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Updates on Giant Manta Ray and Smalltooth Sawfish Data and the Reinitiation of ESA Section 7 Consultation on the Authorization of the Southeast U.S. Shrimp Fisheries

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Presentation Overview

- Brief Background: The 2021 Opinion, SFD Reinitiation Request and Previous Updates to the AP and Council
- New Information to Consider in Shrimp Opinion Reinitiation
  - Giant Manta Ray and Sawfish Recovery Planning Updates
  - Manuscript in Review: Trends in juvenile sawfish abundance in Charlotte Harbor
  - Summary of 2024 Florida Keys Sawfish Mortality Event
- Consultation Timing Update

Background

- April 2021: SERO issued ESA biological opinion and incidental take statement on the implementation of the sea turtle Conservation regulations (TED regs) under the ESA and the authorization of the southeast U.S. shrimp fisheries in federal Waters under the Magnuson Stevens Fishery Management and Conservation Act.

- June 2023: SERO, Sustainable Fisheries Division (SFD) requested SERO Protected Resources Division (PRD) reinitiate Section 7 consultation on U.S. shrimp fisheries and giant manta rays and smalltooth sawfish.
    - Reinitiation was required to address unanticipated observed lethal incidental take of giant manta rays and new information revealing effects of southeast shrimp fisheries on smalltooth sawfish and giant manta rays not considered in the 2021 Shrimp Opinion.
    - No other reinitiation triggers were met so reinitiation scope was limited to addressing only those two species.

Background

- Information is required to initiate formal consultation (see § 402.14(c) and (d))
- Data needs identified for reinitiation of this consultation included:
  - Trawl effort data
  - Revised bycatch estimates based on the recent observer data (and effort data),
  - Evaluation of the best available data on giant manta rays and smalltooth sawfish, the nature and the extent of the lethal trawl interactions.
  - Completion of smalltooth sawfish and giant manta rays SEFSC population viability analyses for understanding the impact of Southeastern shrimp fisheries on these species.
  - Assessment of any new proposed management actions by the Councils, including any taken in response to new information as it becomes available.
- Presentations on reinitiation and related information to date:
  - August/September 2023 - Presented to GMFMC/ SAFMC Shrimp Committees
  - October 2023 /March 2024 - Presented to GMFMC Shrimp APs
  - April 2024 - Presented to SAFMC Shrimp APs
  - June/August 2024: - Presented to the SAFMC and GMFMC

Assessing Best Available Science

SERO PRD has:

- Updated its giant manta ray and smalltooth sawfish "Status of Species " sections, incorporating information from publications that SERO previously has shared with the Council that were not available for the last consultation.

SERO PRD is:

- Updating the Smalltooth Sawfish Recovery Plan. Draft will be made available for public comment later this year.
- Developing a Giant Manta Ray Recovery Plan. Draft published (89 FR 82991; 10/15/2024)
    - Six comments received during the 60 day public comment period, including a comment from the Southern Shrimp Alliance. New information will be incorporated as appropriate.
- Continuing to monitor observer data for new takes (e.g., 9 new giant manta ray takes observed in 2024)
- Completing a new publication: Distribution and trends in relative abundance of juvenile smalltooth sawfish (Pristis pectinata) in Charlotte Harbor, Florida. Currently in Journal review.
- Assessing the effects of the sawfish mortality event in South Florida

Long-term sampling identifies high-use areas and indicates declining abundance of small juvenile smalltooth sawfish (*Pristis pectinata*) in Charlotte Harbor, Florida

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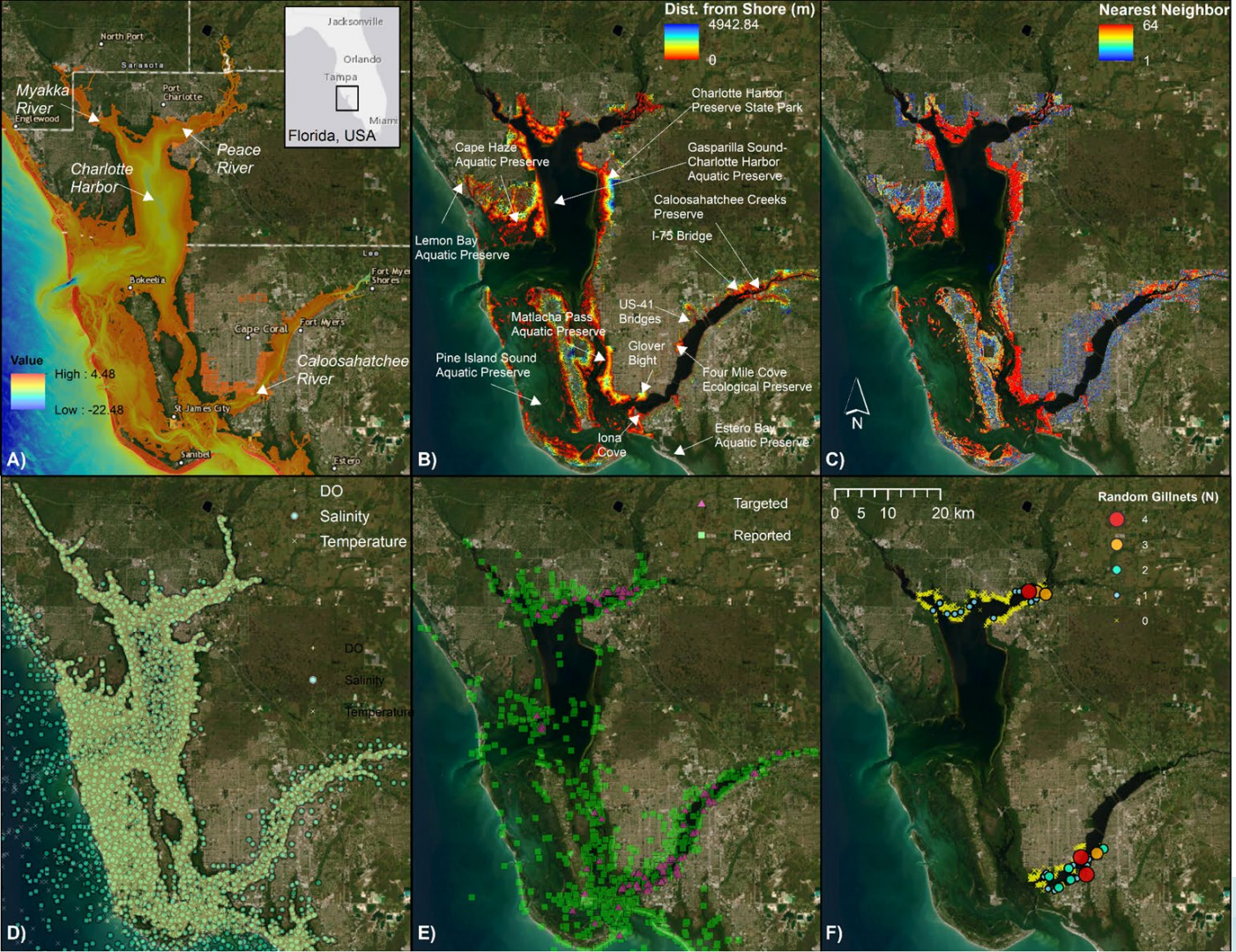
- Evaluated 13 years of endangered smalltooth sawfish random gillnet sampling data from the Charlotte Harbor estuarine system.
- Highest densities in spatiotemporally stable natural shoreline habitats near concentrations of mangroves, in well-oxygenated (dissolved oxygen >7 mg/L), warm (25–33°C), brackish (salinity 5–27) waters between 5 and 15 km upriver.
- Estimated juvenile abundance:
  - Within the sampling domain: **34 ± 11** (range: 15–69)
  - Extrapolating to the broader estuary: **503 ± 163** (range: 357–1,009).



Charlotte Harbor study area and data layers. (**A**) Bathymetry and locations of the Myakka, Peace, and Caloosahatchee rivers; (**B**) Mangrove distance from shoreline; (**C**) Mangrove nearest neighbor analysis identifying clusters of mangroves; (**D**) Daily sonde data for temperature (°C), dissolved oxygen (DO), and salinity used for interpolation; (**E**) Smalltooth sawfish catch locations (zeroes excluded) from targeted sampling by the Florida Fish and Wildlife Commission (FWC, age-0 and age-1 only) and the U.S. Sawfish Recovery Database (all sizes); and (**F**) Sampling and sawfish catch locations from FWC random gillnet sampling.

From Farmer et al.
(In Review)

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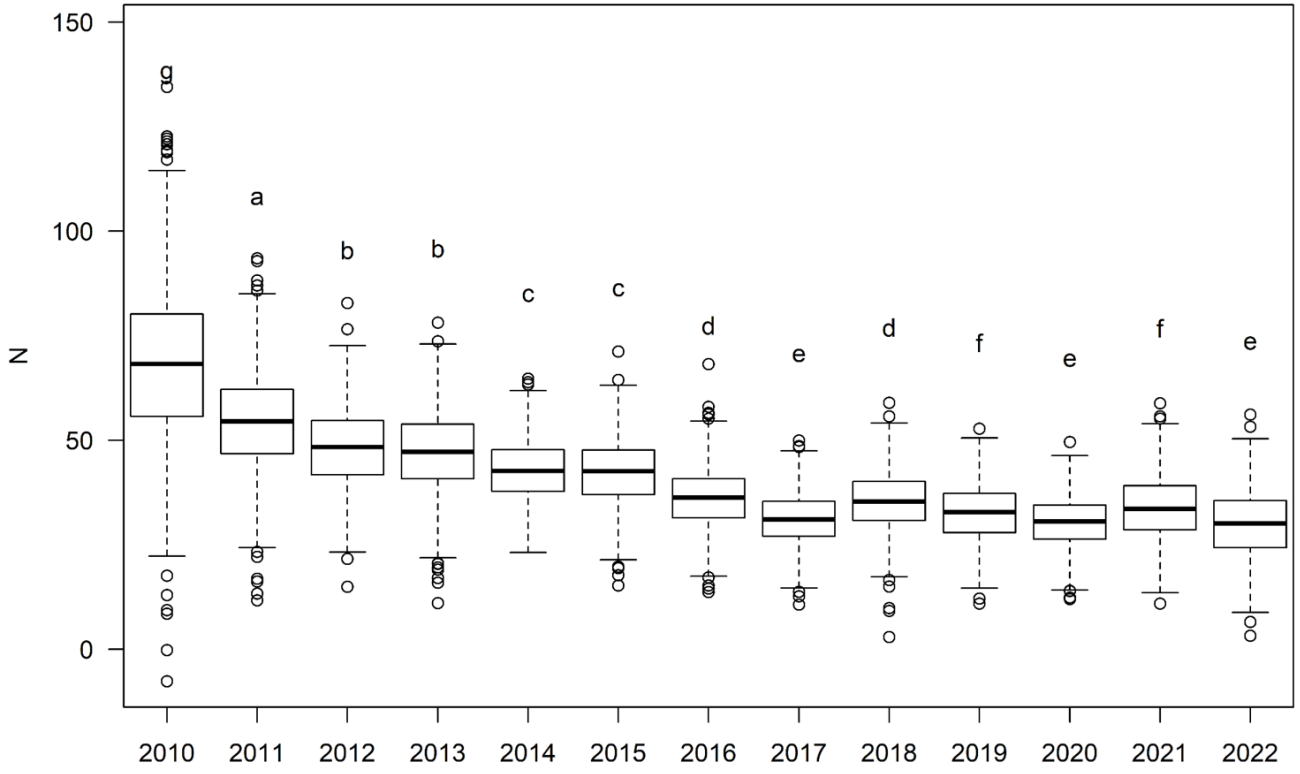
Draft Manuscript: In Review



Trend in smalltooth sawfish relative abundance. Model-estimated Spring/Summer abundance (N) of age-0 and age-1 juveniles in Charlotte Harbor from random gillnet sampling, accounting for parameter uncertainty and environmental variability. Lettering denotes significant differences revealed by post-hoc pairwise comparisons using Tukey tests.

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Draft Manuscript: In Review

- Significant declining trend in relative abundance of small juveniles.
- Back-calculated adult female abundance estimates:
  - Derived from brood size: **48 ± 16** (range: 26–144)
  - Derived from stable age distribution: **87±30** (range: 39–211)
  - Genetic estimate (Feldheim et al. 2017): **55**
- The declining trend in small juveniles and small number of adult females contributing to the population are causes for concern for recovery of this species, which faces ongoing threats of fishery bycatch, development of high-use nursery habitats, and stochastic mortality events potentially linked to warming seas.

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Sawfish Mortality Event Update

- 2024 (January - August):
  - 230 affected (spinning, thrashing, beaching) sawfish reported
  - 56 confirmed mortalities (total mortality likely higher)
  - Nearly all were large juvenile or adults (9-16 ft)
  - Most reports came from the Keys, Jan through June

- 2025 (January - present):
  - Less than a dozen affected sawfish reports thus far
  - Less than 5 mortalities
  - Reports are more geographically isolated than last year

- Cause is still under investigation but likely linked to a benthic harmful algal bloom

ESA Section 7 Consultation Timing Update

- SERO is in the pre-consultation or technical assistance phase
- SEFSC bycatch analyses and PVAs are vital for moving forward in the consultation
- SERO will also need to consider any proposed Shrimp FMP-driven actions and any actions the Gulf or South Atlantic Councils consider in response to key data as it becomes available.
- Future Key Presentations and Discussions in Support of ESA and MSA Integration Policy:
  - SEFSC: Updated bycatch estimates and PVA analyses presentations at Gulf SSC
  - SERO: Summary of reinitiation package/biological assessment

Where Can I Get More Information?

- Information posted on our website:
  - 2021 Shrimp Biological Opinion
  - Smalltooth Sawfish and Giant Manta Ray Species Profiles
    - Species Overview, Conservation and Management, Science, and Resources
  - ESA Section 7 Consultation Species Frameworks
    - Guidance on evaluating effects from federal action for each listed species

- Information YOU Want to Share? Questions? Other Needs?
  - Reach out to me and I'll listen, help or connect you to a Protected Resources specialist who can! Jennifer.Lee@noaa.gov