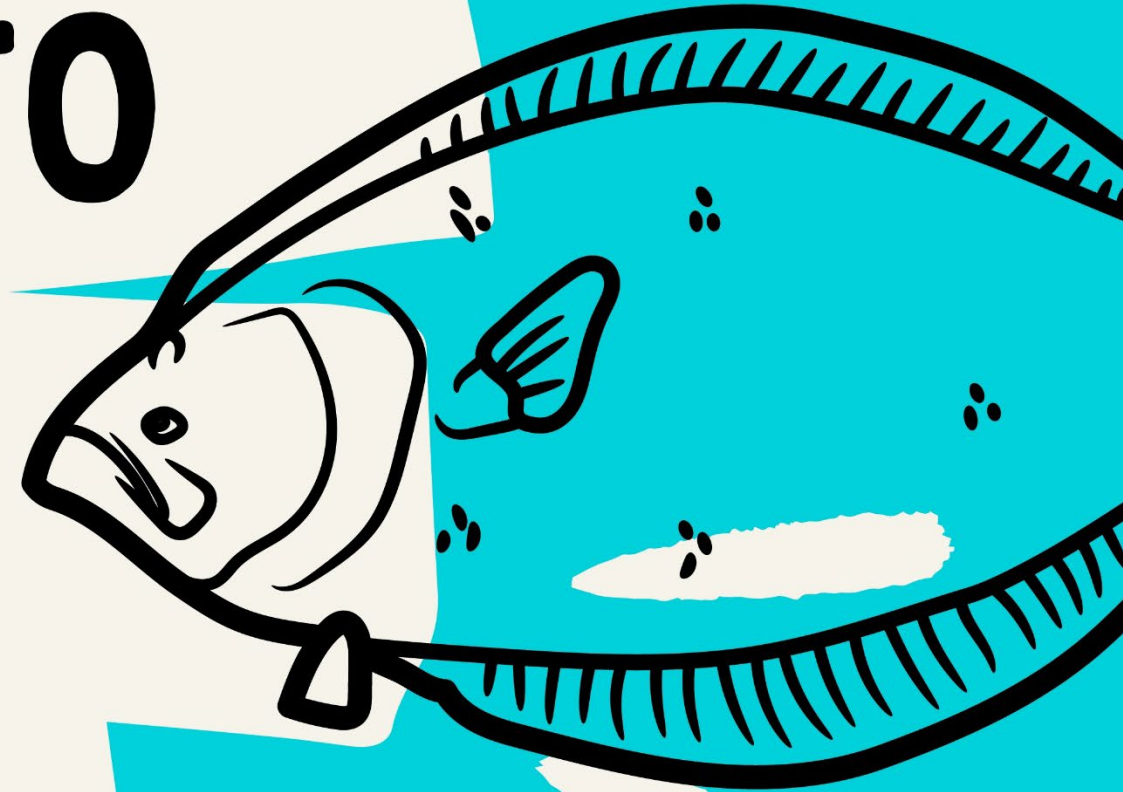




**TAGGING  
INTO**

**CITIZEN  
SCIENCE**





March 20, 2024

# Multi-Species Tagging Program

*North Carolina Division of Marine Fisheries*



# *What fish do we tag?*



**Striped Bass**



**Southern Flounder**



**Red Drum**



**Spotted Seatrout**



**Cobia**



# *What is citizen science?*



**“the collection and analysis of data relating to the natural world by members of the general public, typically as part of a collaborative project with professional scientists.”**

*-Oxford Languages*

**“Citizen science is science for everyone!”**

*-U.S. National Park Service*



# *Why do we tag fish?*

**Tagging studies play a vital role in assessing fish populations by providing information about:**

- migration patterns
- habitat use
- stock delineation
- population structure
- growth rates
- mortality rates (natural and fishing)



**Tagging techniques include the use of conventional, acoustic, and satellite tags.**



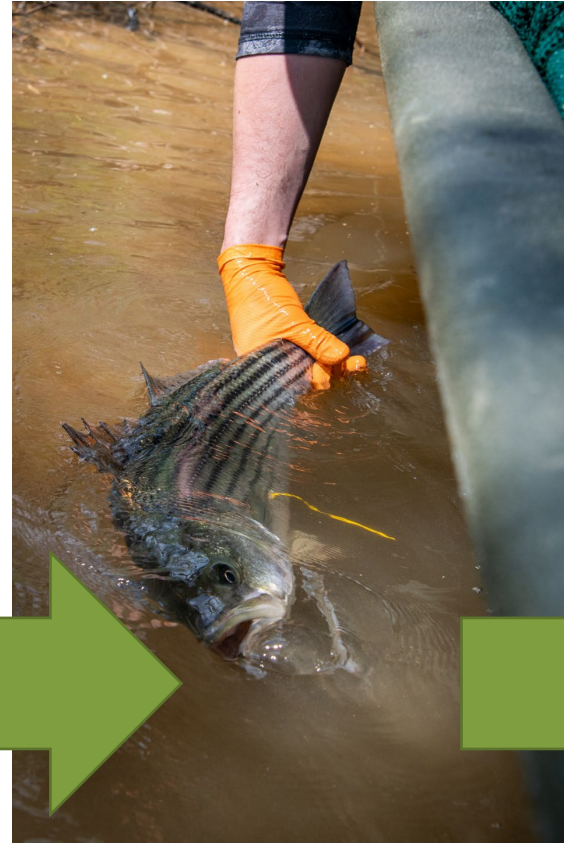
# *What is mark-and-recapture?*



*Capture*



*Mark*



*Release*



*Recapture*

# *How can citizen scientist play a role?*



***Capture***



***Mark***



***Release***



***Recapture***

# *How do I become a volunteer tagger?*

## **Complete the online application**

## **Attend an in-person volunteer tagger training**

- Overview of the Tagging Program
- Review of tagging procedures and data collection
- Hands-on tagging demonstration and practice with real fish
- One-on-one time with biologists

**If there is need in the area where you fish, then you will receive a tagging kit and start tagging!**





# *When are volunteer tagger trainings?*



## **Training 1 - Thursday, April 11<sup>th</sup>**

- NCDMF Wilmington Regional Office
- 6pm-9pm

## **Training 2 - Thursday, April 18<sup>th</sup>**

- NCDMF Central District Office
- 6pm-9pm

## **Training 3 - Saturday, April 27<sup>th</sup>**

- NCDMF Washington Regional Office
- 9am-12pm



# *How are Southern Flounder tagged?*

**During cooler months, September through May**

## **Floy FT-4 spaghetti tie loop tag**

- 11-inch minimum size
- Red and yellow tags
- Yellow tags can be doubled
- Tag numbers start with “N”
  - Ex. N03441



Floy FT-4 Applicators



Floy FT-4, ~12 inches long



# *Southern Flounder Tags*



**Single Low Reward**



**Single High Reward**



**Double Low Reward**



# *What do the tag colors mean?*

**North Carolina uses two main tag colors for all species and the color determines the reward the angler receives:**

**YELLOW**

= Low reward (hat, towel, fish pin)

**RED**

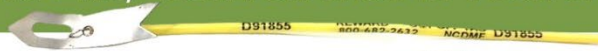
= High reward (\$100)

Using two different reward amounts allows us to assess tag reporting rates by anglers. Double tagging allows us to assess tag retention rates.



# \$100 REWARD

ANGLERS, LOOK FOR TAGS IN YOUR CATCH



RED DRUM



STRIPED BASS



SOUTHERN FLOUNDER



SPOTTED SEATROUT



COBIA



## REWARDS FOR TAG & FISH RECAPTURE INFORMATION

Check both sides of your fish. Some fish may have two tags.

To receive a reward you must report the tag number(s), fish species, date, location, gear, length, and fate of fish.

Yellow tag rewards include a hat, towel, fish pin or \$5.

Red tags are worth a \$100 reward and the tag must be cut off and mailed to:

N.C. Division of Marine Fisheries  
Attn: Tagging Program  
P.O. Box 769  
Morehead City, N.C. 28557

📞 1-800-682-2632

## REPORT YOUR TAGGED FISH



**Catch**

**Cut**

**Report**



# *Report your tagged fish!*

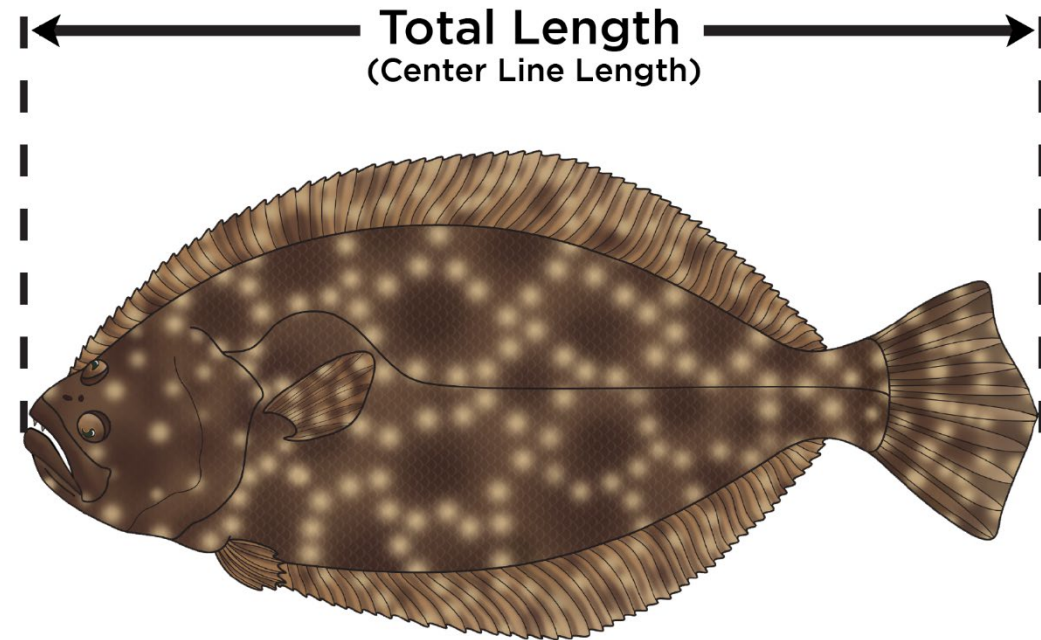
If you **CATCH** a tagged fish,  
**CUT** off the tag and **REPORT**  
the tag to **1-800-682-2632**.

**REWARDS** for tag information  
include program hats, towels  
& even up to **\$100**.



# *What information do I report?*

1. **Date of capture**
2. **Location of capture**
3. **Tag number**
4. **Species**
5. **Gear used for capture**
6. **Length (TL)**
7. **Fate of fish**

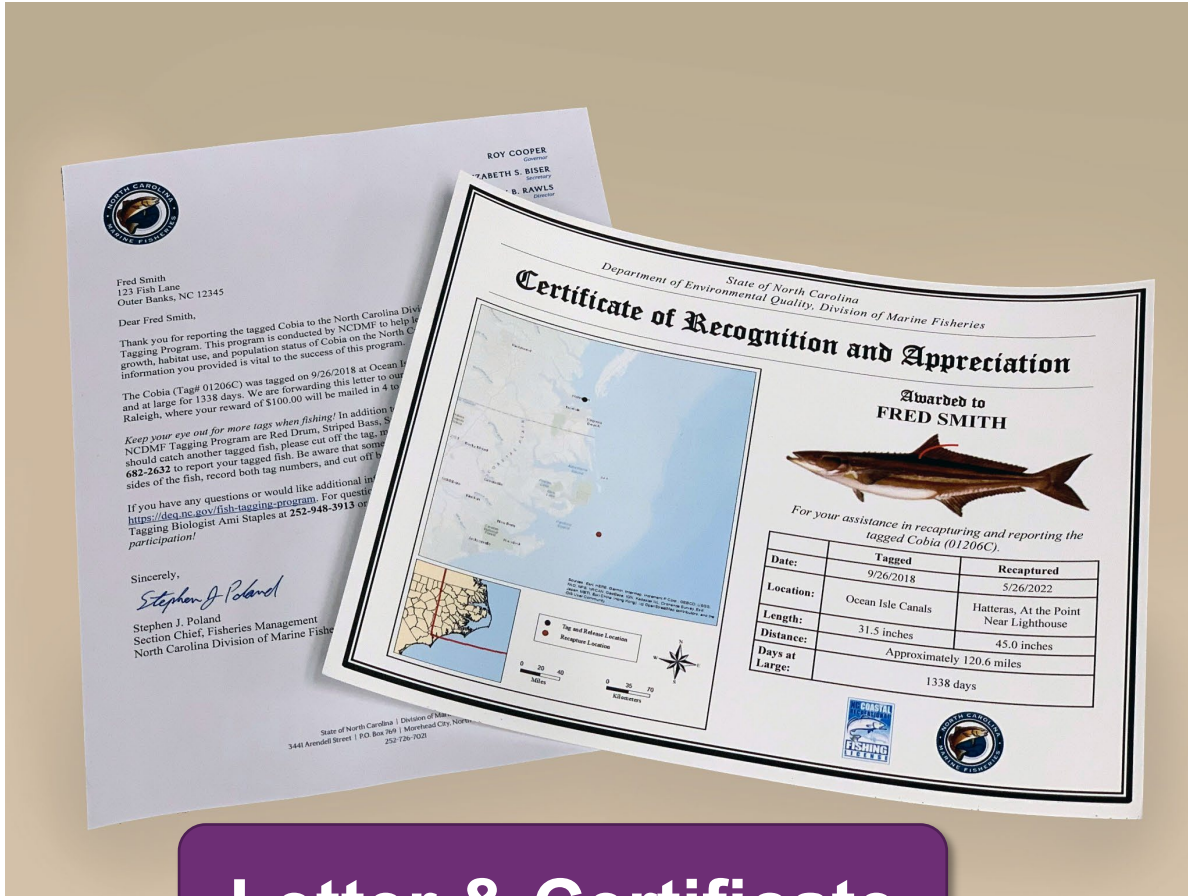


In addition, your contact information will be collected at the reporting time.





# What are in reward packets?



Letter & Certificate



Reward

# *How many Southern Flounder have we tagged?*

## Multi-Species Tagging Program Effort (2014-2022)

Species	Total Fish Tagged (#)	Total Fish Recaptured (#)
Striped Bass	99,386	3,255
Red Drum	12,644	1,416
Spotted Seatrout	12,358	795
Southern Flounder	8,007	551
Cobia*	547	97
Total	132,942	6,114

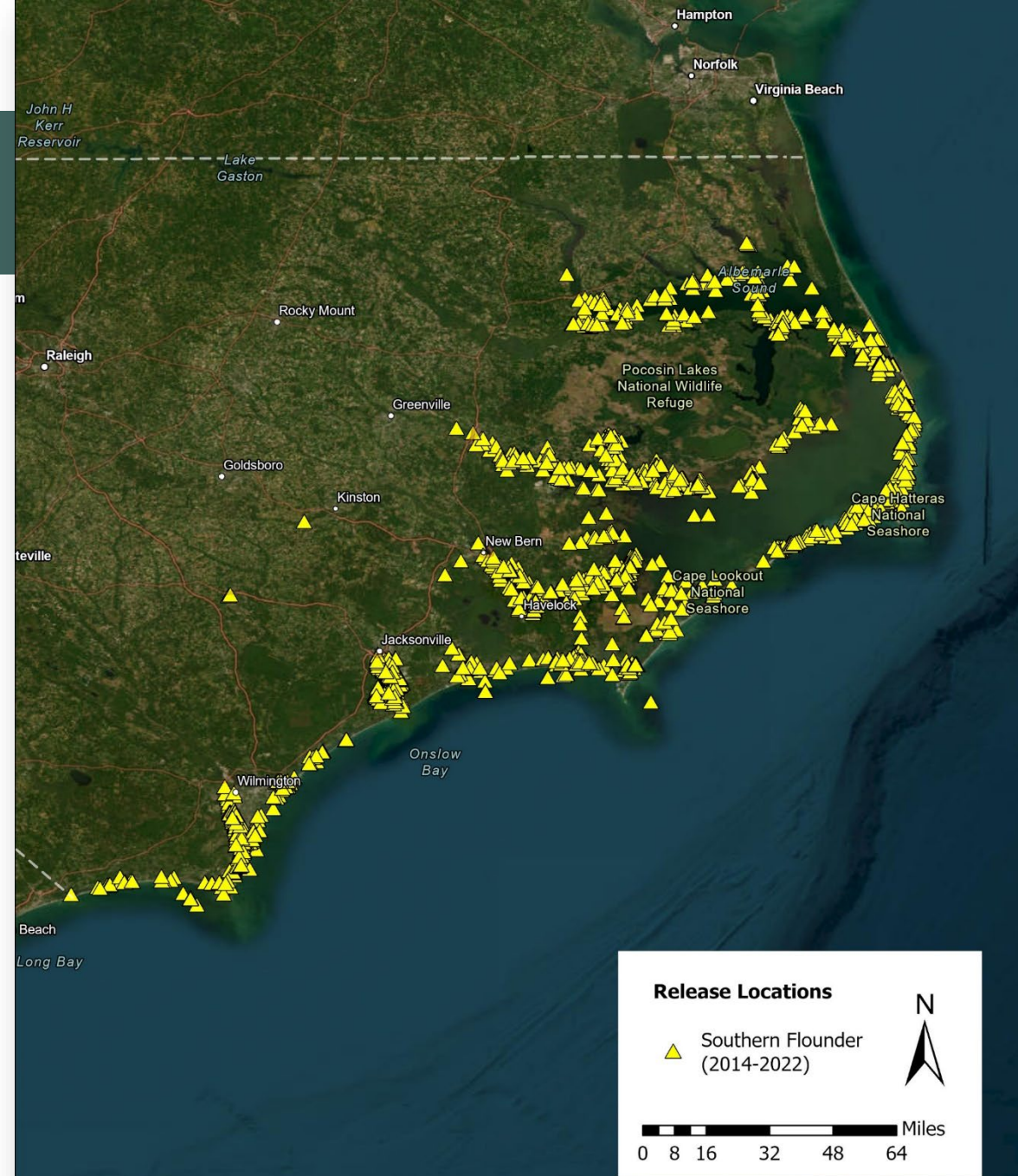
\*Cobia tagging data reported for 2017-2022. Cobia tagging study began in 2017.



# *Southern Flounder Releases*

**8,007**

**total tagged fish**



# *Southern Flounder Recaptures*

**551**

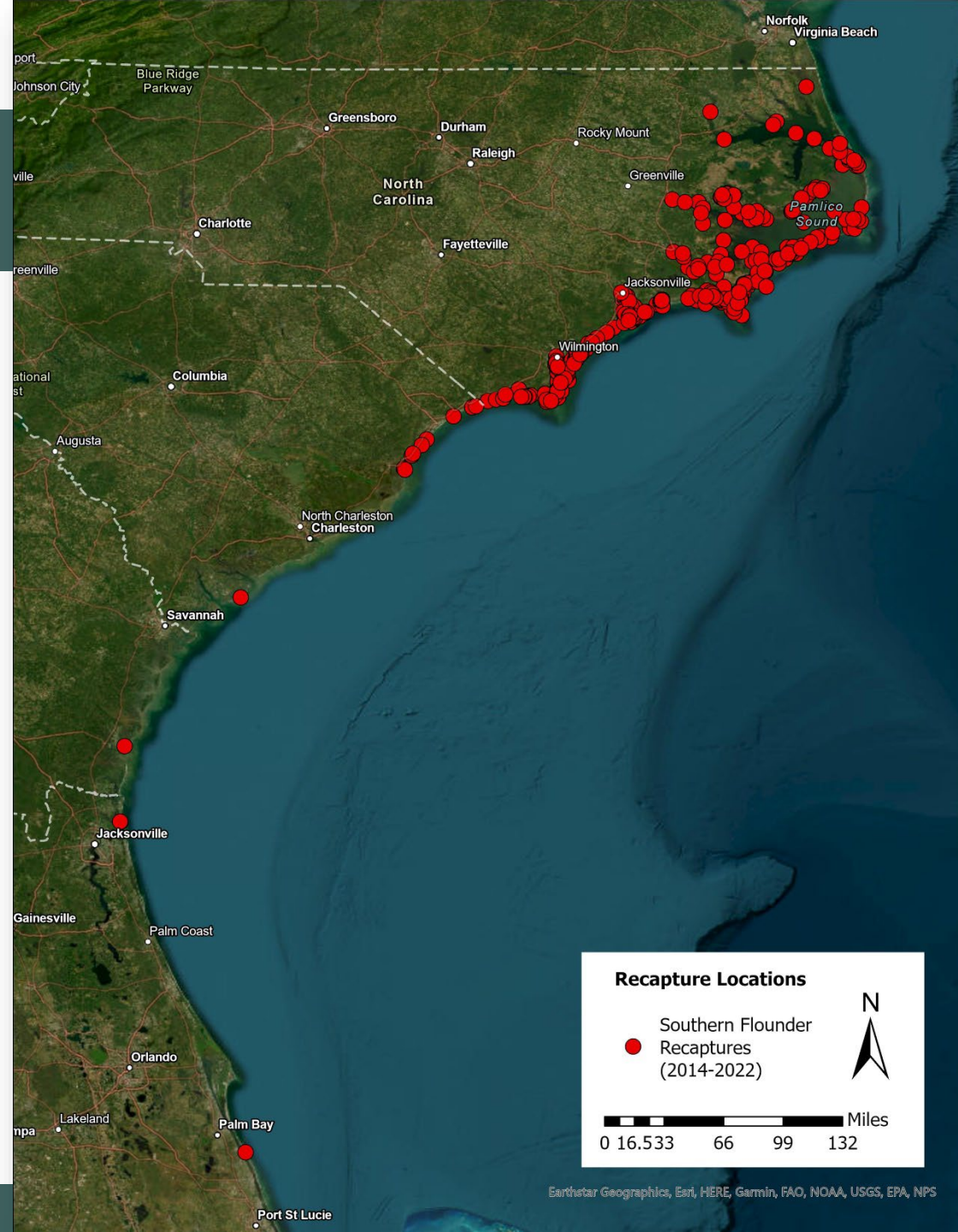
total recaptured fish

## **Days-At-Large**

- Average 141.0 days
- Max 1,753 days (~4.8 years)

## **Distance Traveled**

- Average 16.6 miles
- Max 518 miles



# *Most Days-At-Large*

**N01663**

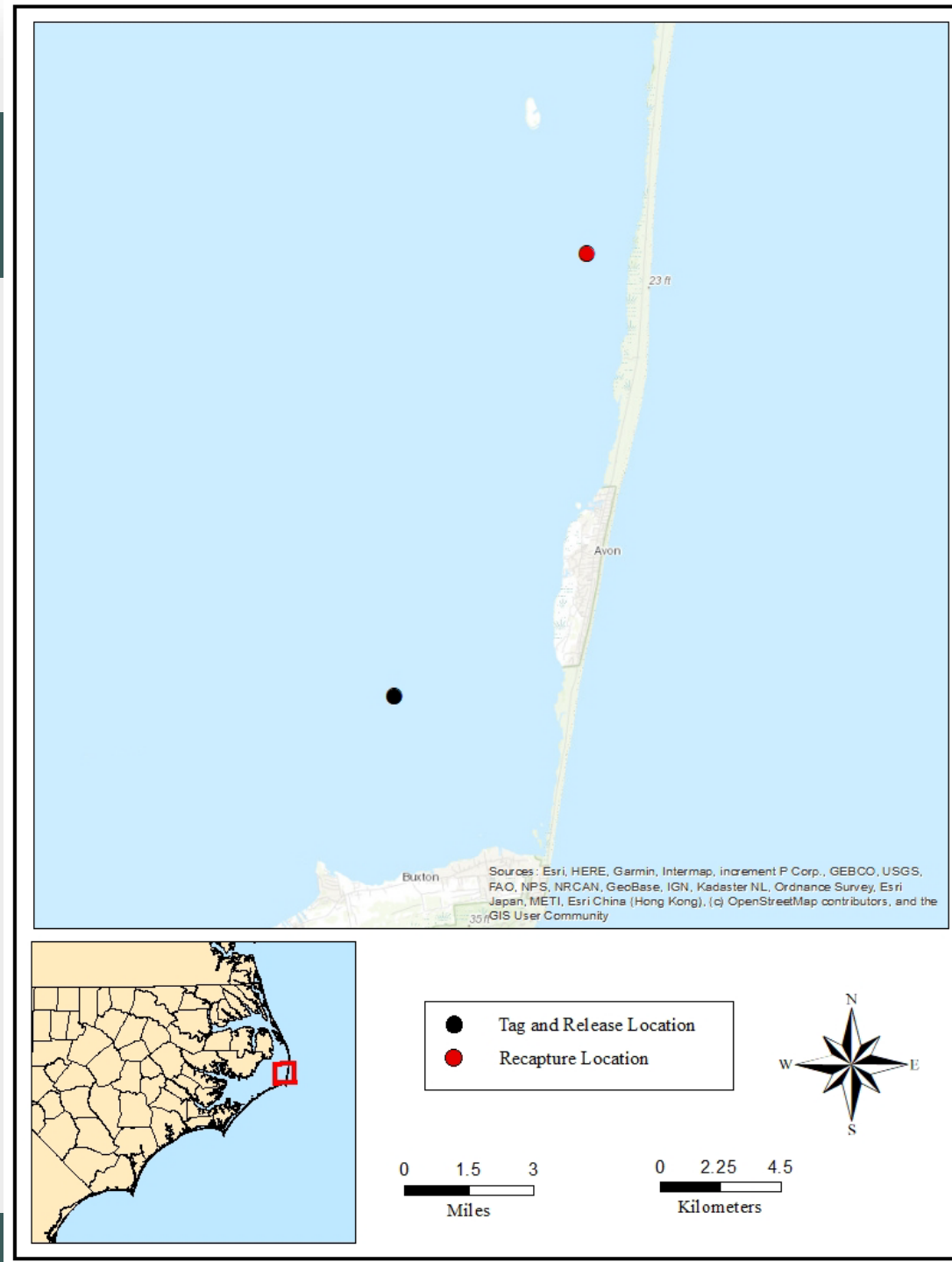
**1,753 days (~4.8 years)**

- Tagged on 9/2/2015
- Recaptured on 6/20/2020

**8 miles traveled**

- Tagged in Cape Channel behind Hatteras, NC
- Recaptured between Little Kinnakeet and Gull Shoal, NC

**Grew 14.6" (13.4" to 28.0")**



# *Furthest Distance Traveled*

**N00017**

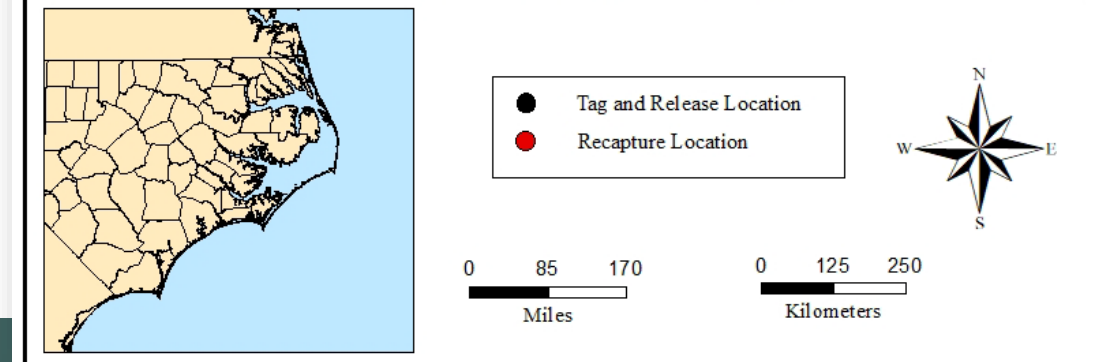
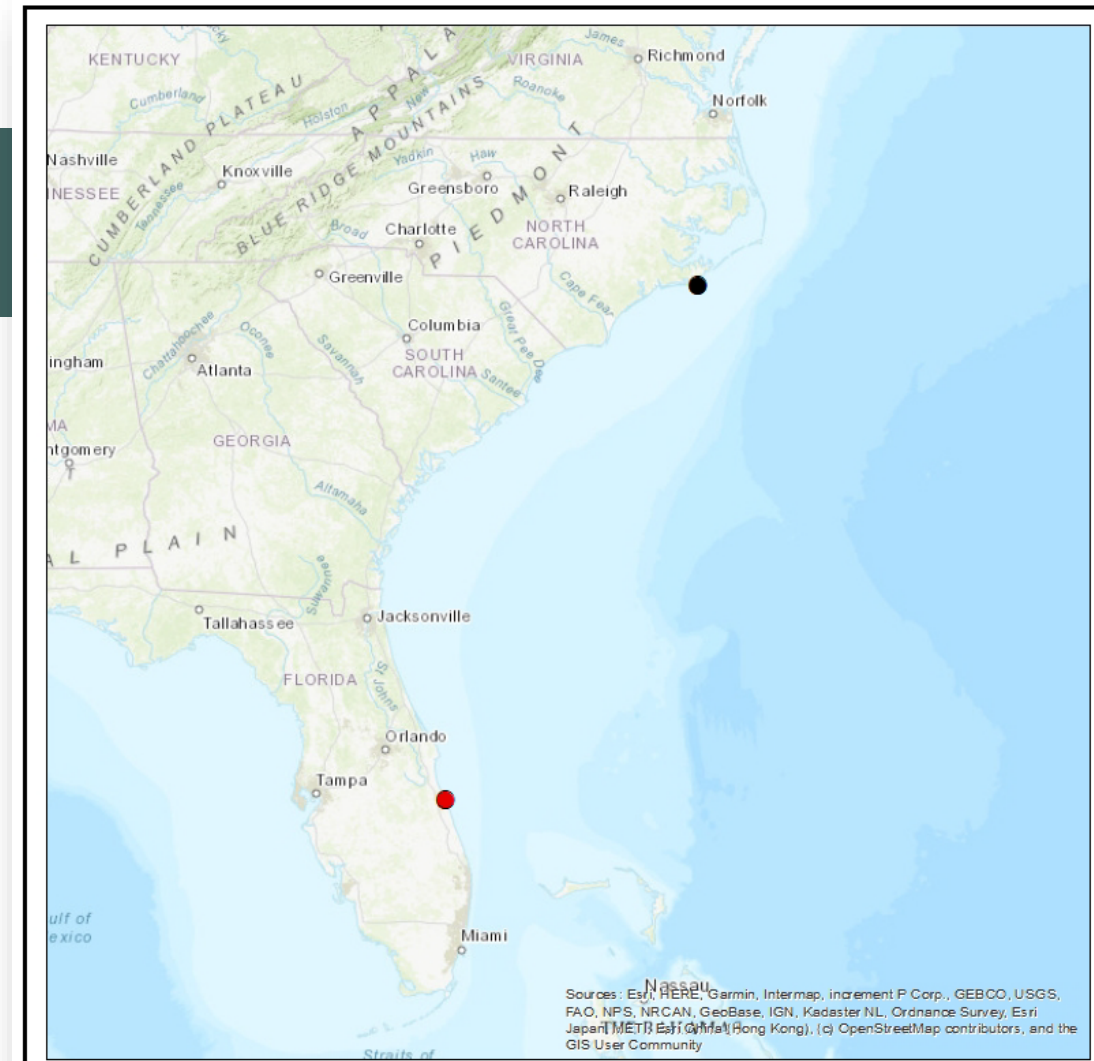
**184 days at large**

- Tagged on 10/13/2014
- Recaptured on 4/15/2015

**518 miles traveled**

- Tagged Hog Pen Bay, NC
- Recaptured in Hobe Sound, FL

**Grew 0.4" (21.1" to 21.5")**



# *What we've learned about Southern Flounder...*



## **High spring and summer site fidelity**

- Early season tagged fish are recaptured in same system prior to fall migration
- Larger tagged fish in the fall are highly migratory

## **General Movements**

- Larger, mature fish migrate to ocean beginning late summer and early fall
- A portion of stock migrates south to SC, GA, FL
- Fish return to NC estuaries after migration into ocean
- Limited tagging data from SC and GA suggest a low probability that adult fish move north into NC waters

**Current assessment combines FL, GA, SC, and NC into one unit stock in the U.S. South Atlantic.**



# *Who do I contact for more information?*

**Ami Staples**

*Tagging Program Biologist*

[ami.staples@deq.nc.gov](mailto:ami.staples@deq.nc.gov)

252-948-3913





*Questions?*



# TAGGING PROGRAM

