

2024 Annual Meeting of the Texas Chapter of the American Fisheries Society

February 22nd- 24th, 2024
Nacogdoches, Texas



MEETING PROGRAM

WELCOME TO NACOGDOCHES!



Reflecting on the achievements of the Texas Chapter over the years, I am struck by the dedication and passion of our membership. The Texas Chapter is one of the strongest state chapters of the American Fisheries Society, supporting student members by offering numerous travel awards and student scholarships every year. In the last year, we have increased membership participation at the University level with the addition of The University of Texas at San Antonio student subunit. I am proud to have played a small role in the continued success of this outstanding organization.

This year's 48th annual meeting will be held at the Fredonia Hotel and Convention Center in Nacogdoches. Nestled in the Piney Woods, the venue is sure to provide a relaxing atmosphere for us to gather to share our achievements in research and fisheries management and strengthen collaborative relationships both old and new. This historic hotel is located downtown in the oldest town in Texas, adjacent to Stephen F. Austin State University. What a spectacular venue for the meeting and I wish to take a moment to thank our President Elect Steven Bardin, Secretary / Treasurer Stephen Curtis, and the rest of the meeting planning team that have pulled out all the stops to make this an enjoyable and memorable event.

Continuing Education workshops, a field trip to the Banita Creek Preserve, and La Nana Bayou cleanup will kick off the event on Thursday February 22nd. The Poster Session and Student Social, followed by a conservation movie will cap off the first day's events. Friday is jam-packed with sessions that are sure to stimulate, with rooms running concurrently so you may choose from numerous oral presentations (50 over the 1.5 days!). The technical sessions on Saturday are not to be missed, and we invite you to stay for the business meeting as we wrap up the meeting and announce results of the officer elections for next year.

Let's keep the momentum going and continue to grow the participation and diversity of our chapter membership. If you would like to join in planning the next meeting or participate on the TCAFS Executive Committee, feel encouraged to reach out via email at Christopher.Mace@tpwd.texas.gov. Moreover, if you have ideas you'd like to share, please consider volunteering on one of the many important behind-the-scenes teams. More information about the officers may be found at <https://units.fisheries.org/tx/officers-and-chairs/>.

Dr. Christopher E. Mace
President, Texas Chapter of the American Fisheries Society

I am very excited to extend a warm welcome to each of you to the 2024 Texas Chapter of the American Fisheries Society Annual Meeting. This year, we have the privilege of gathering in Nacogdoches - a town that is not only the oldest in Texas but also a place rich in culture and history, perfectly complemented by the charm and elegance of the Fredonia Hotel.



This annual meeting is poised to be an extraordinary event, brimming with opportunities for professional growth, networking, and the celebration of the remarkable advancements made in our field. Our agenda showcases our members' wide range of interests and expertise. It all begins with two continuing education workshops: "Translating Science to English," aimed at honing our communication skills to make our work more accessible, and "An Introduction to ArcGIS Pro and ArcGIS Online," which will equip participants with valuable tools for spatial analysis and data sharing.

Moreover, we have organized engaging and meaningful activities to connect us with the local environment and community. The Banita Creek Preserve tour offers an immersive experience into the local ecosystems, enriching our understanding and appreciation of the natural world. Similarly, the La Nana Bayou cleanup event presents a hands-on opportunity to contribute positively to this community and the resources we are dedicated to preserving.

Networking and collaboration are the cornerstones of all TCAFS meetings. The Poster Social and Student Mixer, generously sponsored by the SFASU Biology Department, is designed to be a platform for sharing research, exchanging ideas, and sparking new collaborations across our community. The Awards Banquet, a highlight of our gathering, will honor the outstanding achievements within our community, celebrating the dedication and hard work that continue to propel our field forward.

I urge each of you to fully engage with the sessions, workshops, and social events planned throughout the meeting. This is a unique opportunity to reconnect with colleagues, meet new peers, and immerse yourself in the inspiring beauty and history of Nacogdoches. Let us come together to share our knowledge, experiences, and passion for fisheries science and conservation, driving our mission forward with renewed vigor and commitment.

The excom, committee chairs, and committee members have worked extremely hard to make sure that this meeting is one we will all remember, we owe each one of them a very big thank you for their effort and continued commitment to the chapters. Here's to a memorable and inspiring meeting that not only reflects on our past achievements but also honors our members' hard work and paves the way for future advancements in our vital field. Welcome to Nacogdoches, and may our time together be both productive and enjoyable!

**Sincerely, Steven Bardin,
President Elect, Texas Chapter of the American Fisheries Society**

2023-2024 TEXAS CHAPTER OFFICERS AND COMMITTEE CHAIRS

President
Christopher Mace, Ph.D.

President Elect
Steven Bardin

Past President
Timothy Birdsong

Secretary-Treasurer
Stephen Curtis

Awards
Beth Silvy, Ph. D.

Continuing Education
Lynn Wright

Editorial
Dave Buzan
Preston Bean, Ph.D.

Endowments
Brian Van Zee

History
Ray Mathews
Michele Nations

Internet
Haley Kokel
Michele Nations
Ryan Seymour

Issues
Mukhtar Farooqi

Membership
Michele Nations

Newsletter
Matthew Troia, Ph.D.

Nominating
Greg Cummings

Pond Management
Todd Sink

Publicity/Exhibits
Dylan Kwak

Scholarship
Jennifer Butler

Student Outreach
Joshuah Perkin, Ph.D.

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Schedule at a Glance

Thursday, February 22, 2024

8:00 AM - 5:00 PM	TCAFS Conference Registration Exhibits Setup Poster & Raffle/Auction Set Up	Rusk Room Convention Lobby Convention A & Stage
1:00 PM - 4:40 PM	Load Presentations	Rusk Room
1:00 PM - 3:00 PM	Continuing Education: <u>Translating Science to English – a Hands-on Workshop for Improving Public Messaging</u> <i>Instructor: Leslie Hartman</i>	Convention B
1:00 PM - 3:00 PM	Continuing Education: <u>An Introduction to ArcGIS Pro and ArcGIS Online</u> <i>Instructor: Dan Bennett</i>	Banita Ballroom
1:00 PM - 3:00 PM	<u>Tour: Banita Creek Preserve</u> <i>Led by: Carmen Montaña</i>	Meet at Main Lobby
3:30 PM - 5:00 PM	<u>Service Project: La Nana Bayou Cleanup</u> <i>Led by: Carmen Montaña</i>	Meet at Main Lobby
5:30 PM - 7:00 PM	Poster Social	Convention A & B
7:00 PM - 9:00 PM	Student Mixer <i>Sponsored by the SFASU Biology Department</i>	Terrace Pool & Patio/ Convention B
9:00 PM - 10:00 PM	Conservation Movie	Terrace Pool & Patio

Friday, February 23, 2024

8:30 AM - 8:40 PM	President's Welcome	Convention A
8:40 AM - 10:20 AM	Technical Session	Convention A & B
10:20 AM - 10:40 AM	Break	Lobby
10:40 AM - 12:00 PM	Technical Session	Convention A & B
12:00 PM - 1:40 PM	Lunch	On Your Own
12:00 PM - 1:40 PM	Student-Mentor Lunch	Banita Ballroom
1:40 PM - 3:00 PM	Technical Session	Convention A & B
3:00 PM - 3:20 PM	Break	Lobby
3:20 PM - 4:40 PM	Technical Session	Convention A & B
6:00 PM - 9:00 PM	Awards Banquet	Convention A & B

Saturday, February 24, 2024

7:00 AM - 8:00 AM	Past President's Breakfast	Rusk Room
8:20 AM - 9:40 AM	Technical Session	Convention A & B
9:40 AM - 10:00 AM	Break	Lobby
10:00 AM - 11:00 AM	Technical Session	Convention A & B
11:00 AM - 12:00 PM	Business Meeting	Convention B
12:00 PM	Adjourn	



Technical Session Schedule

Friday, February 23rd

	Convention Room A	Convention Room B
8:40-9:00	<p>Seventy years of change: Analyzing fish assemblage shifts of the upper Sabine River, Texas</p> <p><i>Johnathan Ellard, Texas A&M University</i></p>	<p>Eel ramps and eDNA detect recruitment of American Eel (<i>Anguilla rostrata</i>) in Texas</p> <p><i>Jenny Oakley, University of Houston – Clear Lake</i></p>
9:00-9:20	<p>Beta diversity of stream fishes in east Texas: partitioning variation among spatial scales</p> <p><i>Anastasia Umstott, Stephen F. Austin State University</i></p>	<p>Using eDNA metabarcoding to assess fish assemblages in the rivers and streams of Texas</p> <p><i>Kylie Perkins, University of Houston – Clear Lake</i></p>
9:20-9:40	<p>Long-term changes in fish assemblage structure across the Neches River basin</p> <p><i>Rebecca Mangold, Texas A&M University</i></p>	<p>Metabarcoding for rapid detection of imperiled fishes in the upper Brazos River, Texas</p> <p><i>Kaley Cave, University of North Texas</i></p>
9:40-10:00	<p>Historical change of a large river fish assemblage following lock and dam construction</p> <p><i>Thomas Dodson, Texas A&M University</i></p>	<p>Exploring the challenges and opportunities for eDNA bioassessment in aquatic systems of the arid Southwest</p> <p><i>Zacchaeus Compson, University of North Texas</i></p>
10:00-10:20	<p>Mesohabitat and macroecological correlates of Blue Sucker occurrence in regulated rivers</p> <p><i>Hannah Evans, Texas A&M University</i></p>	<p>The use of environmental DNA (eDNA) in comparison to contemporary trawls and historical catch data for assessing marine finfish in Matagorda Bay, Texas</p> <p><i>Polly Hajovsky, Texas Parks and Wildlife Department</i></p>
10:20-10:40	Break	
10:40-11:00	<p>Sexual dimorphism and dispersal: What morphological differences can tell us about dispersal capability in the highly invasive Western Mosquitofish (<i>Gambusia affinis</i>)</p> <p><i>Rose Blanchard, Texas A&M University</i></p>	<p>Will the future go with the flow? Protecting and restoring environmental flows and water levels in Texas through the Environmental Flows Information Toolkit (EFIT)</p> <p><i>Lindsey Elkins, Texas Parks and Wildlife Department</i></p>
11:00-11:20	<p>The <i>Carpoides</i> conundrum: Molecular and morphological patterns of a putative undescribed Catostomid, the Llano River Carpsucker</p> <p><i>Hayden Roberts, Texas A&M University</i></p>	<p>Reconstructing reference and altered streamflow to identify environmental flow thresholds in Texas rivers</p> <p><i>Mark Lueders, Baylor University</i></p>
11:20-11:40	<p>An investigation of personality in the Creek Chub, (<i>Semotilus atromaculatus</i>)</p> <p><i>Jacob Barrett, Austin Peay State University</i></p>	<p>Investigating the effectiveness of stream temperature, intermittency, and conductivity loggers to quantify river connectivity</p> <p><i>Cienna Hanson, Texas Tech University</i></p>



Convention Room A		Convention Room B	
11:40-12:00	Cellular mechanism of intracellular pH regulation during exposure to high CO ₂ in Rainbow Trout (<i>Oncorhynchus mykiss</i>) and Channel Catfish (<i>Ictalurus punctatus</i>) <i>Dillon Flowers, The University of Texas at Tyler</i>		Thermal sensitivity and exposure of endemic spring-associated fishes of the Edwards Plateau <i>Matthew Troia, The University of Texas at San Antonio</i>
12:00-1:40	Lunch Student-Mentor Lunch: Banita Ballroom <i>Poster Break Down - unclaimed posters will be at registration</i>		
1:40-2:00	Local stream predictors of darter (Percidae) assemblages in east Texas streams <i>Jordan Lindholm, Stephen F. Austin State University</i>		High-resolution species distribution modeling of endemic Texas crayfish species under current and future conditions <i>Sarah Burgett, The University of Texas at Tyler</i>
2:00-2:20	Fish metacommunity dynamics in response to drought in the upper Brazos River basin <i>Michael Curtis, University of North Texas</i>		Using mark-recapture to evaluate the success of a relocated mussel community in the lower Sulphur River <i>Rachel Leicher, The University of Texas at Tyler</i>
2:20-2:40	Local drivers influencing the distribution of two endangered shiners (Sharpnose <i>Notropis oxyrhynchus</i> and Smalleye <i>N. buccula</i>) In a southern Great Plains river <i>Chase Nimee, Stephen F. Austin State University</i>		Freshwater mussel recolonization in an east Texas reservoir four years following dewatering, with implications for management of ESA-proposed Texas Heelsplitter <i>Potamilus amphichaenus</i> <i>Brad Littrell, BIO-WEST, Inc.</i>
2:40-3:00	Assessing the distribution of fish biomass associated with seafloor characteristics at two natural reefs within the Gulf of Mexico <i>Marissa Lamb, The University of Texas Rio Grande Valley</i>		Enhancing endangered mussel conservation: leveraging multi-scale models for effective stocking strategies <i>Cody Craig, Arrowhead Ecology Group</i>
3:00-3:20	Break		
3:20-3:40	Spatial and interspecific variation in feeding habits of four native prairie stream fishes <i>Wade Wilson, Texas Tech University</i>		Shallow stream cyanotoxin loading into Texas lakes <i>Crista Kieley, Texas A&M University at Galveston</i>
3:40-4:00	Asymmetric competition among stream fishes: Do food web pathways mediate competitive outcomes? <i>Owen George, Texas Tech University</i>		Are constructed wetlands functionally equivalent to natural wetlands? <i>Justin Rea, The University of Texas at Tyler</i>



Convention Room A

Convention Room B

4:00-4:20	Shifting saltwater angler preferences and management of Spotted Seatrout in Texas <i>Dakus Geeslin, Texas Parks and Wildlife Department</i>	Quantifying a century of suburban succession in the Dallas – Fort Worth metroplex and effects on carbon export to urban streams <i>David Hoeinghaus, University of North Texas</i>
4:20-4:40	Texas angler compliance during the temporary regulation adjustment for Spotted Seatrout in response to Winter Storm Uri in February 2021 <i>Caren Utley, Texas Parks and Wildlife Department</i>	Quantifying an artificial reef's ability to act as a carbon sink <i>Michelle King, The University of Texas Rio Grande Valley</i>

Saturday, February 24th

Convention Room A

Convention Room B

8:20-8:40	Movement, home range, and structural habitat use of Largemouth Bass in two large Texas reservoirs <i>Todd Driscoll, Texas Parks and Wildlife Department</i>	Long-term shifts in composition of fishes and macroinvertebrates in Texas coastal waters <i>Damon Williford, Texas Parks and Wildlife Department</i>
8:40-9:00	A prehistoric fish in a modern estuary: exploring Alligator Gar movement and habitat use in Cedar Lakes, Texas <i>Jillian Swinford, Texas Parks and Wildlife Department</i>	Lavaca Bay ecosystem assessment: Gathering key baseline data among nursery habitats across a pollution gradient <i>Robinson McMillan, Harte Research Institute at Texas A&M University-Corpus Christi</i>
9:00-9:20	Employing a style of participation self-classification measure to understand recreational Spotted Seatrout angler needs and preferences in Texas <i>Daniel Pilgreen, Texas A&M University</i>	Have climate-mediated changes to Southern Flounder reproductive phenology driven population declines in the Gulf of Mexico? <i>Joel Anderson, Texas Parks and Wildlife Department</i>
9:20-9:40	Crevalle Jack ecology and harvest in the Texas Gulf of Mexico <i>Ethan Getz, Texas Parks and Wildlife Department</i>	Reconstructed environmental stress histories from geochemical records in Eastern Oyster shells from subtropical estuarine systems <i>Jessica Randall, Texas Parks and Wildlife Department</i>
9:40-10:00	Break	
10:00-10:20	Aquatic plant identification for the fisheries conservationist <i>Casey Williams, BIO-WEST Inc.</i>	Decision making and prioritization for the conservation of Texas fish SGCN <i>Diane Le Bouille, USGS / Texas Tech University</i>



Convention Room A

Convention Room B

10:20-10:40 Evaluation of environmental factors influencing survival and sex determination of Southern Flounder (*Paralichthys lethostigma*) on the Texas Coast

Ivonne Blandon, Texas Parks and Wildlife Department

Blotchy bass syndrome in the Lone Star State: A synergistic approach to citizen and agency science integration

Cynthia Fox Holt, Texas Parks and Wildlife Department

10:40-11:00

Coastal Brigade, growing our future coastal conservation leaders

Emily Miller, Texas Parks and Wildlife Department



Poster Presentations

Thursday, 23rd, 5:30 – 7:00 pm

Poster Location	Poster Presentation
1	Changes in the abundance of Atlantic Croaker in northwestern Gulf of Mexico <i>Damon Williford, Texas Parks and Wildlife Department</i>
2	Estuarine residency and habitat preferences of Atlantic Tripletail (<i>Lobotes surinamensis</i>) in the northwestern Gulf of Mexico <i>Elliot Briell, Texas Parks and Wildlife Department</i>
3	Sampling logistics of hydraulic tongs and oyster dredges <i>Margaret Wheat-Walsh, Texas Parks and Wildlife Department</i>
4	State of the basin: Brazos River instream flow program <i>Cory Scanes, Brazos River Authority</i>
5	An ichthyofaunal survey of the Trinity River in downtown Fort Worth <i>Andrew Brinker, Tarrant County College</i>
6	Fish community dynamics in an intermittent river of the Edwards Plateau: Results from inaugural monitoring by the new Student AFS Subunit of The University of Texas at San Antonio <i>Regan Doss, The University of Texas at San Antonio</i>
7	Early developmental morphology of Southern Flounder <i>Jennifer Butler, Texas Parks and Wildlife Department</i>
8	Overview of acoustic telemetry array installation in the Sabine Lake system, Texas/Louisiana, USA <i>Shambhu Paudel, Texas Parks and Wildlife Department</i>
9	Assessment of juvenile abundance of marine nursery dependent species in a man-made dredge placement compartment in Sabine Lake <i>Kole Kubicek, Lamar University</i>
10	Ctenophores in Texas: the rise of comb jellies along our coast <i>Elizabeth Benson, Texas Parks and Wildlife Department</i>
11	Habitat-driven differences in the biomass of three economically important species along the lower Texas coast <i>Catherine Eckert, Texas Parks and Wildlife Department</i>
12	Updated maps of shallow and terrestrial coastal habitats in the Aransas Bay system <i>Evan Pettis, Texas Parks and Wildlife Department</i>
13	The <i>Phenacobius mirabilis</i> in east Texas - adding context to a "deceptive life" <i>Dave Peterson, Stephen F. Austin State University</i>
14	Changes in diversity of adult finfish in East Bay after the closure of Rollover Pass <i>Grant Maresh, Texas Parks and Wildlife Department</i>



15	Rising turbidity in Matagorda Bay associated with oyster reef health <i>Corey Waddell, Texas Parks and Wildlife Department</i>
16	Combining spatial gradients and sparse time series data to predict fish assemblage response to increasing aridity <i>Josh Perkin, Texas A&M University</i>
17	Angler bait preferences for targeted Red Drum and Spotted Seatrout landings in Matagorda Bay <i>Emily Miller, Texas Parks and Wildlife Department</i>
18	Diel activity, site fidelity, and experimental exclusion of Suckermouth Armored Catfish in the San Marcos River <i>Ka'inoa o kekai Lee, The Meadows Center - Texas State University</i>
19	Hook, line, and storytime: Unraveling the fin-tastic narrative of commercial Red Snapper (<i>Lutjanus campechanus</i>) for recreational anglers in coastal Texas <i>Elizabeth Harris, National Academy of Sciences Gulf Research Program</i>
20	An analysis of fish assemblages and flow regimes upstream and downstream of Falcon Reservoir <i>Christopher Austin, The University of Texas Rio Grande Valley</i>
21	Effects of extreme flow events on community composition and habitat complexity of groundwater dominated systems <i>Joshua Tivin, Texas State University</i>
22	Modelling habitat associations of sympatric <i>Cichla</i> spp. in the Essequibo River basin, Guyana <i>Benton Fry, Texas A&M University</i>
23	Does Rio Grande Cichlid (<i>Herichthys cyanoguttatus</i>) induce trophic niche shifts in native Centrarchids? <i>Jacob Wolff, Texas A&M University</i>
24	Development of a novel eDNA sampling method for macroinvertebrate species of greatest conservation need (SGCN) in Texas <i>James York, The University of Texas at Tyler</i>
25	Cichlid assemblages in habitats of the Rupununi River-Guyana during the rising water season <i>Megan Beeksma, Stephen F. Austin State University</i>
26	Competition and abiotic environmental filtering drive co-occurrence patterns of congeneric cyprinids <i>Roni Maddox, The University of Texas at San Antonio</i>
27	A framework for integrating stream ecosystem theories into spatial modelling of fish richness and assemblage structure <i>Lucas Stevens, Texas A&M University</i>
28	Wastewater effluent impact on <i>Lepomis auritus</i> reproductive physiology in Cibolo Creek <i>Jesse Guajardo, The University of Texas at San Antonio</i>



29	Temporal and spatial variability of fish assemblages in Harmon Creek: The influence of habitat complexity and environmental drivers <i>Erica Hagmeyer, Sam Houston State University</i>
30	Toxicity assessment and real-time metabolic trait responses of juvenile <i>Macrobrachium rosenbergii</i> to ammonia exposure at different salinities <i>Cameron Emadi, University of North Texas</i>
31	Predicting habitat suitability of crayfish using a multiple logistic regression Accounting for Spatial Autocorrelation <i>Christopher Conneen, The University of Texas at Tyler</i>
32	Determining the viability of amphibian and reptile communities in reconstructed wetlands within the Red River watershed <i>Shelby Rodriguez-Edwards, The University of Texas at Tyler</i>
33	Scale-dependent tradeoffs between habitat and time in explaining Alligator Gar (<i>Atractosteus spatula</i>) movement <i>Hayden Roberts, Texas A&M University</i>
34	Projecting survival and growth of Eastern Brook Trout (<i>Salvelinus fontinalis</i>) for contemporary and future climate scenarios in the southern Appalachian Mountains <i>Karmann Kessler, The University of Texas at San Antonio</i>
35	A novel approach to estimating Suckermouth Armored Catfish population size in the San Marcos River <i>Kannon Byckovski, The Meadows Center - Texas State University</i>
36	Estimation of fish biomass on the RGV Reef using split beam sonar <i>Allison White, The University of Texas Rio Grande Valley</i>
37	Fish diversity in habitats of the Rupununi River, Guyana <i>Sophie Scott, Stephen F. Austin State University</i>
38	Abiotic and biotic factors influence population structure of the threatened Red River Pupfish (<i>Cyprinodon rubrofluviatilis</i>) in the Salt Fork of the upper Brazos River <i>Lily DiFrank, Stephen F. Austin State University</i>
39	Hydrodynamics and fish assemblage fluxes in a forested riverscape <i>Blake Elzi, Texas A&M University</i>
40	Using vegetation surveys to compare natural and constructed wetlands <i>Kennedi Davis, The University of Texas at Tyler</i>
41	eDNA use in Southern Flounder detection and observation <i>Lelaina Clayburg, The University of Texas Rio Grande Valley</i>
42	Physiological responses to global climate change stressors and determination of associated functional traits in plains fishes in support of management and conservation efforts <i>Kasey Pruett, University of North Texas</i>
43	Impacts of bathymetry and current velocities on fish assemblages of the RGV Reef <i>Annie Zeiler, The University of Texas Rio Grande Valley</i>



