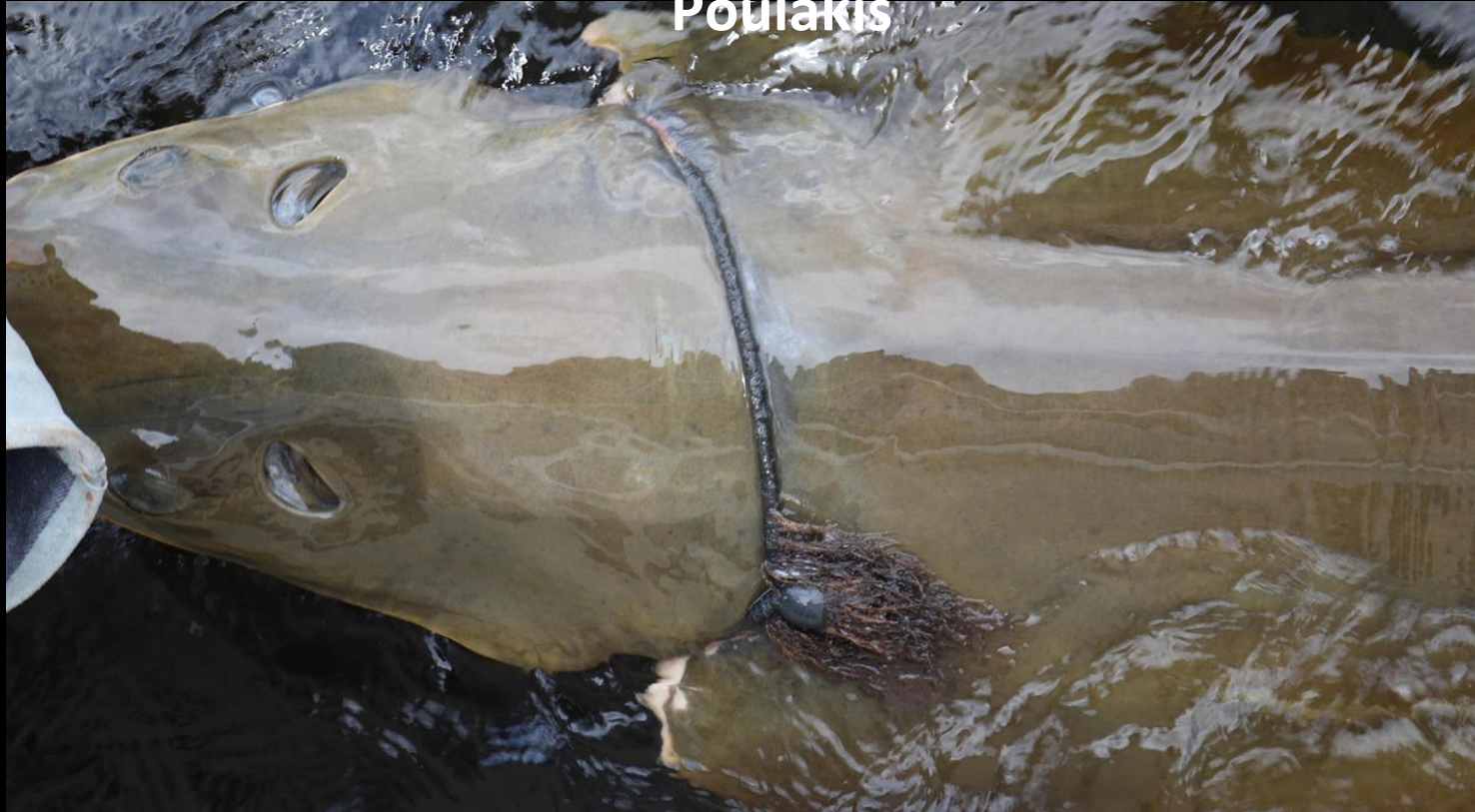


# Effects of marine debris and human interactions on the smalltooth sawfish

Dylan M. Yakich, Andrew K. Wooley, Lukas B. Heath, Rachel M. Scharer and Gregg R. Poulakis



2023 Watershed Summit  
Coastal & Heartland National Estuary Partnership





# Outline

- **Smalltooth Sawfish**
- **Historical marine debris**
- **Current marine debris**
  - **Ball bungees**
- **Solutions**
- **Hotline**





# Smalltooth Sawfish (*Pristis pectinata*)

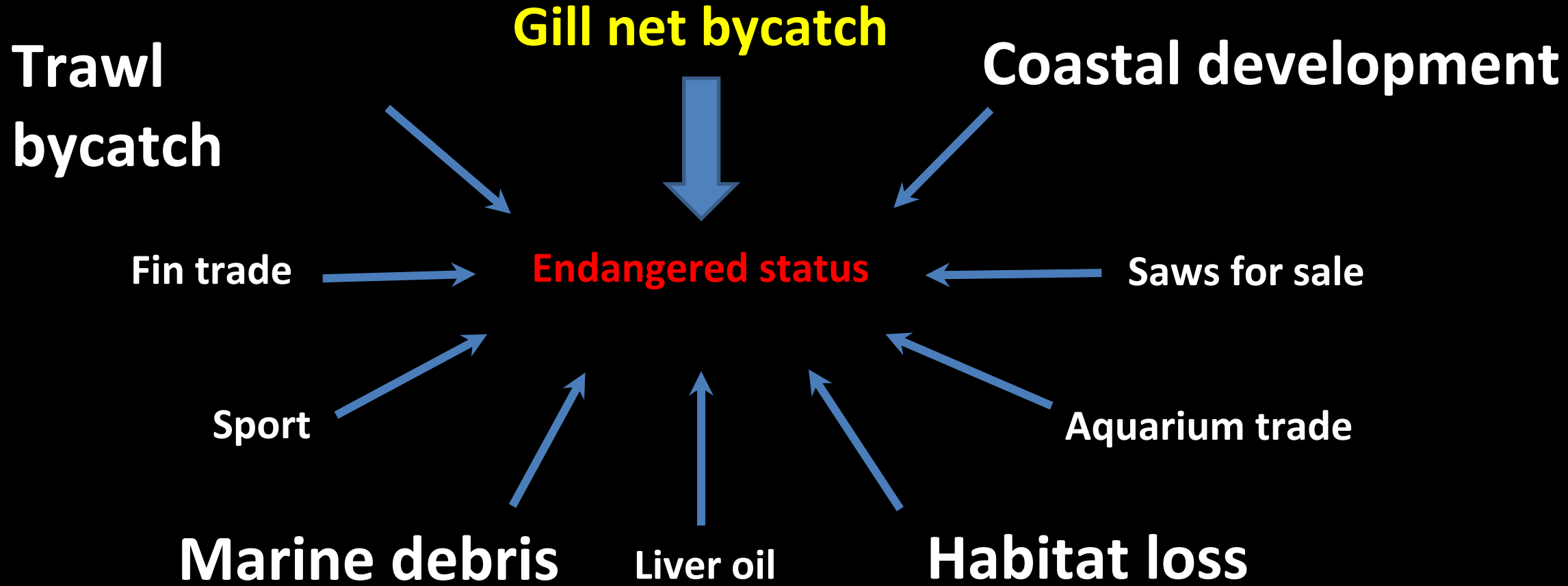
- Endangered (ESA), Critically Endangered (IUCN)
- Historical U.S. range from Texas to North Carolina
- Currently found primarily in south Florida

-  1992: Protected in Florida
-  1995: Gill net ban
-  2003: U.S. Endangered Species Act
-  2009: NMFS Recovery Plan



Photo by Sarah Ruth

# Sawfish population declines





# Smalltooth Sawfish (*Pristis pectinata*)

- Rostrum typically with 22-30 teeth on each side
- Feeding and defense



Photos by FWC



- Susceptible to entanglement



Photo by Bill Sperry



# Historical marine debris issues

Photos by FWC



Available online at [www.sciencedirect.com](http://www.sciencedirect.com)



Marine Pollution Bulletin 52 (2006) 1533–1540

MARINE  
POLLUTION  
BULLETIN  
[www.elsevier.com/locate/marpolbul](http://www.elsevier.com/locate/marpolbul)

Note

Anthropogenic effects on the smalltooth sawfish (*Pristis pectinata*)  
in the United States

Jason C. Seitz<sup>a,\*</sup>, Gregg R. Poulakis<sup>b,c</sup>

- Jan. 1999 – Nov. 2005
- 3,289 encounter reports
- 50 reported entangled, injured or dead (1.5%)

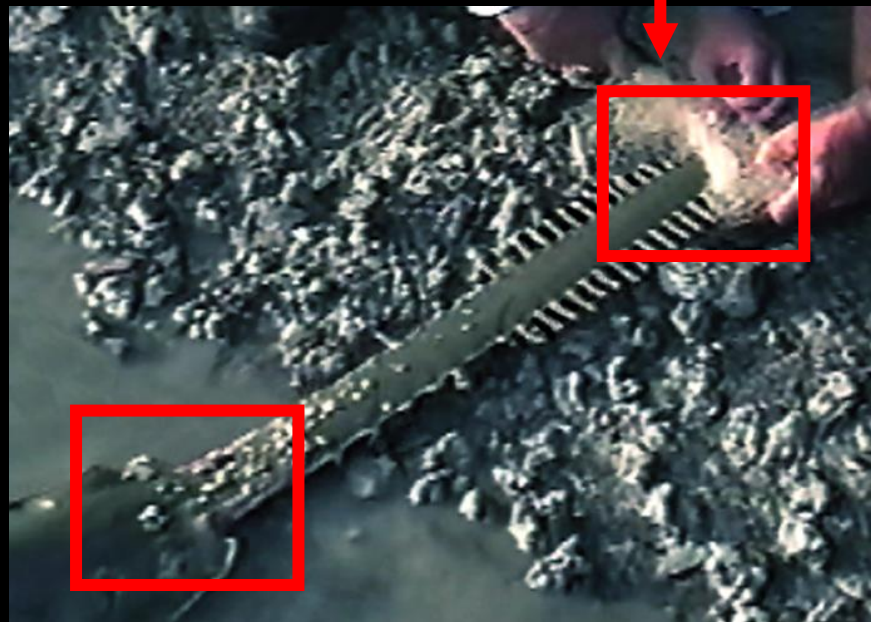
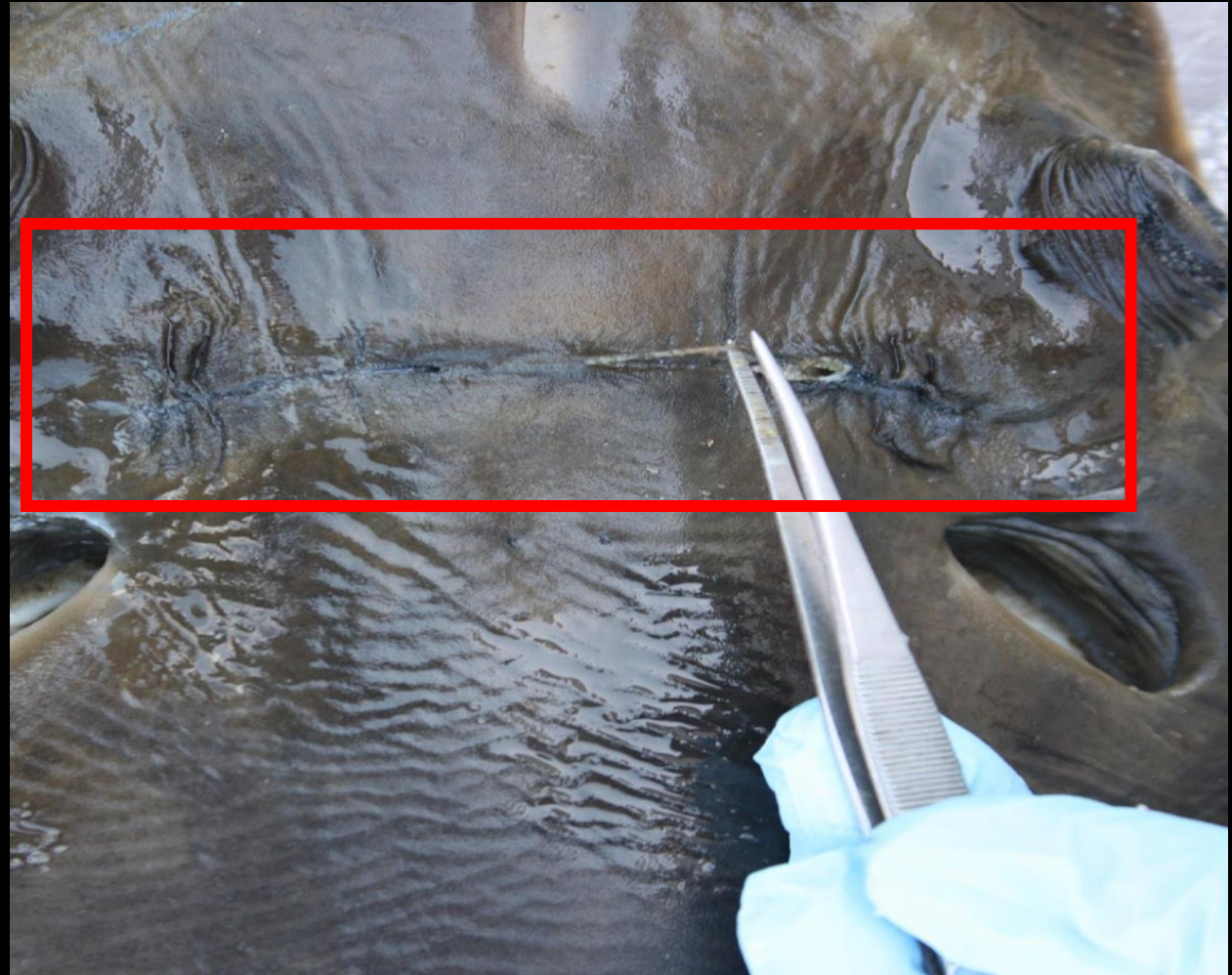






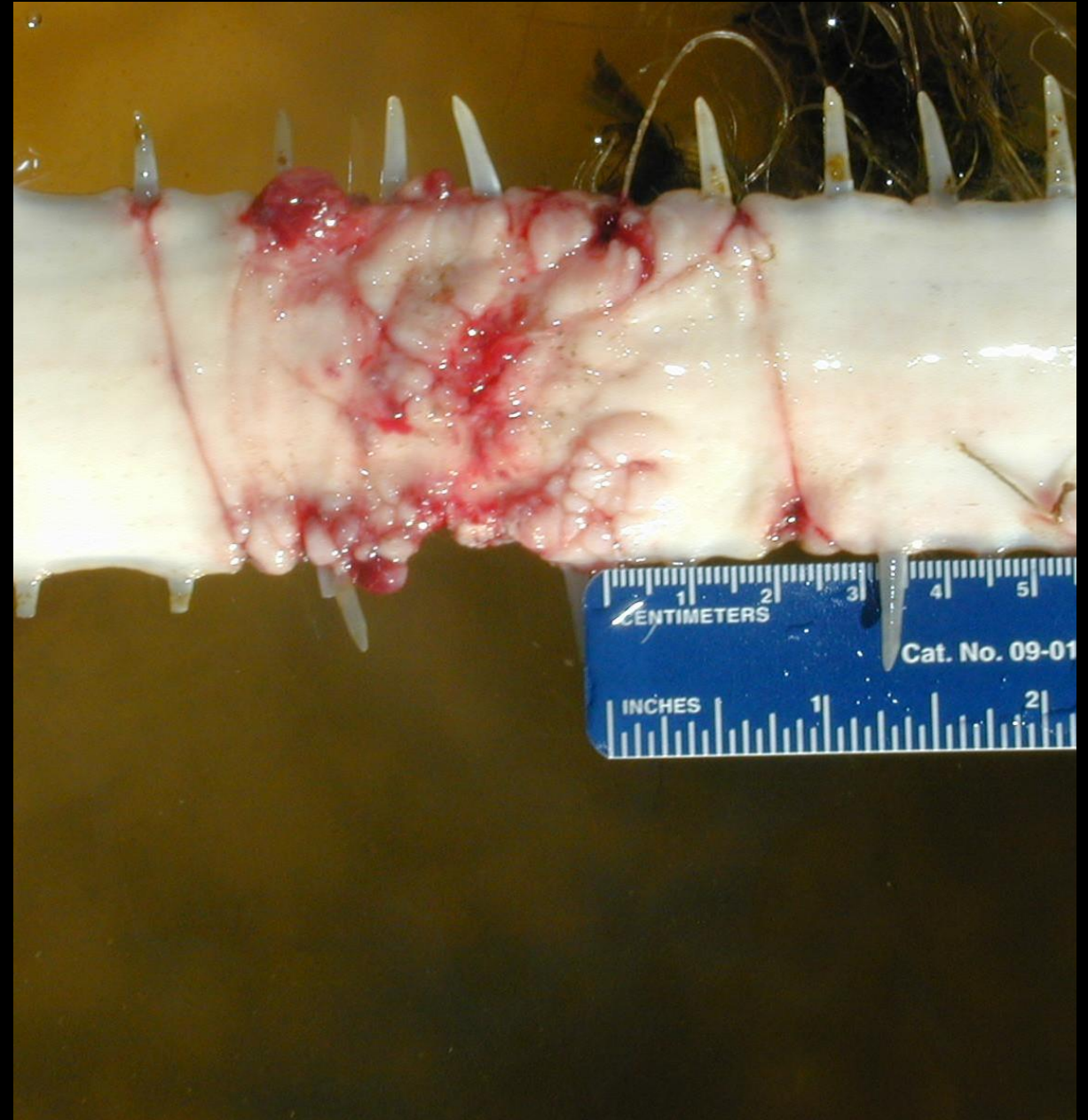
Photo by FWC





*Photos by FWC*





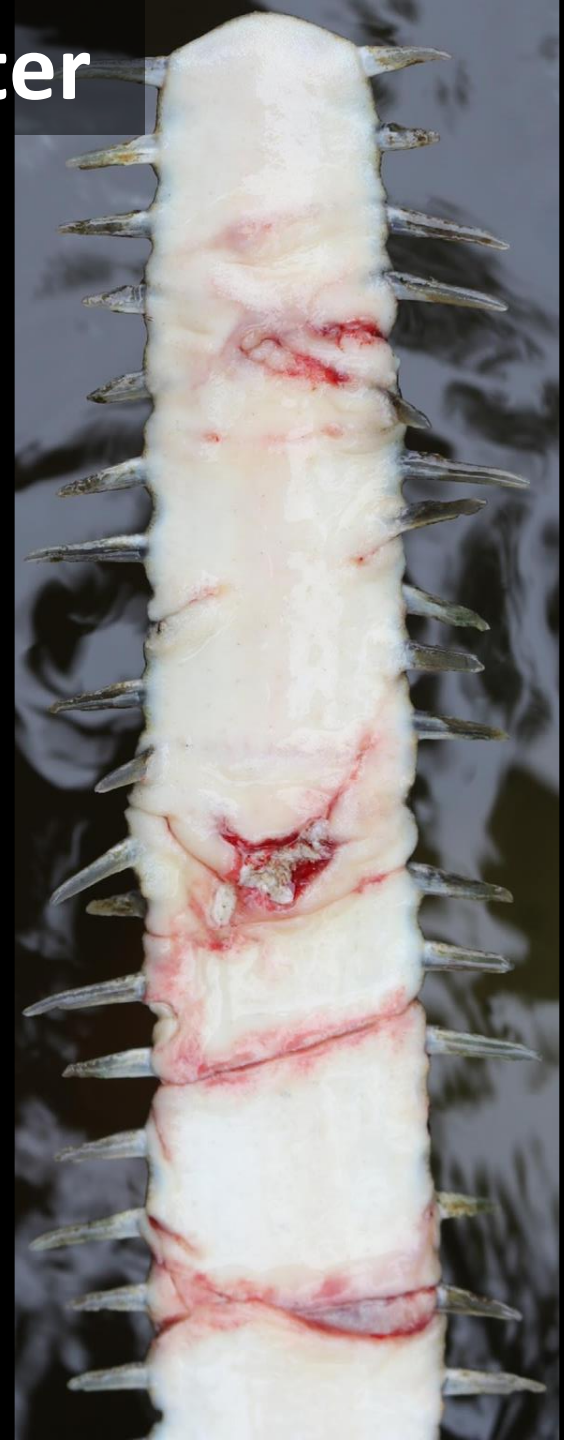
*Photos by FWC*



**Before**



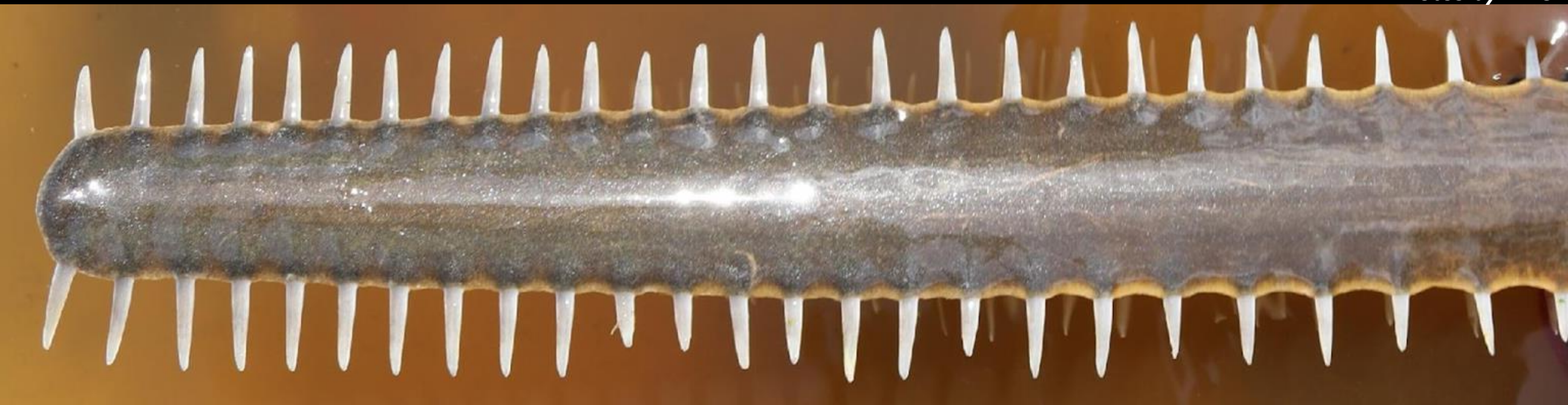
**After**







*Photos by FWC*







Photos by FWC



Photo by Jimmy Adams



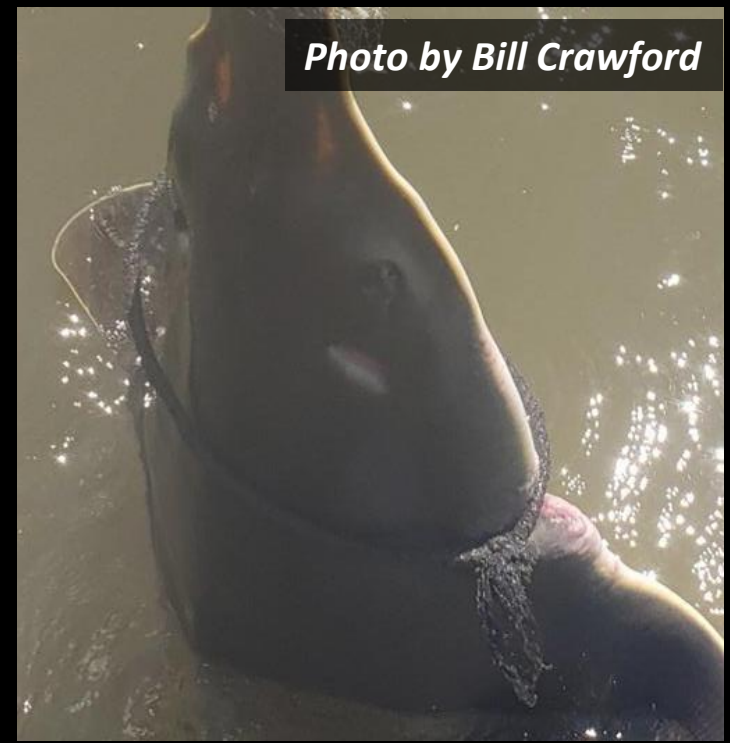
Crab trap

Photo by Alex Banach



Aluminum can

Photo by Bill Crawford



Elastic band

Photo by Josh Ludwig



Rope





# Other Anthropogenic Effects



**Injured rostrum and rostrum-less fish**



## Current marine debris issues

- Jan. 2017- Dec. 2021
  - 2,857 encounter reports
  - 176 reported entangled, injured or dead (6.2%)



# Miscellaneous debris

**Dog toy**

*Photo by Trish De*



**Onion bag**



*Photo by Brian Smith*

**Unknown plastic ring**

*Photo by Toni Robertson*





*Photo by John Straehle*



*Photo by Kyle Eberwein*



*Photo by Kristopher Perry*



*Photo by Jason Bihari*



*Photo by Doug Bartow*



*Photo by Doug Bartow*







*Photo by Kristopher Perry*





*Photo by Kristopher Perry*



**Ball bungee with piece of tarp**



# Sawfish and ball bungee

- Boat lift canopies
- At least 20 entangled sawfish have been captured or reported to the hotline



*Photos by FWC*



*Photo by Chris Presley*









# Bungee cord mortality

- The first one that we know died with a ball bungee around gills
- 1995 mm STL female
- Very fresh
- Gill function impaired



Photos by FWC





# Ball bungees continued...

- FWC caught 3 sawfish in 2021 with distinct notches from bungees (including one with bungee still on head)
- Ongoing problem in Cape Coral and Fort Myers
  - Hook and line gear: n = 82
  - Ball Bungees: n = 20



Photos by FWC



# 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](http://www.SawfishRecovery.org)**

*The information you provide helps scientists track sawfish recovery*

# Solutions

- Precautions to take with boat lift canopy
  - Hurricane events
  - Cut loops of ball bungees
- Cape Coral newsletter
- Future outreach and awareness
- Not a localized issue
- Remove fishing gear before release
- No abandoned fishing gear
- Dispose of garbage appropriately



*Photo by Chris Shinouskis*



# Acknowledgements

- NOAA/NMFS for funding research
- Citizens reporting sawfish encounters
- FWC Charlotte Harbor Field Lab staff

Share information about your encounters!

Call: 1-844-4SAWFISH

Email: [Sawfish@MyFWC.com](mailto:Sawfish@MyFWC.com)

[www.SawfishRecovery.org](http://www.SawfishRecovery.org)

