



Exploring the Potential of Citizen Science

“Catch U Later” Smartphone Application Update

DEPARTMENT OF ENVIRONMENTAL QUALITY

Marine Fisheries

Andrew Cathey | November 18, 2021



MRIP and Southern Flounder



- **Harvest Estimates are precise**

Estimate Status	Year	Common Name	Total Harvest (A+B1)	PSE	Harvest (A+B1)	Total Weight (lb)	PSE
FINAL	2018	SOUTHERN FLOUNDER	217,805	19.3		495,289	18.5
FINAL	2019	SOUTHERN FLOUNDER	163,045	19.1		387,203	23.3
FINAL	2020	SOUTHERN FLOUNDER	152,244	19		398,769	20.7

- **Discard Estimates are severely limited**

Estimate Status	Year	Common Name	Released Alive (B2)	PSE	** Contribution of Imputed Data to Released Alive Rate
FINAL	2018	LEFTEYE FLOUNDER GENUS	1,497,351	11.4	0%
FINAL	2019	LEFTEYE FLOUNDER GENUS	2,053,642	14.6	0%
FINAL	2020	LEFTEYE FLOUNDER GENUS	2,528,335	13.5	9%

- Field Staff do not physically see discarded catch
- Discarded flounder are recorded to the genus level
- No Biological Data: Length/Weight

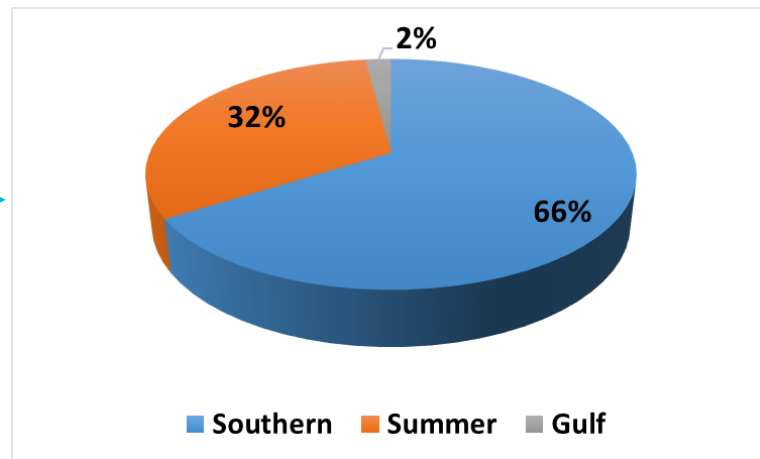
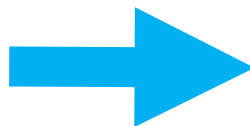


Catch U Later Research Objectives

1. What are the species specific contributions to generic flounder discards?

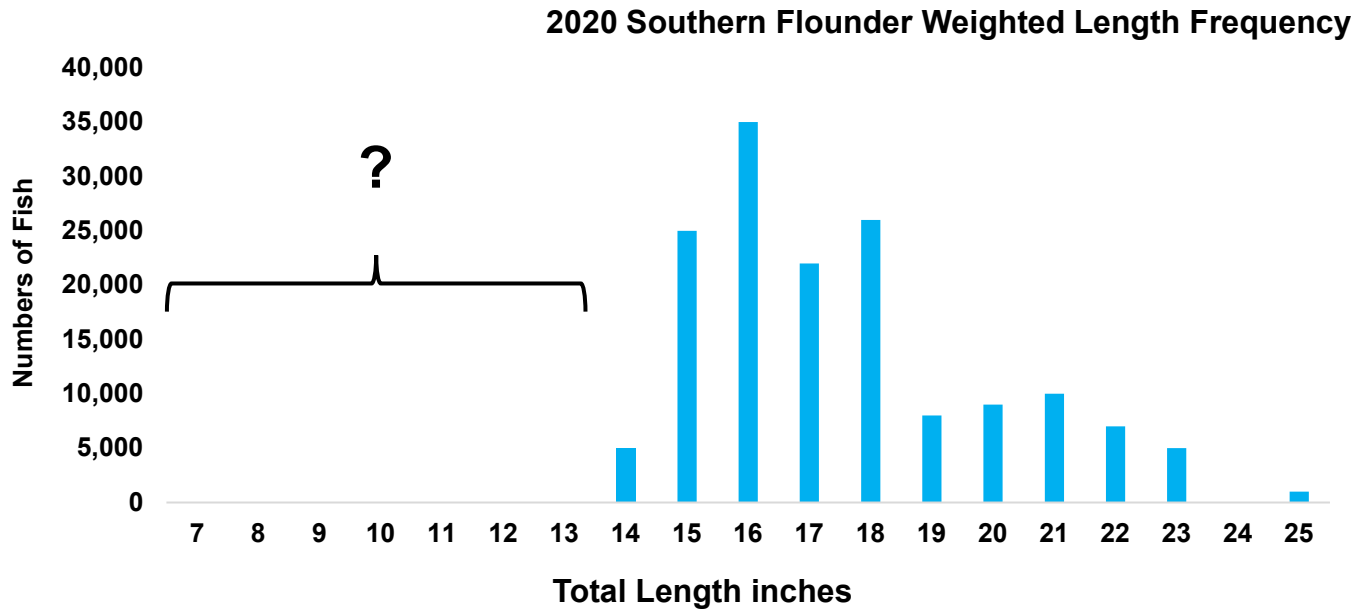
Benefit: Accurately classify generic discards

Year	Common Name	Released Alive (B2)	PSE
2020	LEFTEYE FLOUNDER GENUS	2,528,335	13.5



2. What is the species specific length distribution of discarded flounder?

Benefit: Evaluation of catch at size

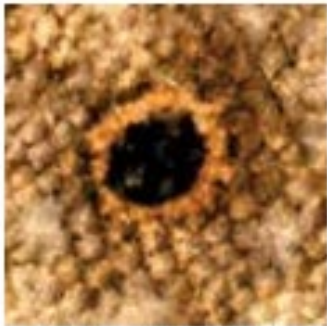


Catch U Later Research Objectives

3. Can anglers tell the difference between North Carolina's Flounder species?

Benefit: Evaluate the feasibility of single species management

What about spots?



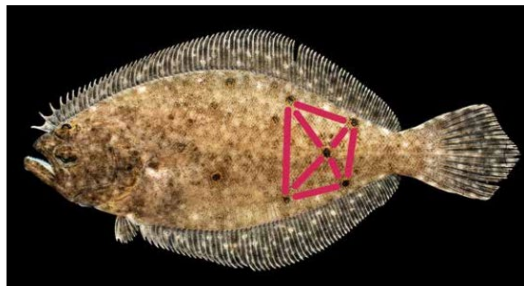
Ocellated or "eye" spot
(Summer & gulf flounder)



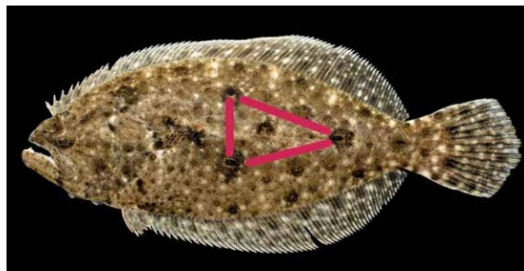
Non-ocellated spot
(Southern flounder)



Southern Flounder



Summer Flounder

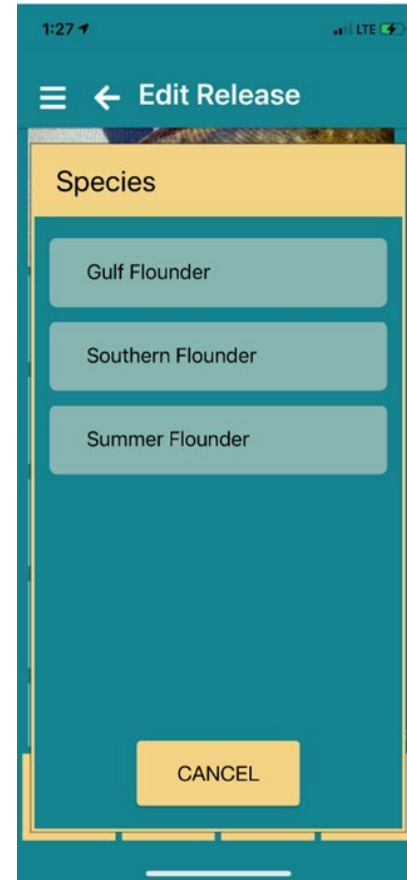
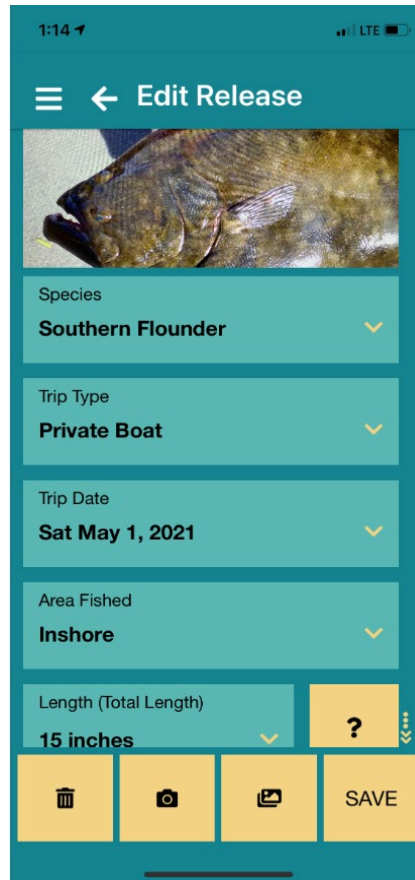
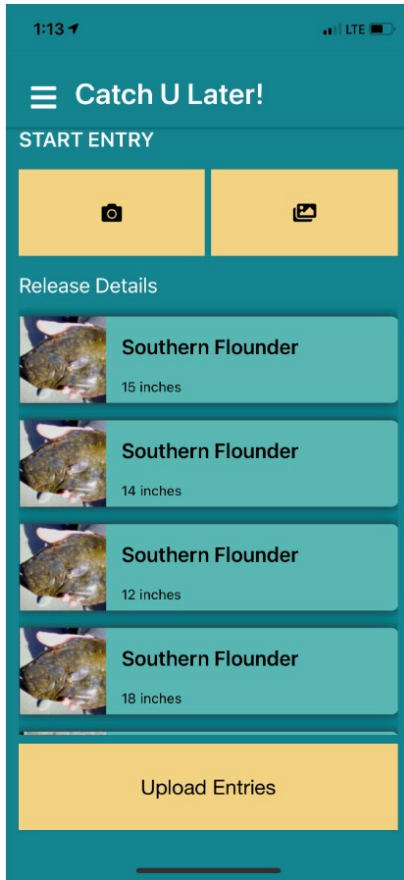


Gulf Flounder



Progress to Date: App Development

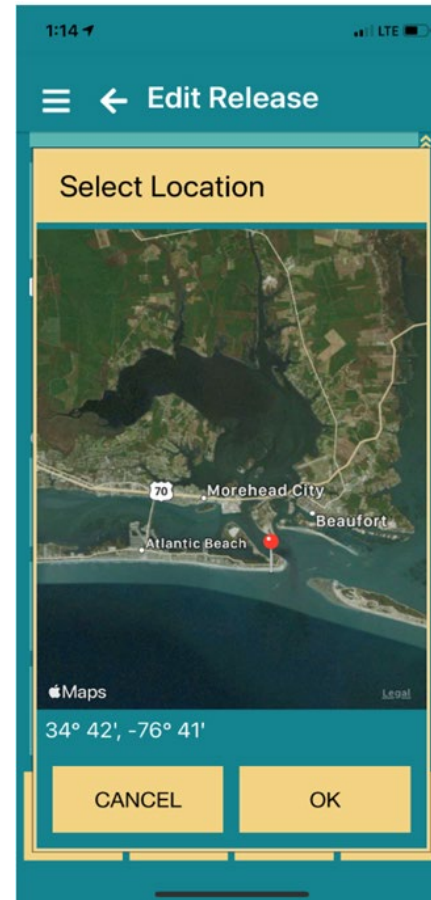
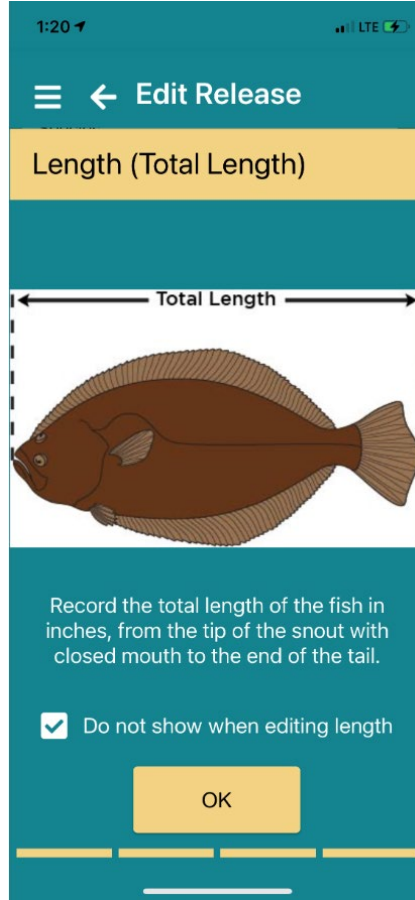
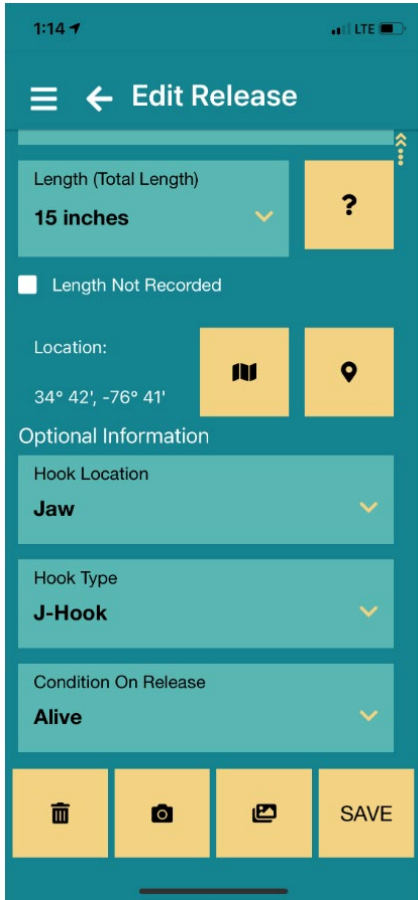
Launched Application August 23, 2021



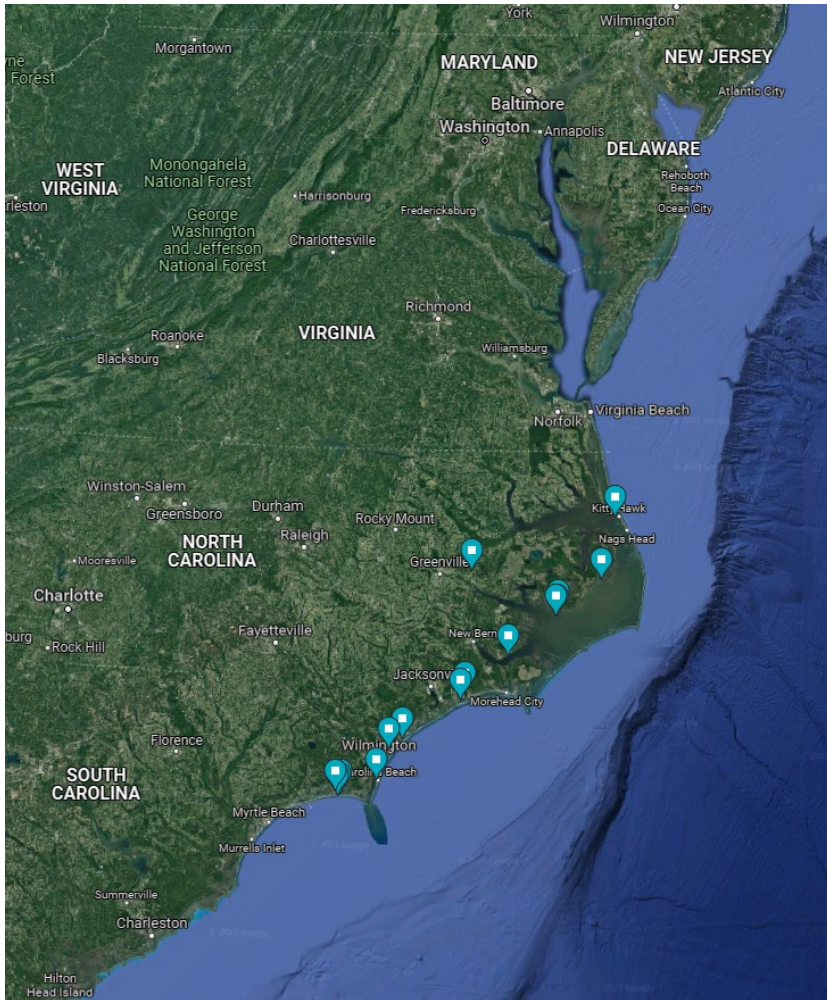
Department of Environmental Quality



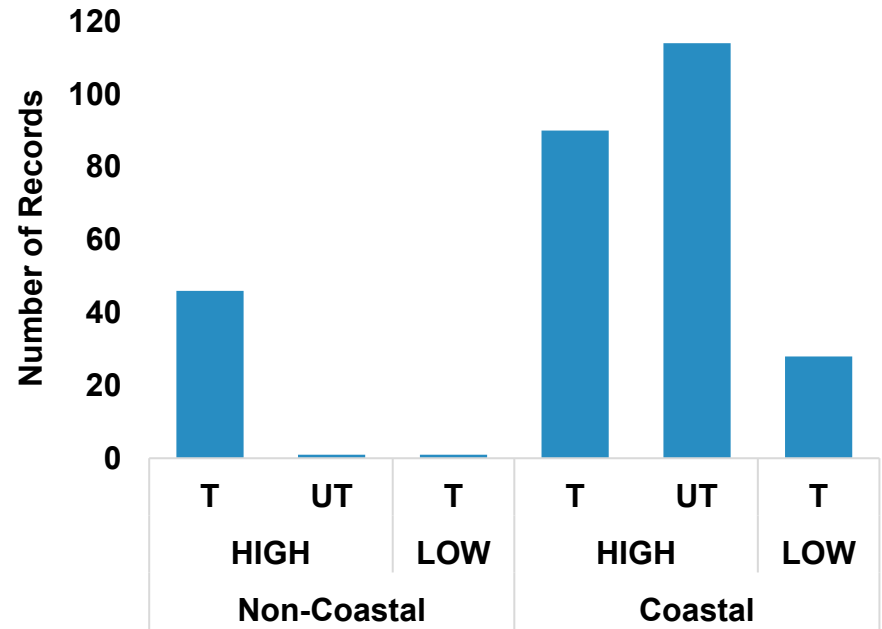
Progress to Date: App Development



Preliminary Data: Sampling Representation



Data Records by Sampling Strata



T = Trained
 UT = Untrained



Preliminary Data: Unusable Records

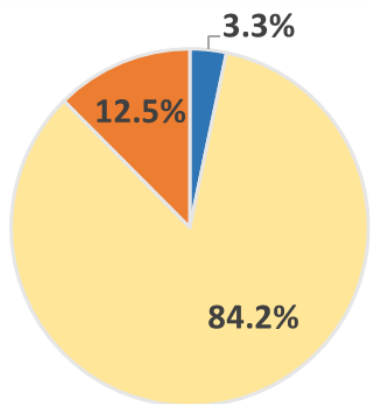


Of 288 records submitted
26 or (11%) could not be used
due to a lack of picture or
unusable picture



Preliminary Data: Species Specific Discard Contributions

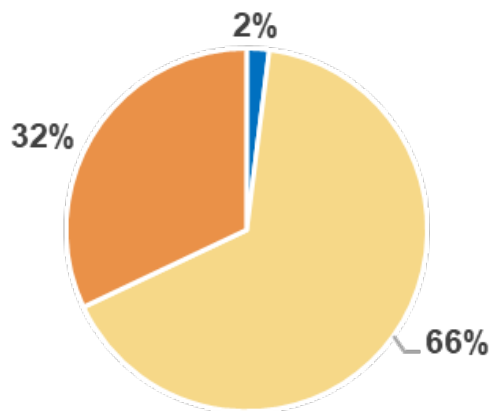
Year	Common Name	Released Alive (B2)	PSE
2020	LEFTEYE FLOUNDER GENUS	2,528,335	13.5



➤ **Observed** from Catch U Later



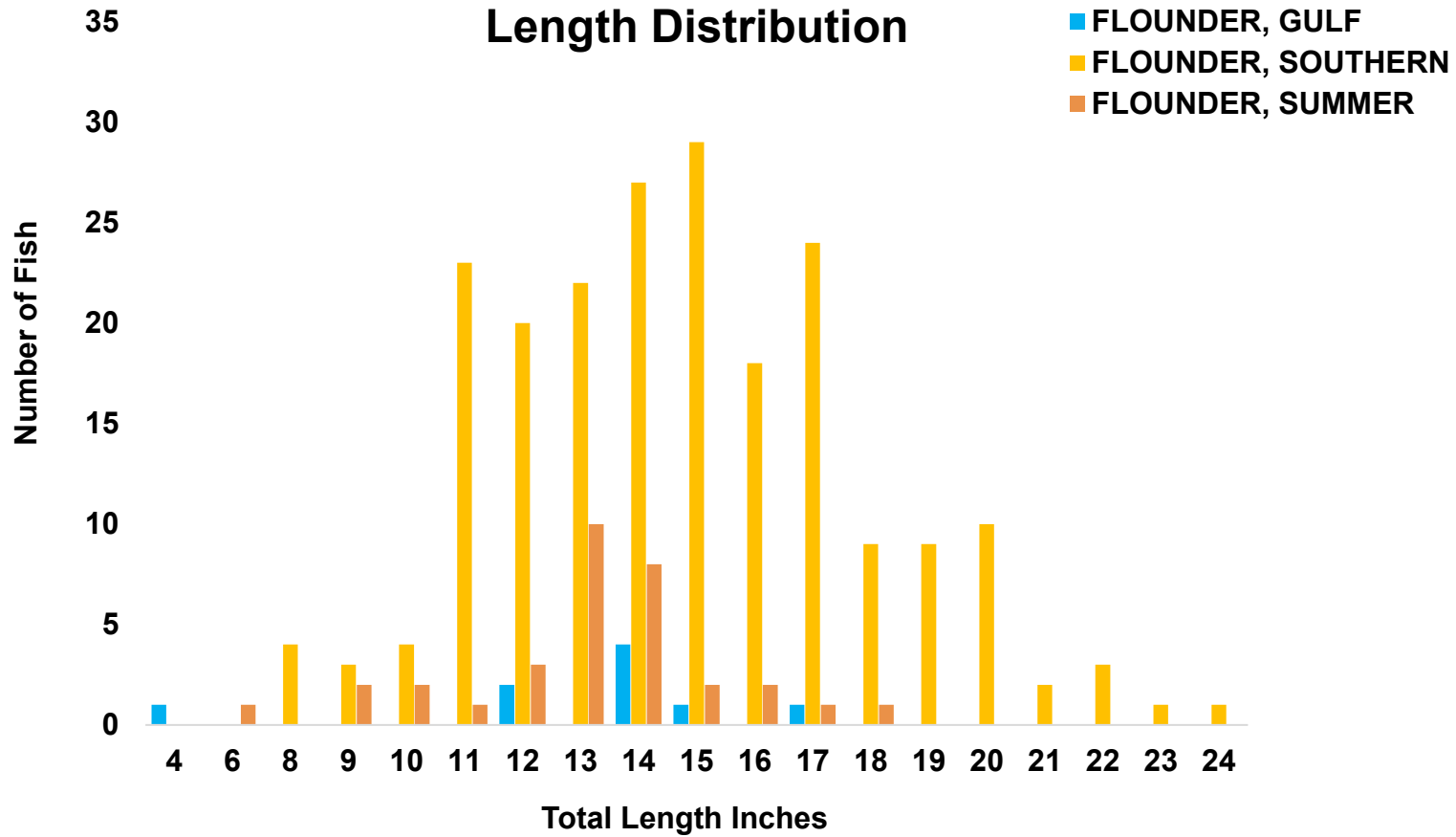
■ FLOUNDER, GULF ■ FLOUNDER, SOUTHERN ■ FLOUNDER, SUMMER



➤ **Estimated** from MRIP Harvest Ratios



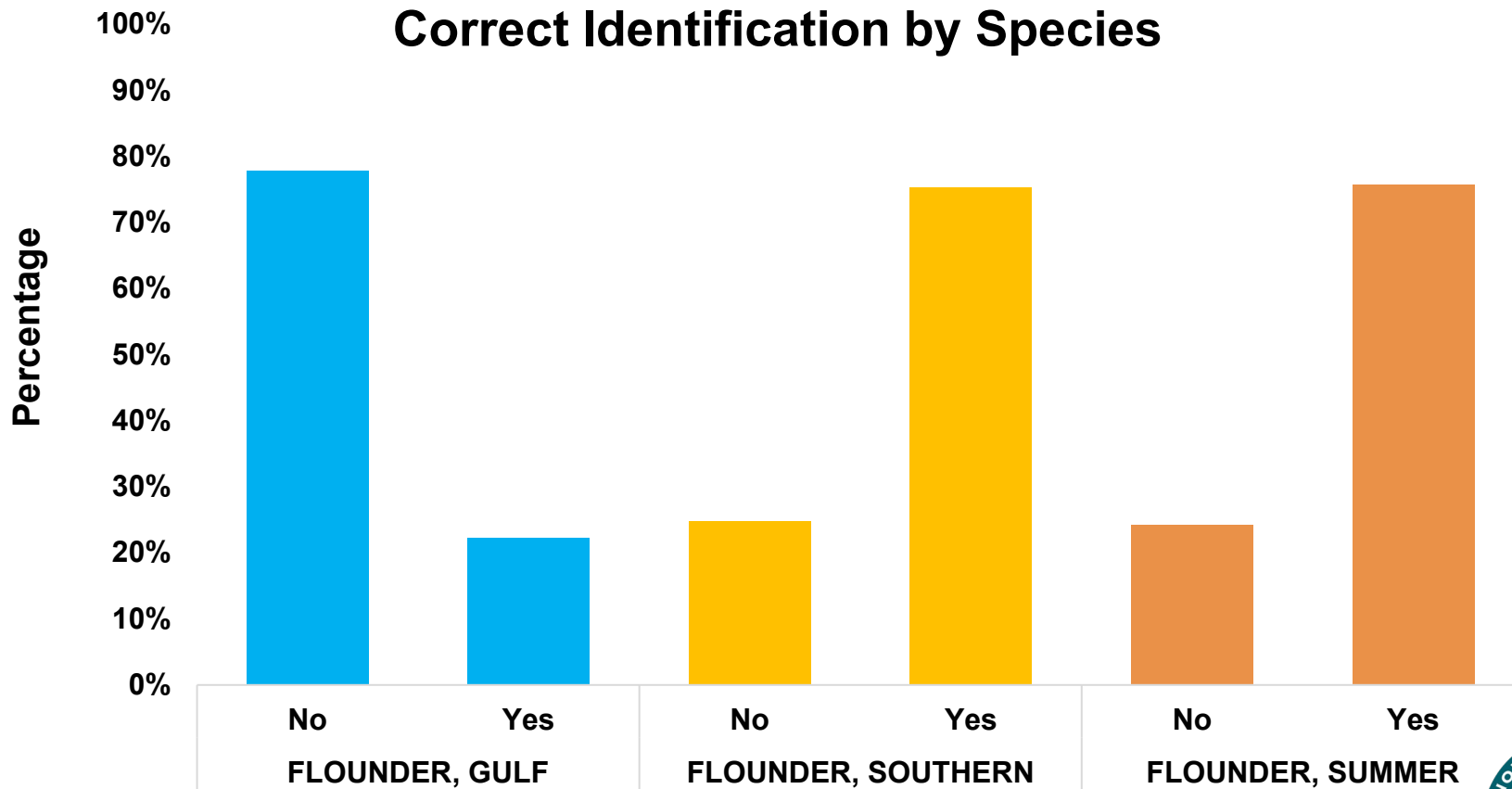
Preliminary Data: Species Specific Discard Length Frequency



Preliminary Data: Can Anglers Identify Flounder to Species?



Correct Identification by Species



Questions, Comments, Concerns

