TPWD Lower Colorado River Initiatives
American Eel
American Eel

*Anguilla rostrata*

- Long-bodied and long-lived (47” and 40 years)
- Invertivore/Carnivore
- Nocturnal
- Habitat includes structure (i.e. riprap, woody debris, burrows)
Life History of American Eel
American Eel Data Needs

1. Distribution & Abundance
2. Life History
3. Population Structure

Project Components

1. Yellow Eel Sampling/Outreach
2. Eel Mop & Fyke Net Sampling (glass/elvers)
3. Eel Ramp Sampling (glass/elvers)
Yellow Eel: Field sampling

- Statewide, below instream barriers (e.g., dams, weirs, SW barriers)
- Methods include electrofishing, trotlines, traps
Yellow Eel: Public Outreach

• Presentations
• TPWD Press Release/UT Eel Wanted Poster
• Social Media
• News Coverage

LOOKING FOR AMERICAN EELS

Please report specimens or observations to Melissa Casarez or Adam Cohen, the Fishes of Texas Project
512-475-8171 (Melissa) / 512-471-8845 (Adam)
Maintain specimens alive if possible, or put on ice and give us a call. See links below for more information:

http://www.fishesoftexas.org
http://www.birdobserver.com
http://www.naturalist.com

Why was an American eel found in Brays Bayou?
By Sophia Beaudell - Reporter
Posted: 4:57 PM, December 04, 2017
Updated: 12:57 PM, December 05, 2017

SLIPPERY CREATURES will be donated to research effort
by Jessica Proctor

Do you ever catch eels while fishing in Texas rivers? TPWD could use your help gathering data that will help to conserve this unique and secretive species!

TPWD Biologists collected this fellow on the beautiful Lavaca River this week as part of a statewide life history study on American Eel. Little information exists on American Eel in Texas and TPWD could use your help in locating them to gather more data. If you catch an eel, please take a photo, record your location, and contact the River Studies Program at 512.754.6844. If possible, we would love to take the catch off your hands – feel free to freeze the eel and give us a call! Each individual can provide us with invaluable information to better understand this species.
Public Response

Doug-Tammy Isaacs: The San Bernard river, upstream of the freshwater dam in Brazoria County is loaded with them.

Tina Park: May 26 at 6:02pm • ◆
Logan caught an eel!!

Jeff Zeal Stefanoff: Talk to San Marcos city utility crews. They are always getting them.

Like · Reply · Message · 30 mins
Citizen scientist sightings and specimen donations

- 141 Reported sightings considered credible
- 23 Donated specimens
Specimens Collected

• 114 individuals
• 33 sites across 7 major river basins
• 113 yellow eel & one silver eel

Next Steps:

• Aging specimens
• Otolith microchemistry to inform movement patterns
Glass Eels & Elvers: Field Sampling

Small-mesh Fyke Nets
- Rotational sampling every 2 wks across 5 major bay systems for one year

Eel Mops
- Continuously deployed
- Checked every 2 wks
Eel Mops & Fyke Net Sampling

Eel Mops
• 29 sites
• 4,510 nights & 217 mop checks

Fyke Nets
• 124 sites & 330 sets
• Cumulative soak time: 1,693 hrs
Developing an eel ramp network and utilizing eDNA sampling to monitor cryptic recruitment of juvenile stage (glass eel and elver) American eel (*Anguilla rostrata*) in Texas Coastal Drainages.
Eel Ramp Sites

Gulf of Mexico

- Gulf of Mexico
- Eel Ramp Sites
- Pine Island Bayou
- Cow Bayou
- Pine Island Bayou
- Colorado River
- Tres Palacios River
- Coleto Creek
- Lynn Bayou
- Steep Bank Creek
- Highland Bayou
- Greens Bayou
- Horsepen Bayou
- Carpenters Bayou
- Oyster Creek

- eDNA Sampled Ramps
- Ramp Only
Eel Collections So Far...

• Glass Eels
  • 19 eels in Lynn Bayou, Port Lavaca (3 weeks in Jan 2023)
  • Site is closest to bay system and furthest south

• Elvers
  • One elver caught by LCRA, Colorado River, Bay City (May of 2022)
  • Three elvers in Lynn Bayou, Port Lavaca (Mar of 2023)
Blue Sucker
Cycleptus elongatus

• Large and long-lived (35” and 40 years)
• Fluvial specialist
• Invertivores
• Capable of migrating large distances (125 mi)
Habitat includes riffles, runs with boulders.
Flow homogenization and habitat degradation have been implicated in decline of this species throughout its range.
Blue Sucker Demographics and Recruitment

Boat electrofishing at 36 sites in the Lower Colorado between Austin and Altair
Blue Sucker Tagging

- Each fish captured is scanned for existing PIT tags
- A PIT tag is injected into newly captured fish
- A fin ray sample is collected
Blue Sucker Length Frequency

2016-2017
Blue Sucker Length Frequency

2016-2017

2019

n = 4 juveniles
Blue Sucker Length Frequency

2016-2017
2019
2021

10% of catch was sub-adult
Population Stressors?

Next Steps:

• Continue adult Blue Sucker monitoring in the Lower Colorado
• Assess tributaries for spawning activity
River Access
RACA Program

Lease private property to provide more access for bank, wade, and kayak fishing
RACA in Texas

- 22 leased river access areas
- Access to ~300 river miles
- Improved access or habitat conservation projects at 10 sites
Site Selection

- Locations that offer a unique wilderness setting with intact instream and riparian habitats,
- Offer high-quality paddling and river fishing experiences, and access to other nature-oriented uses such as wildlife viewing,
- Currently limited public river access,
- Strategically positioned to connect with other upstream or downstream river access areas, and
- Located near an urban population center.
Conservation Delivery

- Native riparian vegetation plantings
- Seed dispersal
- Access improvement
- Kiosk or signage installation
Texas Paddling Trails Program

106 access areas       60 inland trails       439 river miles
Next Steps:

• Seeking additional landowners for the leased access program
• Always accepting paddling trail locations from local partners
Summary

- Aquatic Bioblitzes
  - 5 State Parks
  - 6 State Wildlife Management Areas
  - 1 TPWD Lonestar Land Steward
  - 1 Nature Conservancy Preserve
  - 1 County Park

- Gap Sampling Sites
  - 388 fish collection sites
  - 41 mussel collection sites

- Fish Records
  - 90,000+ individuals
  - 165+ species
Project Contacts

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