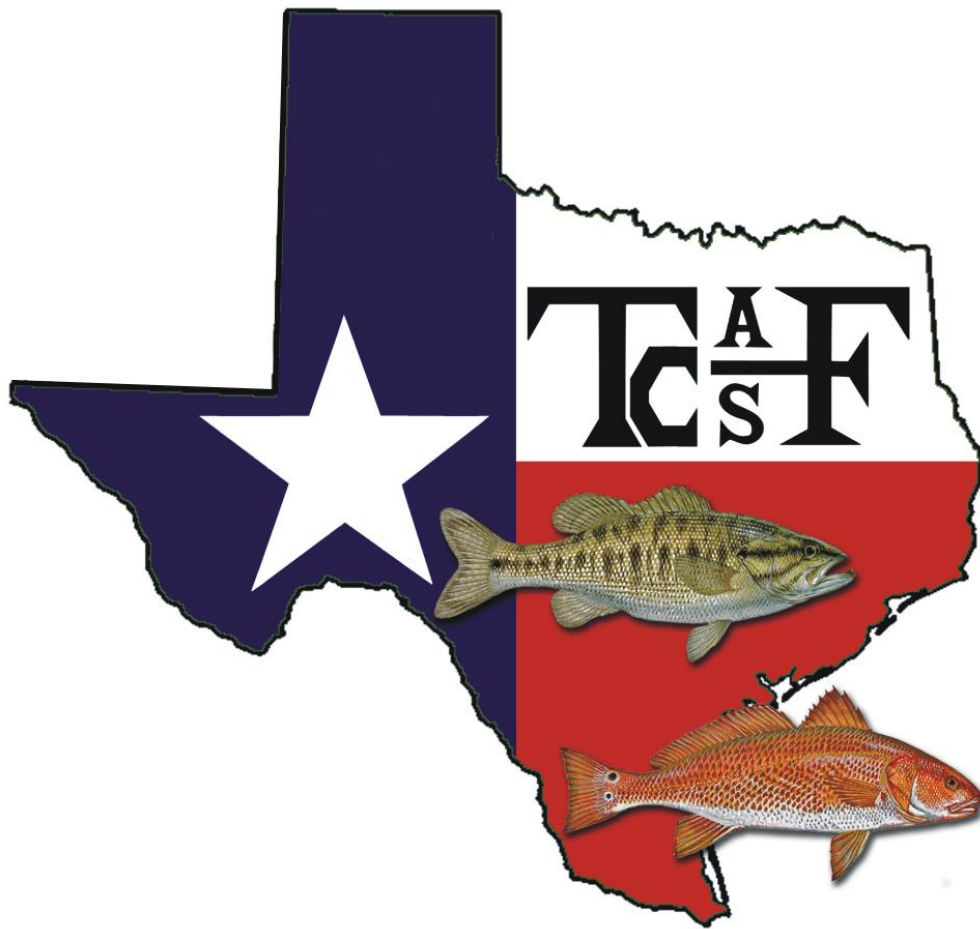


2020 ANNUAL MEETING OF THE  
TEXAS CHAPTER OF THE AMERICAN FISHERIES SOCIETY

January 23<sup>rd</sup> – 25<sup>th</sup>, 2020

Waco, Texas



MEETING PROGRAM

WELCOME TO WACO!

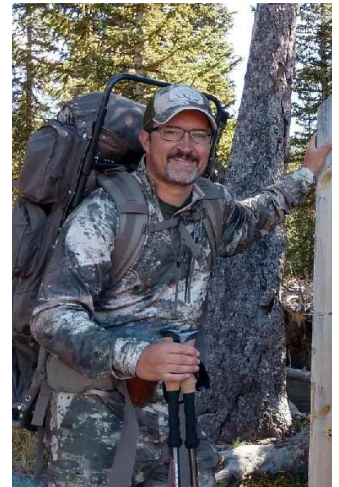


I'd like to extend a warm welcome to participants of the 2020 Meeting of the Texas Chapter of the American Fisheries Society. This year's meeting promises to be another great one. After enjoying outstanding workshops, scientific presentations and discussions with colleagues, you might also want to take advantage of some of the great amenities and attractions in Waco. And many thanks to our outstanding chapter officers and volunteers for all the time and effort to organize the event.

Sincerely,  
Kirk Winemiller, PhD  
President-Elect, Texas Chapter of the American Fisheries Society

On behalf of the Texas Chapter of the American Fisheries Society, welcome to our 44th annual meeting! I had the good fortune of being able to take a sneak peek at the program prior to writing this, and in addition to the quantity, quality, and diversity of science that will be presented, something else caught my eye – the diversity of people and places. Our program alone includes presentations from 13 universities, three agencies, and even a Texas high school. Our presenters include professors, students, and agency personnel. Our sponsors represent industry, agencies, recreational clubs, and foundations. This diversity is what makes our chapter what it is – robust, productive, and respected within the fisheries community. There is no better time to embrace our diversity than when we all convene to see old colleagues and friends, make new ones, broaden our scientific perspectives, and support our chapter's missions. Thank you for attending - I hope you greatly enjoy your time here in Waco.

Sincerely,  
Daniel J. Daugherty, PhD  
President, Texas Chapter of the American Fisheries Society



2019-2020 TEXAS CHAPTER OFFICERS AND COMMITTEE CHAIRS

**President**  
Dan Daugherty, Ph.D.  
**President Elect**  
Kirk Winemiller, Ph.D.  
**Past President**  
Michael Homer Jr.  
**Secretary-Treasurer**  
Natalie Goldstroh  
**Awards**  
Michele Nations  
**Continuing Education**  
Lynn Wright

**Editorial**  
Alice Best  
Dave Buzan  
**Endowments**  
Dave Terre  
**History**  
Michele Nations  
**Internet**  
Sarah Haas, Ph.D.  
John Taylor, Ph.D.  
**Issues (Vacant)**  
**Membership**  
Michele Nations

**Newsletter**  
Matthew Acre, Ph.D.  
**Nominating**  
Dan Bennett  
**Pond Management**  
Greg Binion  
**Publicity/Exhibits**  
Shaun Donovan  
**Scholarship**  
Jennifer Butler  
**Student Outreach**  
Joshuah Perkin, Ph.D.

*Thank you to our sponsors for supporting the Texas Chapter of the American Fisheries Society's Annual Meeting.*

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*Thank you Sportsmen's' Club of Fort Worth and the Patsy B. Hollandsworth Foundation for your support!*



## Schedule at a Glance

<b><u>Thursday, January 23rd</u></b>		
12:30 pm – 5:30 pm	Registration	Three Rivers Atrium
12:30 pm – 5:00 pm	Presentation Loading	Three Rivers Atrium
	Continuing Education	
1:00 pm – 5:00 pm	<i>Evolution of Pond Management</i>	Brazos A/B
	<i>Going into 2020</i>	
3:00 pm – 5:00 pm	<i>Advancing your fisheries career: guidance on pursuing employment or graduate school</i>	Brazos C
<b>2:40 pm – 3:00 pm</b>	<b>Break</b>	<b>Three Rivers Atrium</b>
5:00 pm – 6:30 pm	Student-Professional Mixer	Three Rivers Atrium

<b><u>Friday January 24<sup>th</sup></u></b>		
7:00 am – 7:45 am	Presentation Loading	Three Rivers Atrium
7:30 am – 5:00 pm	Registration	Three Rivers Atrium
8:00 am – 8:15 am	Welcome	Brazos Room
8:15 am – 10:00 am	Technical Session	Brazos Room
<b>10:00 am – 10:15 am</b>	<b>Break</b>	<b>Three Rivers Atrium</b>
10:15 am – 12:00 pm	Technical Session	Brazos Room
<b>11:45 am – 1:30 pm</b>	<b>Lunch</b>	<b>On your own</b>
	Student- Mentor Lunch	
	<i>Students and mentors should coordinate a pre-chosen location to meet</i>	

1:30 pm – 3:15 pm	Technical Session	Brazos Room
<b>3:15 pm – 3:30 pm</b>	<b>Break</b>	<b>Three Rivers Atrium</b>
3:30 pm – 5:00 pm	Technical Session	Brazos Room
5:00 pm – 6:15 pm	Poster Session	Three Rivers Atrium
6:30 pm – 10:00 pm	Dinner, Awards Presentations, Raffle, and Auction Social	Three Rivers Ballroom

<b><u>Saturday, January 25th</u></b>		
7:00 am – 7:45 am	Past President's Breakfast	Rio Grande Boardroom
8:00 am – 10:00 am	Technical Session	Brazos Room
<b>10:00 am – 10:15 am</b>	<b>Break</b>	<b>Three Rivers Atrium</b>
10:15 am – 11:45 am	Technical Session	Brazos Room
11:45 am – 1:00 pm	Business Meeting	Brazos Room
<b>1:00 pm</b>	<b>Adjourn</b>	



## Technical Session Schedule

### Oral Presentations

#### Friday January 24<sup>th</sup>

- 8:00 am Welcome
- 8:15 am Conservation Status of Texas Freshwater Fishes and Protected Species Recommendations  
*Timothy Birdsong, Texas Parks and Wildlife Department*
- 8:30 am New Tools for Environmental Flow Information  
*Kevin Mayes, Texas Parks and Wildlife Department*
- 8:45 am Do components of the natural flow regime paradigm predict occurrence of imperiled Great Plains fishes?  
*Erin Nguyen, Texas A&M University*
- 9:00 am A model simulating interactions between hydrology, landscape, species traits and biotic interactions to predict food web dynamics in a neotropical freshwater ecosystems  
*Eduardo Ribeiro Cunha, Texas A&M University*
- 9:15 am Ephemeral habitat sustains high fish  $\alpha$  and  $\beta$ -diversity during droughts in a subtropical semiarid wetland  
*Thethela Bokhutlo, Texas A&M University College Station*
- 9:30 am Overview of spring-associated fishes: distribution, ecology, structuring mechanisms, and future management  
*Cody Craig, Texas State University*
- 9:45 am A comparison of benthic invertebrate composition between ephemeral pools and permanent pools along upper Leon Creek  
*Alexander Toder, University of Texas at San Antonio*

#### **10:00 am Break**

- 10:15 am Spatial distribution of demersal fish abundance across the continental shelf in the northwestern Gulf of Mexico  
*Jason Mostowy, Texas A&M University at Galveston*
- 10:30 am Influence of abiotic and biotic factors on the distribution and co-occurrence patterns of estuarine predators and prey  
*Mariah Livernois, Texas A&M University at Galveston*
- 10:45 am Influences on the distributions of petroleum platform-associated fishes in the U.S. Gulf of Mexico  
*Derek Bolser, The University of Texas at Austin, Marine Science Institute*



2020 TCAFS ANNUAL MEETING

- 11:00 am Flatlined Flatfish? Status, Trends, and Fisheries Management of the Southern Flounder in Texas  
*Dakus Geeslin, Texas Parks and Wildlife Department - Coastal Fisheries*
- 11:15 am The Unfortunate Reality of Microplastics in our Local Ecology  
*Riya Mohan, Grapevine High School*
- 11:30 am Microplastic ingestion by juvenile silversides (*Menidia* spp.) in seven bays and estuaries along the Mid-Texas coast  
*Gray Ryan, Texas A&M University Corpus Christi*

**11:45 am Lunch (on your own)**

*Student- Mentor Lunch*

*Students and mentors should meet at a pre-arranged location. Hotel restaurant seating is limited, but there is a selection of restaurants in walking distance.*

- 1:30 pm Effects of insecticides, fipronil and imidacloprid, on the growth, survival, and behavior of brown shrimp *Farfantepenaeus aztecus*  
*Ali Albadran, WFSC*
- 1:45 pm Stochastic species loss and dispersal limitation drive patterns of spatial and temporal beta diversity of fish assemblages in tropical agroecosystem streams  
*David Hoeinghaus, Department of Biological Sciences and the Advanced Environmental Research Institute, University of North Texas*
- 2:00 pm Here today, gone tomorrow? Assessing changes in stream fish assemblage in relation to habitat fluctuation.  
*Matthew Madewell, Texas A&M University*
- 2:15 pm Ecological impact of the invasive armored catfish (Loricariidae): implications for conservation of fishes in Northern Guatemala  
*Yasmin Quintana, Texas A&M University*
- 2:30 pm Urban Fisheries Management in Dallas/Fort Worth, TX  
*Cynthia Holt, Texas Parks and Wildlife Department*
- 2:45 pm Northern Leon Creek Greenway user and fish population surveys to enhance urban fishing  
*Madeliene Buchanan, University of Texas San Antonio and Texas Parks and Wildlife Department Inland Fisheries Division San Antonio, TX*
- 3:00 pm Dynamic interdependence between anglers and fishes in spatially coupled inland fisheries  
*Scott F. Collins, Texas Tech University*



**3:15 pm Break**

- 3:30 pm Assessing climate change vulnerability of Guadalupe bass (*Micropterus treculii*): comparing bioenergetics and species distribution modeling  
*Matthew Troia, University of Texas at San Antonio*
- 3:45 pm Establishment of *Monopterus cuchia* in east Texas  
*Alice Best, Texas Parks and Wildlife Department*
- 4:00 pm Temporal Patterns of Spawning and Fishing in Sheepshead (*Archosargus probatocephalus*) from Port Aransas, Texas  
*Brad Erisman, The University of Texas at Austin*
- 4:15 pm Habitat use and sampling efficiency of low-frequency electrofishing for Blue Catfish  
*Zach Moran, Baylor University*
- 4:30 pm Influence of Traps Equipped with Bycatch Reduction Devices on Blue Crab Catch and Texas Diamondback Terrapin Bycatch  
*Tiffany Hopper, Texas Parks and Wildlife Department*
- 4:45 pm To tong or not to tong: comparing gear types for measuring oyster density on degraded and restored reefs  
*Jacob Harris, Texas Parks and Wildlife Department*

**Saturday, January 25th**

- 8:00 am Movement ecology of Red River endemic Prairie Chub  
*Zachary Steffensmeier, Texas A&M University*
- 8:15 am Application of a Hierarchical Spatial Framework to Prioritize Stream Restoration for an Endemic Fish  
*Ryan McManamay, Baylor University*
- 8:30 am Low-level dissolved organic carbon subsidies drive a trophic upsurge in a boreal stream  
*Ryan King, Baylor University*
- 8:45 am Incorporating indirect pathways in body size-trophic position relationships  
*Friedrich W Keppeler, Texas A&M University*
- 9:00 am Host selectivity and local environmental conditions determine cutaneous microbiome structure of North Texas stream fishes at the onset of drought  
*Brittany Harried, University of North Texas*
- 9:15 am Flow alterations associated with changes in the fish fauna of the lower section of the Rio Grande River  
*Jason Selwyn, Texas A&M University - Corpus Christi*



2020 TCAFS ANNUAL MEETING

9:30 am Abundance and distribution of larval fish off Galveston Bay post Hurricane Harvey compared to historic NOAA SEAMAP data  
*Simon Geist, Texas A&M University Corpus Christi*

9:45 am Climate change and diversity of fishes and invertebrates along the Texas coast  
*Masami Fujiwara, Department of Ecology and Conservation Biology, Texas A&M University*

**10:00 am Break**

10:15 am Climate effects on fish diversity in the bays of Texas  
*Michaela Pawluk, Texas A&M University*

10:30 am Conservation genetic analysis of captive breeding strategies of two endangered great plains minnows  
*Ryan Vazquez, Texas Tech University*

10:45 am Evaluation of a Novel Slow-Release Spawning Aid, OvaNext™, In Marine Finfish Reproduction  
*Todd Sink, Texas A&M University*

11:00 am Effects of Temperature and Salinity on the Survival of Southern flounder (*Paralichthys lethostigma*) Pre-metamorphic Larvae Spawned by Broodstock From Three Different Ecological Regions Along the Texas Coast a Transcriptomic Perspective.  
*Ivonne Blandon, Texas Parks And Wildlife Department Marine Development Center*

11:15 am Age Validation and Population Structure of Warsaw Grouper in the Gulf of Mexico  
*Phillip Sanchez, Texas A&M Galveston*

11:30 am Scale microchemistry as a non-lethal alternative for tracking individually variable migration patterns in mobile fish  
*Ethan Taulbee, Texas A&M - Corpus Christi*

**11:45 am – 1:00 pm Business Meeting**

**1:00 pm Adjourn**





## Poster Presentations

**Friday, January 24<sup>th</sup>, 5:00 – 6:15 pm**

- Poster #1 Cryptic genetic and morphological divergence within the Texas Shiner *Notropis amabilis* group throughout central Texas drainages  
*Christa Edwards, Texas State University*
- Poster #2 Diel Fluctuations in Comanche Springs Pupfish Abundances in San Solomon Springs, Balmorhea State Park  
*Lauren Yancy, Texas A&M University*
- Poster #3 Intermediate Traits Present in Hybridized Prairie *Macrhybopsis australis* and Shoal *M. hyostoma* Chub within the Red River Basin  
*W. Austin Banks, Texas State University*
- Poster #4 Conservation Biogeography of Headwater Catfish in the United States  
*Joshuah S. Perkin, Texas A&M University*
- Poster #5 The Value of Citizen Scientists: Data Collection for Juvenile American Eel Using Non-Traditional Field Gear  
*Stephen Curtis, Texas Parks & Wildlife Department*
- Poster #6 Molecular phylogenetics of the North American chubsuckers (Catostomidae: *Erimyzon*) based on mitochondrial and nuclear loci  
*Kevin W. Conway, Biodiversity Research and Teaching Collections, Texas A&M University*
- Poster #7 Hands-off: a visual approach to monitor a threatened pupfish  
*Matthew R. Acre, Texas A&M University*
- Poster #8 Does urbanization affect life history parameters of the Western Mosquito fish (*Gambusia affinis*)?  
*Alejandra Martinez, Stephen F. Austin State University*
- Poster #9 Assessing fish assemblage structure in Lake Conroe using rarefaction and electrofishing  
*Wyatt Stinebaugh, Texas A&M University*
- Poster #10 Autonomous imaging and identification of invertebrates and fish to support biological monitoring  
*Ryan McManamay, Baylor University*
- Poster #11 Abundance & Movement of Black Bass in Headwater Streams of the Edwards Plateau, Texas.  
*Dominik Chilleri, Texas Parks and Wildlife Department*
- Poster #12 Distribution, abundance, diet and sex ratios of Common Snook (*Centropomus undecimalis*) in Texas  
*Ethan Getz, Texas Parks and Wildlife Department*
- Poster #13 A Student's Perspective on Fisheries Management  
*Matthew Ellis, Texas A&M University*



2020 TCAFS ANNUAL MEETING

- Poster #14 Inquiry-based education which includes biotic Immersion better enhances river conservation ethic  
*Sara McGillewie, University of North Texas*
- Poster #15 A Riverscape Divided: Longitudinal Change in Fish Community Structure in White Creek, College Station, Texas  
*Fernando Chavez, Texas A&M University*
- Poster #16 The complex nature of conservation in urbanized streams: A case study in La Nana Bayou, East Texas  
*Carmen G. Montaña, Stephen F. Austin State University*
- Poster #17 Water quality assessment of the Upper Neches River Watershed  
*Samantha Rowe, The University of Texas at Tyler*
- Poster #18 Development of environmentally friendly methods to control harmful blooms of golden alga  
*Mousumi Akter Mary, Department of Biological Sciences, Texas Tech University*
- Poster #19 Morphological variation and distribution of *Cyprinodon variegatus* and *C. rubrofluvialis* in Brazos River, Texas  
*Jordan Griffin, Stephen F. Austin State University*
- Poster #20 Growth of the harmful alga, *Prymnesium parvum*, under past, present and projected future atmospheric concentrations of carbon dioxide  
*Rakib H. Rashed, Department of Biological Sciences and Texas Cooperative Fish and Wildlife Research Unit, Texas Tech University*
- Poster #21 Mercury concentrations in dusky grouper along the Southern Brazilian coast  
*Kathleen Roark, University of North Texas*
- Poster #22 Elucidating Variation in Migration Strategies of Catadromous Fish (*Anguilla rostrata*) Utilizing Natural Tracers  
*Michael Curtis, Texas A&M University - Corpus Christi*
- Poster #23 Fish assemblage structure in leaf litter patches of the Jacunda River, Lower Amazon  
*George M. T. Mattox, Universidade Federal de São Carlos*
- Poster #24 Ecological analyses of macroinvertebrates and fish species in six streams on a Louisiana military base from 2001 to 2019  
*Danielle Joerger, University of Texas at Tyler*
- Poster #25 Fishes of Texas Project: Sampling Completeness and Data Visualization  
*Colton Avila, Department of Integrative Biology and Biodiversity Collections, University of Texas at Austin*
- Poster #26 Temporal dynamics of aquatic habitat structure, water chemistry and biodiversity in ephemeral and intermittent habitats on a sustainable land management ranch in North Texas  
*Emily Hartdegen, Department of Biological Sciences and the Advanced Environmental Research Institute, University of North Texas*



2020 TCAFS ANNUAL MEETING

- Poster #27 Flow-recruitment relationships of Smallmouth Buffalo in the Colorado, Brazos and Guadalupe rivers  
*Cole Reeves, Department of Biological Sciences and the Advanced Environmental Research Institute University of North Texas*
- Poster #28 Gut morphology and digestive enzyme activities in North Texas stream fishes  
*Drew Porter, University of North Texas*
- Poster #29 Gill surface area and metabolic enzyme activity of North Texas stream fishes  
*Chance Benedict, Department of Biological Sciences and the Advanced Environmental Research Institute, University of North Texas*
- Poster #30 Development of the trophic apparatus in three species of South American Armored Suckermouth Catfishes (Family Loricariidae)  
*Emily Chandler, Texas A&M University*
- Poster #31 The lateral-line canal bearing scales of the Ghost Shiner *Notropis buchmanii* and three other species of *Notropis* (Teleostei: Cyprinidae)  
*Rebecca Castro, Texas A&M University*
- Poster #32 Notes on the life history of the Caribbean clingfish *Tomicodon reitzae* (Teleostei: Gobiesocidae)  
*Chloe Dannenfelser, Texas A&M University*
- Poster #33 Evolution of electroreceptor distribution in weakly electric fishes  
*David Saenz, Texas A&M University*
- Poster #34 Evaluation of palatability enhancers in plant-based diets with juvenile Red Drum (*Sciaenops ocellatus*)  
*Grayson Clark, Texas A&M University*
- Poster #35 In vitro and in vivo effects of butyrate, propionate and their combination in high-plant-protein-diets for red drum (*Sciaenops ocellatus*)  
*Fernando Yamamoto, Texas A&M University*



# TCAFS 2020 Map at Hilton Waco

