Citizen Science Program Update

Citizen Science Operations

May 2023

Program Activities

- Fisheries Magazine Special Issue on Citizen Science: November 2022
- NOAA Library Seminar Presentation
- SMILE Project
- SAFMC Release Project
- FISHstory Findings & Scanning Events
- CitSci Evaluation Update

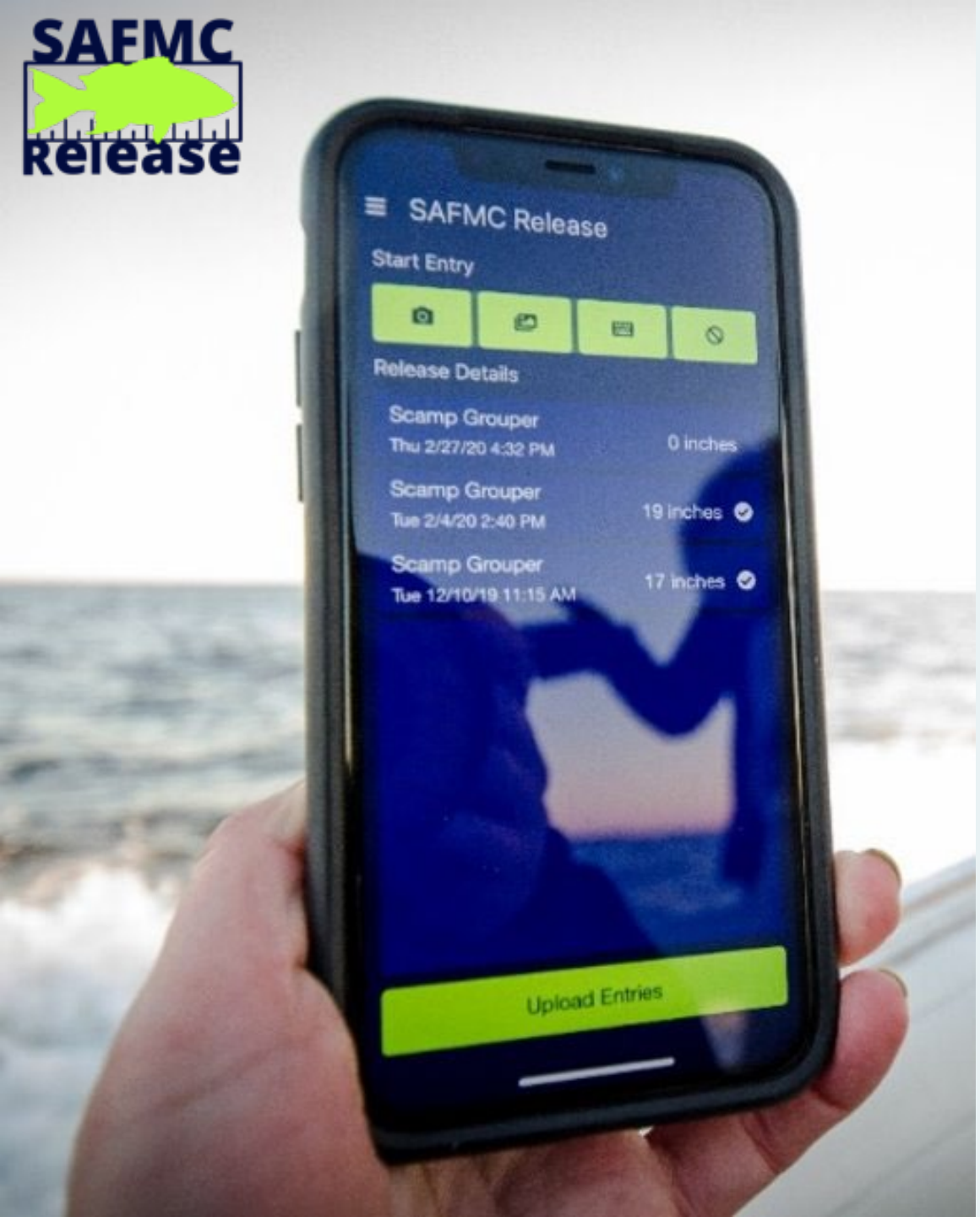
SMILE Pilot Project

- Partnering with recreational divers to collect length information on data limited species
- Camera development underway
- Field testing – summer 2023

REEF
www.REEF.org

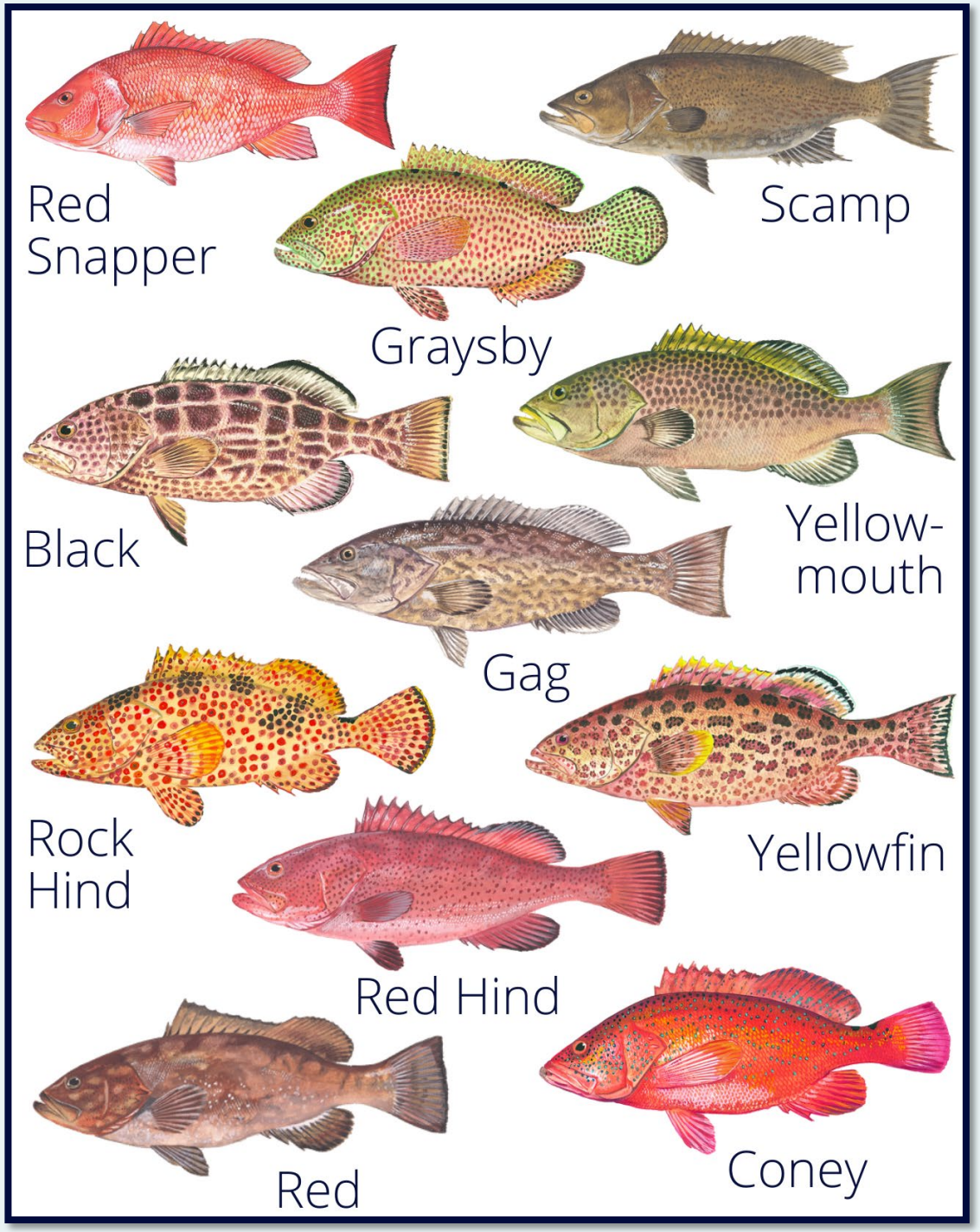
Citizen Science

SECOORA
Southeast Coastal Ocean Observing Regional Association



SAFMC Release

FLOWCODE
PRIVACY.FLOWCODE.COM



Updates

- Participants recording information about released shallow water grouper and Red Snapper in SciFish app
- Continued collaboration with Best Fishing Practices initiative
- Participant Recognition Program
- 2022 Annual Data Summary

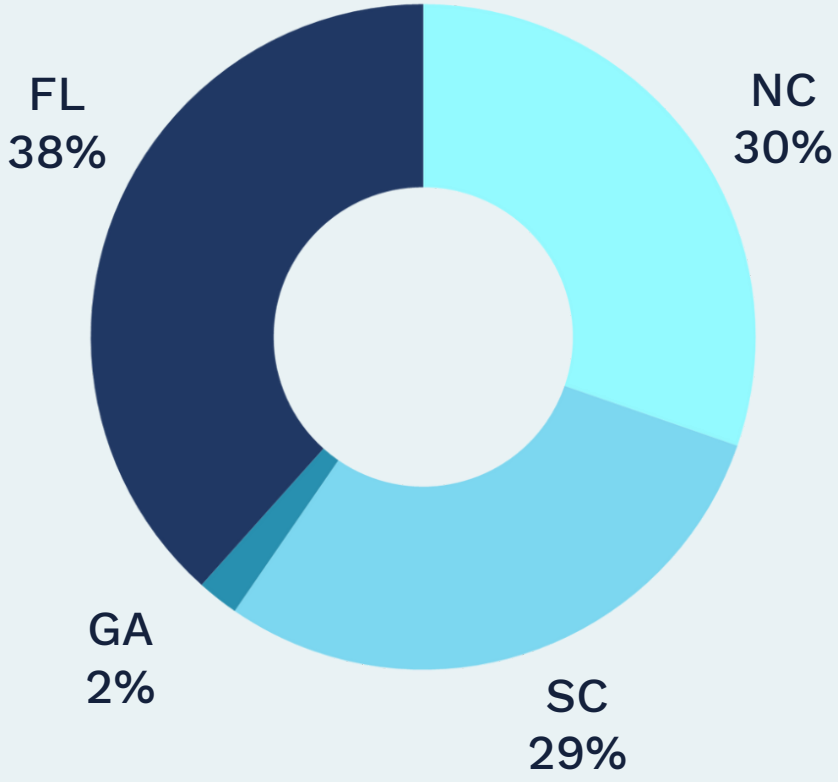
SAFMC Release
Participant Recognition Program

- Designed to celebrate participants' achievements within the SAFMC Release project
- Recognition on various platforms, including Release newsletter and social media
- Set 2023 milestones

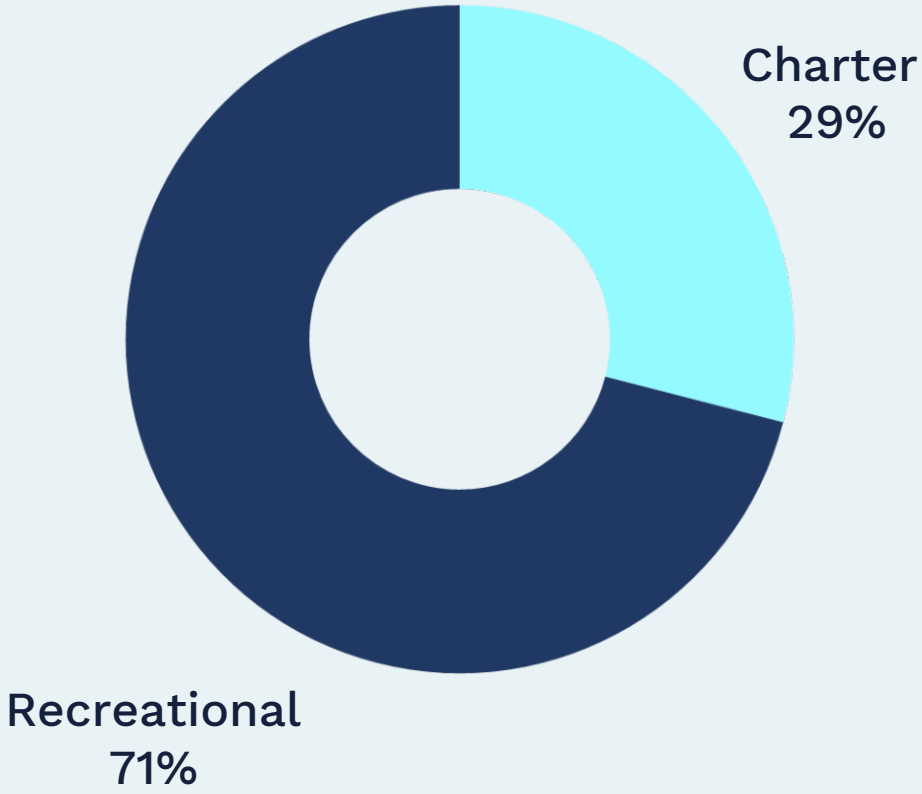
safmc.net/documents/safmc-release-prp-2023-milestones/

2022 Data Summary: Where Release Submissions Came From

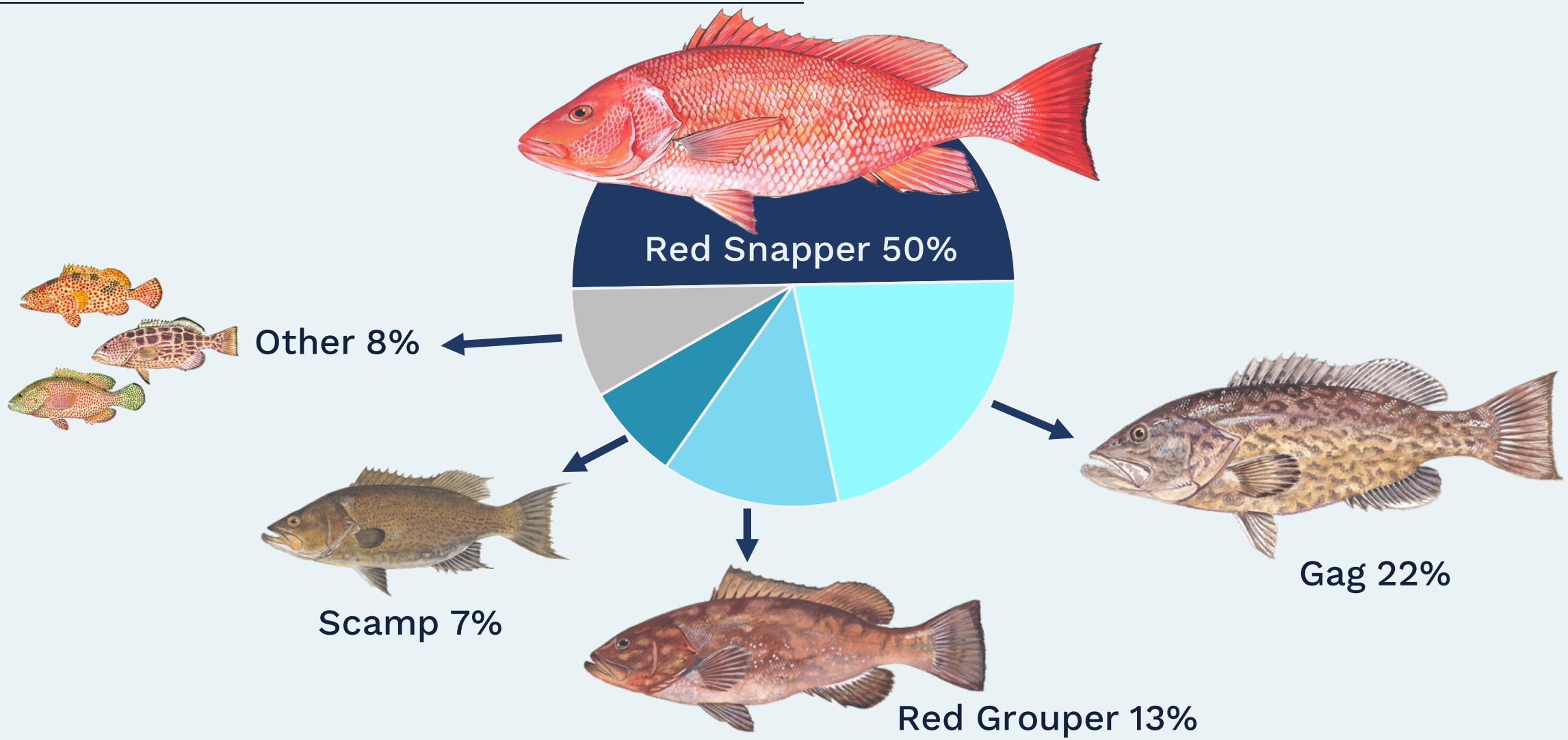
By State



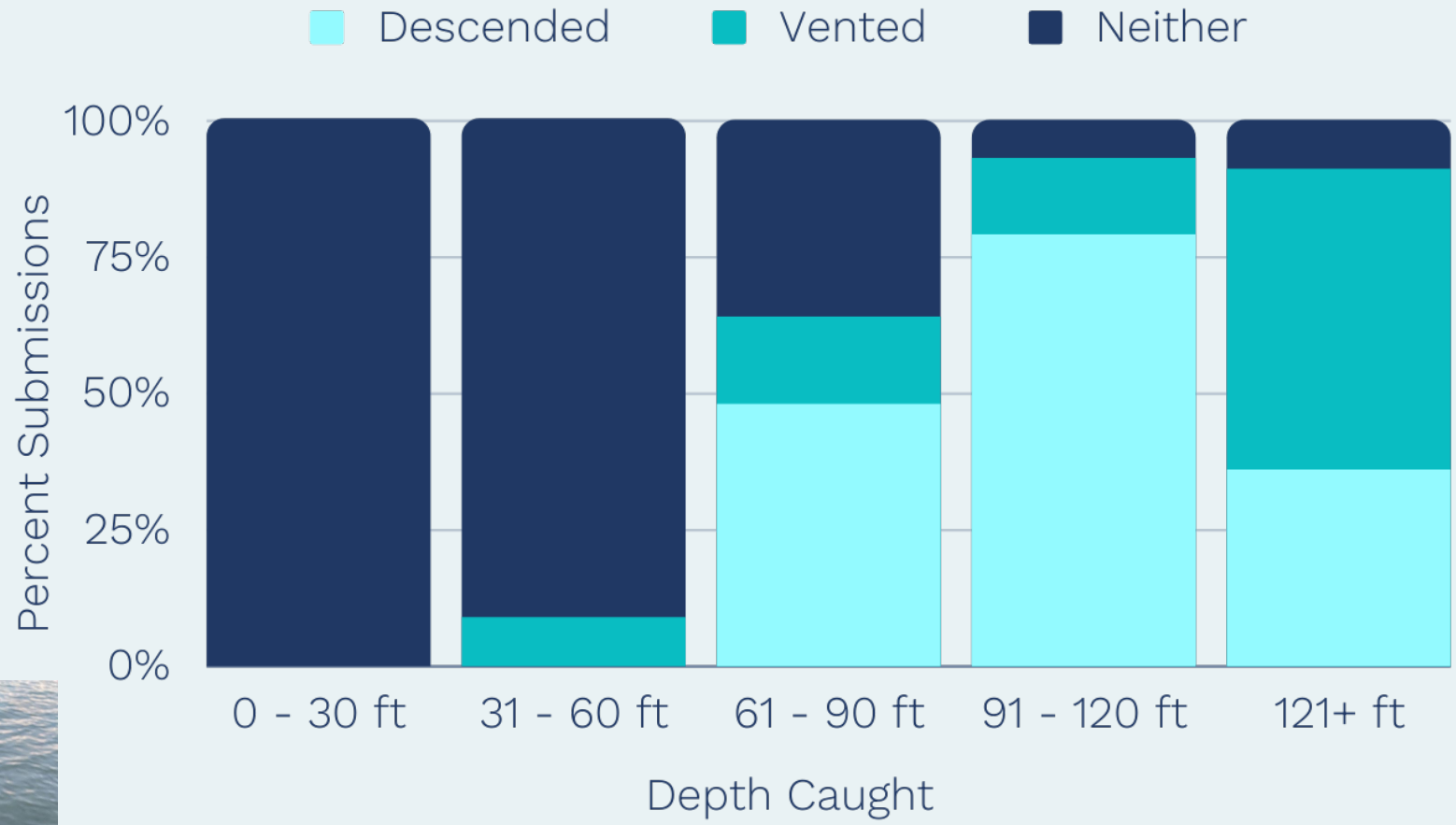
By Sector



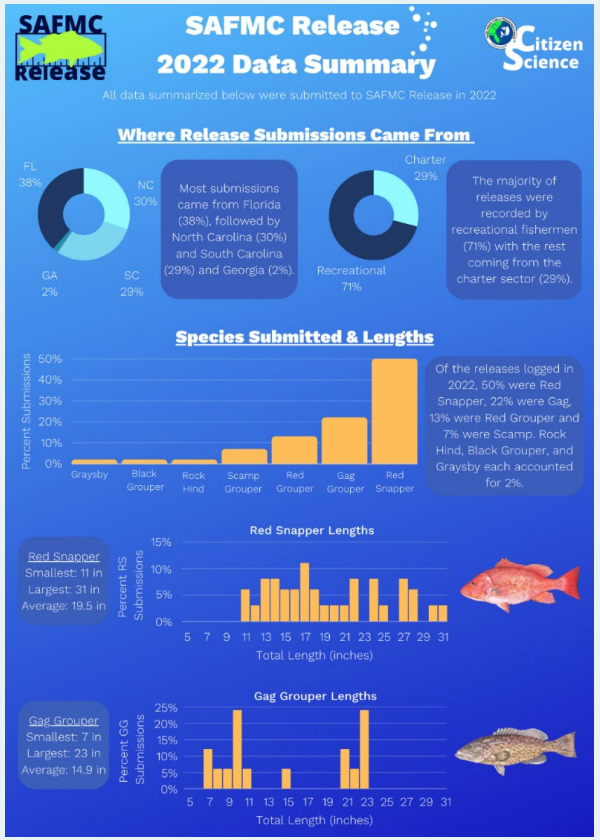
2022 Data Summary: Percent of Releases Logged by Species

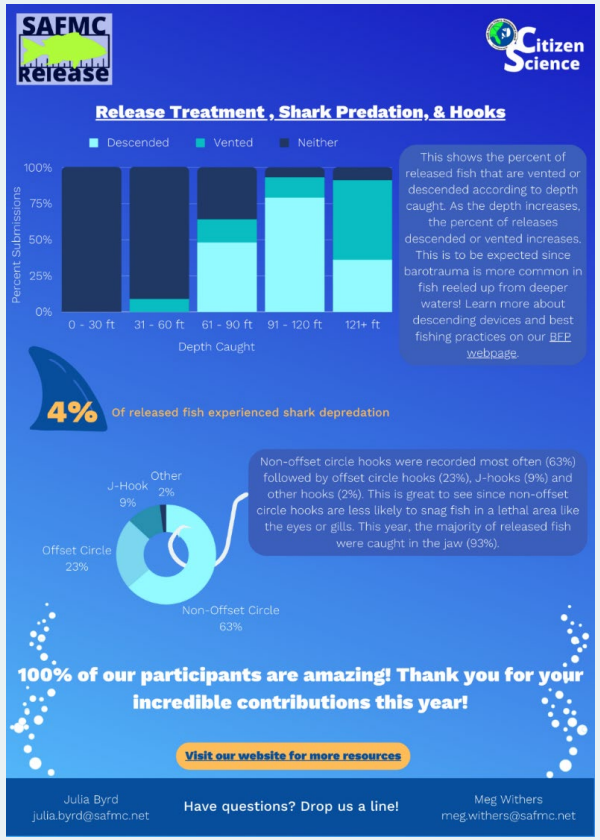


2022 Data Summary: Release Treatment by Depth



2022 Data Summary





Summary includes:

- Release submissions by state & fishing sector
- Species submitted
- Length compositions
- Release treatment by depth
- Shark depredation
- Hook type & location

Safmc.net/documents/safmc-release-2022-data-summary-final/

Citizen Science

FISHstory

FISHstory
A SAFMC CitSci Project

FISHstory Project Components

Digitize & archive historic photos → Over 1,374 photos digitized & archived

For-hire catch composition in Zooniverse → Over 2,120 volunteers made 35,740 classifications
Validation Team reviewed 180 photos

Method to estimate length → All 1,374 photos reviewed for King Mackerel

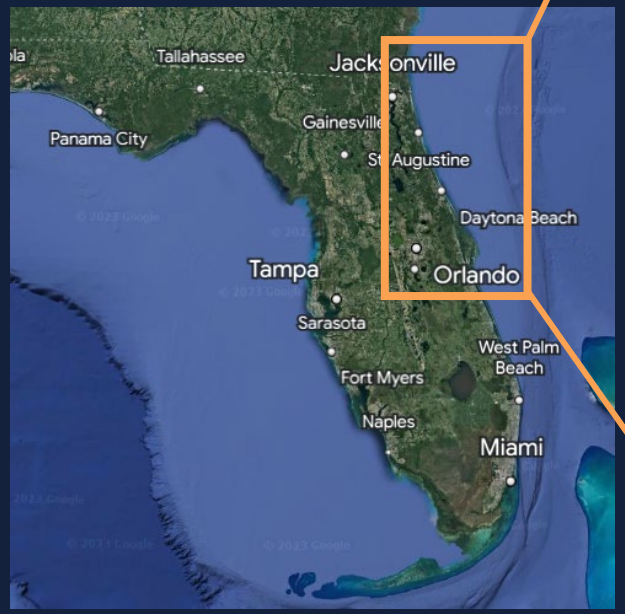
Historical Photo Overview

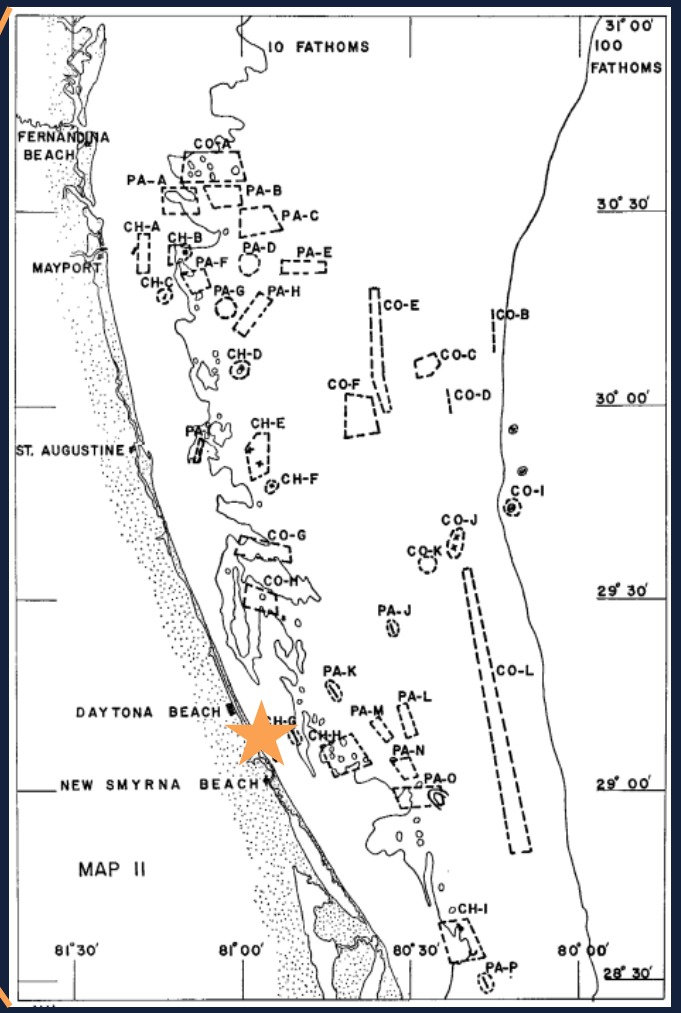
Photo Location:

Daytona Beach, FL

Photos from fishing trips departing from:

Inlet Harbor & Timmons Fish Camp

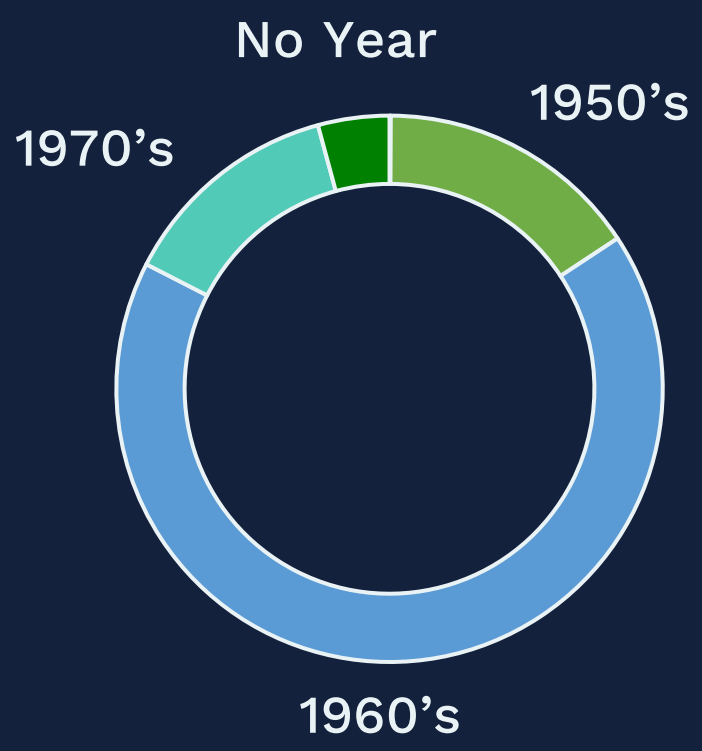




Moe, M. A. (1963). A Survey of Offshore Fishing in Florida (Rep. No. Four).

Historical Photo Overview

Percentage of photos by decade
Photo range: 1949 - 1975



Percentage of photos by month

Historical Photo Overview

88% of photos from 5 vessels

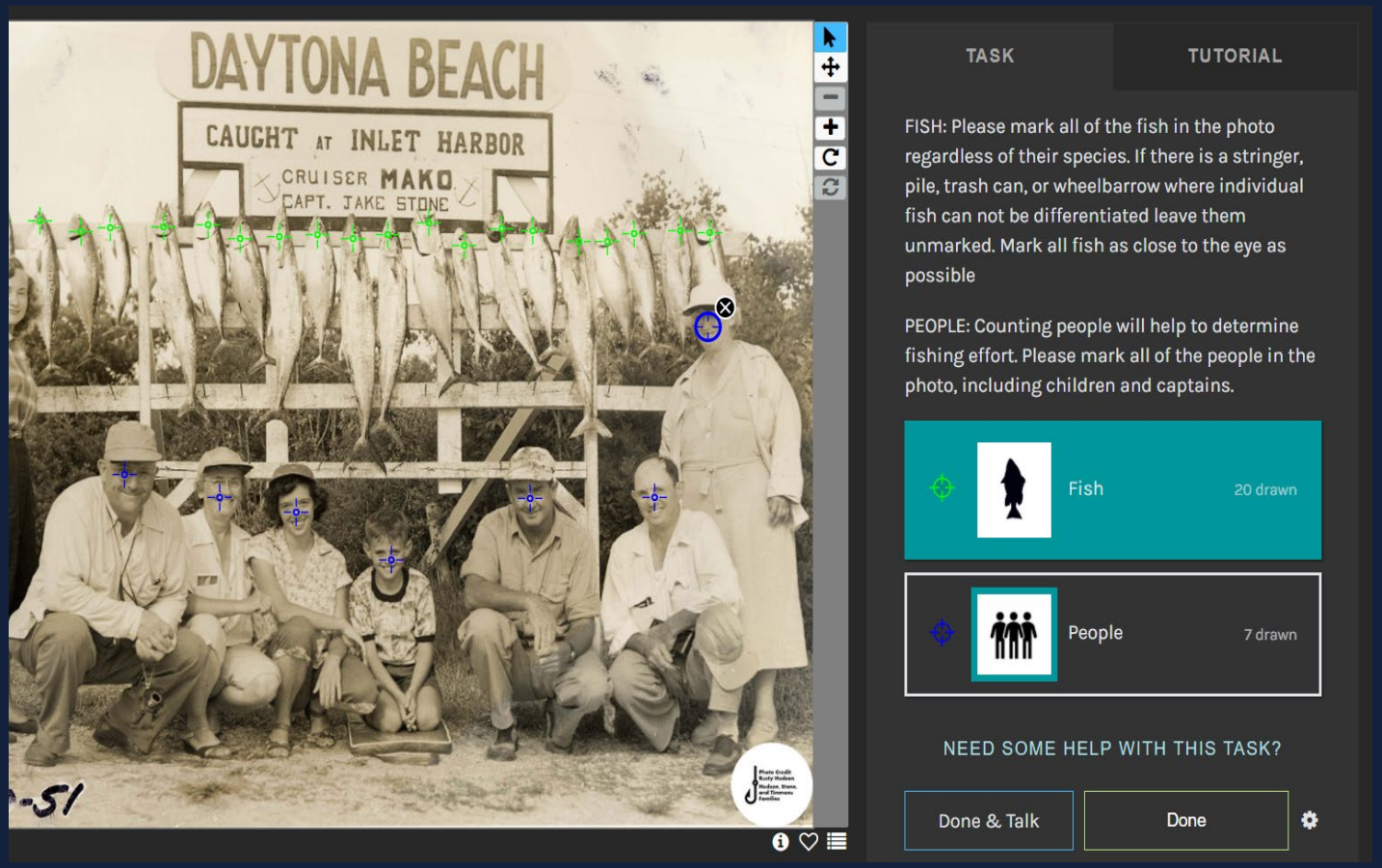

CAUGHT AT TIMMONS CL 3-5825
FISHING CAMP
DAYTONA BEACH, FLA.


CAUGHT AT
FISHERMAN'S PARADISE
DAYTONA BEACH FLA. CALL 767-7676
7 27 74

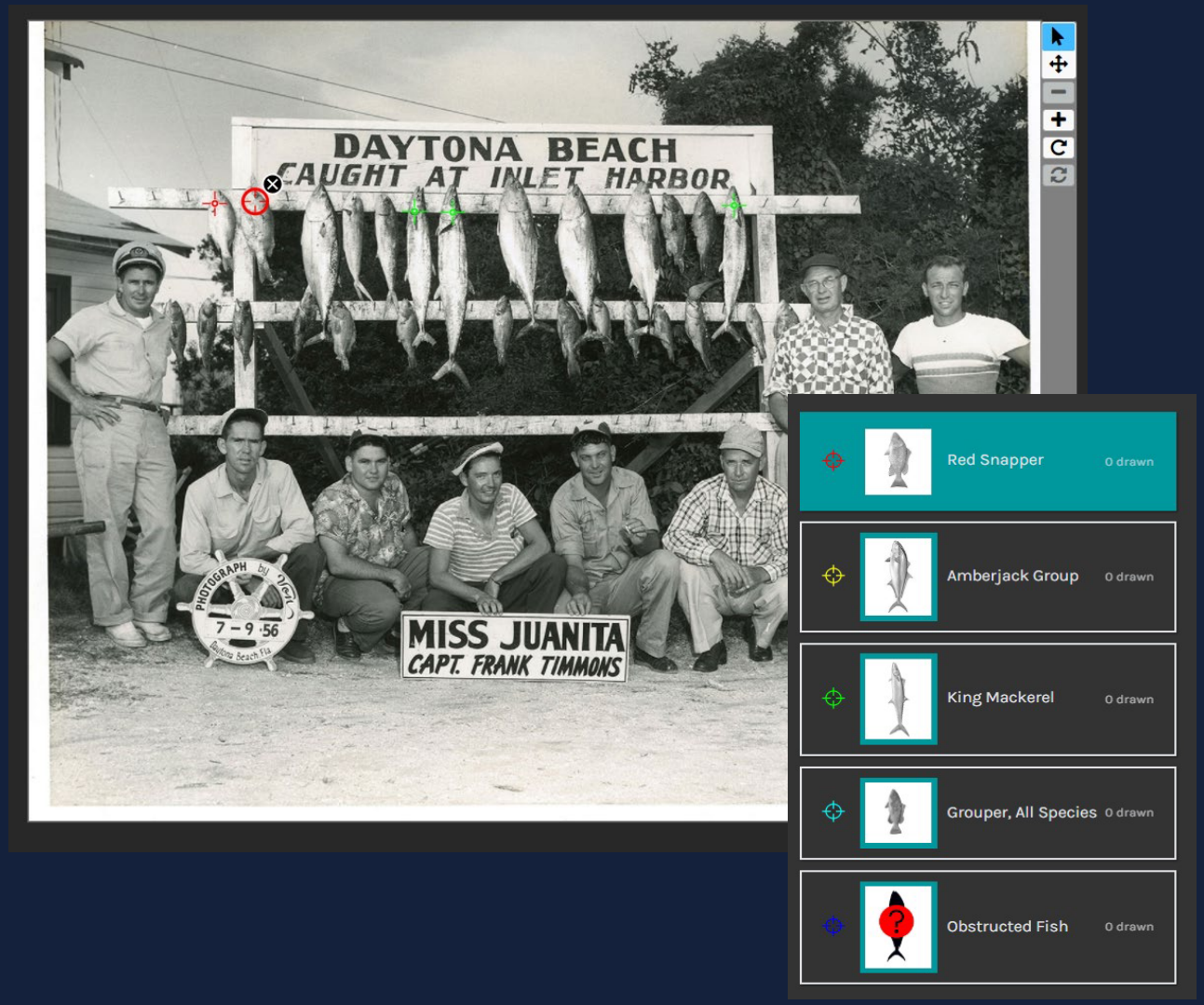
Zooniverse Workflows

FISH & PEOPLE: Count

- Count the total number of fish and people in the photos
- 10 volunteers per photo
- No Validation Team Review
- 1,374 photos complete



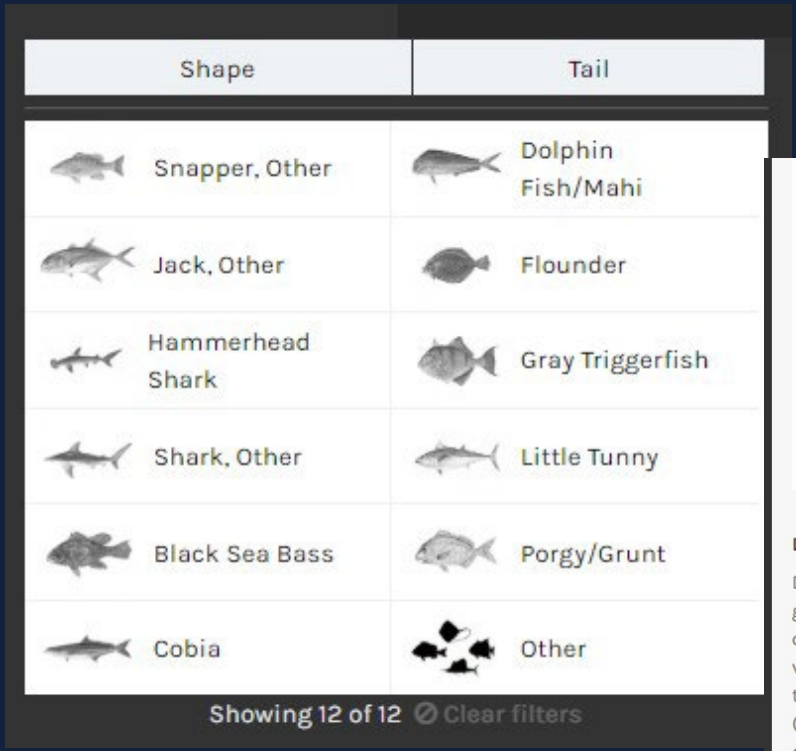
Zooniverse Workflows

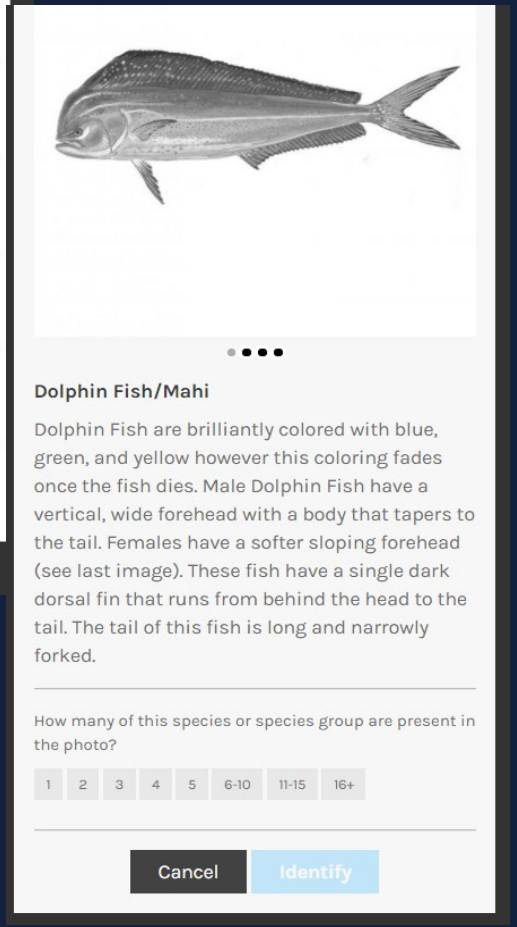


FISH: Classify

- Identify fish into 16 species or species groups
- Document obstructed fish
- Tiered data collection via two tasks
- 20 volunteers per photo
- Validation Team review when substantial disagreement
- 1,000 photos complete

Zooniverse Workflows





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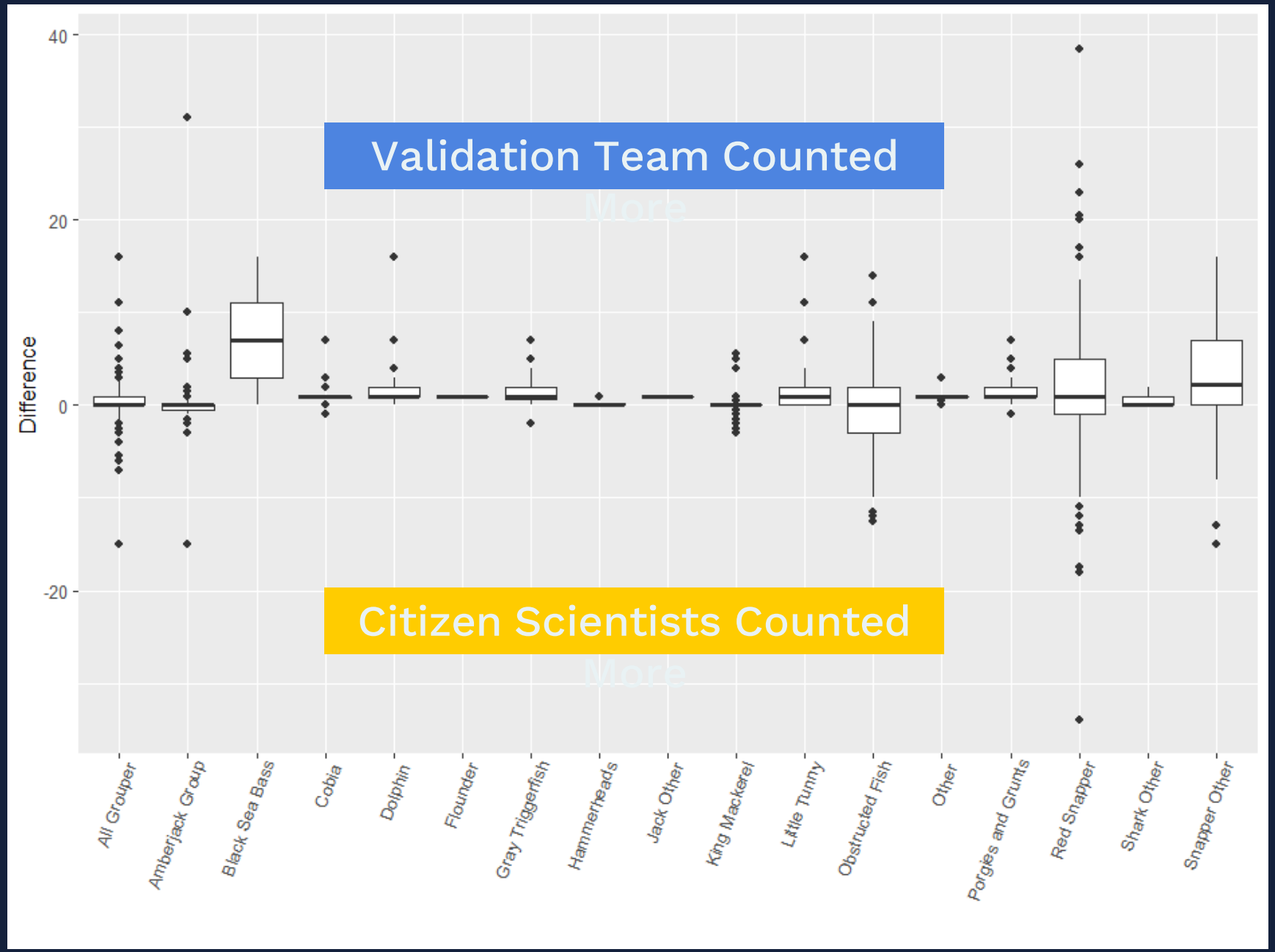
- 1000 photos complete

Comparison of Validation Team & Citizen Scientists



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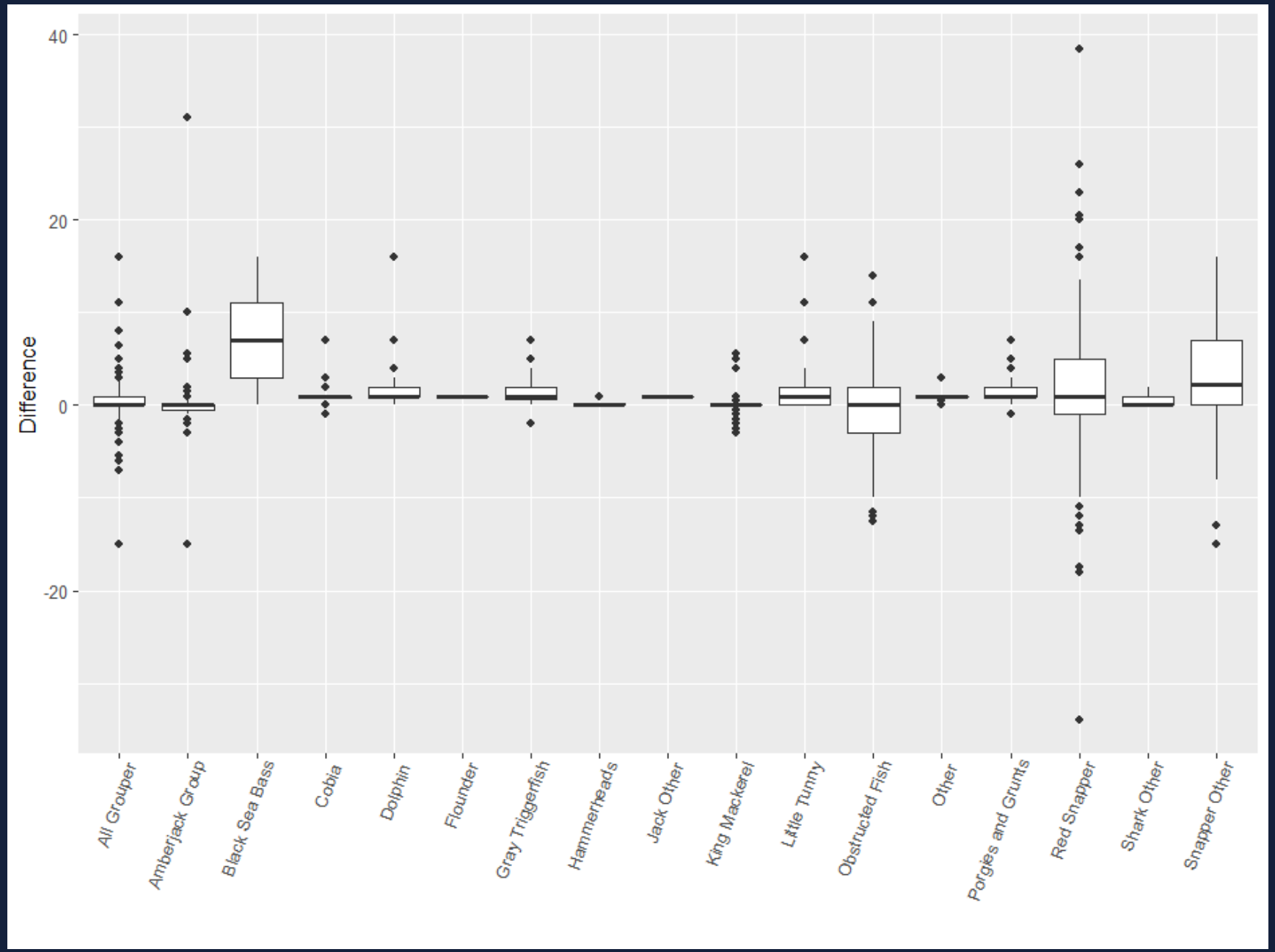

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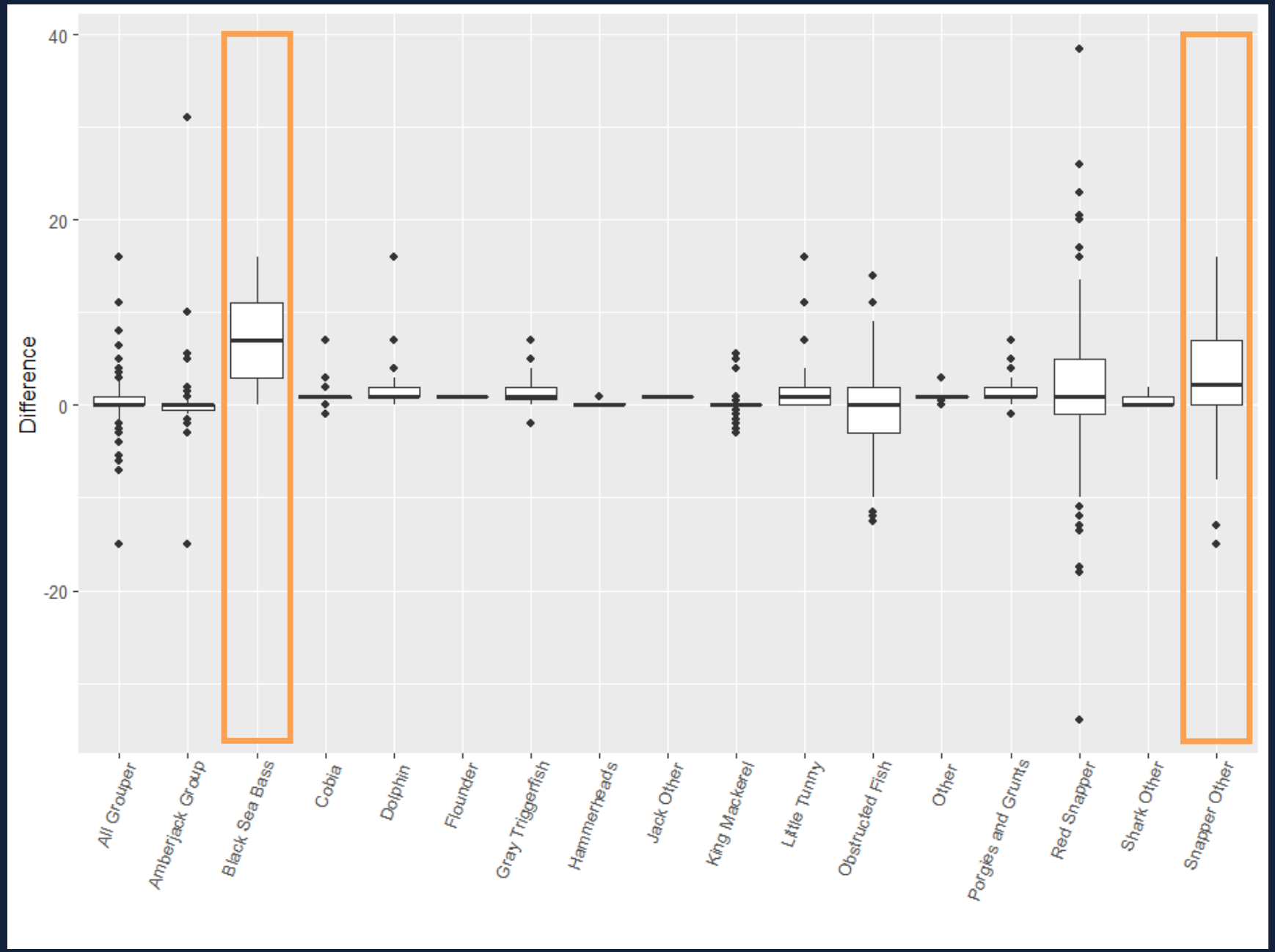

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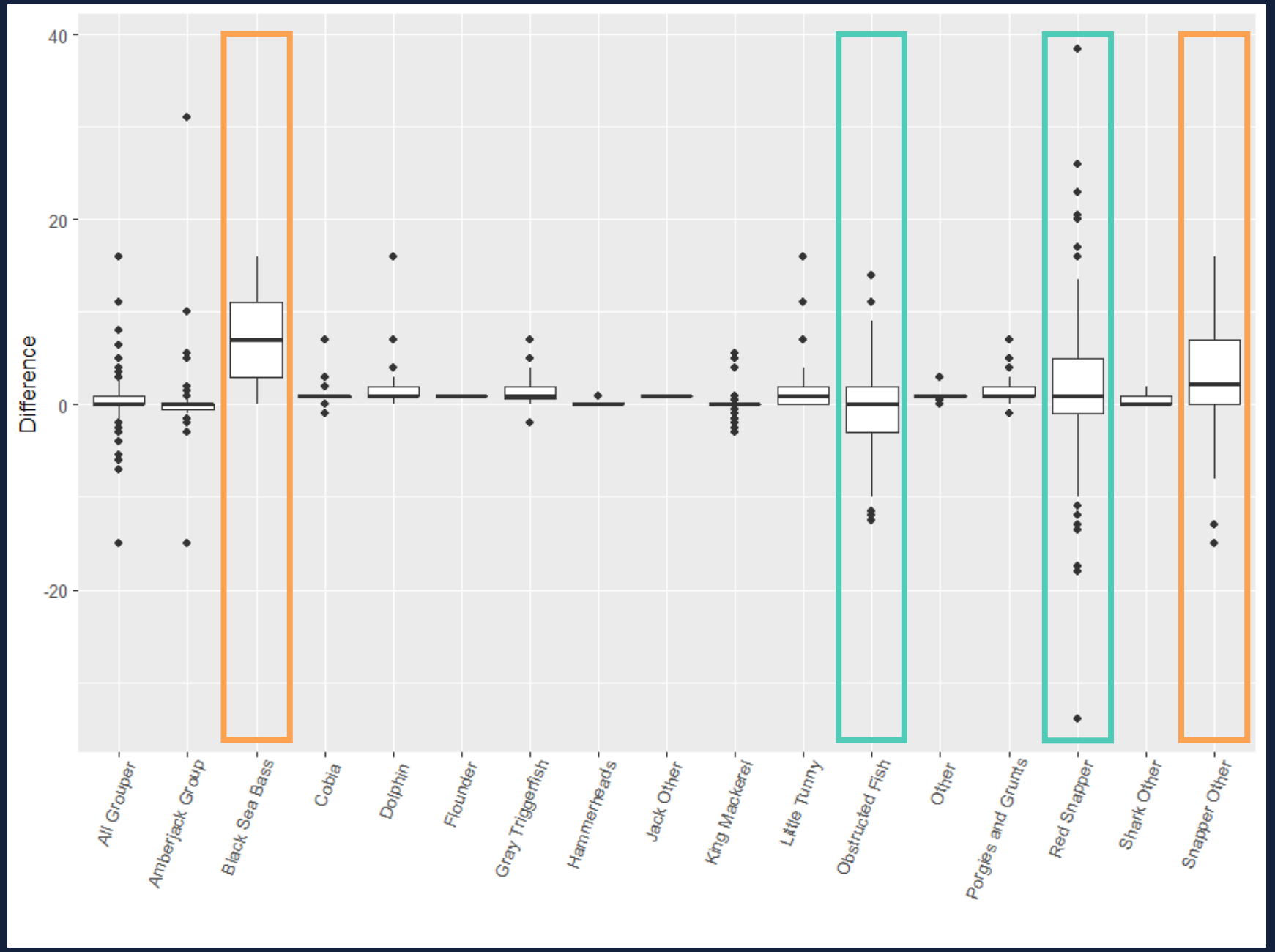

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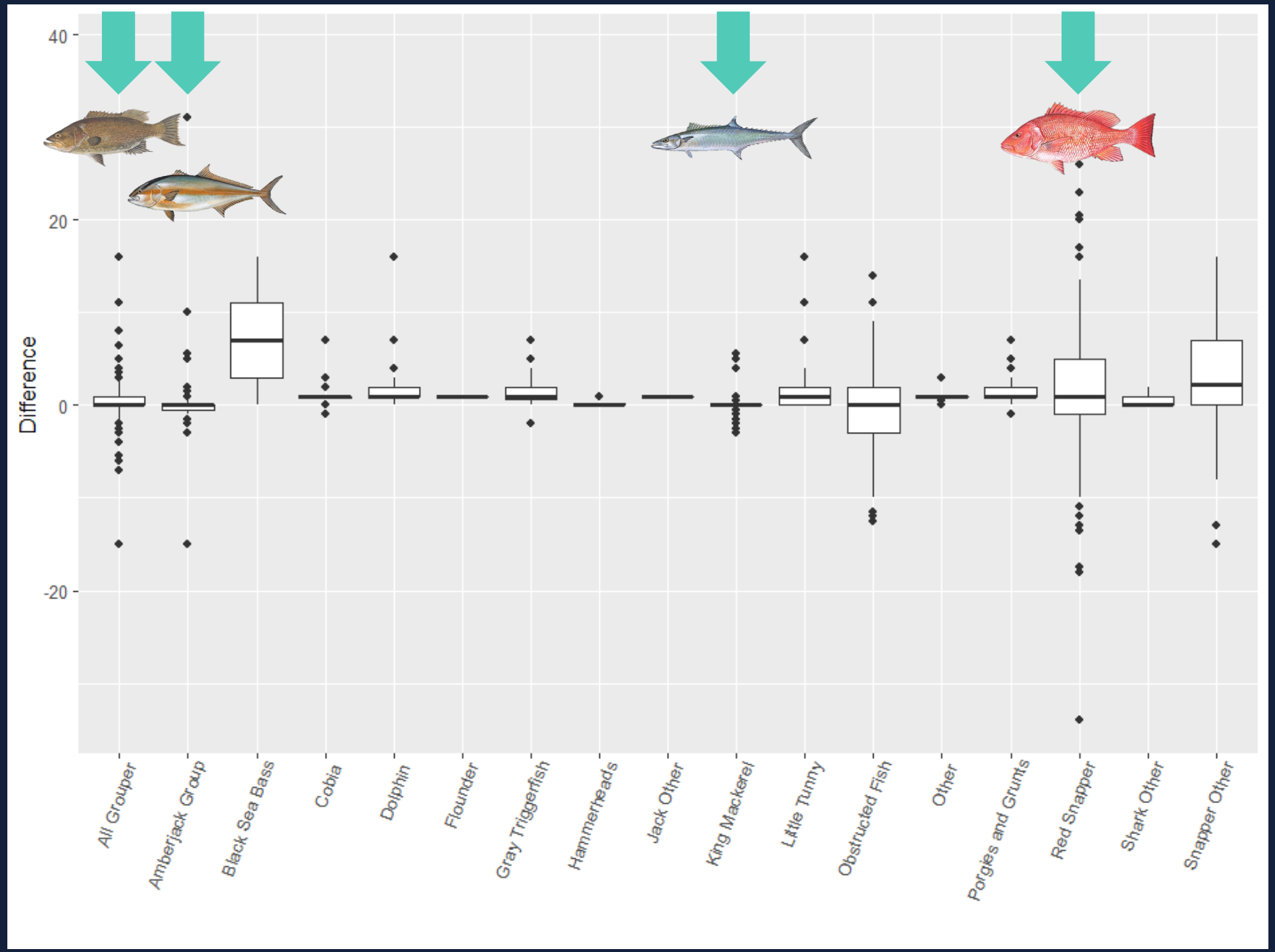


FISHstory: Length Component

- Method developed to measure fish length

Identify scalar & develop protocol

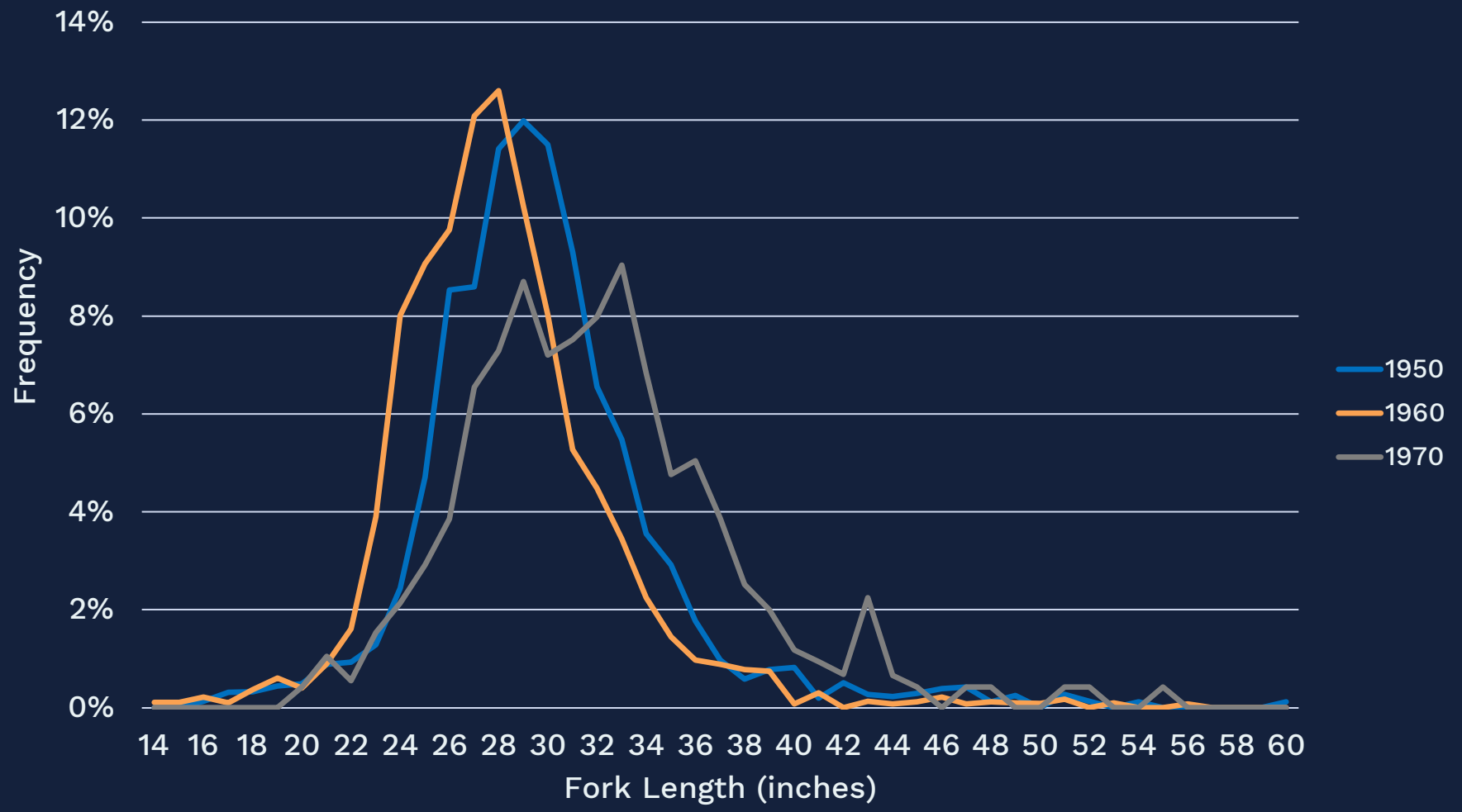
Test protocol

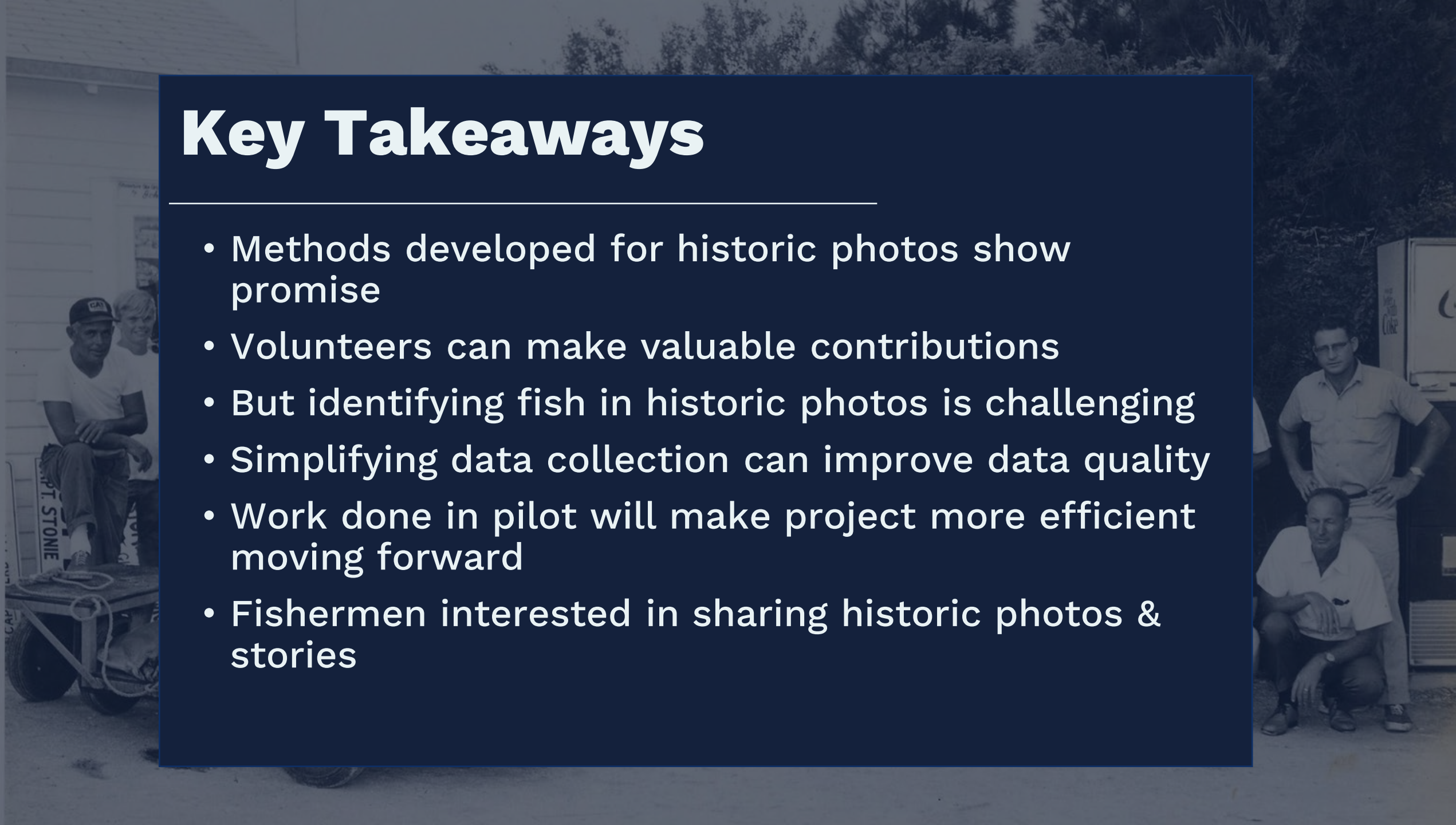
Train length analysts

Coordinate & measure King Mackerel

Share Results

King Mackerel length compositions by decade





Key Takeaways

- Methods developed for historic photos show promise
- Volunteers can make valuable contributions
- But identifying fish in historic photos is challenging
- Simplifying data collection can improve data quality
- Work done in pilot will make project more efficient moving forward
- Fishermen interested in sharing historic photos & stories

Next Steps

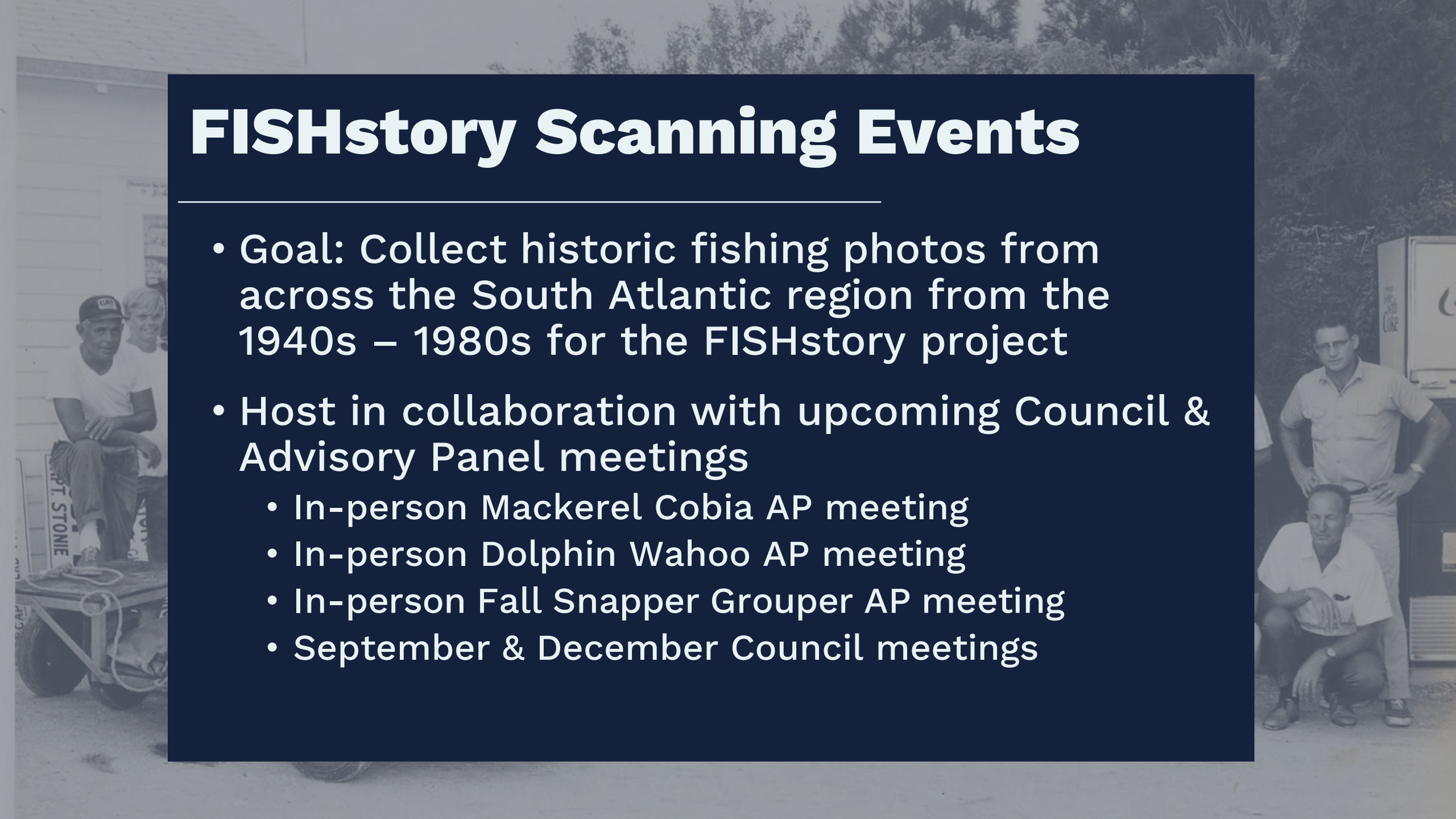
- Move from pilot to full scale project

Funding to grow project

Expand geographic & temporal range of photos

Improve efficiency of processes

Estimate length compositions for more species



FISHstory Scanning Events

- Goal: Collect historic fishing photos from across the South Atlantic region from the 1940s – 1980s for the FISHstory project
- Host in collaboration with upcoming Council & Advisory Panel meetings
  - In-person Mackerel Cobia AP meeting
  - In-person Dolphin Wahoo AP meeting
  - In-person Fall Snapper Grouper AP meeting
  - September & December Council meetings

FISHstory Scanning Events

- Bring hard copy photos or digital photos to the event
- Scan hard copy photos
- Save digital photos
- Collect photo details
- Share digital copies of photos with provider

FISHstory: Photos for Analyses

Photo Description	Good	Better
Photo Type	Picture taken at the end of a trip displaying harvested catch with anglers	Fish hanging on leaderboard
Photo Date	Year	Month & Day
Photo Location	State	City & Dock
Photo Background	Photo provider name & contact	Vessel name & captain name

PC: Rusty Hudson

Good
Picture taken at end of trip displaying harvest with anglers
Year
State
Photo provider name & contact

Better
Fish hanging on leaderboard
Month
City & dock
Vessel name & captain name

PC: Outer Banks History Museum, Aycock Brown

Good
Picture taken at end of trip displaying harvest with anglers
Year
State
Photo provider name & contact

Better
Fish hanging on leaderboard
Month
City & dock
Vessel name & captain name

PC: Judy Helmey

Good
Picture taken at end of trip displaying harvest with anglers
Year
State
Photo provider name & contact

Better
Fish hanging on leaderboard
Month
City & dock
Vessel name & captain name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Initial Program Evaluation Plan

- Gather baseline data on knowledge, attitudes, collaborations, engagement, and trust levels of various stakeholders in three stages:

Interviews	→	Complete: 6 fishermen, 6 scientists, 6 managers
Gather information from broader group	→	Online survey – scientists & managers More interviews - fishermen
Implement & analyze results		

Keep Up with Projects & the Program!

http://safmc.net/citizen-science-program/

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