)	\$666,740	565	X
FY06	Increase charter (100% increase) and party/headboat (50% increase ME-GA, FL level funded) sampling levels from ME through FL	\$389,700	560	X
FY07	Increase charter (100% increase) ME through GA and party/headboat (50% increase) sampling levels from ME through FL	\$391,940	357	X
FY08	Increase charter (100% increase) ME through GA and party/headboat (50% increase) sampling levels from ME through FL (excluding GA)	\$359,753	310	X
FY09	Increase charter (100% increase in most waves) NH through GA and party/headboat (50% increase) sampling levels from NH through FL (excluding ME, CT, RI, GA)	\$309,279	327	X
FY10	Increase charter (between 50-100%) NH through GA (excluding ME, CT, RI, MD, RI) and party/headboat (50% increase) sampling levels from NH through FL (excluding ME, CT, RI, SC, GA)	\$376,092	293	X
FY11	Increase charter (between 50-100%) NH through GA (excluding ME, CT, RI, MD, RI) and party/headboat (50% increase) sampling levels from NH through FL (excluding ME, CT, RI, SC, GA)	\$299,591	276	X
FY12	Increase party/headboat (50% increase) sampling levels from NH through FL (excluding ME, CT, RI, VA)	\$159,573	285	X
FY13	Increase party/headboat (50% increase) sampling levels from NH to FL	\$147,707	302	X
FY14	Increase party/headboat sampling levels from NH through FL	\$155,490	314	X
FY15	Increase party/headboat sampling levels from NH through FL	\$168,738	327	X
FY16	Increase party/headboat sampling levels from NH through FL (excluding SC)	\$179,286	327	X
FY17	Increase At-Sea Sampling Levels for the Recreational Headboat Fishery on the Atlantic Coast	\$155,373	247	X
FY18	Supplemental At-Sea Sampling for the Recreational Headboat Fishery on the Atlantic Coast	\$134,370	247	X
FY19	Supplemental At-Sea Sampling for the Recreational Headboat Fishery on the Atlantic Coast	\$107,187	165	X

Table 6: Prior complete year (2019) Cost Summary Budget Narrative.

NH	NJ	NC	FL
Personnel (a)	Personnel (a)	Personnel (a)	Personnel (a)
(10 hr/trip x \$20.60/hr x 7 trips x 2 staff) \$2,884	(8 hr/trip x \$19.00/hr x 18 trips x 0.5 tech staff) + (8 hr/trip x \$13.00/hr x 18 trips x 1 hourly staff) \$3,240		(10 hr/trip x \$15.00/hr x 120trips x 2 staff) \$36,000
Fringe (b)	Fringe (b)	Fringe (b)	Fringe (b)
51.07% \$1,473	53.95% tech + 7.65% hourly \$881		35.45% \$12,762
Travel (c)	Travel (c)	Travel (c)	Travel (c)
\$0.54/mi x 7 trips x 54 mi \$204	[(100 mi/trip*18 trips)/20 mpg] * \$4/gallon \$360	\$0.54/mi x 20 trips x 80 mi \$864	\$0.445/mi x 120 trips * 80 mi * 2 staff \$8,544
	Headboat fare (\$55/trip x 18 trips x 2 staff) \$1,980	Headboat fare (\$75/trip x 20 trips x 2 staff) \$3,000	Headboat fare (2 staff x \$62/trip x 120 trips) \$14,880
	Parking and highway tolls \$200	Parking and Permits \$0	Parking and highway tolls \$251
Total Direct Charges (i) \$4,561	Total Direct Charges (i) \$6,661	Total Direct Charges (i) \$3,864	Total Direct Charges (i) \$72,437
Indirect (j)	Indirect (j)	Indirect (j)	Indirect (j)
State indirect = 20% of TDC, charge 10% as per ASMFC policy \$456	15% of TDC \$999	26.8% of Salary and Wages \$ 0	State indirect = 25% of TDC \$18,109
Sum of Direct and Indirect (k) \$5,017	Sum of Direct and Indirect (k) \$7,660	Sum of Direct and Indirect (k) \$3,864	Sum of Direct and Indirect (k) \$90,546

Beverly J. Sauls, Research Administrator II

Florida Fish and Wildlife Conservation Commission, Fish and Wildlife Research Institute
100 8th Avenue SE, Saint Petersburg, FL 33701
(727) 502-4719, Beverly.Sauls@MyFWC.com

Degrees

University of South Florida, M.S., College of Marine Science, Marine Resource Assess. Program, 2013
Christopher Newport University, B.S., Biology, 1993

Professional Experience

Florida Fish and Wildlife Conservation Commission, Fish and Wildlife Research Institute,
Research Administrator II, May 2019 to present

- Direct and coordinate activities of the Fisheries Dependent Monitoring Program for commercial and recreational fisheries in Florida.

Associate Research Scientist and Research Scientist, September 2001 to April 2019

- Design, implement, supervise, and oversee the conduct of fishery-dependent data collection programs for recreational fisheries throughout the state of Florida, including:
 - Marine Recreational Information Program (MRIP)
 - Access Point Intercept Survey and For-Hire Telephone Survey
 - Supplemental biological sampling
 - At-sea observer programs on for-hire recreational fishing vessels in Gulf and Atlantic
 - Florida Gulf Reef Fish Survey certified through MRIP
 - Supplemental East Florida Red Snapper Recreational Survey

Maryland Department of Natural Resources, Fishery Management Plan Writer, Jan. 1994 to June 1998

- Led development of Fishery Management Plans for the Chesapeake Bay Program.

College of William and Mary, Virginia Inst. of Marine Science, Lab Technician, June 1989 to Dec. 1993

- Collected quantitative data utilizing radio and sonic telemetry and aerial surveys. Compiled over ten years of mark-recapture data for marine turtles and summarized migration patterns.

Appointments

- Atlantic Coast Cooperative Statistics Program: Recreational Technical Committee
- Gulf States Marine Fisheries Commission: Technical Coordinating Committee, Fisheries Information Network (Gulf FIN) Committee, and Data Management Subcommittee
- Southeast Data Assessment and Review (SEDAR): Data Workshop Panelist for South Atlantic and Gulf of Mexico stock assessments

Select Peer-Reviewed Publications

2017. Sauls, B., A. Strelcheck and R. Cody. Survey methods for estimating red snapper *Lutjanus campechanus* landings in a high-effort recreational fishery managed with a small annual catch limit. North American Journal of Fisheries Management 37: 302-313.

2014. Sauls, B. Relative survival of gags *Mycteroperca microlepis* released within a recreational hook-and-line fishery: application of the Cox regression model to control for heterogeneity in a large-scale mark-recapture study. Fisheries Research 150: 18-27.

2012. Sauls, B. and O. Ayala. Circle hook requirements in the Gulf of Mexico: application in recreational fisheries and effectiveness for reef fish conservation. Bulletin of Marine Science. 88: 667-979.

Response to Comments

Thank you for the opportunity to submit this final proposal, attached. Only one change was made to the proposal (highlighted below). Written responses to reviewers' comments are below:

Comment: Costs per trip have been steadily increasing FY18 - \$544/trip; FY19 - \$649/trip; FY20 \$718/trip – any info as to why?

Reply: The FY2020 proposal includes one state (Florida), whereas previous years included multiple states. The cost per trip in Florida has gone down this year. In 2018 and 2019, we requested \$90,546 to conduct 120 trips, at an average cost of \$754.55 per trip. In 2020, we are requesting \$104,899 to conduct 147 trips, at an average cost of \$718.48 per trip. We are requesting 27 additional trips so that sampling may be conducted on the Atlantic coast of the Florida Keys.

Comment: Are there any discussions going on as to what will happen to FL sampling as this proposal is cut?

Reply: in the proposal we note, “the state is exploring options that would potentially establish a dedicated funding stream to support monitoring of recreational fisheries targeting important reef fish stocks on the Gulf and Atlantic coasts. Funding will not be available in time to support this work in FY20, and ACCSP support is requested while the state continues to work towards a transition plan.” We cannot provide more details before we have appropriate approvals through our state Commission.

Comment: Given changes over time to proposal and now just a program for FL, title not overly representative of the actual proposal

Reply: The title now reads, “Supplemental At-Sea Sampling for the Recreational Headboat Fishery on the Atlantic Coast of Florida.”