

# 20 Years of Lake Sturgeon Assessment: Lessons Learned

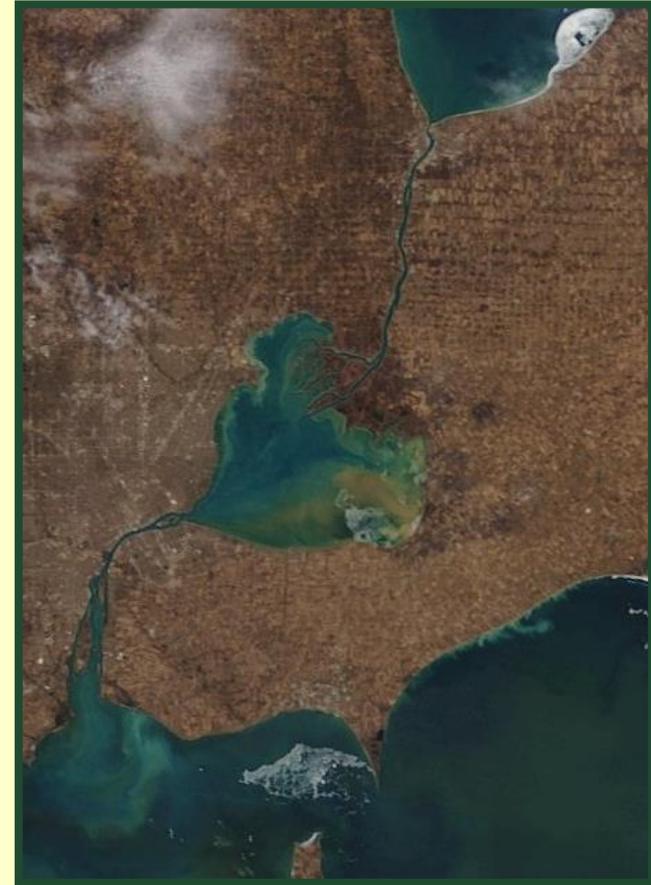


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# Pre-1996

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- Little known about lake sturgeon populations in the SCDRS
- Recreational fishery was present but unmonitored
- No fishery independent assessment program
- Statewide Rehabilitation Plan under development – information gaps id'ed



# MDNR SCDRS

## Sturgeon Assessment

1. SCR Setline survey  
(since 1996)
2. LSC Trawl survey  
(since 1996)
3. Harvest registration  
(since 1999)



# MDNR SCDRS Sturgeon Assessment

- Thru 2014, captured, tagged and released 2,871 sturgeon
- TL range from 9 to 74 inches
- Recapture data from 8 gear types, 3 agencies



# MDNR SCDRS Sturgeon Assessment

- 375 unique sturgeon with combined 540 recaptures
- 113 individual fish with multiple recaptures
- 11 fish with at least 4 recaptures, including 1 fish with 8 recaptures
- Many fish with tags shed and/or replaced, or tags added



# Adaptive Approach

- Sampling in the connecting channels is difficult
- New survey gears, baits, locations tested
- Adds complexity to data collection
- Details fade in the mists of time



Lesson learned: Metadata are critical



# The Wages of Data Sin...

- Across the years data fields added/removed, codes added, codes forgotten
- What starts out working in Excel can become unwieldy

The screenshot shows an Excel spreadsheet with a large data table. The columns are labeled with letters A through Z, and the rows are numbered. The data includes various codes and numerical values, with some cells containing text descriptions. The spreadsheet is titled 'M\_sturg\_tag1\_UpdatedJune2013\_workshop - Microsoft Excel'. The table has a complex structure with many columns and rows, making it difficult to read and manage.



Lesson Learned: Access is thy Salvation

# Sturgeon Handling

- Initial concerns for handling T&E species – kid-gloves
- Pectoral fin samples, gastric lavage, blood samples
- Sonic tag surgery
- Ultrasound sex determination



# Sturgeon Handling

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- Observations of survivors from boat strikes
- Survey gear encounters gone wrong



Lesson learned: Tough fish, maybe the perfect C&R species



# It Takes a Village

- SCDRS is Big Water
- 65 miles of connecting channels and a lake (27 X 26 miles)
- Early life history to adults
- Partner with USFWS, OMNRF, USGS, UM, Sea Grant, et al



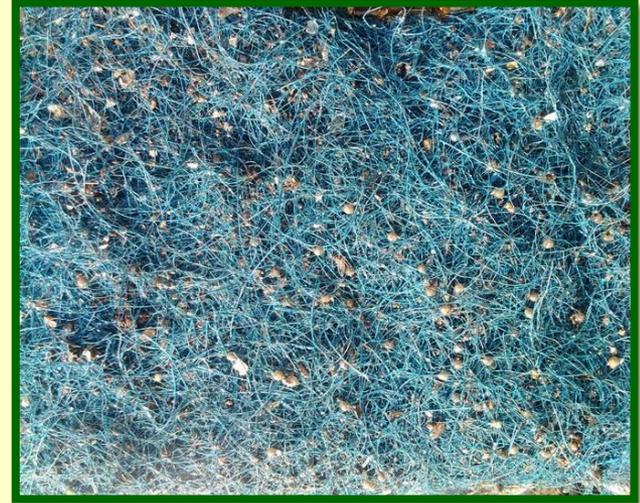
Lesson Learned:

Behold the Power of Collaboration



# The Needle in the Haystack

- Age 2 and older assessment (USFWS, DNR)
- Egg and larval assessment successes (USGS, UM)
- Age 0 and Age 1 fish remain elusive



Lesson Learned:

Big Haystack and Small Needle



# How Old Is That Sturgeon?

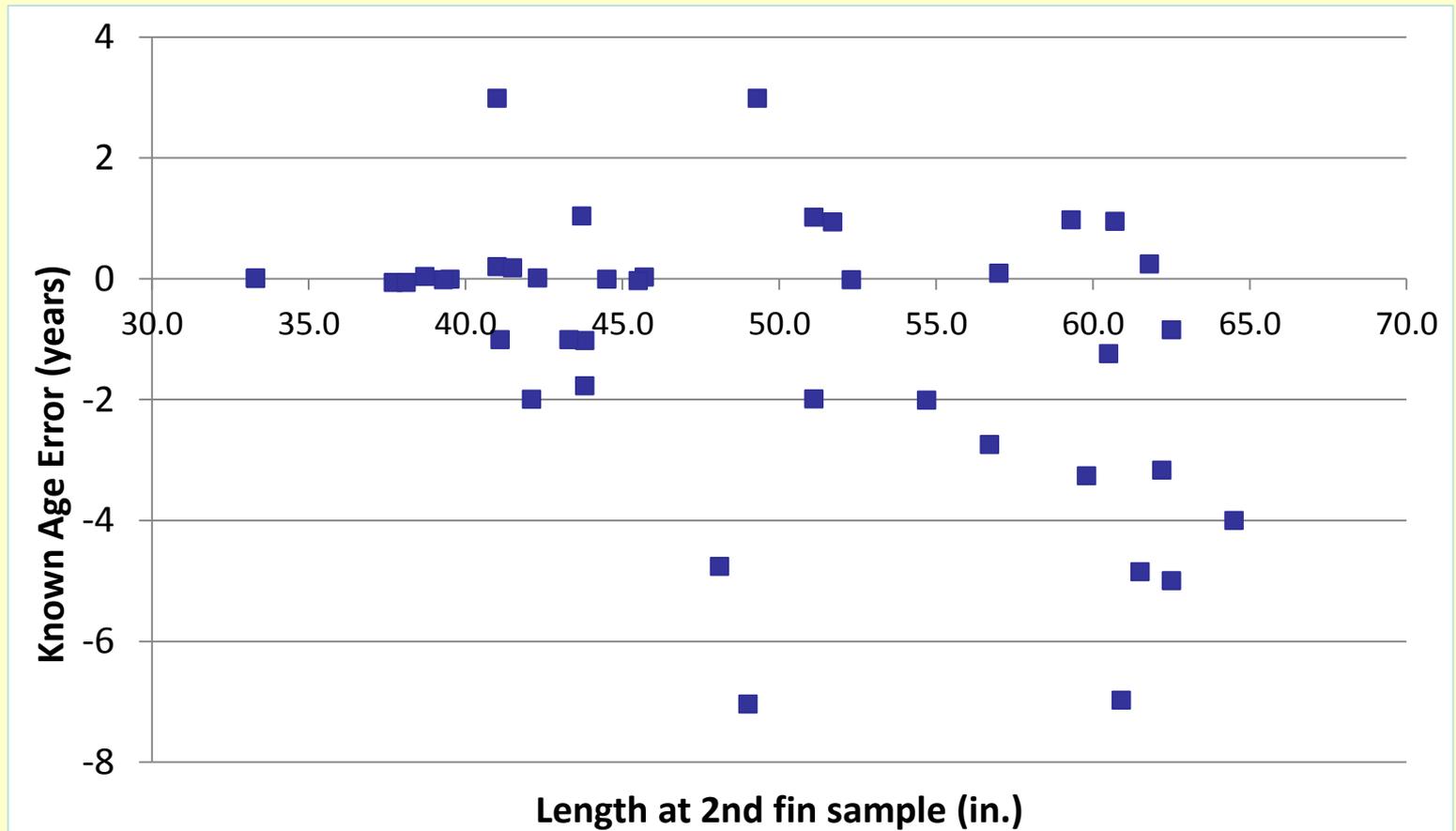
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- Pectoral fin rays used to estimate age for 2,400+ fish
- Recaptures after several years – opportunity to examine reliability of age estimates



# How Old Is That Sturgeon?

- Double ages for 41 individual fish have demonstrated difficulties in age accuracy for fish over 40" TL



# How Old Is That Sturgeon?

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Lesson learned: Age estimation with fin rays inaccurate for mature lake sturgeon

- Current protocol – fin rays sampled from:
  - Fish <40” TL
  - Recaptures that have been at-large for 5+ years since original fin sampling



# To Fish or Not To Fish?

- During drafting of Rehabilitation Strategy in mid-1990's closure of MI SCDRS recreational fishery was considered
- Concerns around ongoing violations (harvest out-of-season, snagging, undersize harvest)



# To Fish or Not To Fish?

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- Perception: Small, localized, harvest driven fishery
- Ontario commercial and recreational harvest in adjoining waters



# SCDRS Lake Sturgeon Fishing Regulations

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- Detroit River – Fishing season July 16 to Nov. 30, CIR only
- Lake St. Clair and St. Clair River
  - Fishing season July 16 to Nov. 30, possession season July 16 to Sept. 30
  - 1 fish per year; 42” to 50” harvest slot limit
  - Harvested fish must be tagged and registered (toll free phone-in)



# To Fish or Not To Fish?

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## Lesson Learned:

- Low interest in harvest, C&R dominates the fishery
- Anglers = Stakeholders with self-interest in conservation and restoration
- St. Clair-Detroit River Sturgeon for Tomorrow
  - Partner in conservation and management
  - Non-agency advocate for community awareness of unique resource
- Legal anglers on the water promote compliance



# Human Connection



1997 - Telemetry tagging (Katie - age 6)



2014 – Successful angler (Katie – age 23), 17 years later - possibly the same fish

Lesson Learned: There's Something Special About Sturgeon

2031 – ?????? - possibly the same fish?



# Summary

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- Lake Sturgeon management in the SCDRS now based on data/information collected over 20 years
- Lessons learned have shaped sturgeon assessment in SCDRS



# Thank You

