



# SEDAR 79: Mutton Snapper Data Workshop

FWRI Stock Assessment Group

St. Petersburg, FL

8/21/2023 – 8/25/2023



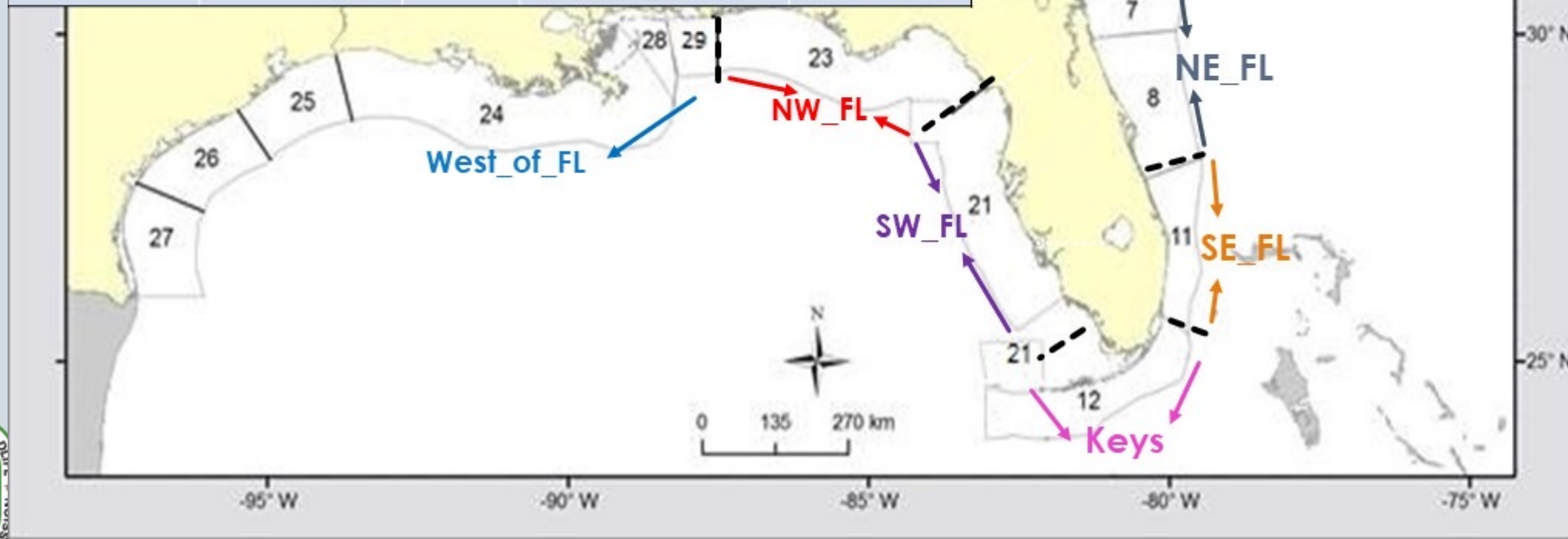
# Life History Overview

- Tropical reef species associated with coral reef areas in the western Atlantic Ocean.
  - Maryland to southeastern Brazil. In U.S. continental waters, most abundant in SE FL and FL Keys
  - Populations from U.S. waters are believed to belong to a single stock.
- Juveniles inhabit nearshore bays, seagrass beds, and mangroves before shifting to reefs.
- Longevity: 42 years
- Forms large spawning aggregations, peaking April through July
- Feeds both day and night on fishes, shrimps, crabs, cephalopods, and gastropods



Aquamaps Kaschner 2010

MTS Region	FL Counties	MRIP	Statistical Grids	SRHS
West_of_FL	-	-	11 - 21	24 -29
NW_FL	Escambia-Dixie	1	7-10	~23
SW_FL	Levy - Collier	2	3-6	21, old 18,22
Keys	Monroe	3	1, 2, 2479-2482	12, old 17
SE_FL	Indian River – Miami-Dade	4	2580,2680,2780, 2579,2679,2779	11
NE_FL	Nassua - Brevard	5	2880,2980,3080, 2879,2979,3079	7, 8
North_of_FL	-	-	North of 31°	1 – 6, 9,10





# Assessment History

## SEDAR 15A Benchmark

- ASAP v2 – Statistical Catch-At-Age Model
- **1981-2006**, Single Stock, Ages 1 – 25+
- 5 fleets – All Dome Shaped Selectivity
  - Commercial Hook and Line, Commercial Longline, Commercial Traps, Headboat, General Rec (MRFSS)
- 11 IOAs
  - 5 FD – Selectivity linked to fleets
  - 6 FI – Dome shaped selectivity

**Base Model Results: not overfished,  
overfishing is not occurring**



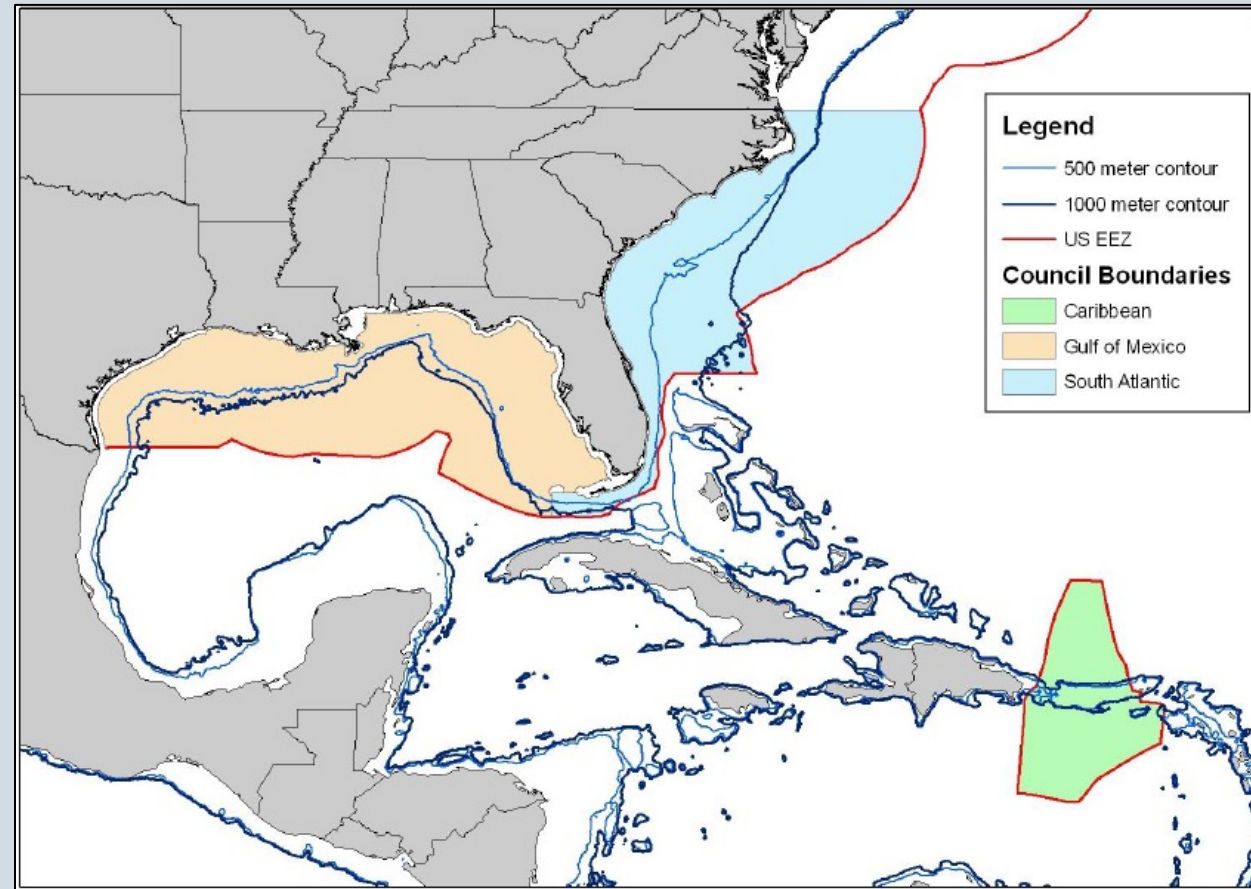
## SEDAR 15AU Update

- ASAP v3 – Statistical Catch-At-Age Model
- **1981-2013**, Single Stock, Ages 1 – 25+
- 4 fleets – Com: flat top, Rec: dome shaped
  - Commercial Hook and Line, Commercial Longline, Headboat, General Rec (MRFSS)
- 7 IOAs
  - 4 FD – Selectivity linked to fleets
  - 3 FI – Dome shaped selectivity

**Base Model Results: not overfished,  
overfishing is not occurring**

# Management History in the U.S.

- Managed as separate stock units by two councils (SAFMC, GMFMC)
  - Boundary is U.S. Highway 1 in the Florida Keys west to the Dry Tortugas
  - State of Florida also manages in state waters
- SEDAR assessments have treated this species as a single stock for the Councils to determine apportionment



# Size Limit History

## **South Atlantic Federal (3 - 200 Miles)**

- 12" (305mm) TL (1/1992 – 1/1995)
- 16" (406mm) TL (1/1995 – 2/2018)
- 18" (457mm) TL (2/2018 – present)

## **Gulf Federal (10 -200 Miles)**

- 12" (305mm) TL (2/1990 – 11/1999)
- 16" (406mm) TL (11/1999 – 7/2018)
- 18" (457mm) TL (7/2018- present)

## **FL State Waters South Atlantic (0 - 3 Miles) & Gulf (0 -10 Miles)**

- 12" (305mm) TL (7/1985 – 2/1994)
- 16" (406mm) TL (3/1994 – 12/2016)
- 18" (457mm) TL (1/2017 – present)



# Trip Limit History – Federal Waters

## **South Atlantic (3 - 200 Miles)**

### Commercial

- 5 fish per person/day limit from April – June and 500-pound commercial vessel limit for July – March (2/2018 – present)

### Recreational

- Included in the aggregate daily bag limit of 10 snappers (1/1992 – present)
- 5 fish per person per day included in the aggregate daily bag limit of 10 snappers (2/2018 – present)

## **Gulf (10 -200 Miles)**

### Commercial

- None

### Recreational

- 10 snapper aggregate in the 20 reef fish aggregate (1/1984 – 7/2018)
- 5 fish per person per day included in the aggregate daily bag limit of 10 snappers (7/2018 – present)



# Trip Limit History – FL State Waters

## Commercial - Trip Limit Per Boat/Day

- Restricts all harvest in May and June to the bag limit (12/1992 – 1/2017)
- **South Atlantic** (0 - 3 Miles): 5 fish per person/day limit from April – June and 500-pound commercial vessel limit for July – March (1/2017 – present)

## Recreational - Bag Limit Per Person/Day

- Included in the aggregate daily bag limit of 10 snappers (1/1992 – present)
- Restricts all harvest in May and June to the bag limit (12/1992 – 1/2017)
- 5 fish per person per day included in the aggregate daily bag limit of 10 snappers (2/2017 – present)





# Quota History (CHTS units)

## South Atlantic

### Commercial ACL

- 157,707 lbs (4/2012 – 2/2018)
- 104,231 lbs (2/2018 – 12/2018)
- 107,981 lbs (1/2019 – 12/2019)
- 111,354 lbs (1/2020 – present)

### Recreational ACL

- 768,893 lbs (4/2012 – 2/2018)
- 121,318 fish (2/2018 – 12/2018)
- 124,766 fish (1/2019 – 12/2019)
- 127,115 fish (1/2020 – present)

## Gulf

### Combined ACL

- 203,000 lbs (1/2012 – 12/2017)
- 134,424 lbs (1/2018 – 12/2018)
- 139,392 lbs (1/2019 – 12/2019)
- 143,694 lbs (1/2020 – present)



# Fishery/Spatial Closures

## Gulf

- The Edges: Jan 1 – April 30 (7/2009 – present)
- Steamboat Lumps (6/2000 – 6/2004)
- Steamboat Lumps: Nov 1 – April 30 (6/2004 – present)
- 20 Fathom Break: Feb 1 – Mar 31 (7/2013 - present)
  - Recreational fishing prohibited
- Riley's Hump: May 1- June 30 (2/1994 - 8/2002)
- Tortugas Reserves (8/2002 – present)
- Pulley Ridge (1/2006 – present)
  - bottom gears prohibited

## FL State Waters – Western Dry Rocks

- April 1 – July 31 (4/2021 – present)



# Musings and Questions

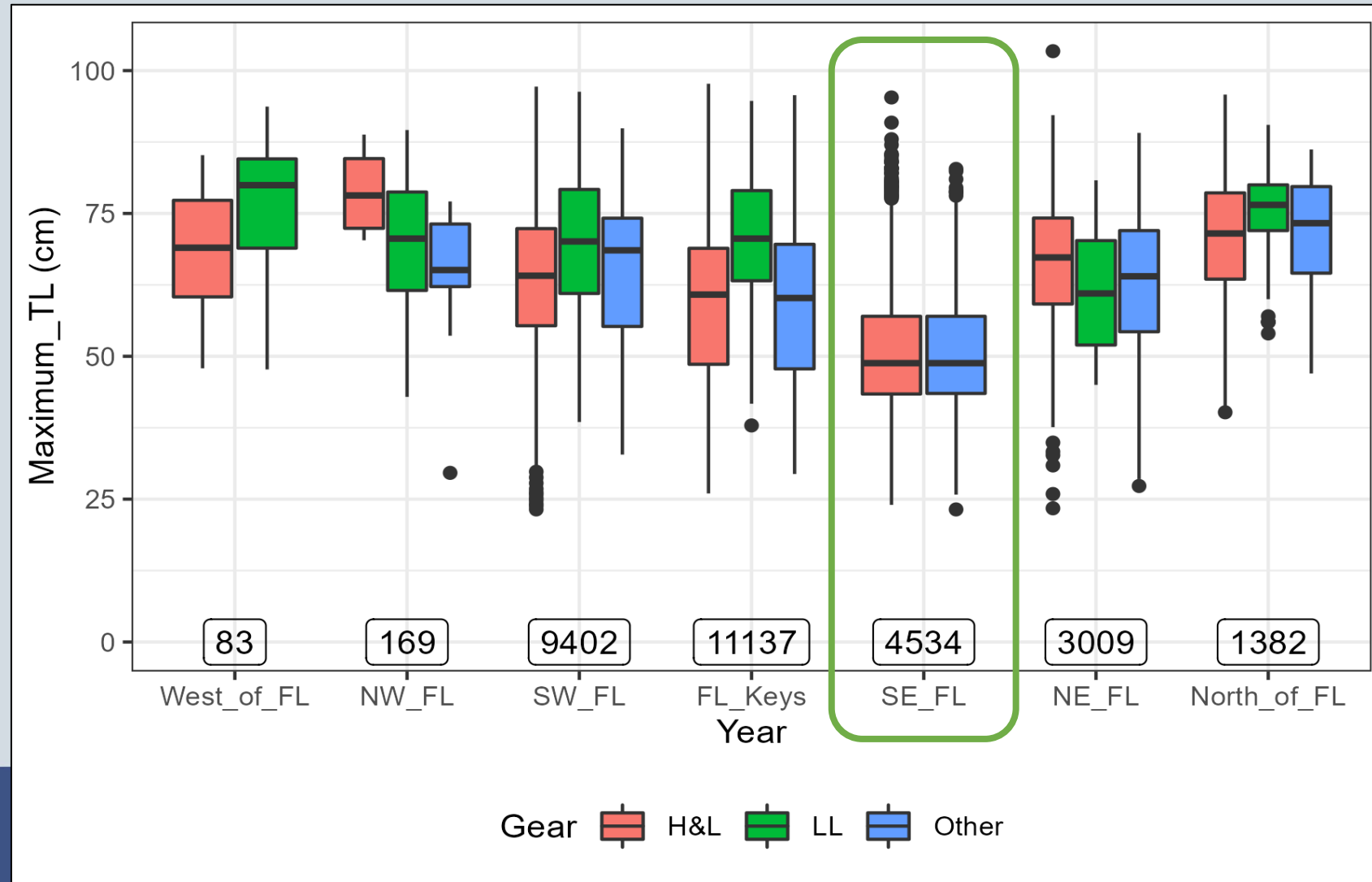
- What's driving the truncated length and age distribution in SE FL?
  - One-way migration from Dry Tortugas/Keys to northern FL and north of FL?
  - Larval transport?
  - Localized overfishing?
  - Depth-limited sampling?
  - ????
- Can these hypotheses be tested in an assessment model?
- What data or surveys would be needed to answer this?
  - Reproduction
  - Movement/Tagging data into and out of SE FL
  - ????



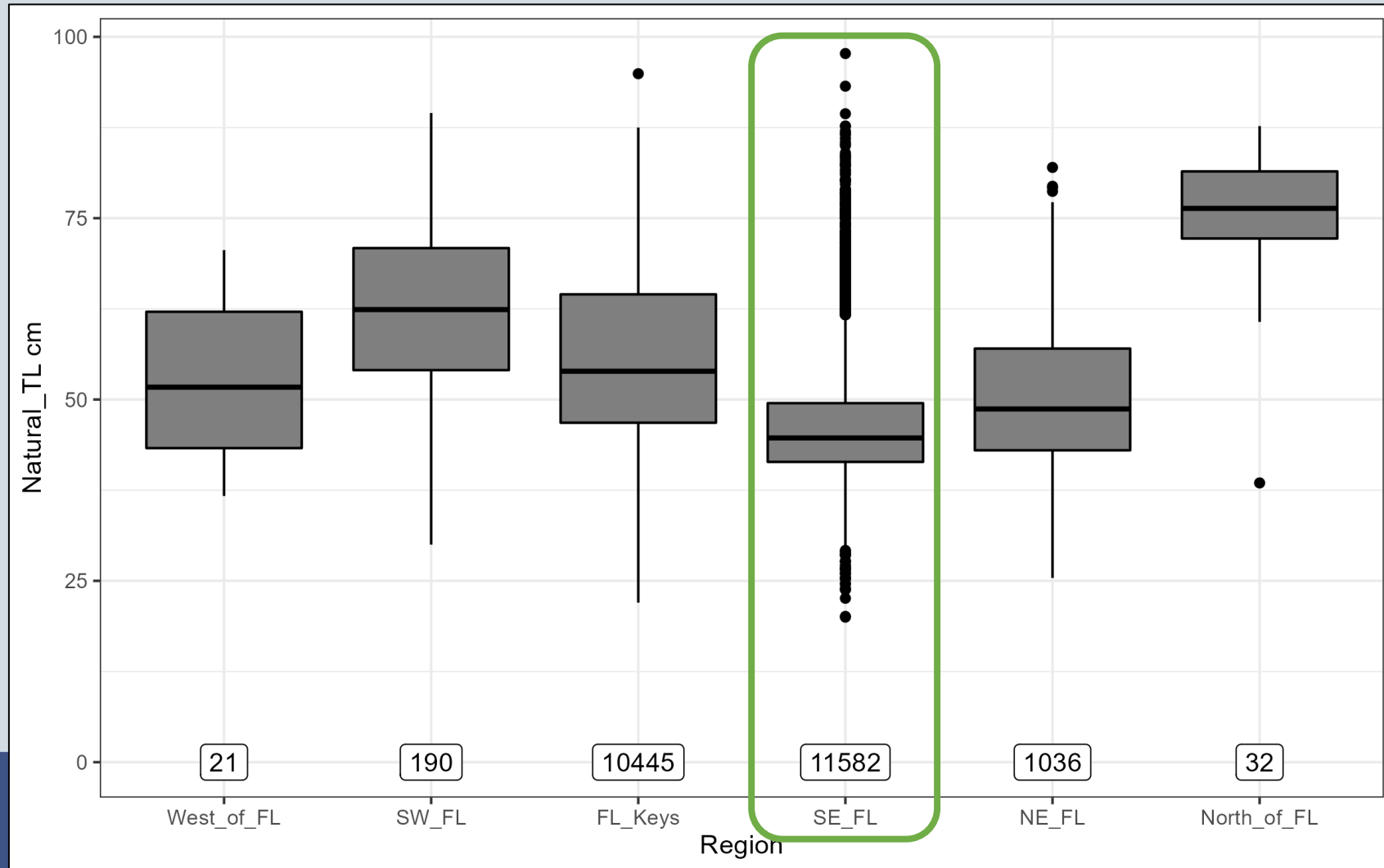




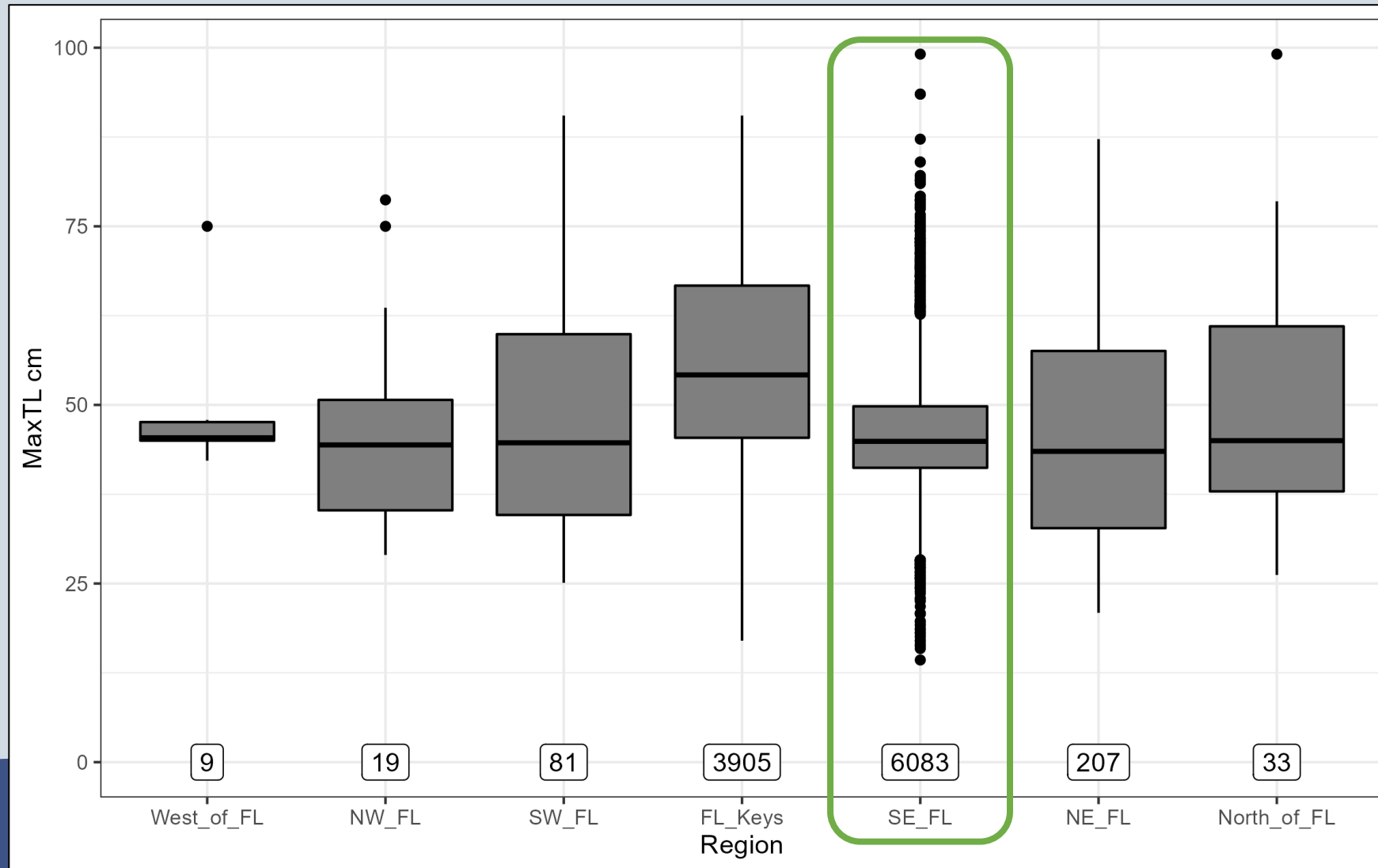
# TIP Retained Lengths By Region Landed (1984-2022)



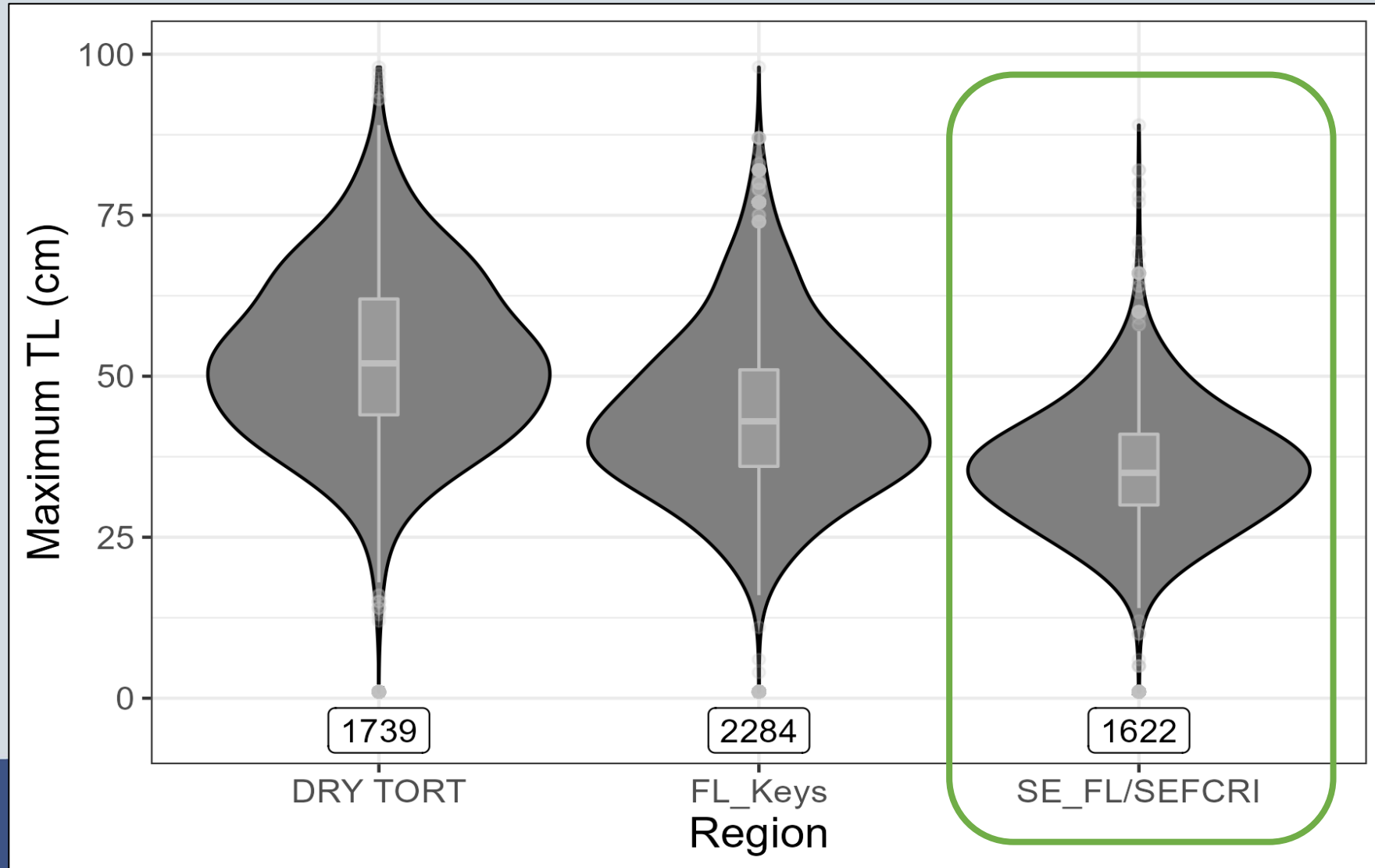
# SRHS Retained Lengths By Region (1976-2022)



# MRIP Retained Lengths (1981 – 2022)



# Reef Visual Census 1999-2022





# Calendar Ages vs Max Total Length

