

SAFMC Citizen Science Program



2023 Annual Report



Credits: Historic photos from Rusty Hudson and Skip Nielsen. Divers from REEF & Tom Sparke.

A Busy Year

The Council's Citizen Science program has made strides in 2023! The 2023 Annual Report highlights key activities and accomplishments during the past year. **This work wouldn't be possible without our amazing partners, collaborators, and volunteers.** Thanks to their help, we've made incredible progress and can't wait to see what we will achieve together in 2024!

Citizen Science Research Priorities Updated

SAFMC Citizen Science Research Priorities: 2023-2025		
Topic	Data Needed	Potential Outcome
Age Sampling	Otolith & fin clip (future) collection	Characterize the age of catches
Discard Information	Length, depth, quantity, discard reason, devices used, terminal gear, disposition	Characterize the size of discards, Improved discard removal estimates
Genetic Sampling	Fin clips	Stock identification, Species ID, Ageing (still developing)
Fishing Infrastructure	GPS location and details of fishing-related infrastructure	Baseline for fishing-related infrastructure, help better define communities for social analysis
Historical Fishing Photos	Digitized images	Species and length compositions, improved historical information
Fishery Oral Histories & Historic Logbooks	Fishermen interviews, digitized logbooks	Improved understanding of changes in fishery over time
Oceanographic & Environmental Conditions	Various environmental data including bottom temperature and weather	Database of climate and changing conditions, fishery patterns
Shifting, Rare or Data Limited Species Observations	Point observations of data limited or rarely encountered species; length info for data limited species	Baseline for species shift, increased information for data limited species
Observations in Managed Areas	Species, length, depth, videos, photos, effort, edge effects	Species composition, occurrence of spawning, info on compliance
Movement & Migration	Species, location, length, tag details, supporting existing tagging programs	Movement and migratory patterns
Shark & Mammal Depredation	Observations of depredation, location, species, photo, DNA swab	Document depredation observations
Habitat Characterization	Photos, videos - focused on EFH	Ground truth bathymetry data
Spiny Lobster Data	Catch, effort, length, sex, presence of eggs, presence/absence	Characterize fishery in FL and GA north (more data limited)

Summarized research priorities for the Citizen Science Program, 2023-2025.

The Citizen Science Research Priorities guide the projects the Citizen Science Program supports and develops. They narrow the focus of the South Atlantic's many data needs to tangible ideas important to our fishermen, scientists, and managers. The priorities are updated every two years following the process outlined in the Program's policies by gathering input from Advisory Panel and Council members. Not only do these priorities help us determine the types of projects that we work to develop, we share them with other groups interested in collaborating with the Council on citizen science projects.

The table to the left summarizes the new 2023-2025 Citizen Science Research Priorities adopted by the Council at their December 2023 meeting. For more detailed information, check out the [Citizen Science Research Priorities](#) on the Program's webpage.

Contributions to Symposia & Conferences Focused on Citizen Science

In 2023, our Citizen Science Team presented information on the SAFMC Release and FISHstory projects at various local, national, and international conferences including the American Fisheries Society (AFS) Florida Chapter's Annual Meeting, the [Association for Advancing Participatory Sciences' C*Sci 2023](#) meeting, the [Gulf and Caribbean Fisheries Institute Annual Conference](#), and we were invited to provide a poster for the European Commission's Maritime and Fisheries 2023 Fisheries seminar.



Citizen Science staff and NOAA colleagues Hillary Burgess, Camryn Allen, and Laura Oremland at the C*Sci 2023 conference.

Working with colleagues, staff also helped coordinate two citizen science focused symposia at the American Fisheries Society's 2023 Annual Meeting: 'Growing Fisheries Research & Management Through Angler Engagement' and 'Challenges and Solutions Using Citizen Science Data in Fisheries Management'.

Thanks to our partners and collaborators, the Citizen Science Team was also invited to present on our Program and projects as part of NOAA's Central Library seminar series and to the Gray's Reef National Marine Sanctuary's Sanctuary Advisory Council.

Participating in these meetings allowed us to share information on our program with new audiences, learn from others working in this field, incorporate new ideas into the Program, and develop new and strengthen existing relationships with partners and collaborators. For example, staff were able to learn about new Zooniverse features to incorporate into FISHstory and made new connections to share information on SAFMC release with anglers.

SAFMC Release Continues to Grow & Launches a Participant Recognition Program

The SAFMC Release project works with recreational, for-hire, and commercial information to gather information on released shallow water grouper and Red Snapper. Participants are providing vital insights into the snapper grouper fishery by helping us better understand the size of released fish and how many of these released fish survive. Want to see the valuable contributions our participants made in 2023? Check out the [SAFMC Release 2023 Data Summary](#).



Logging releases in the SciFish app on the water.



2023 Participant Recognition Program 'Best Photo' milestone winner, Darrin Willingham.



Citizen Science staff sharing information on SAFMC Release at SCDNR's Open House.

Throughout the year, staff focused on outreach, working to recruit new and retain current participants. We've worked closely with the SAFMC's [Best Fishing Practices](#) campaign visiting tackle shops, collaborating with captains on fishing seminars, posting on social media, and partnering with other organizations to help spread the word about these projects among other things.

2023 also featured the start of the SAFMC Release Participant Recognition Program (PRP)! The PRP was designed to celebrate the achievements of our participants and is one way we thank them for their contributions. [2023 PRP milestones](#) included the most submissions, largest and smallest fish logged of each species, and best photo submitted through the project. Check out the [SAFMC Release 2023 Annual Data Summary](#) to see our PRP winners!

Want to join other anglers in the SAFMC Release community? [Set up an account](#) and learn more on the [project webpage](#)!

Development of the SciFish Platform & Policies Wraps Up



The Council, North Carolina Division of Marine Fisheries, and Atlantic Coastal Cooperative Statistics Program (ACCSP) continued development of the SciFish platform to support the collection and sharing of information about Atlantic fish species. SciFish is a mobile application and menu-driven project builder designed to collect citizen science data. It will allow ACCSP partners to easily create a customizable app without the

need to develop stand-alone applications for each new project or data need. This will help reduce the cost and time required to create an application from the ground up as well as increase consistency in data fields and structures.

During 2023, the SciFish Organizing Committee continued development of the SciFish platform and completed the [SciFish Policies](#) to support the development of new projects within the platform. At their October 2023 meeting, the ACCSP Coordinating Council approved the policies and launching of the SciFish platform making it available to partners in 2024. Pre-applications for the development of new projects in SciFish will begin in April and June 2024.

Want to learn more about building a project in SciFish? Check out the [ACCSP SciFish webpage](#)!



SciFish mobile application.

FISHstory Project Expands & Grows its Historic Photo Archive



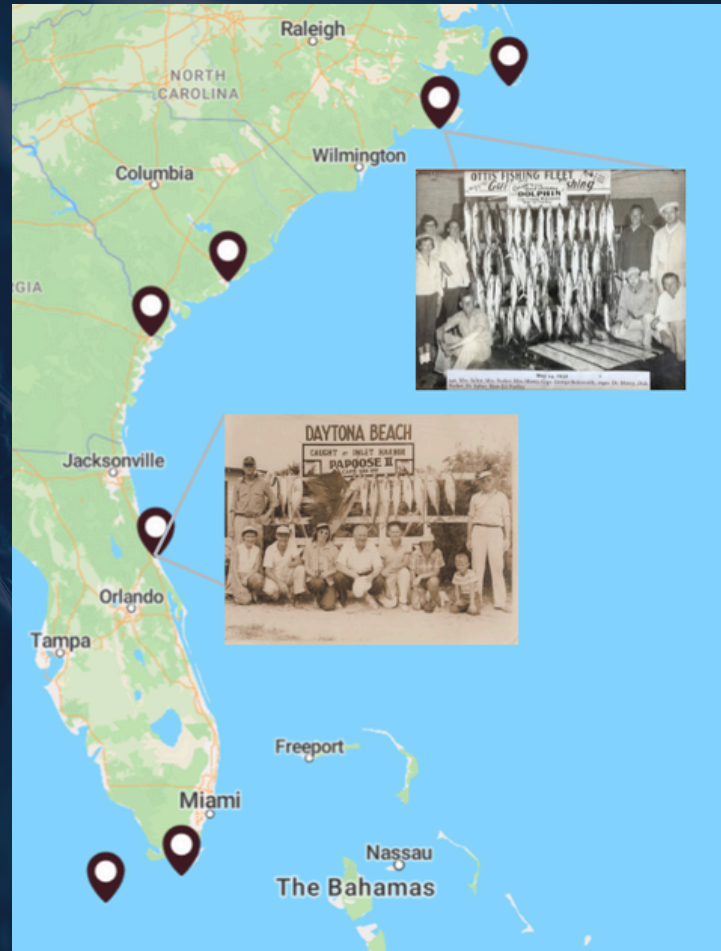
Thanks to funding through ACCSP, the FISHstory project is moving from a pilot to a full scale project. To do this, we're collaborating with NC State University, NOAA Fisheries Southeast Fisheries Science Center, and many other fishermen and organizations across the region. The project has three primary components: digitizing and archiving

historic fishing photos; analyzing historic photos to estimate for-hire catch using the online crowdsourcing platform, Zooniverse; and developing a method to estimate fish length in historic photos. Insights from the project will better inform historic data used in stock assessments.

To grow the project, we're gathering more historic fishing photos from across the South Atlantic region from the 1940s-1980s. Having photos from all South Atlantic states will make the data gathered through the project more representative of the region as a whole.

Six FISHstory scanning events were held in conjunction with Council related meetings in fall 2023. Not only did AP members, Council members, and members of the public share photos with the project through these events, they also helped connect the Citizen Science Team with other individuals, organizations, and businesses that had photos in their communities. Members of the public also reached out to share photos after seeing information on scanning events shared via the Council's communication channels.

Thanks to these efforts, over 600 photos were added to the FISHstory archive from the Outer Banks of NC through the FL Keys.



Map of photo locations included in the FISHstory photo archive. PC: Sanitary & Jeff Garner; Cathy Owen & Charles C. Owen Jr.



Historic fishing photo shared with FISHstory by Captain Skip Nielsen, Islamorada, FL

Although the focus has been on gathering new photos in 2023, we've also been working to refine the FISHstory project in Zooniverse with the target to re-launch the project with new photos in Spring/Summer 2024. Additionally, our length analysts have been working hard to measure the Red Snapper within our photo archive.

Want to share photos with the FISHstory project or help us analyze photos in Zooniverse? We'd love to have you join the FISHstory team! Visit our [webpage](#) for more details.



Historic fishing photos new to the FISHstory archive provided by Captain Billy Smitherman, Daytona Beach, FL (left) and Captain Bobby Freeman, Atlantic Beach, NC (right).

SMILE Project Develops Camera & Completes Initial Field Work



Diver using SMILE camera.
PC: REEF & Tom Sparke

The SMILE (Size Matters: Innovative Length Estimate) project made great strides in 2023! Led by the Reef Environmental Education Foundation (REEF), SMILE partners with volunteer scuba divers using low-cost, waterproof cameras that make it possible to measure fish captured in pictures using artificial intelligence technology. The project has been working closely with partners at the Semmens Lab at Scripps Institution of Oceanography, UC San Diego Engineers for Exploration, and UCSD Kastner Research Lab to develop the camera/laser system to be used by volunteers. Fieldwork for the SMILE pilot project began in 2023 and is focused in the FL Keys. The project has seen great success so far and data analysis for the first field season is underway. Over the course of the SMILE project, the camera and methodology will continue to be field tested and modified by project staff and volunteers.

SMILE is truly a collaborative project. The project team includes REEF, the SAFMC's Citizen Science Program, the Southeast Coastal Ocean Observing Regional Association (SECOORA), Axiom Data Science, the Semmens Lab at Scripps Institution of Oceanography, UC San Diego Engineers for Exploration, UCSD Kastner Research Lab, and funding through NOAA's Coral Reef Conservation Program. Check out the [SMILE webpage](#) to learn more about the progress on this project!

Citizen Science Program Evaluation & Stakeholder Assessment Continues



To help us evaluate our Program, we've been working with researchers to begin the process of establishing baseline levels of knowledge about, confidence in, and trust in the citizen science process of collecting data to inform fisheries management from three of our main audiences – fishermen, scientists, and managers.



During 2023, we expanded the research team for this project! Rick Bonney, Director Emeritus of the Public Engagement in Science Program at the Cornell Lab of Ornithology, continues to work on this project leading efforts to gather information from a broad group of scientists and managers via an online survey.



Jennifer Sweeney Tookes (Georgia Southern University), Tracy Yandle (TYED Consulting), and Bryan Fluech (UGA Marine Extension & Georgia Sea Grant) are leading efforts to gather information from a broad group of fishermen via interviews.



During 2023, Bonney worked to finalize the survey questionnaire and the Sweeney Tookes team completed research trips interviewing fishermen in Florida and Georgia. Work on this project will continue with a target for the project to be complete in summer 2024.

Citizen Science Advisory Group Transitions



The Citizen Science Program is lucky to work with two citizen science focused advisory groups: the CitSci Operations Committee and the CitSci Projects Advisory Committee. In 2023, a few members transitioned off our citizen science advisory groups. We'd like to thank the following individuals for all their valuable contributions to the Citizen Science Program over the past several years through their service on our advisory groups.

- Citizen Science Operations Committee: Holly Abeels, Rick DeVictor, Brett Fitzgerald & Bob Lorenz
- Citizen Science Projects Advisory Committee: Scott Baker, Bob Lorenz & Jeff Soss



We also want to give a warm welcome to our new advisory group members and thank all of the reappointed members for their continued support of the Program. We look forward to working and learning from all of you in the upcoming months and years!

- Citizen Science Operations Committee
 - New Members: Will Heyman, Jimmy Hull, Kathy Knowlton & Nik Mehta
 - Reappointments: Scott Baker, Wally Bubley, Rob Cheshire & Michelle Duval
- Citizen Science Projects Advisory Committee
 - New Members: Bryan Fluech, Richard Gomez, Casey Knight, Matt Perkinson & Andy Piland
 - Reappointments: Steve Donalson, Thomas Newman, Jon Reynolds, Justin Smith & Mimi Stafford

Thank You!

Without our amazing partners, volunteers, and collaborators, we would not have the Citizen Science Program we do today. We are incredibly thankful to all who have contributed to the development and growth of the Program and projects and continue to do so!

2024 has already gotten off to a quick start with the launch of the [Citizen Science Project Idea Portal](#) where stakeholders can share their citizen science project ideas online; a new partnership with Sea Grant for [SAFMC Release's Participant Recognition Program](#); and a target to re-launch the FISHstory project in Zooniverse in Spring/Summer 2024.

Want to join a project or learn more about the Citizen Science Program? Staff would love to talk with you about how to get involved.

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