Citizen Science Program Update

Snapper Grouper AP

October 2022

Program Activities

- New CitSci Project Coordinator: Meg Withers
- SMILE Project
- Dolphin Stakeholder Workshops
- CitSci Initial Program: Evaluation Interviews
- SAFMC Release
- FISHstory pilot project

PC: REEF & Daryl Duda

SMILE Pilot Project

- Partners: REEF, SECOORA, UCSD Engineers for Exploration & SAFMC
- Partnering with recreational divers to collect length information on data limited species

PC: Troy Frady

Dolphin Stakeholder Workshops

Focus on gathering information on preferences, priorities & concerns with dolphin fishery to evaluate future management strategies

- Week of October 4th, 2020: South Florida
- Week of October 31st, 2022: Rhode Island & New York
- Week of January 23rd, 2022: South Carolina, North Carolina & Virginia

NOAA FISHERIES

South Atlantic Fishery Management Council
"To Conserve and Manage"

Citizen Science

Initial Program Evaluation Plan

Rick Bonney
Cornell Lab of Ornithology

Initial Program Evaluation Plan

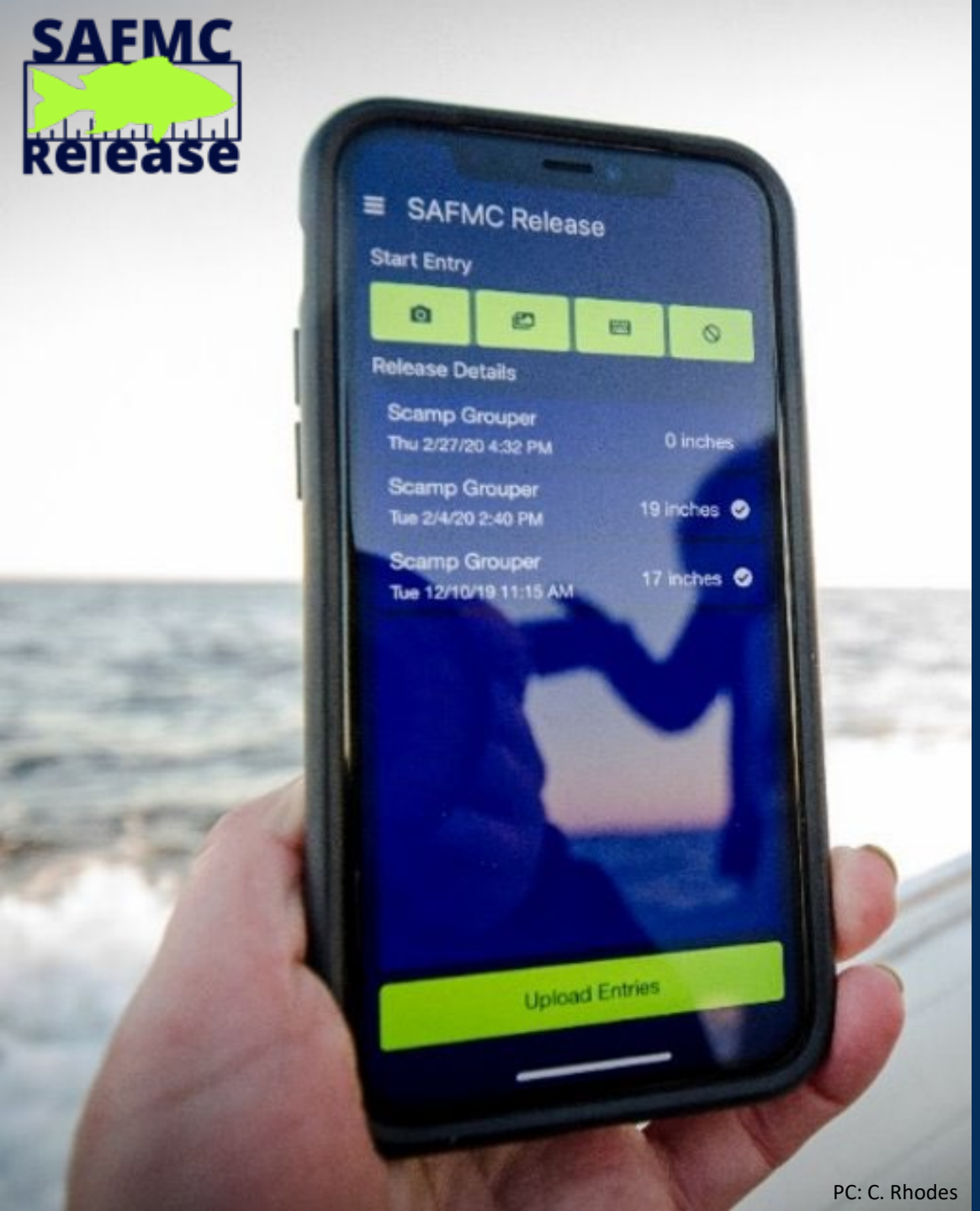
- Gather baseline data on knowledge, attitudes, collaborations, engagement, and trust levels of various stakeholders in three stages:

Interviews → Complete: 6 fishermen, 6 scientists, 6 managers

Develop online survey → Beginning to draft survey questions

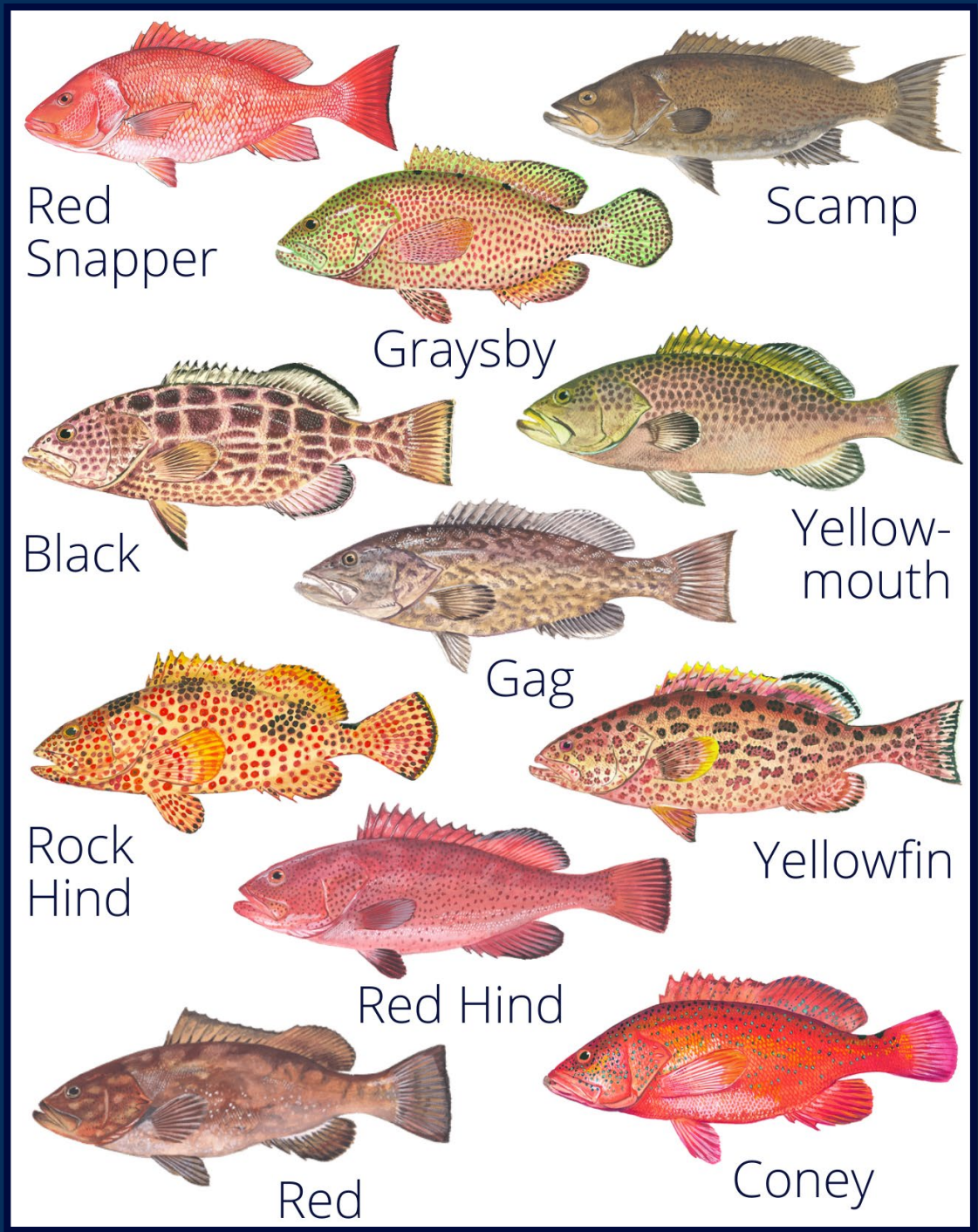
Implement & analyze survey

Interview results available → https://safmc.net/documents/2022/05/citsci_a1_safmc_stakeholderassessment1.pdf/



PC: C. Rhodes

SAFMC Release



Updates

- Added Red Snapper in April 2022
- Volunteers are logging shallow water grouper & Red Snapper data in SciFish app
- Outreach, recruitment, and retention push

Outreach Strategies

Partnerships

- Best Fishing Practices
- NCDMF: mailing to licensed recreational saltwater anglers & laminated flyers at boat landings
- SCDNR: Governor's Cup & Charter Summits

Seminars & Conferences

- Haddrell's in Charleston, SC
- ICAST in Orlando, FL

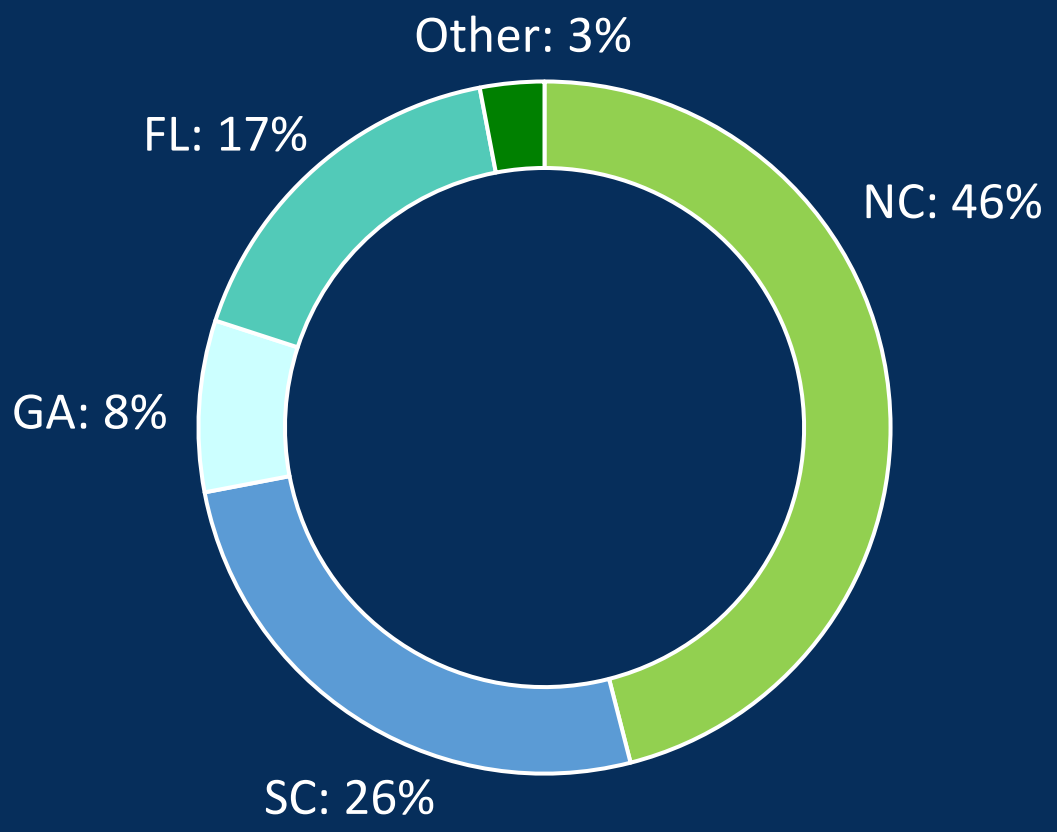
Tackle shop visits

SAFMC Release newsletter

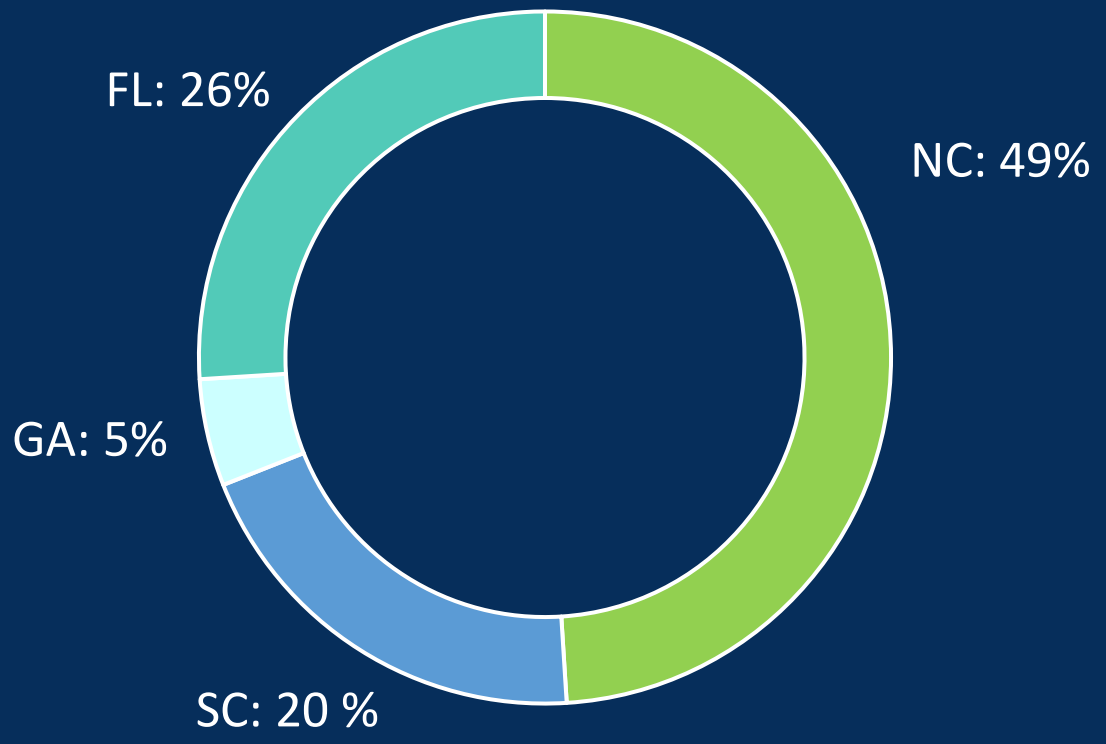
Social media

SAFMC Release Accounts

Percentage of sign ups by state



Percentage of releases logged by state



Percent of Releases Logged by Species

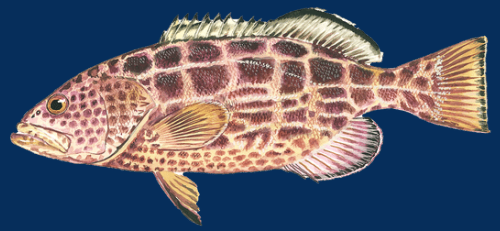
Gag 49%

Red Snapper 21 %

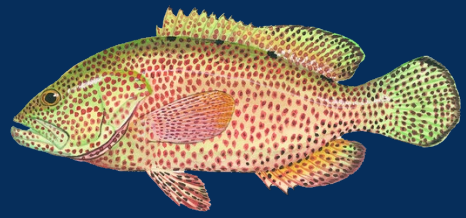
Scamp 14%

Red 9%

Rock Hind 3%



Black Grouper 2%



Graysby 2%

Citizen Science

FISHstory

FISHstory
A SAFMC CitSci Project

FISHstory wouldn't be possible without so many amazing partners & volunteers!

- Rusty Hudson, Ken Brennan, Amber Von Harten & Allie Iberle
- FISHstory Design & Validation Teams
- FISHstory Length Analysts
- FISHstory Zooniverse Volunteers
- Outreach Partners
- Many Council Staff
- NOAA Fisheries - Fisheries Information System Program

FISHstory Project Components

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

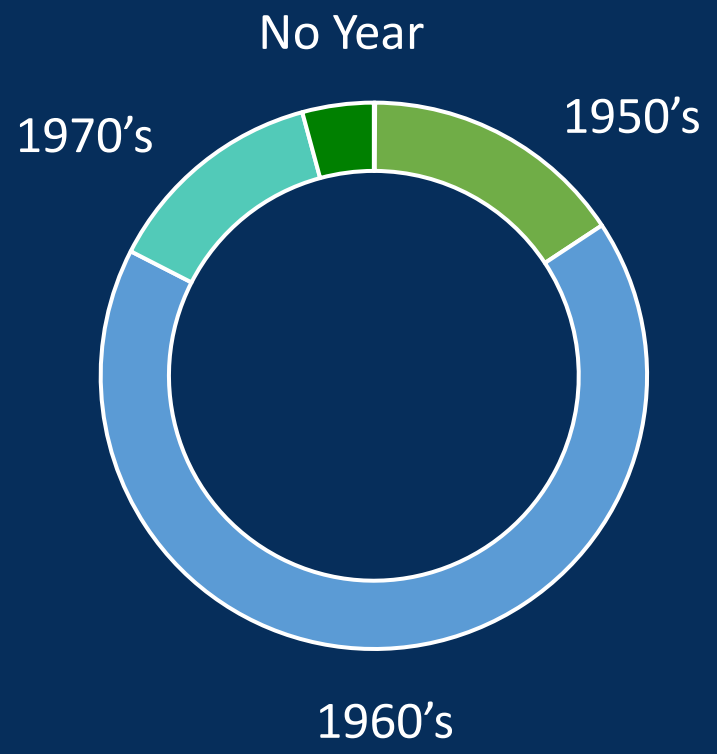
For-hire catch composition in Zooniverse → Over 2,120 volunteers made 35,740 classifications
Validation Team reviewed 180 photos

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

Historical Photo Overview

Percentage of photos by decade

Photo range: 1949 - 1975



Percentage of photos by month

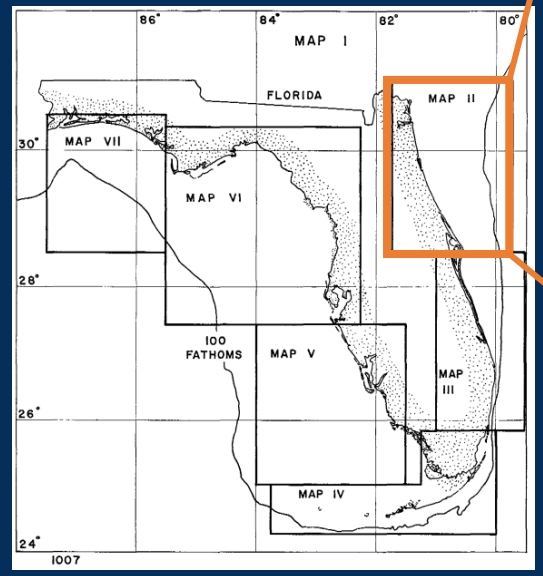
Historical Photo Overview

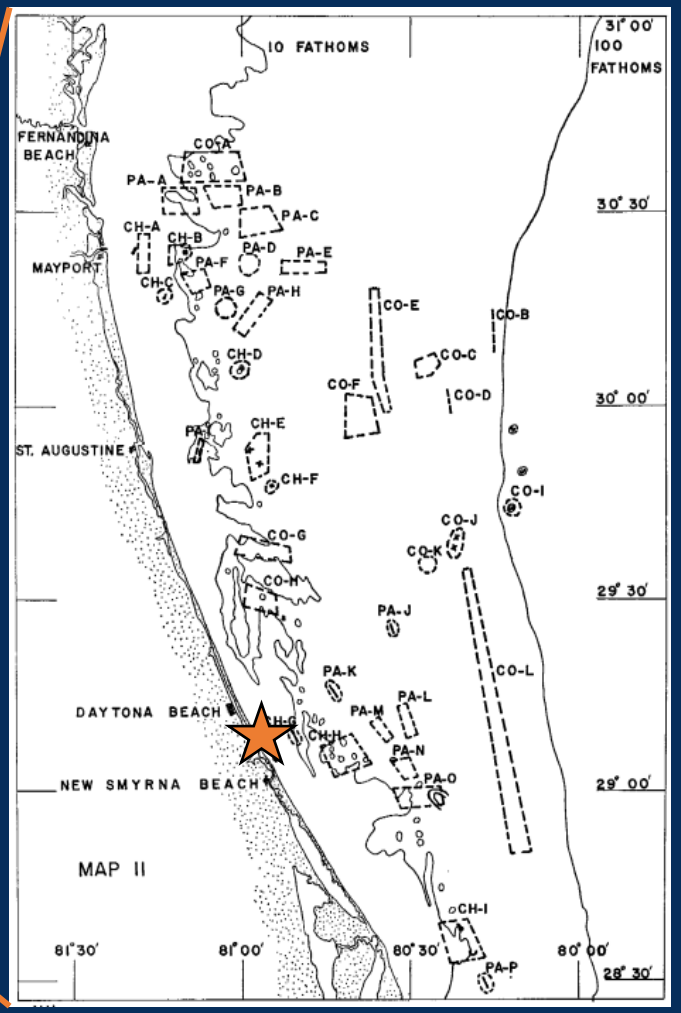
Photo Location:

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

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

For-Hire Catch: Process

Pre-launch

BUILD PROJECT IN ZOONIVERSE

DEVELOP TRAINING MATERIALS

RECRUIT & TRAIN VALIDATION TEAM MEMBERS

BETA TEST IN ZOONIVERSE & ADJUST

Post-launch

BATCH & ADD PHOTOS

IDENTIFY PHOTOS FOR & COORDINATE VALIDATION TEAM REVIEW

VOLUNTEER OUTREACH & ENGAGEMENT

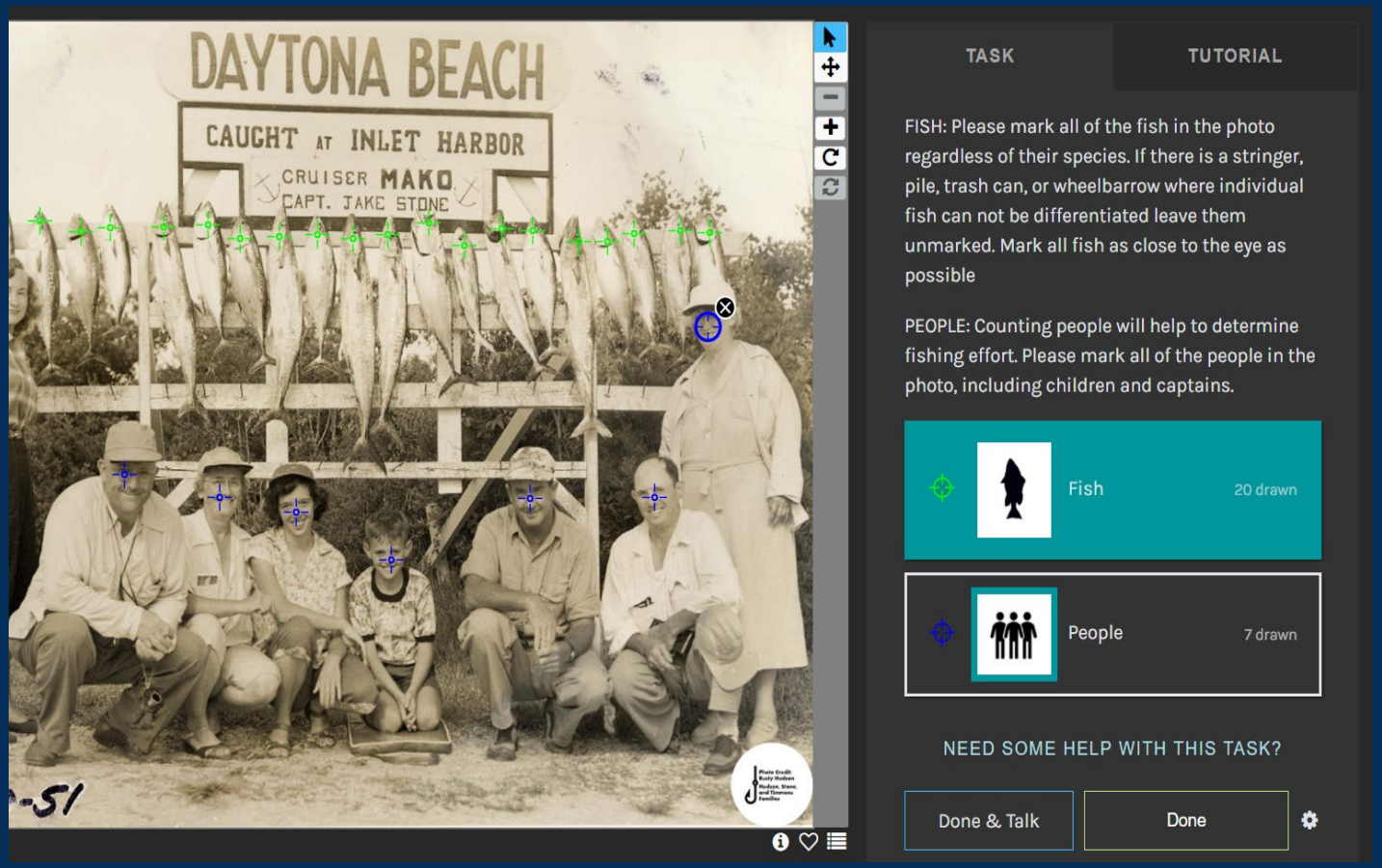
DATA ANALYSIS

SHARE RESULTS

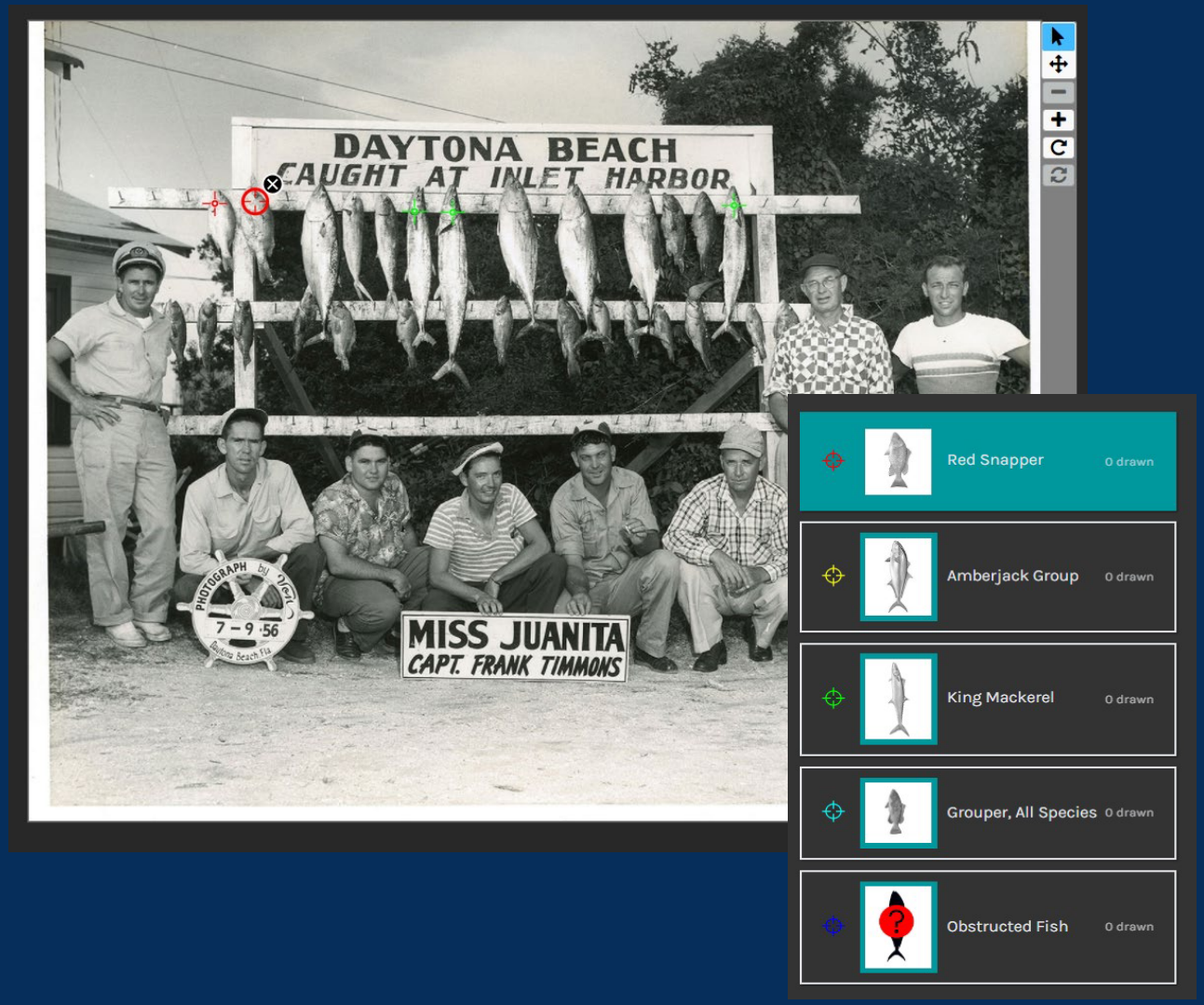
Zooniverse Workflows

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



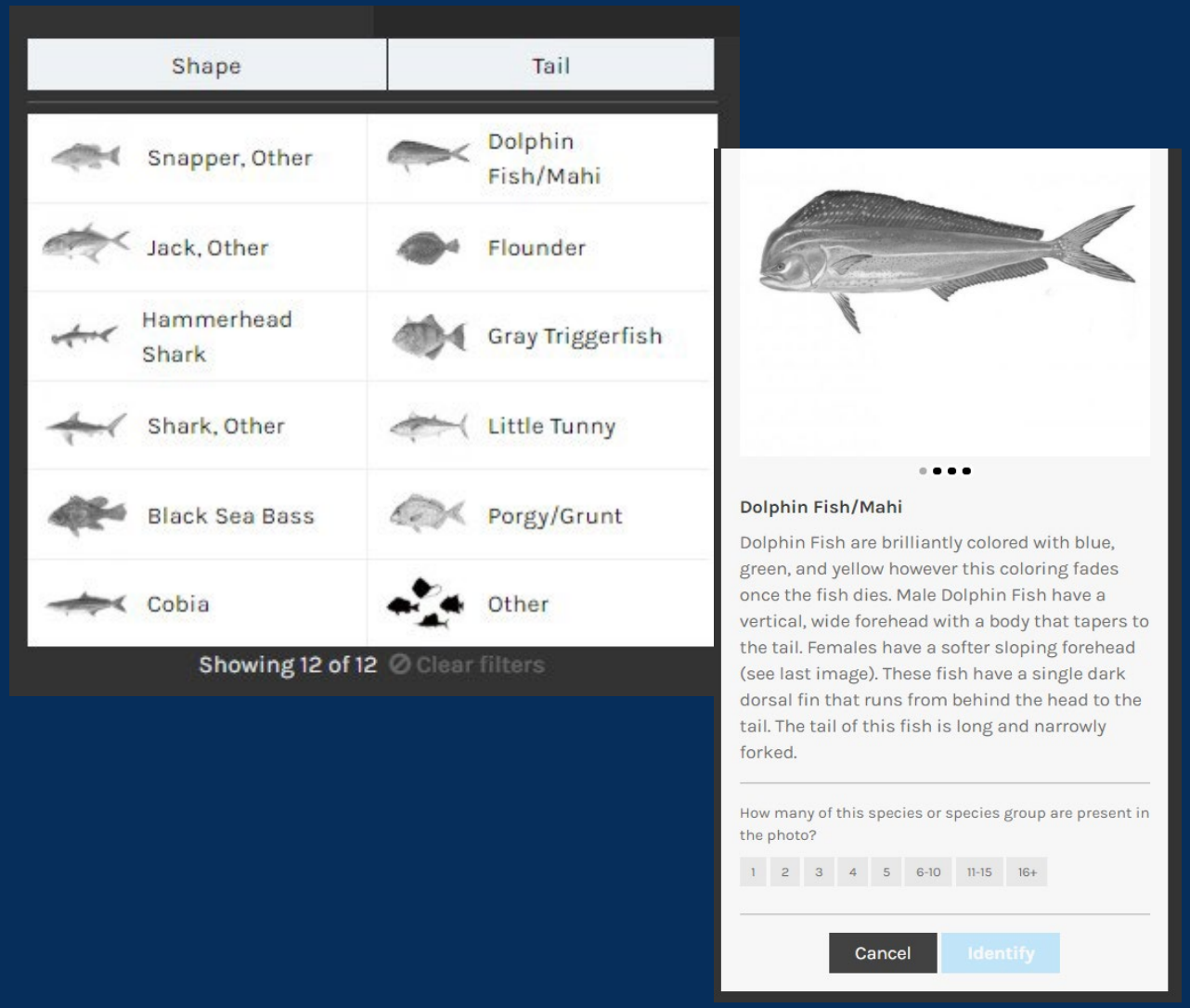
Zooniverse Workflows



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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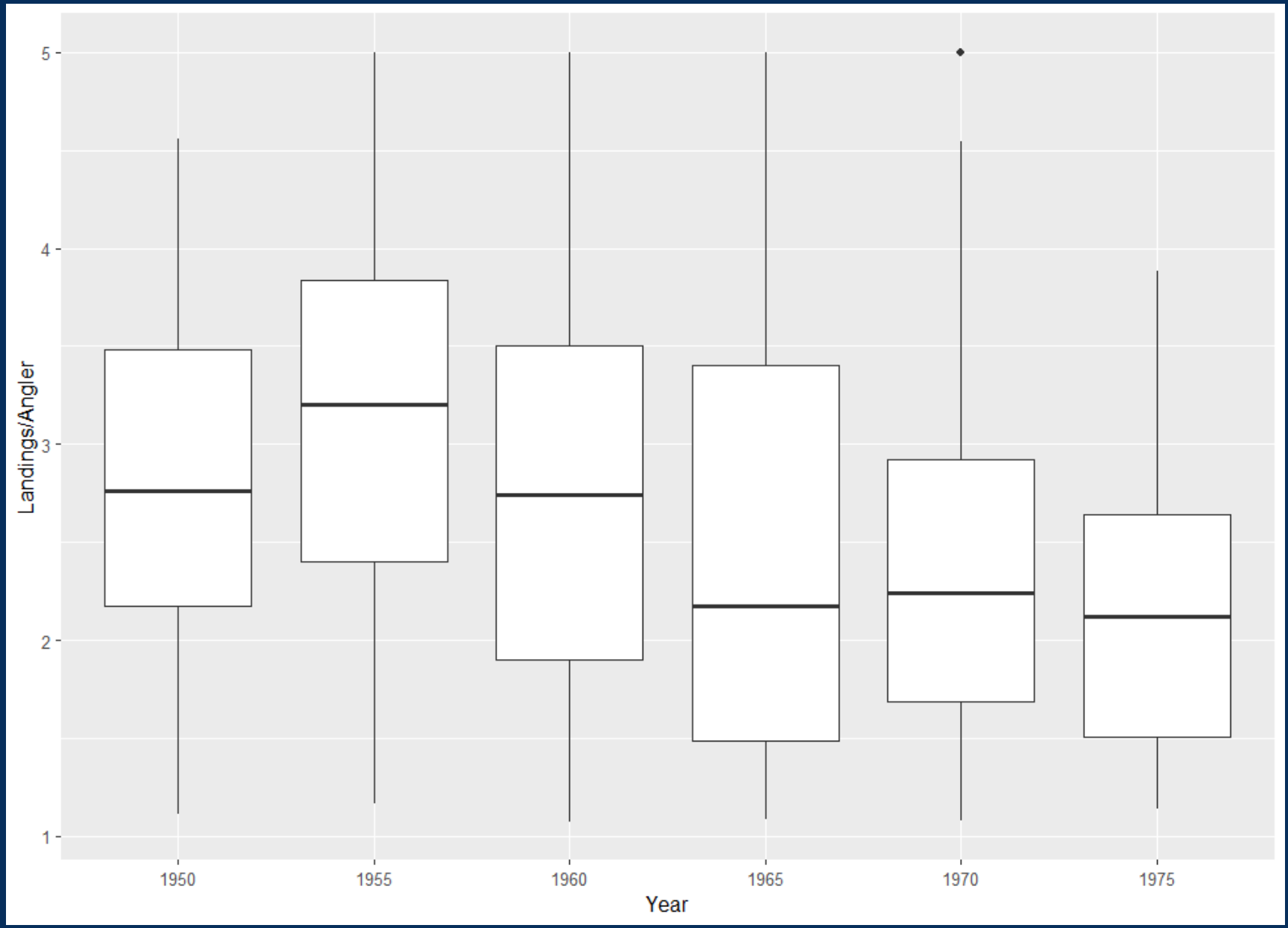
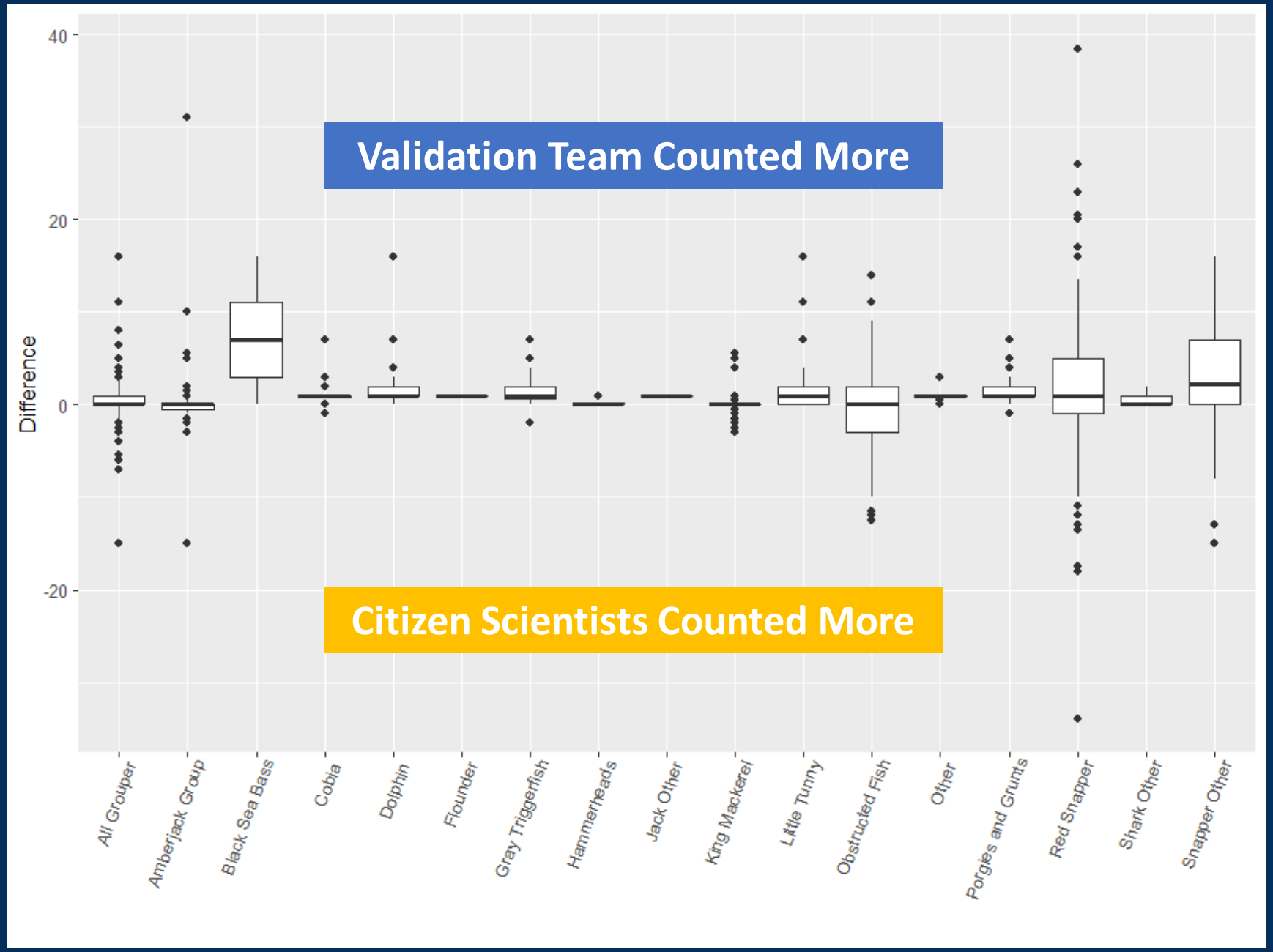
Total landings per angler in 5-year time blocks



Comparison of Validation Team & Citizen Scientists



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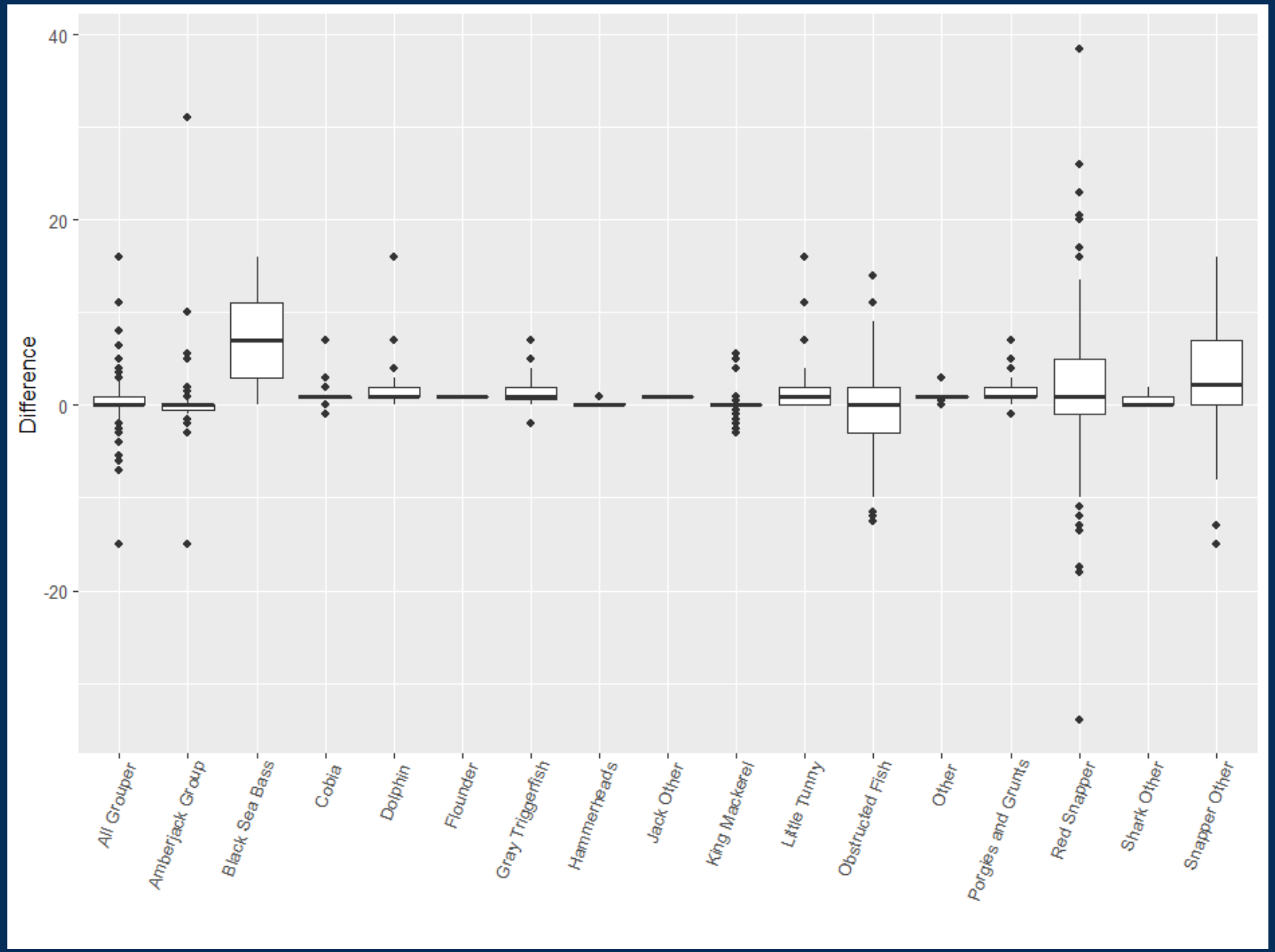

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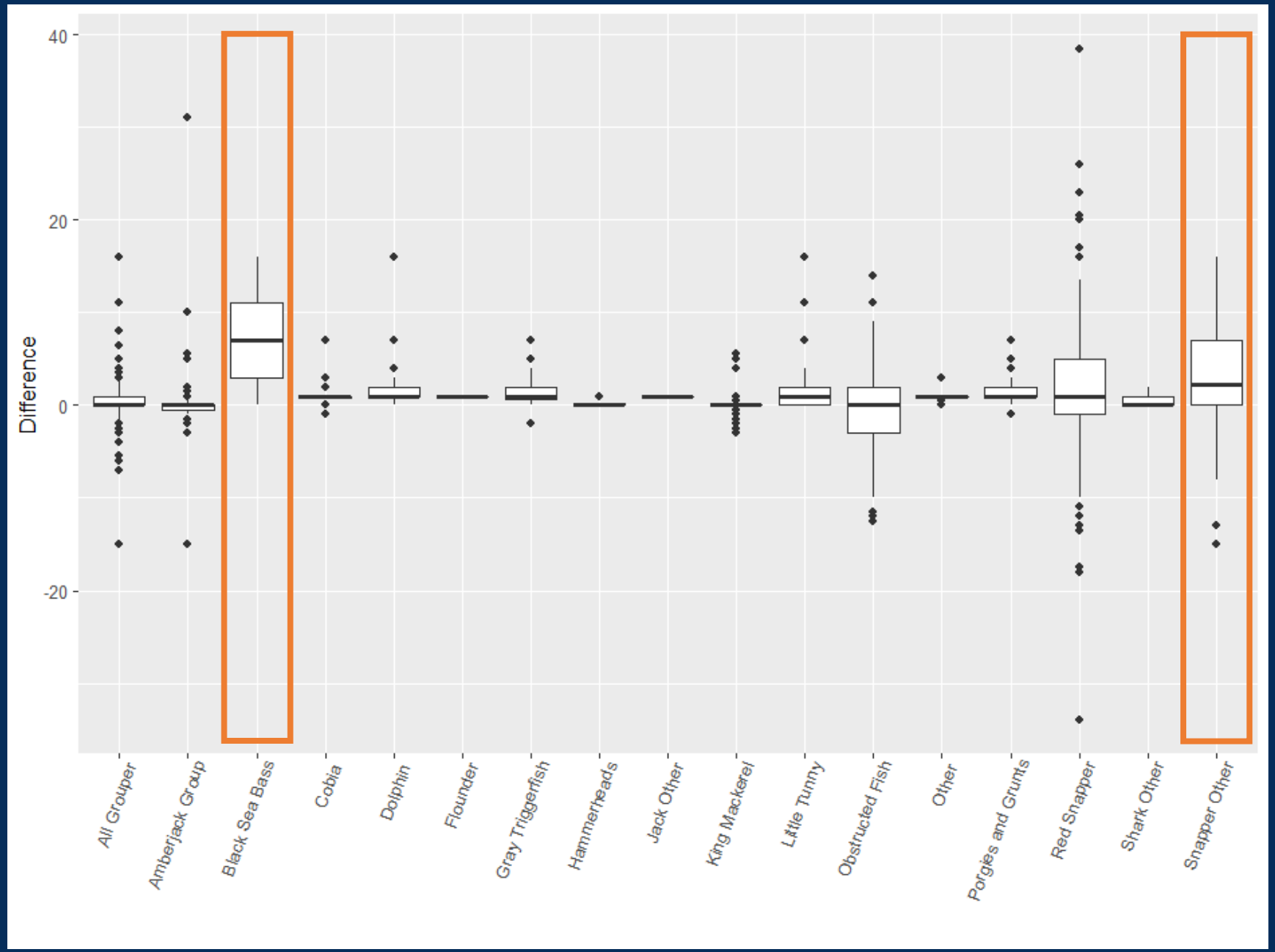

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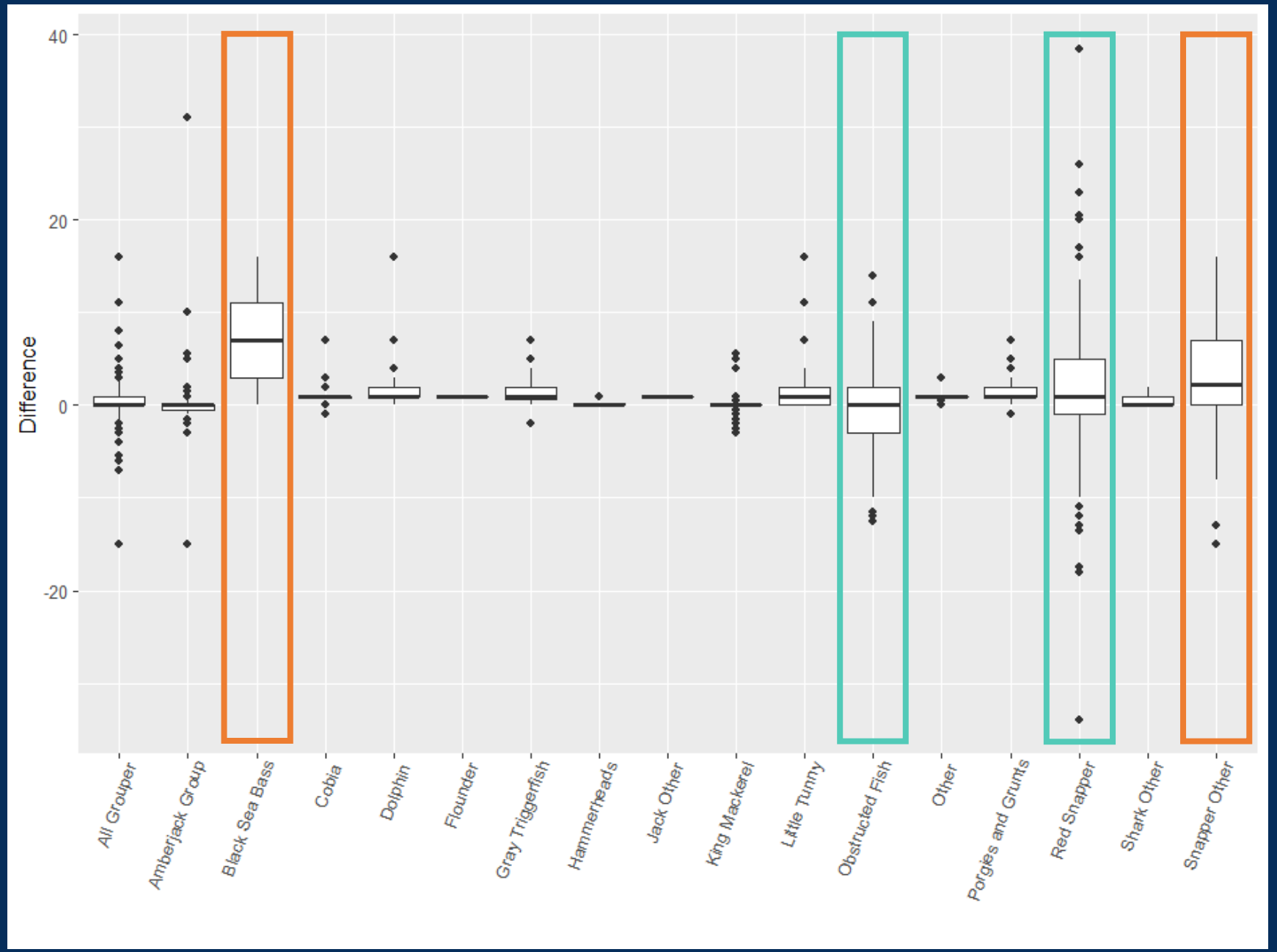

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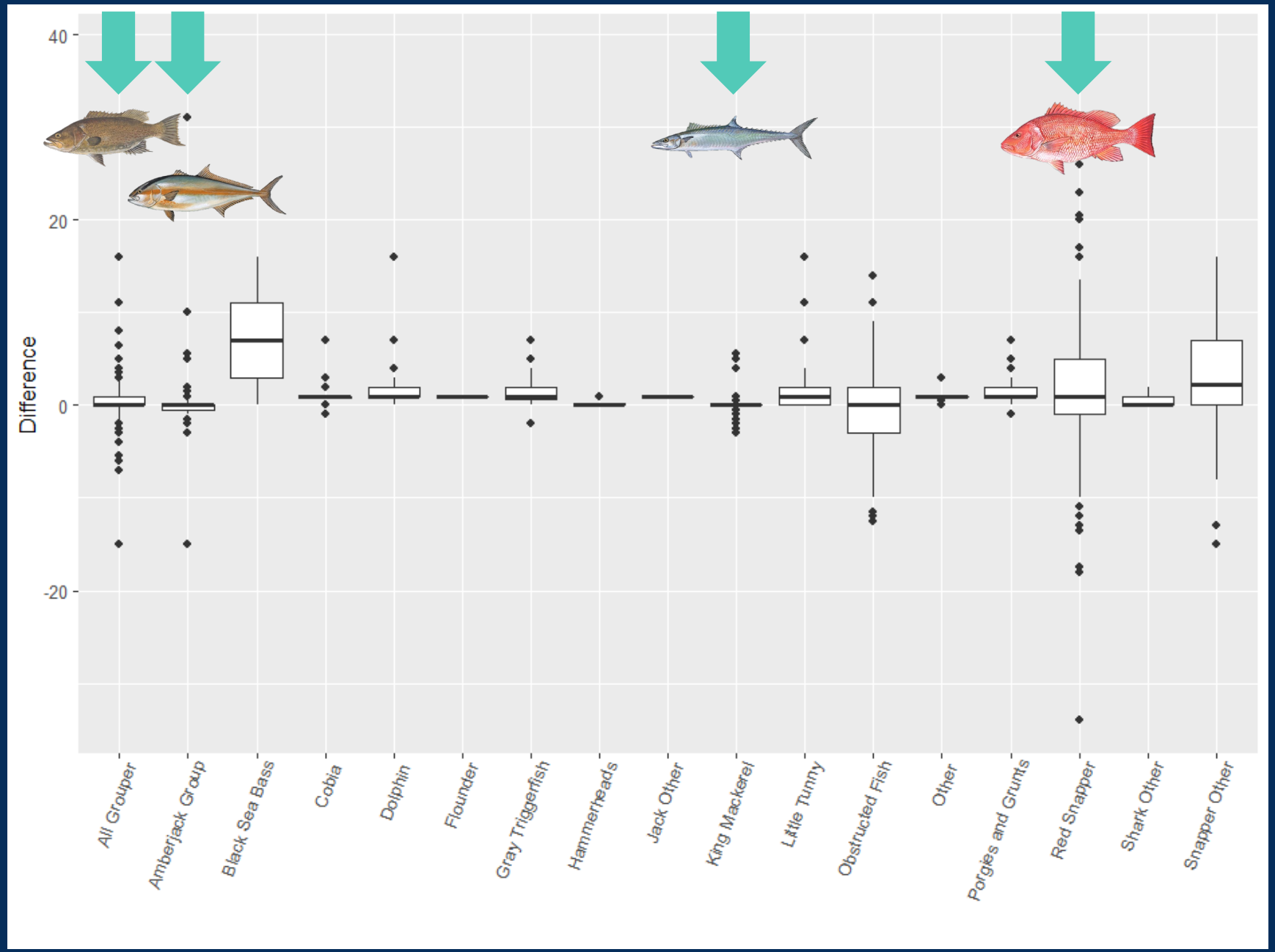
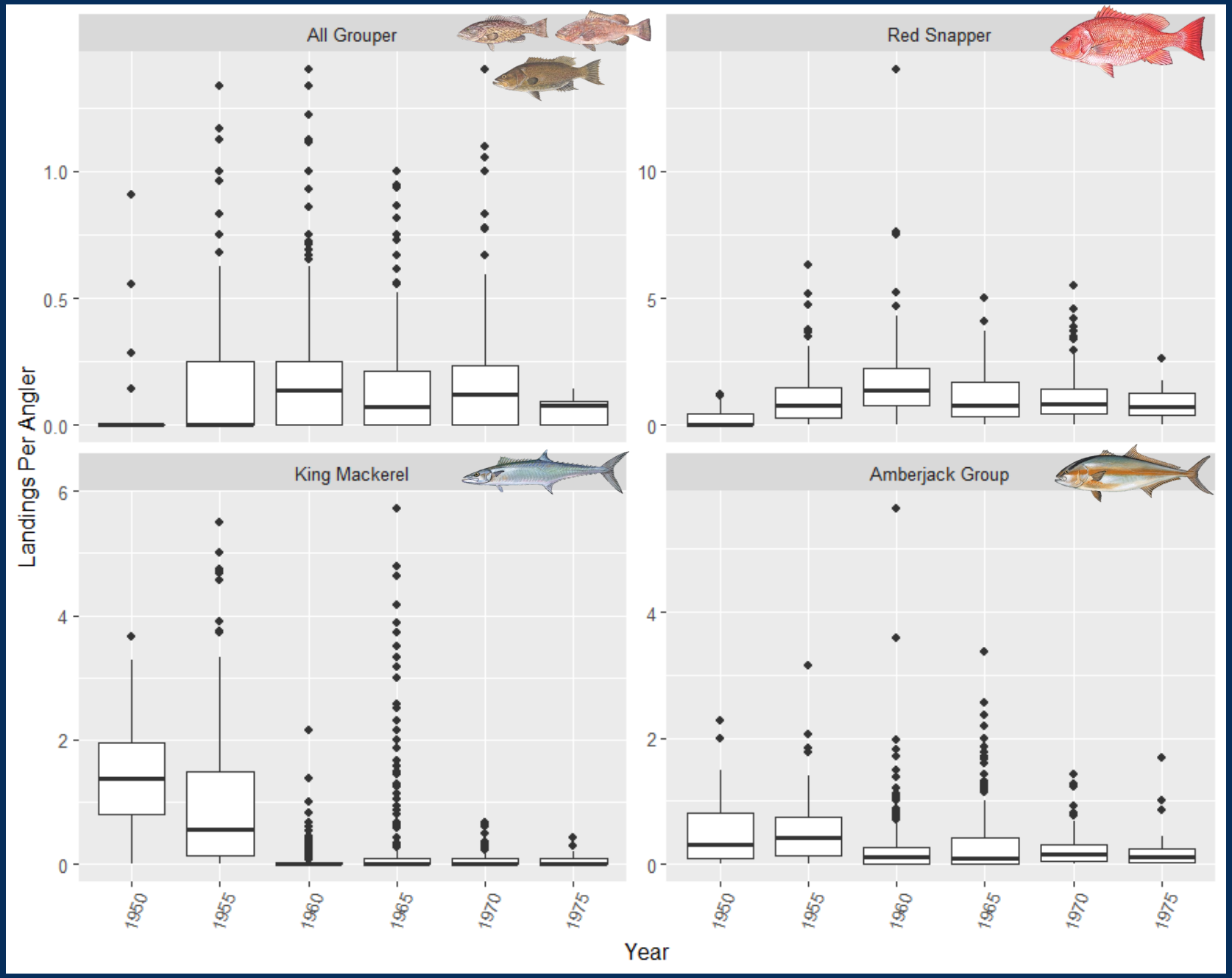
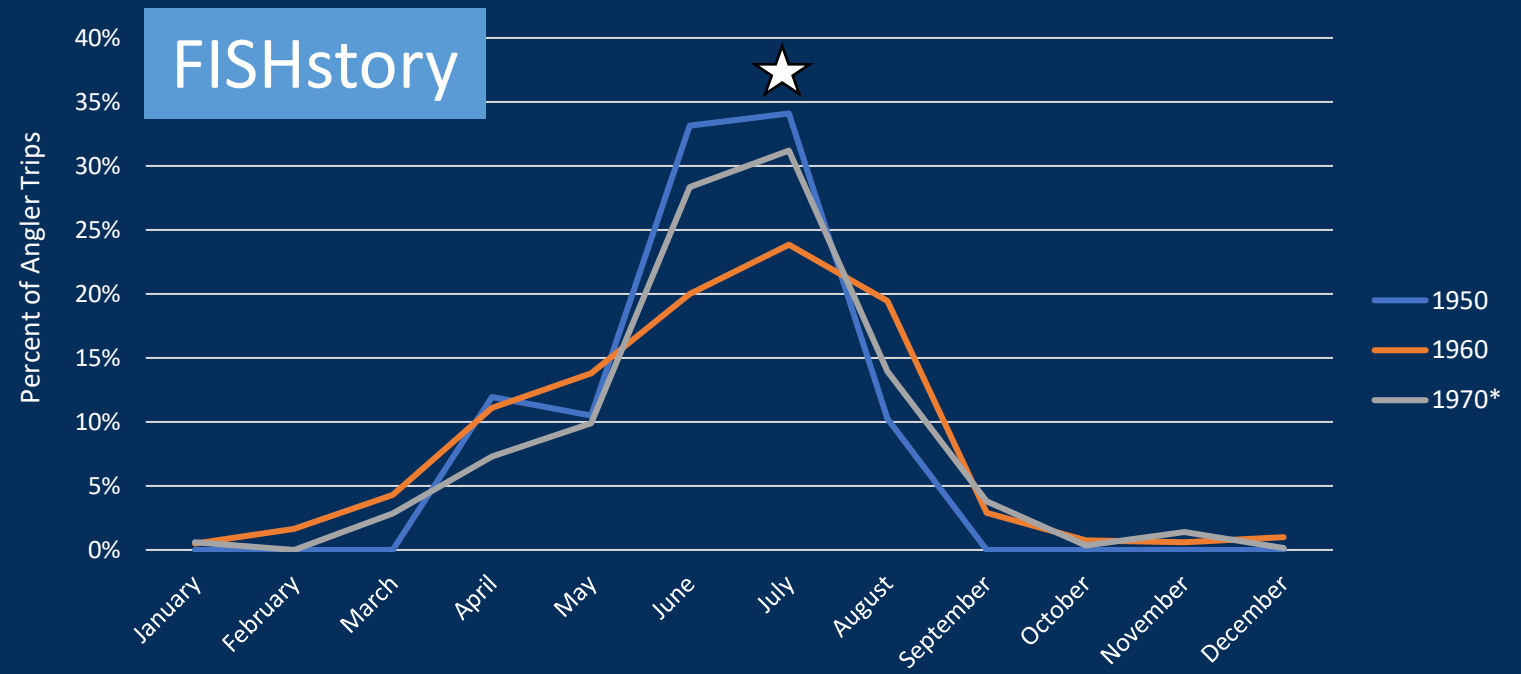
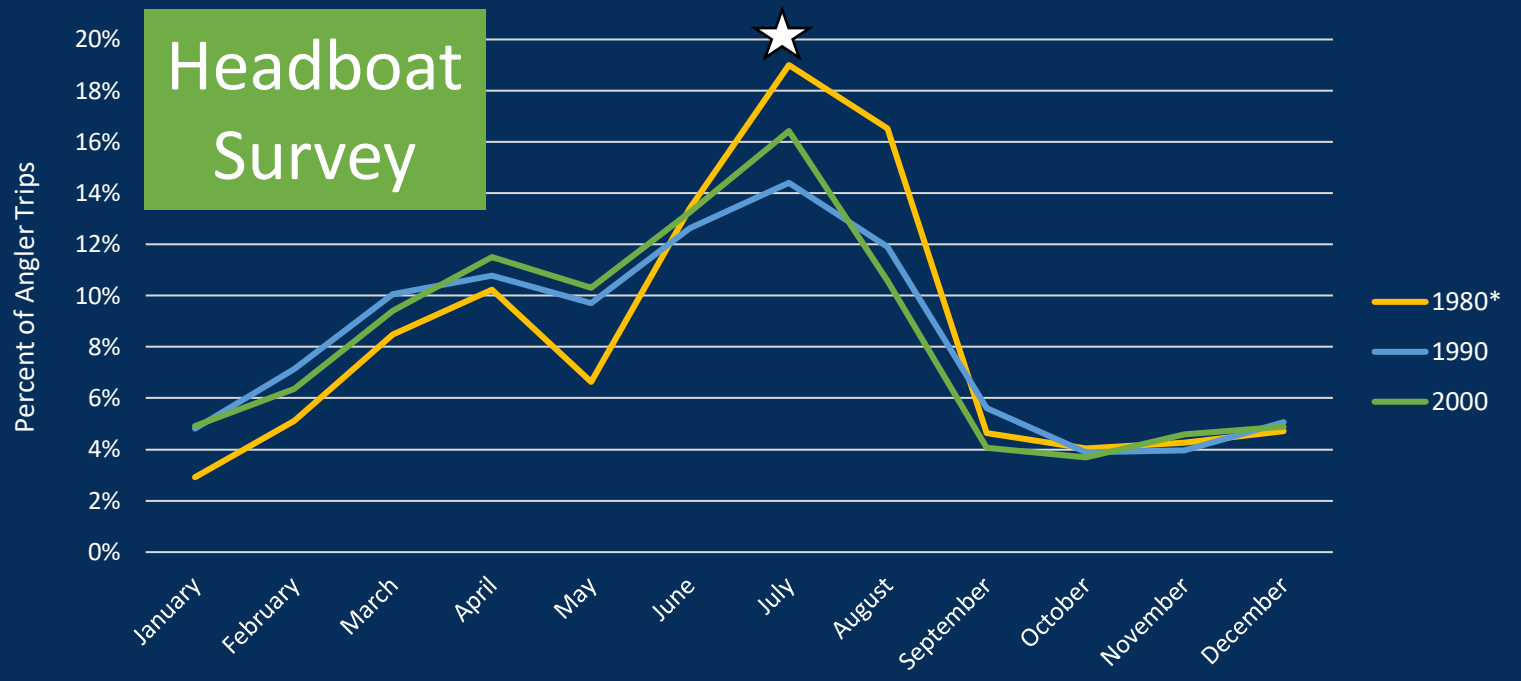


Landings per angler for mark species in 5-year time blocks



Comparison of angler trips between FISHstory & Headboat Survey by decade





Comparison of mark species between FISHstory & Headboat Survey

	FISHstory			Headboat Survey		
Species Groups	**1950**	**1960**	**1970**	**1980**	**1990**	**2000**
All Grouper	**4**	**3**	**3**	**3**	**2**	**1**
Amberjack Group	**3**	**2**	**2**	**2**	**3**	**3**
King Mackerel	**1**	**4**	**4**	**4**	**4**	**4**
Red Snapper	**2**	**1**	**1**	**1**	**1**	**2**

FISHstory: Length Component

- Method developed to measure fish length

Identify scalar & develop protocol

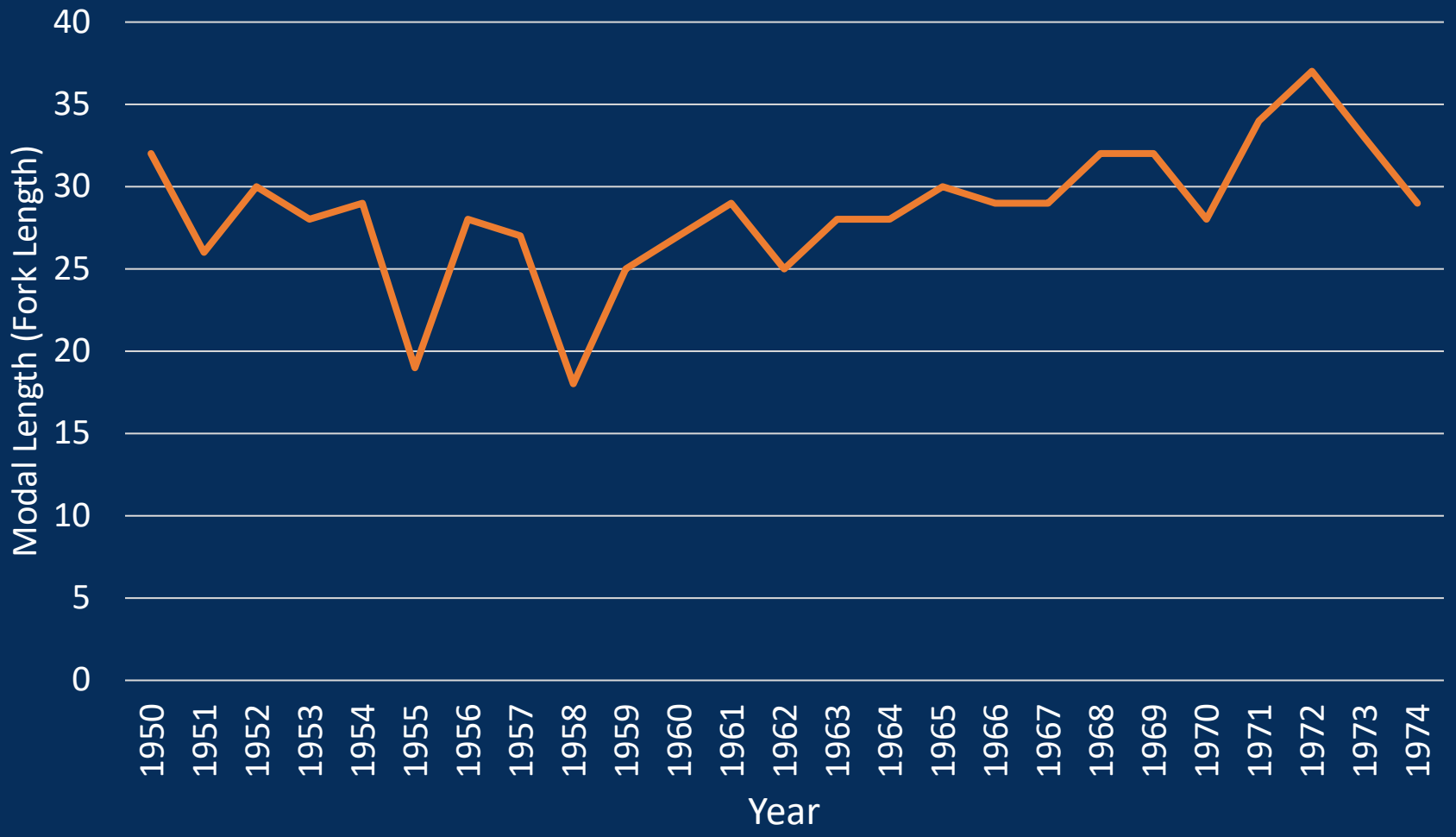
Test protocol

Train length analysts

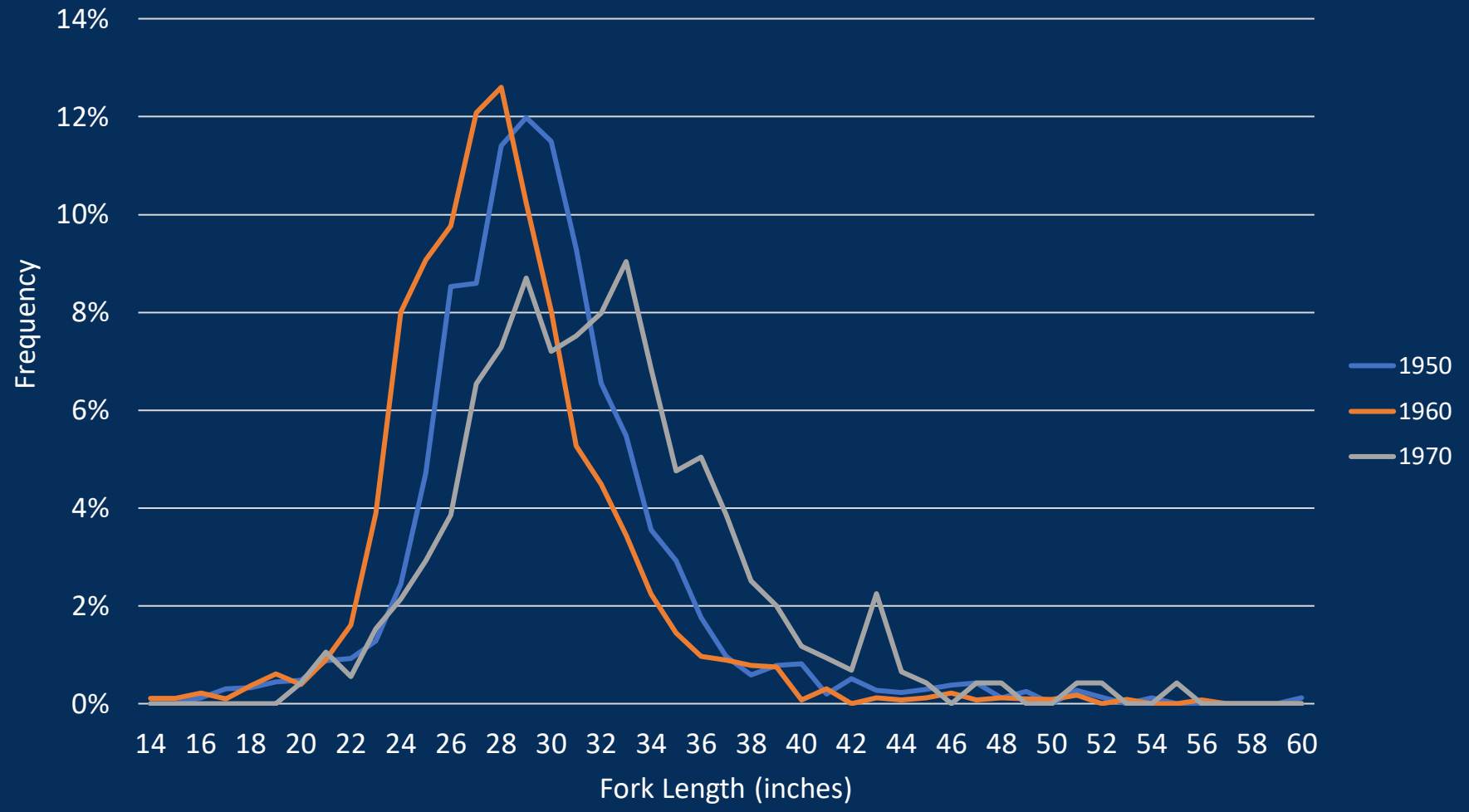
Coordinate & measure King Mackerel

Share Results

King Mackerel modal length by year



FISHstory 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
- Citizen science is not a no cost endeavor
- 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**

Pursue funding to grow project

Expand geographic & temporal range of photos

Improve efficiency of processes

Estimate length compositions for more species

Explore oral history component

Keep Up with Projects & the Program!

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

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