

Reemergence of the Endangered Smalltooth Sawfish in a Historical Nursery in Southeast Florida

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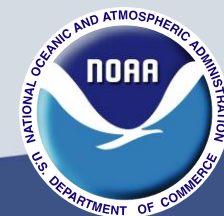


American Elasmobranch Society
New Orleans, Louisiana 2026



Outline

- Brief introduction
- Resurgence of sightings
- Tagging
- Results
- Conclusions



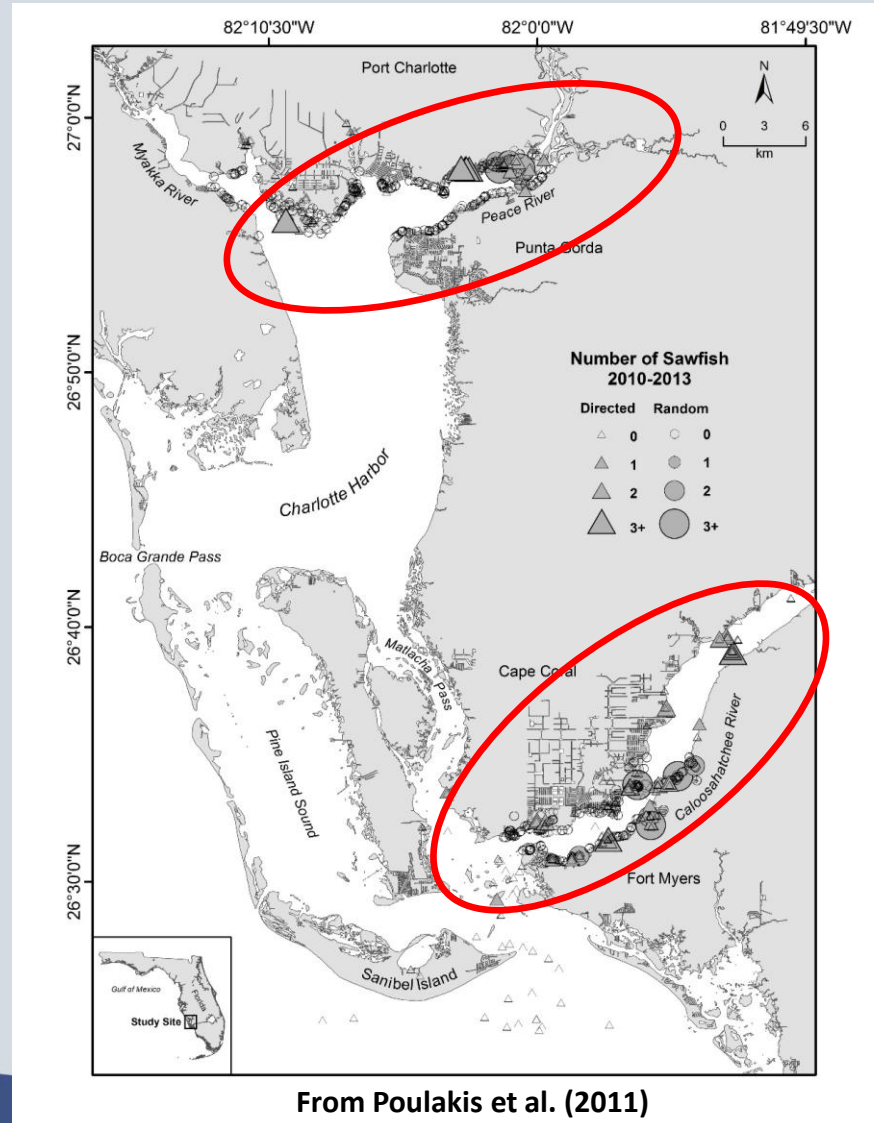
Charlotte Harbor Estuary

- Well known juvenile habitat
- FWC began studying the species in 2004

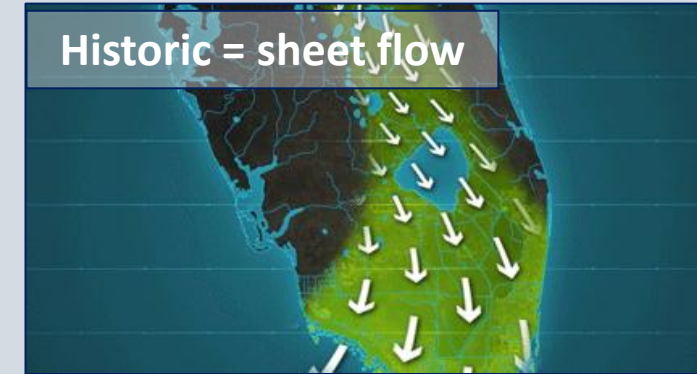
- Documented 2 nurseries:
 - **Caloosahatchee River**
 - Regulated flow

Small juveniles

- Shallow water
- Mangrove shorelines
- Born in rivers



Historic = sheet flow

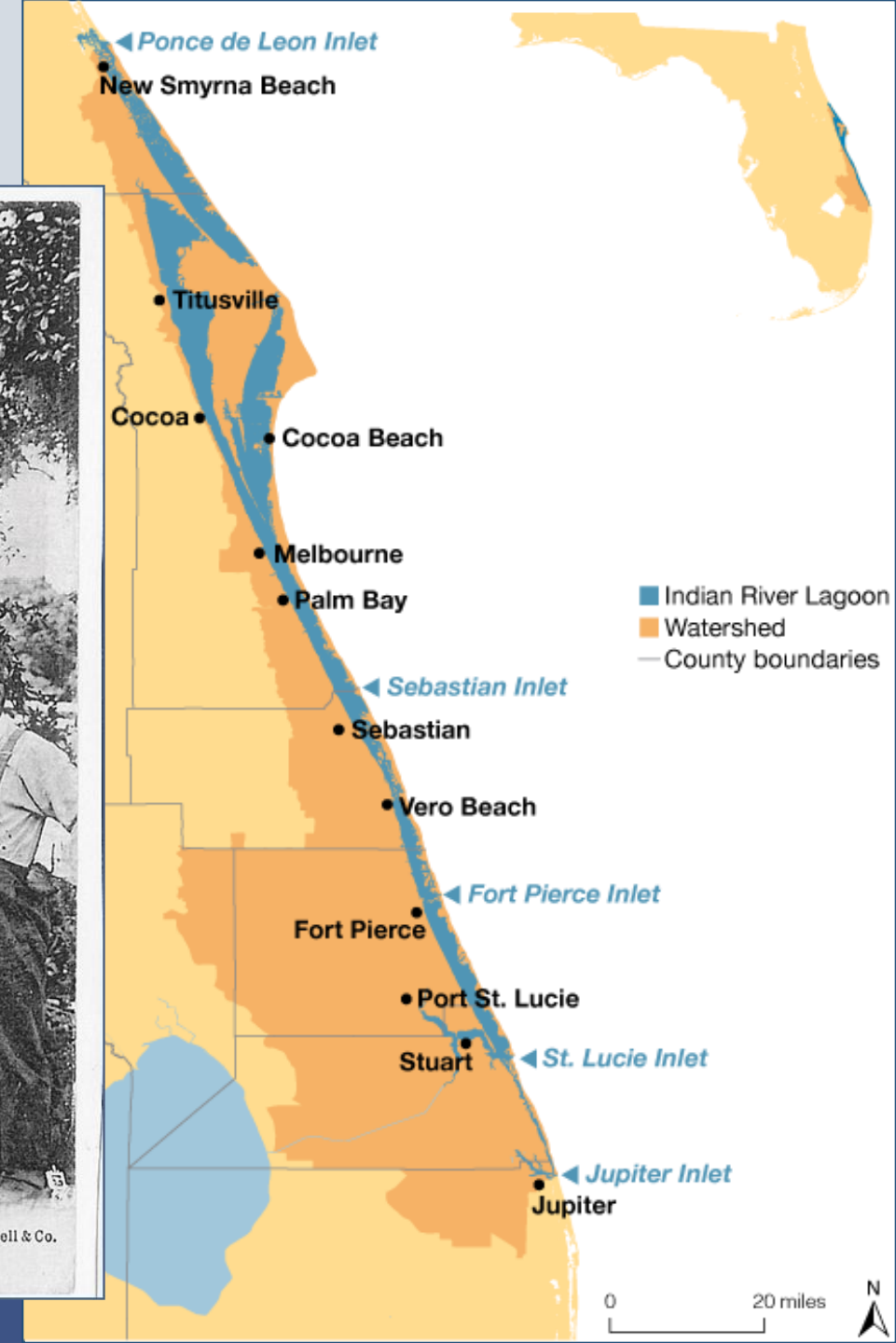


Current flow



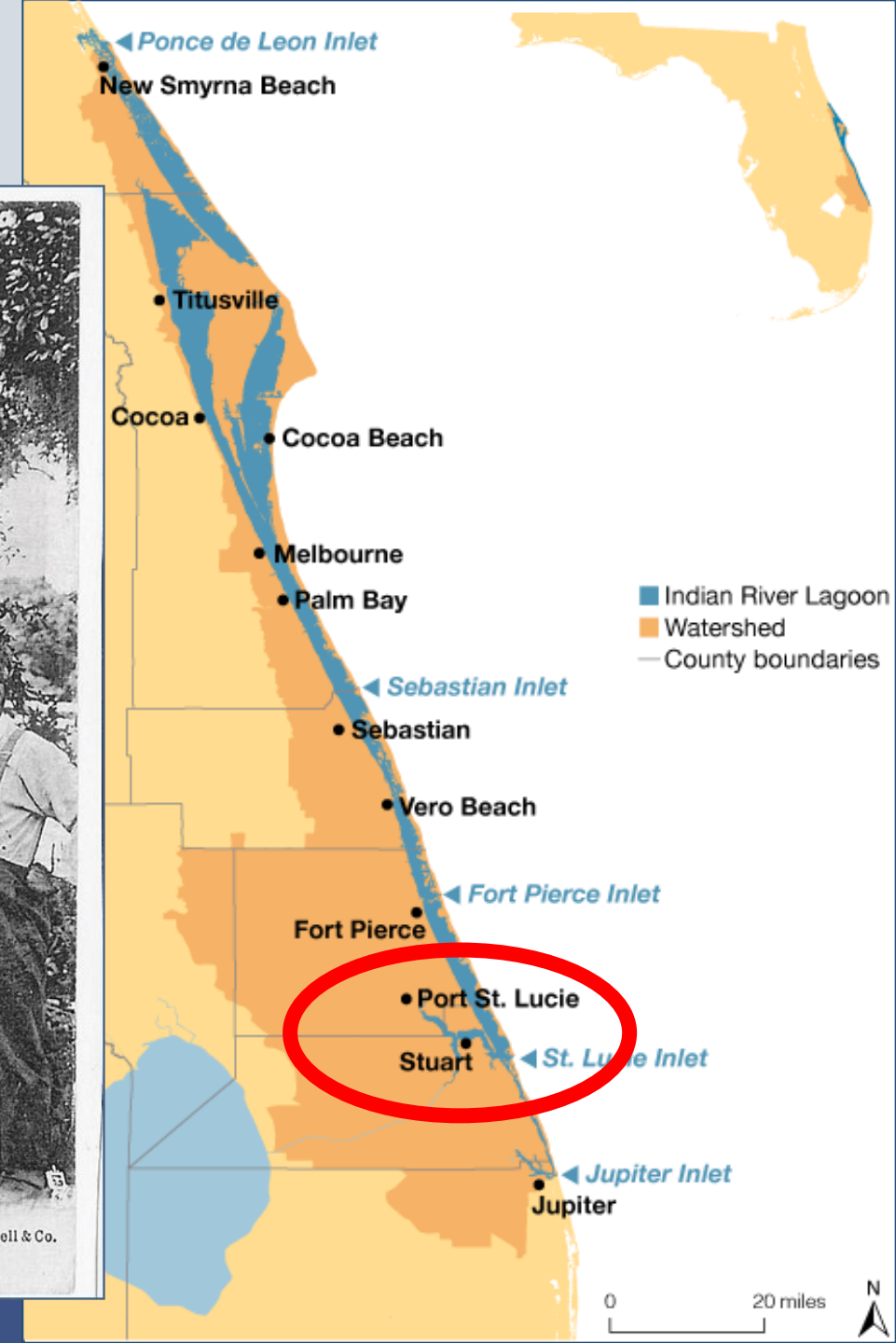
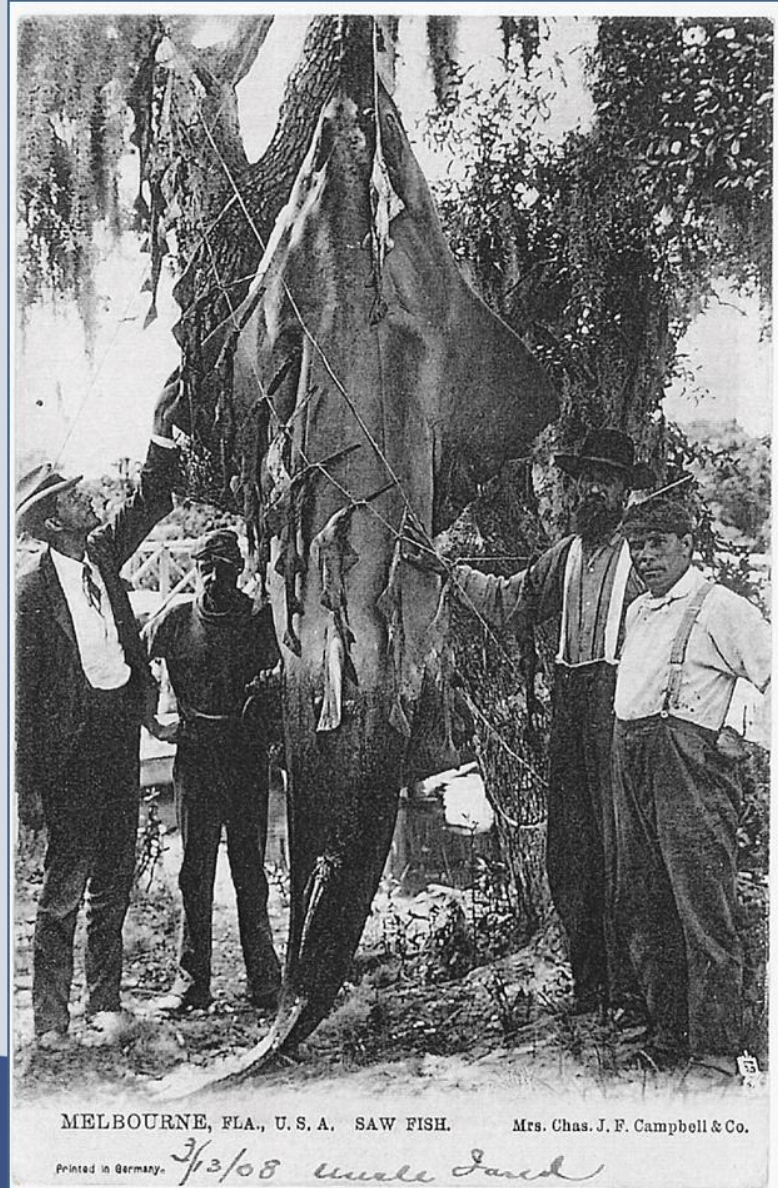
Historical Indian River Lagoon

- Evermann and Bean (1897) showed a healthy population in the IRL
 - All life history stages
- Gilmore (1977), Snelson and Williams (1981) reported **the species to be locally extinct by 1970's**



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Southern IRL study area



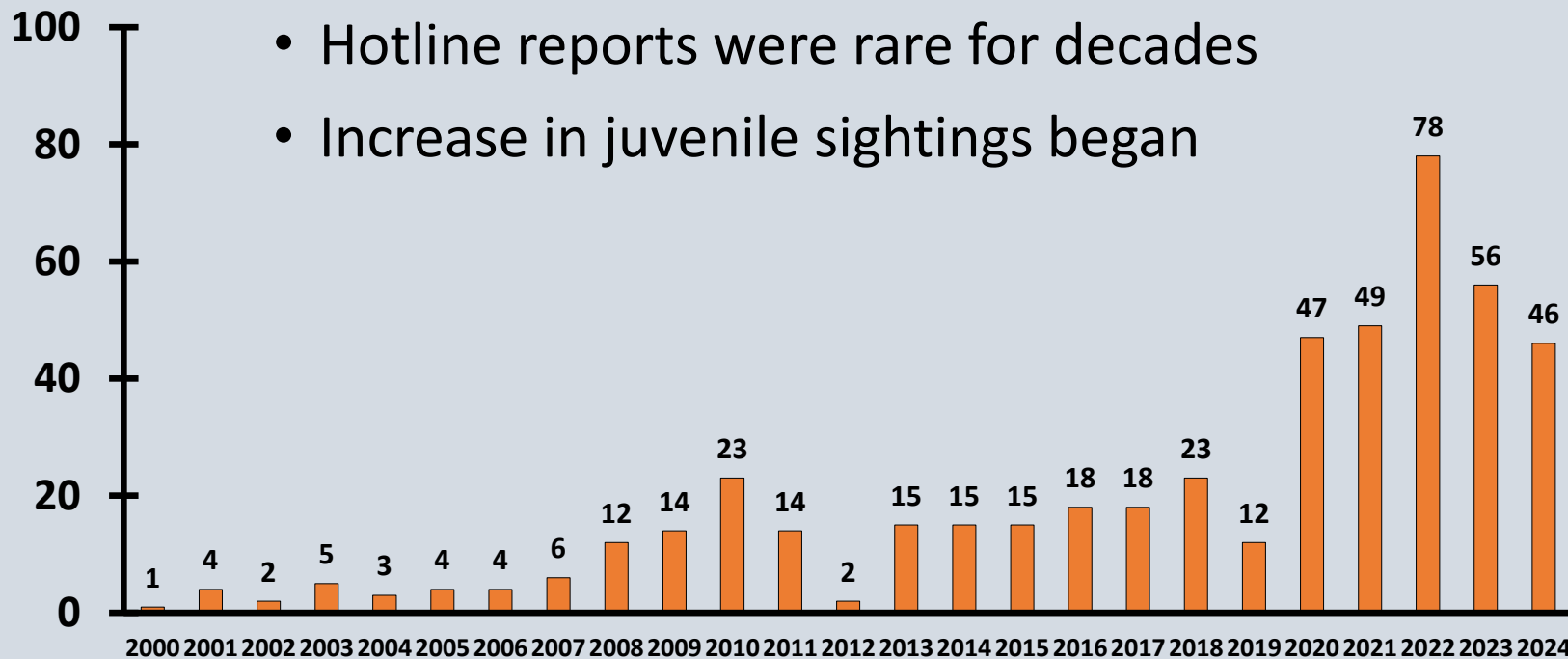
- Regulated flow
- Mostly developed shorelines

The **St. Lucie River** is a major tributary to the southern IRL



Resurgence of Sightings

- **U.S. Sawfish Recovery Hotline**
 - Promotes sawfish recovery
- Hotline reports were rare for decades
- Increase in juvenile sightings began



Sawfish Are Endangered

Respect • Release • Report

Sawfish are protected by State and Federal laws:
It is illegal to harm, harvest, or handle sawfish



You Can Help Save Smalltooth Sawfish

Angler Guidance:

- ▶ Release sawfish immediately
- ▶ Never lift from the water or drag ashore
- ▶ Do not use gaffs or ropes to secure
- ▶ Cut the line as close to the hook as possible

Diver Guidance:

- ▶ Keep your distance
- ▶ Avoid disturbing sawfish
- ▶ Do not chase or pursue
- ▶ Never feed or touch

Share Information About Your Encounter

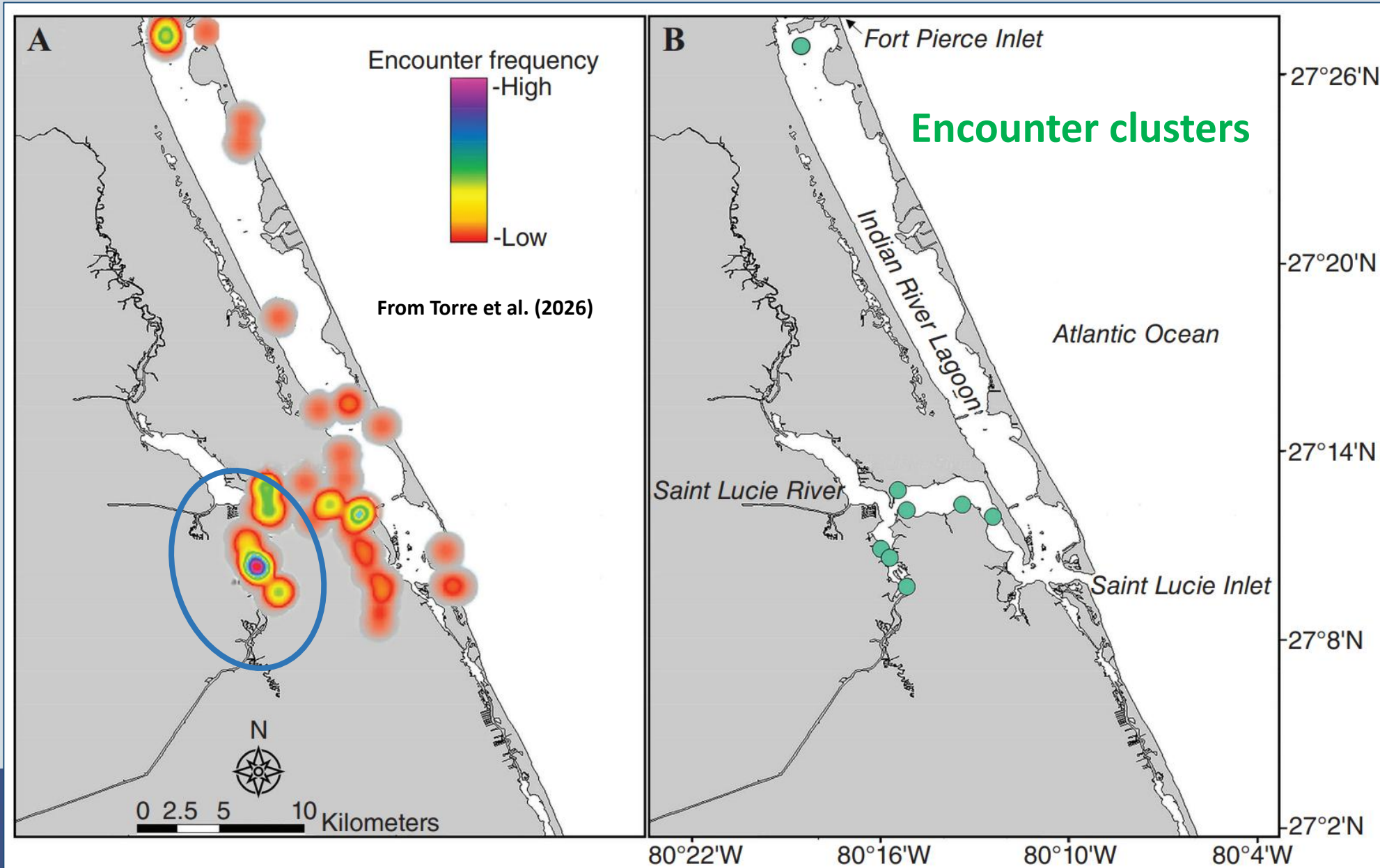
1-844-4SAWFISH

www.SawfishRecovery.org

The information you provide helps scientists track sawfish recovery



Hotline Encounter Patterns



Study Objectives and Methods

- **Space Use**

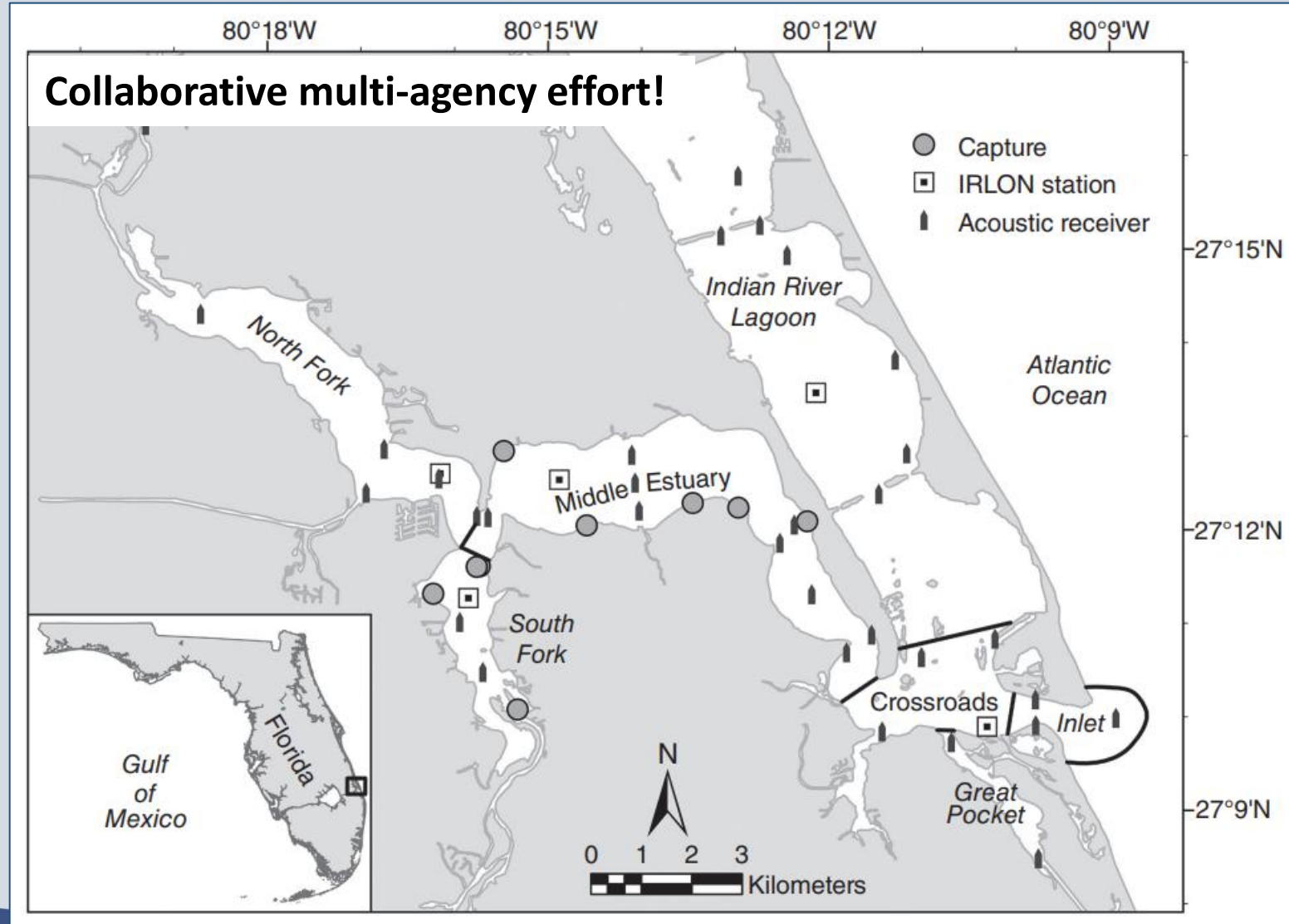
- Core and general space use
 - DBBMM via `movegroup` R package

- **Telemetry**

- Targeted juveniles <2 yrs old
- 7 analyzed
 - Mean STL ~1.34 m

- **Abiotic variables monitored**

- Temperature, salinity, dissolved oxygen, volume of freshwater inflow

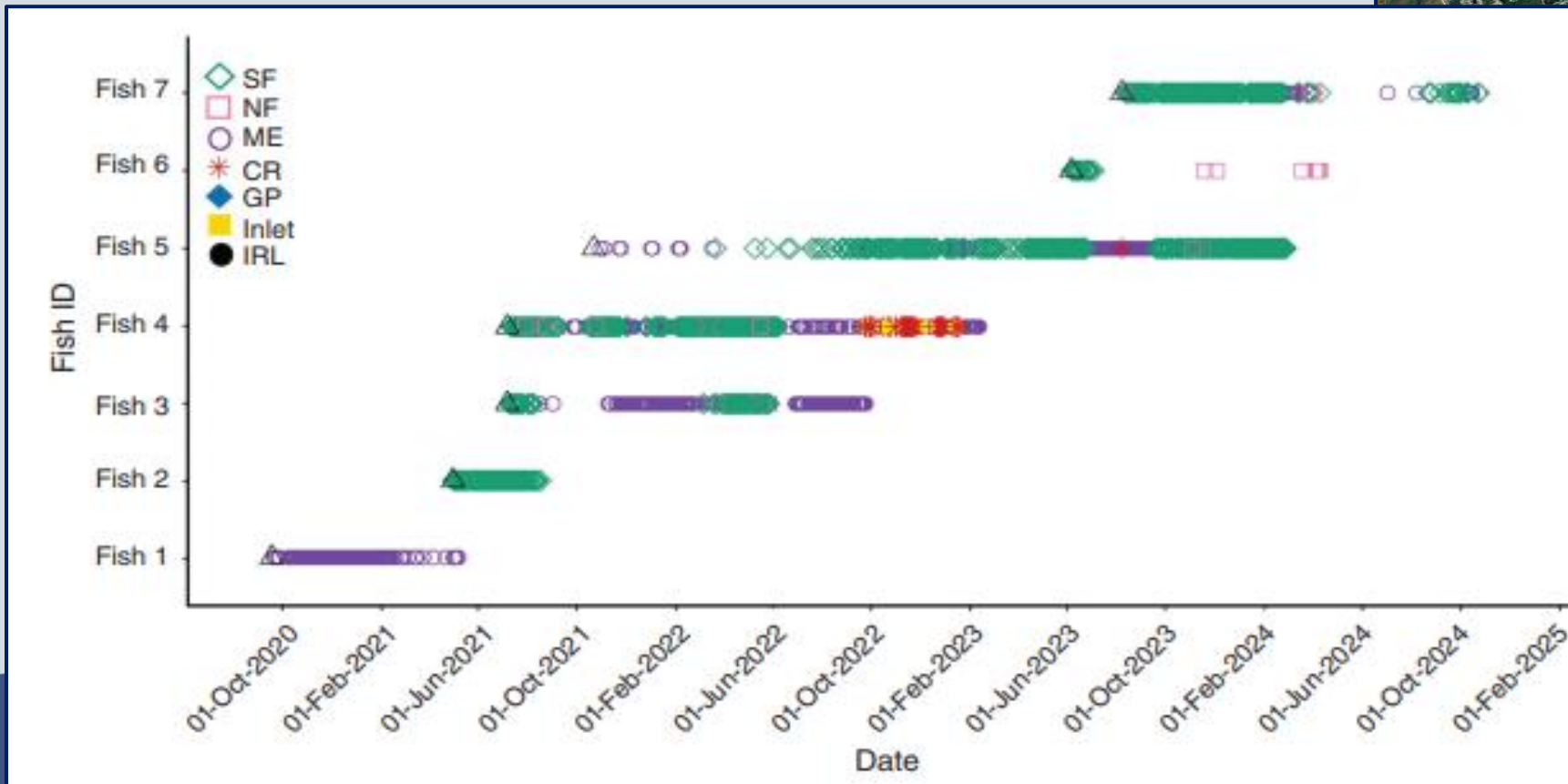


Purpose: Identify the status of the St. Lucie River Estuary as nursery habitat

South Fork Residency

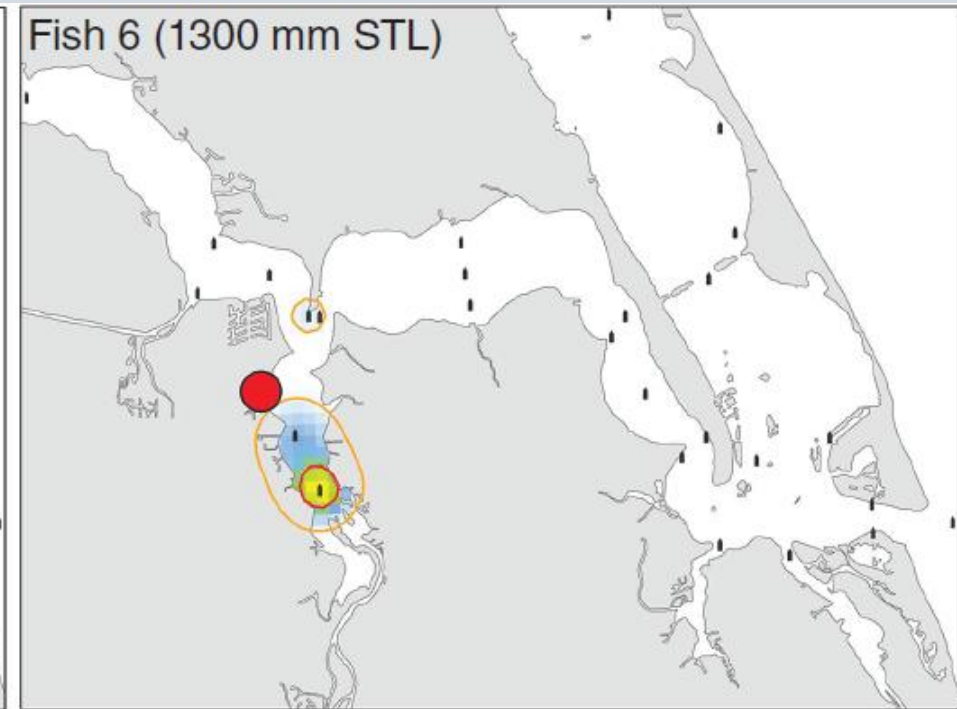
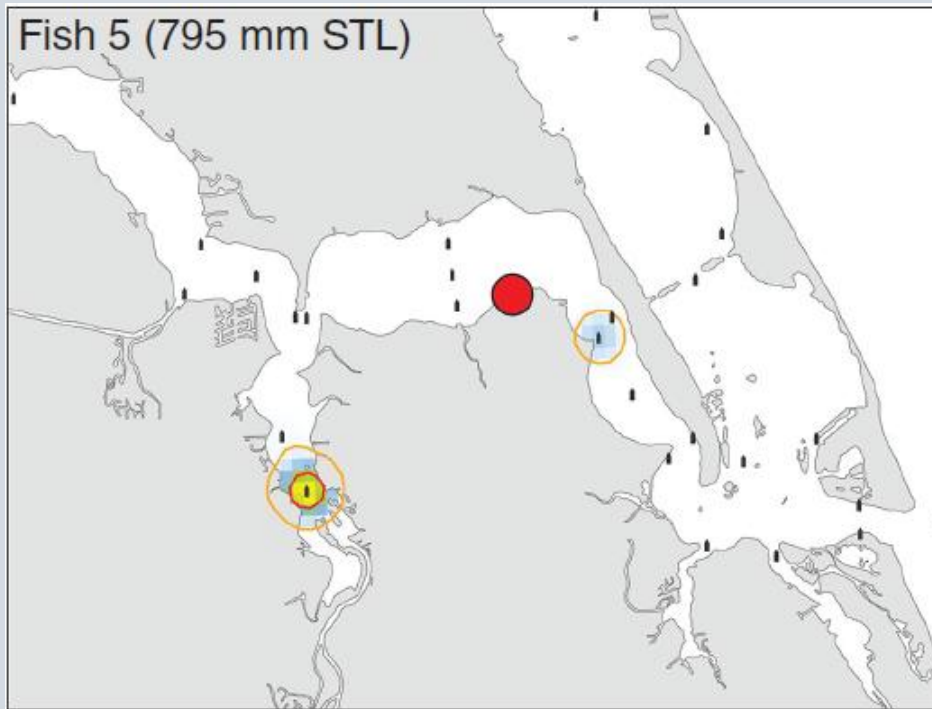
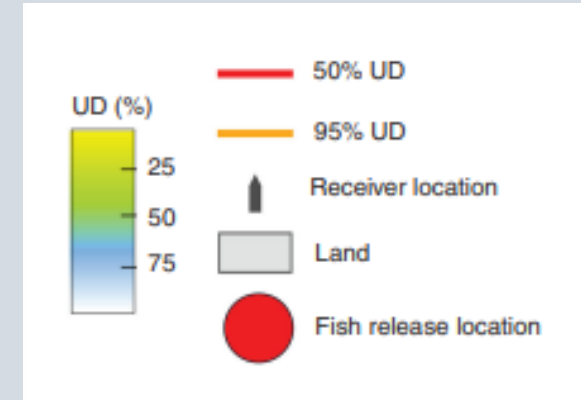
Detections were significantly higher in the South fork compared to all other estuarine regions

Detections spanned 109–850 days (mean of 429)



South Fork Residency!

- Individuals spent up to 87% of their detected days in a 0.4-km² of the South Fork



Abiotic conditions



Parameter	Caloosahatchee River	St. Lucie River
Water temperature	>30°C	24°C–29°C
Salinities	18–30 ppt	15–30 ppt
Dissolved oxygen	>6 mg/L	5–7 mg/L

From Poulakis et al. (2011)

From Torre et al. (2026)



Similar!



Conclusions

- Multiple lines of evidence show South Fork is important
- Identifying high-use areas is an essential step towards safeguarding key habitats
- Habitat protection is essential for promoting recovery





Abstract—The endangered smalltooth sawfish (*Pristis pectinata*) has been protected under the U.S. Endangered Species Act since 2003. Once common throughout the Indian River Lagoon, in Florida, the species was extirpated from this estuarine system by the 1970s because of bycatch mortality. Hotline reports of small juveniles in this estuarine system were rare until 2015, when an increase in reports began and peaked between 2020 and

Reemergence of the endangered smalltooth sawfish (*Pristis pectinata*) in a historical nursery in southeast Florida

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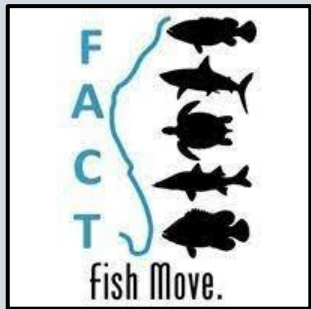




Acknowledgements



- NOAA/NMFS for funding research
- Smalltooth Sawfish Recovery Implementation Team
 - Harbor Branch Oceanographic Institute
 - Citizens reporting sawfish encounters
 - FWC Charlotte Harbor Field Lab
- SFWMD DBHydro & Coastal Ecosystems Section
 - Havenworth Coastal Conservation
 - FACT Network



Report your encounters!

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