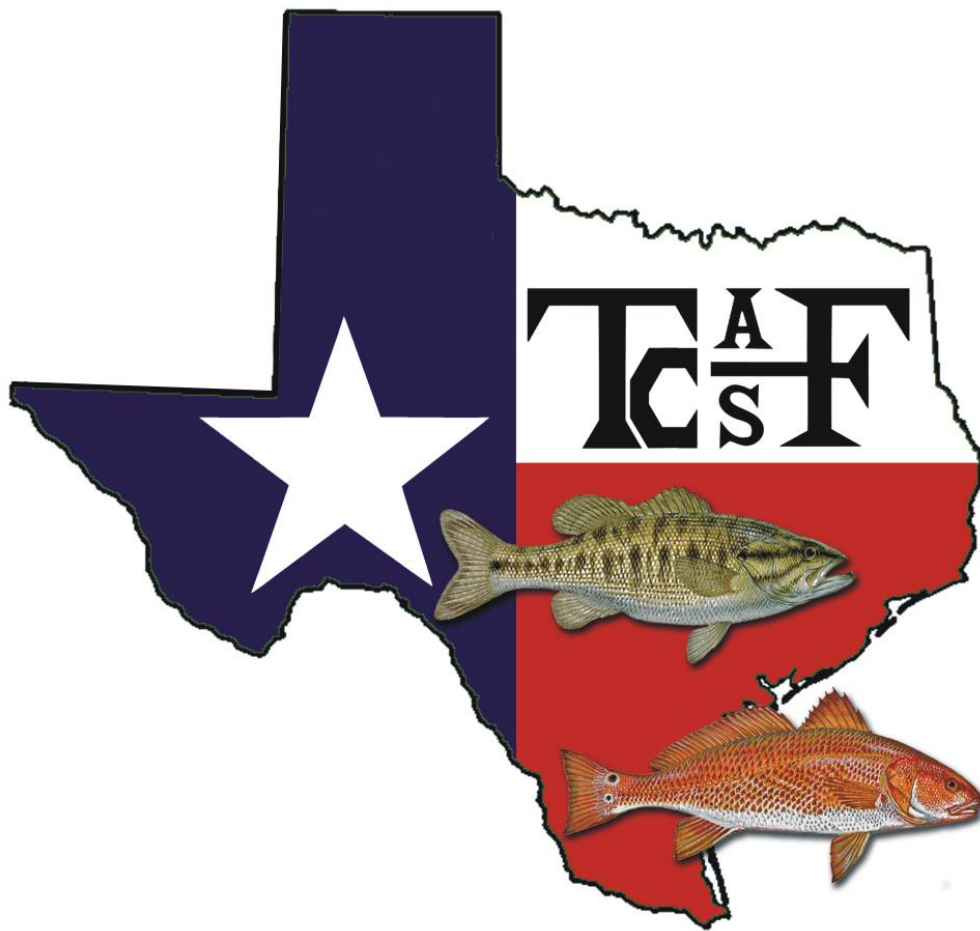


# 2023 Annual Meeting of the Texas Chapter of the American Fisheries Society

February 23<sup>rd</sup>-25<sup>th</sup>, 2023  
Corpus Christi, Texas



## MEETING PROGRAM

## WELCOME TO CORPUS CHRISTI!



Welcome to Corpus Christi! All the planning has come together for the annual Texas Chapter of the American Fisheries Society meeting. To ensure that TC-AFS 2023 is packed with valuable activities that are relevant to our membership, the planning committee has been working vigorously to schedule the member-contributed components. From the educational tour of one of the largest marine fisheries enhancement facilities, to continuing education sessions lead by industry experts, the first day is sure to engage. Friday morning we'll start bright and early with a panel discussion from some of the most prestigious researchers in the Gulf of Mexico, followed by technical presentations – connecting top-down policy making to boots in the mud science. Each day we'll conclude with networking socials designed to connect our diverse membership.

We couldn't do any of this without the participation of our Chapter members, sponsors, and volunteers, and I wish to thank all of you personally. Enjoy your time in the Sparkling City by the Sea!

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

Welcome to the 47th Annual Meeting of the Texas Chapter of the American Fisheries Society in Corpus Christi, TX! As you approached the conference venue on Shoreline Boulevard, I hope the coastal breeze, the smells of the sea, and the scenic view of Corpus Christi Bay helped you breathe a little easier and set the tone for what is intended to be a relaxing and immersive experience in a truly picturesque natural setting. As usual, the program for our annual meeting is filled with an exciting lineup of technical and plenary presentations, continuing education workshops, a local field trip profiling fisheries resources conservation efforts of our members, and multiple networking events intended to help us reconnect, build, and expand our professional networks. I encourage everyone to truly lean into this experience and make the most of these learning and networking opportunities. I'm so glad you're here and I hope you leave this meeting feeling better connected, refreshed, reenergized, and inspired.



Sincerely, Tim Birdsong,  
President, Texas Chapter of the American Fisheries Society

2022-2023 TEXAS CHAPTER OFFICERS AND COMMITTEE CHAIRS

<b>PRESIDENT</b> Timothy Birdsong	<b>EDITORIAL</b> Alice Best Dave Buzan	<b>NEWSLETTER</b> Matthew Troia, Ph.D.
<b>PRESIDENT ELECT</b> Christopher Mace, Ph.D.	<b>ENDOWMENTS</b> Brian Van Zee	<b>NOMINATING</b> Greg Cummings
<b>PAST PRESIDENT</b> Dakus Geeslin	<b>HISTORY</b> Michele Nations	<b>POND MANAGEMENT</b> Greg Binion
<b>SECRETARY-TREASURER</b> Sarah Robertson	<b>INTERNET</b> John Taylor, Ph.D.	<b>PUBLICITY/EXHIBITS</b> Steven Bardin
<b>AWARDS</b> Brittany Chesser	<b>ISSUES</b> Mukhtar Farooqi	<b>SCHOLARSHIP</b> Jennifer Butler
<b>CONTINUING EDUCATION</b> Lynn Wright	<b>MEMBERSHIP</b> Michele Nations	<b>STUDENT OUTREACH</b> Joshuah Perkin, Ph.D.

THANK YOU TO  
**OUR SPONSORS**

FOR SUPPORTING THE TEXAS CHAPTER OF THE AMERICAN FISHERIES  
SOCIETY'S ANNUAL MEETING

AND

THE SPORTSMAN'S CLUB OF FT. WORTH AND  
THE Guadalupe River Trout Unlimited Foundation

FOR SUPPORTING STUDENT SCHOLARSHIPS.



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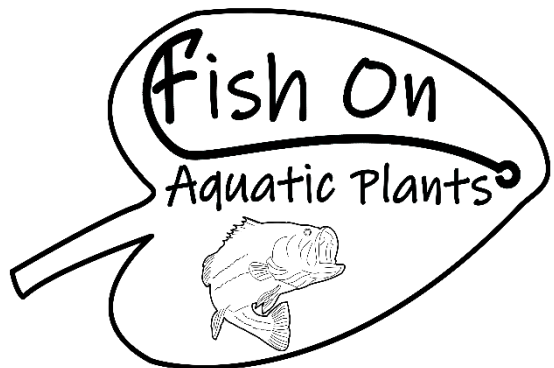
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## 2023 BRONZE SPONSORS

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## Schedule at a Glance

### Thursday, February 23<sup>rd</sup>

8:00 am – 5:00pm	TCAFS Conference Registration and Exhibits Setup  Load PowerPoint Presentations	Posters in Ballroom, Vendors in Foyer  TCAFS Registration Table
1:00 pm – 4:30 pm	Continuing Education <u>Tour CCA Marine Development Center and TPWD Coastal Fisheries Marine Fish Hatchery</u> <i>Advanced Registration Required</i>  <i>Registered Attendees: please refer to your email for transportation and entry times</i>	<i>*Offsite Location –</i> Barney Davis Power Plant Gate, 4300 Waldron Rd., Corpus Christi, TX 78418
1:00 pm – 5:00 pm	Continuing Education <u>Ecology, Status, and Research Techniques of Crayfish in Texas</u> <i>Instructors: Archis Grubh, Lance Williams, Josh Banta, and Jared Dickson</i>	Padre A-B
1:00 pm – 5:00 pm	Continuing Education <u>Writing, Reviewing, and Revising: A Survival Guide for Peer-Reviewed Journals</u> <i>Instructor: Dan Daugherty</i>	Padre C-D
5:00 pm – 6:30 pm	Poster Social	Texas Riviera Ballroom
7:00 pm	Student Mixer	Texas Riviera Ballroom

### Friday, February 24<sup>th</sup>

7:00 am – 8:00 am	Breakfast	On Your Own
8:00 am – 9:00 am	Plenary Session	Texas Riviera Ballroom
9:00 am – 10:20 am	Technical Sessions	Texas Riviera and Padre Island
<b>10:20 am – 10:40 am</b>	<b>Break</b>	
10:40 am – 12:00 pm	Technical Sessions	Texas Riviera and Padre Island
<b>12:00 pm – 1:30 pm</b>	<b>Lunch</b> <b>Student- Mentor Lunch</b>	<b>On your own</b> <b>Marina View</b>
<b>Poster Break Down - Unclaimed posters will be stored at TCAFS Registration Desk</b>		
1:40 pm – 3:00 pm	Technical Sessions	Texas Riviera and Padre Island
<b>3:00 pm – 3:20 pm</b>	<b>Break</b>	
3:20 pm – 5:00 pm	Technical Sessions	Texas Riviera and Padre Island
<b>5:00 pm – 6:00 pm</b>	<b>Break</b>	
6:00 pm – 10:00 pm	Dinner and Awards Banquet	Texas Riviera Ballroom

### Saturday, February 25<sup>th</sup>

7:00 am – 7:45 am	Past President's Breakfast	Marina View
8:00 am – 9:20 am	Technical Sessions	Texas Riviera and Padre Island
<b>9:20 am – 9:40 am</b>	<b>Break</b>	
9:40 am – 11:00 am	Technical Session	Texas Riviera and Padre Island
11:00 am – 12:00 pm	Business Meeting	Texas Riviera Ballroom
<b>12:00 pm</b>	<b>Adjourn</b>	



## Technical Session Schedule

**FRIDAY, FEBRUARY 24<sup>TH</sup>**

	TEXAS RIVIERA	PADRE ISLAND
<b>9:00-9:20</b>	Otolith microchemistry provides insight into habitat plasticity of American Eel ( <i>Anguilla rostrata</i> ) in Texas <i>Michael Curtis, University of North Texas</i>	Using anonymous location data to measure changes in natural resource usage <i>Tommy Johnson, Iowa Department of Natural Resources/ University of Florida</i>
<b>9:20-9:40</b>	How does Red Drum migration behavior change their exposure to environmental mercury or hypoxia? Variations in otolith microchemistry and mercury accumulation in Red Drum ( <i>Sciaenops ocellatus</i> ) from Matagorda Bay, Texas. <i>Jacob Oster, Texas A&amp;M University-Corpus Christi</i>	FETA, a Flow-Ecology Trait Assessment tool for predicting fish assemblage response to hydrologic alteration <i>Mark Lueders, Baylor University</i>
<b>9:40-10:00</b>	Assessment of Common Dolphinfish ( <i>Coryphaena hippurus</i> ) trophic ecology across ocean basins using bulk stable isotopes <i>Alexandra Prouse, Texas A&amp;M University at Galveston</i>	Evaluating the effects of intermittent flow on the resilience and vulnerability of fish assemblage structure <i>Cienna Hanson, Texas Tech University</i>
<b>10:00-10:20</b>	Diet habits and trophic relationships of Rio Grande Sucker and Rio Grande Chub in the Jemez River, New Mexico, USA <i>Owen George, Texas Tech University</i>	Thermal regimes of groundwater dependent streams in South Texas: a case study of temperature monitoring in San Felipe Creek <i>Garrett Tucker, University of Texas at San Antonio</i>
<b>10:20-10:40</b>	<b>BREAK</b>	
<b>10:40-11:00</b>	Morphological divergence of an undescribed catostomid, the Llano River Carpsucker ( <i>Carpiodes sp. cf. carpio</i> ) in the Colorado River basin of Texas <i>Hayden Roberts, Texas A&amp;M University</i>	Thermal vulnerability of spring associated fishes in an urbanizing, groundwater dependent stream <i>Nick Loveland, University of Texas at San Antonio</i>
<b>11:00-11:20</b>	A multiscale conceptual framework to predict movement and habitat associations of an imperiled megafish, the Alligator Gar ( <i>Atractosteus spatula</i> ) <i>Johnathan Ellard, Texas A&amp;M University</i>	Testing responsiveness of stream fish functional traits to anthropogenic riverscape alterations <i>Noah Santee, Texas A&amp;M University</i>



## Technical Session Schedule

**FRIDAY, FEBRUARY 24<sup>TH</sup>**

TEXAS RIVIERA		PADRE ISLAND	
<b>11:20-11:40</b>	Analysis of gene flow between geographically separated populations of <i>Etheostoma radiosum</i> in northeastern Texas and southeastern Oklahoma <i>Victoria Hardeman, Texas A&amp;M University - Commerce</i>	<b>11:20-11:40</b>	Multiple tracking methods reveal Guadalupe Bass dispersal is consistent with the restricted movement paradigm <i>Jacob Wolff, Texas A&amp;M University</i>
<b>11:40-12:00</b>	Survey of Biogeography and Community Ecology Concerning <i>Etheostoma radiosum</i> in Northeast Texas and Southeast Oklahoma <i>Seth Callahan, Texas A&amp;M University - Commerce</i>	<b>11:40-12:00</b>	Predictability and conceptual repeatability of the predator associated burst speed body shape in independently evolved populations of Western Mosquitofish <i>Rose Blanchard, Texas A&amp;M University</i>
<b>12:00-1:30</b>	<b>LUNCH - ON YOUR OWN</b>		
	<b>STUDENT- MENTOR LUNCH - MARINA VIEW</b>		
	<b>POSTER BREAK DOWN</b> - Unclaimed posters will be stored at TCAFS Registration Desk		
TEXAS RIVIERA		PADRE ISLAND	
<b>1:40-2:00</b>	Nitrogen loading and harmful algal blooms in warm, monomictic lakes of the Southcentral US <i>Crista Kieley, Texas A&amp;M University at Galveston</i>	<b>1:40-2:00</b>	Fall Run: Southern Flounder ( <i>Paralichthys lethostigma</i> ) migration timing and trends in Texas ship channels <i>Isabelle Cummings, Texas A&amp;M University-Corpus Christi</i>
<b>2:00-2:20</b>	Using capture-recapture to assess the survivorship of relocated mussels in the Lower Sulphur River <i>Rachel Lancaster, University of Texas at Tyler</i>	<b>2:00-2:20</b>	Multivariate analysis of fish communities in Matagorda Bay, Texas <i>Emily Meese, Texas A&amp;M University at Galveston</i>
<b>2:20-2:40</b>	High dominance of invasive armor catfish linked with isotopic space shift and compression of native species in Guatemala <i>Yasmin Quintana, Texas A&amp;M University</i>	<b>2:20-2:40</b>	Mapping and fish abundance estimates of East Bank Ridge, Gulf of Mexico using sonar imaging <i>Marissa Lamb, University of Texas at Rio Grande Valley</i>
<b>2:40-3:00</b>	Effects of invasive Giant Reed on the stream food web of San Felipe Creek, Texas <i>Lauren Soliz, Texas Tech University</i>	<b>2:40-3:00</b>	Red Snapper size, growth, and movement in the Rio Grande Valley Artificial Reef <i>Marybeth Weihbrecht, University of Texas Rio Grande Valley</i>
<b>3:00-3:20</b>	<b>BREAK</b>		





## Technical Session Schedule

**FRIDAY, FEBRUARY 24<sup>TH</sup>**

	<b>TEXAS RIVIERA</b>	<b>PADRE ISLAND</b>
<b>3:00-3:20</b>	<b>BREAK</b>	
<b>3:20-3:40</b>	Integrative taxonomic investigation of <i>Cyprinella sp. Nueces</i> , a putative undescribed Species of Greatest Conservation Need in Texas <i>Kevin W. Conway, Texas A&amp;M University</i>	Flood pulse and the temporal dynamics of fish metacomunities in the floodplain of the middle Paraná River (Argentina) <i>Pablo Scarabotti, Texas A&amp;M University</i>
<b>3:40-4:00</b>	Assessment of spatial variation in community assemblages and population condition of ESA-proposed Guadalupe Orb ( <i>Cyclonaias necki</i> ) and False Spike ( <i>Fusconaia mitchelli</i> ) mussels in data limited portions of the Guadalupe and San Marcos Rivers. <i>Lee Gudgell, Guadalupe-Blanco River Authority</i>	Hydrology to guide conservation: A gain-loss study in the Devils River, Texas <i>David Young, Texas Parks and Wildlife Department</i>
<b>4:00-4:20</b>	American Eel recruitment in the lower Colorado River (Texas) <i>Stephen Davis, Lower Colorado River Authority</i>	Testing the cold-water climate shield model with stream fishes in the middle Colorado River of Texas <i>Lindsey Elkins, Texas Parks and Wildlife Department</i>
<b>4:20-4:40</b>	Species distribution modeling of Texas SGCN fishes to guide landscape-level conservation <i>Diane Le Bouille, Texas Tech University / U.S. Geological Survey - Texas Cooperative Fish &amp; Wildlife Research Unit</i>	Effects of shoreline habitat on nekton communities along the Lower Texas Coast <i>Catherine Eckert, Texas Parks &amp; Wildlife Department</i>
<b>5:00 – 6:00</b>	<b>BREAK</b>	
<b>6:00–10:00</b>	<b>DINNER AND AWARDS BANQUET-TEXAS RIVIERA BALLROOM</b>	



## Technical Session Schedule

### **SATURDAY, FEBRUARY 25<sup>TH</sup>**

	<b>TEXAS RIVERIA</b>	<b>PADRE ISLAND</b>
<b>8:00-8:20</b>	Persistence of Dermo ( <i>Perkinsus marinus</i> ) in Sun-Cured Eastern Oysters ( <i>Crassostrea virginica</i> ) <i>Jenny Oakley, University of Houston-Clear Lake</i>	The impact of increasing fishing power: Live-imaging sonar use in Texas reservoirs <i>David Smith, Texas Parks and Wildlife Department</i>
<b>8:20-8:40</b>	Recent oyster management in the middle coast of Texas <i>Dakus Geeslin, Texas Parks and Wildlife Department</i>	Assessment of angler harvest diversity and targeted species preference across two regions of the Texas Coast <i>Ethan Getz, Texas Parks and Wildlife Department</i>
<b>8:40-9:00</b>	Status of the Blue Crab fishery in Texas, including sex ratio patterns <i>Tom Wagner, Texas Parks &amp; Wildlife Department</i>	What determines angler satisfaction on the Texas Coast? <i>Shambhu Paudel, Texas Parks and Wildlife Department</i>
<b>9:00-9:20</b>	A novel multivariate ecological approach to modeling freshwater mussel habitats verified by ground-truthing <i>Joshua Banta, University of Texas at Tyler</i>	Regulating urban fisheries: Using angler attitudes and practices to develop harvest regulations for small urban impoundments <i>Cynthia Holt, Texas Parks and Wildlife Department</i>
<b>9:20-9:40</b>	<b>BREAK</b>	
<b>9:40-10:00</b>	Physiological adaptations of fishes and aquatic animals <i>Ryan Shartau, The University of Texas at Tyler</i>	The impacts of winter storm uri on Texas coastal forge fish <i>Andres Garcia, Texas Parks and Wildlife Department</i>
<b>10:00-10:20</b>	Calcium signaling in progestin induction of sperm hypermotility in Southern Flounder ( <i>Paralichthys lethostigma</i> ) <i>Caroline Matkin, University of Texas Marine Science Institute</i>	The cats out of the bag—Gafftopsail Catfish abundance and length trends in Texas Estuaries <i>Zachary Olsen, Texas Parks and Wildlife Department</i>
<b>10:20-10:40</b>	High post-operative morality of Largemouth Bass at colder water temperatures <i>Jake Norman, Texas Parks and Wildlife Department</i>	Blotchy Bass Syndrome in the lone star state: A synergistic approach to citizen and agency science integration <i>Cynthia Holt, Texas Parks and Wildlife Department</i>
<b>10:40-11:00</b>	Study-design tradeoffs and detection error of camera traps to monitor endangered Comanche Springs Pupfish populations. <i>Robert Mollenhauer, Texas Parks and Wildlife Department</i>	Early life stage exposure to Deepwater Horizon crude oil impairs teleost osmoregulation by altering kidney development and function <i>Edward Mager, University of North Texas</i>



## Poster Presentations

Thursday, 23<sup>rd</sup>, 5:00 – 6:30 pm

POSTER LOCATION	POSTER PRESENTATION
1	Lunar periodicity in reproduction of Red Drum in aquaculture <i>Jessica Geiskopf, Texas Parks and Wildlife Department</i>
2	Identification of biomarkers of sub-lethal algal toxin exposure in Atlantic Salmon ( <i>Salmo salar</i> ) and Chinook Salmon ( <i>Oncorhynchus tshawytscha</i> ) using differential gene expression analysis <i>Brandon Ellingson, University of Texas at Tyler</i>
3	Cellular mechanism of intracellular pH regulation during exposure to high CO <sub>2</sub> in Rainbow Trout ( <i>Oncorhynchus mykiss</i> ) and Channel Catfish ( <i>Ictalurus punctatus</i> ) <i>Dillon Flowers, The University of Texas at Tyler</i>
4	Role of second messenger pathways involved in progestin-induced sperm hypermotility through mPR $\alpha$ in Southern Flounder <i>Teresa Bennett, University of Texas Marine Science Institute</i>
5	The potential for carbon sequestration in a nearshore artificial reef <i>Michelle King, University of Texas Rio Grande Valley</i>
6	Addressing uncertainty in fish assemblage responses to increased stream drying <i>Josh Perkin, Texas A&amp;M University</i>
7	Mesohabitat and macroecological correlates for Blue Sucker ( <i>Cycleptus elongatus</i> ) occurrence in regulated rivers <i>Hannah Evans, Texas A&amp;M University</i>
8	Southern Flounder in Texas estuaries: An examination of size specific catch rate trends in the context of climate related population impacts <i>Donella Strom, Texas Parks and Wildlife Department</i>
9	Evaluation of fish communities on an urban-rural gradient in the San Antonio River Basin from 2016 to 2021 <i>Olivia Reves, University of Texas at San Antonio</i>
10	Taxonomic and functional diversity of an urban stream fish assemblage: a 30-year perspective <i>Carmen G. Montaña, Stephen F. Austin State University</i>
11	Multiscale stream fish species-discharge relationships: The relative roles of evenness, density, and spatial aggregation <i>Rebecca Mangold, Texas A&amp;M University</i>



## Poster Presentations

Thursday, 23<sup>rd</sup>, 5:00 – 6:30 pm

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<b>POSTER LOCATION</b>	<b>POSTER PRESENTATION</b>
<b>12</b>	Investigation of man-made dredge material placement compartment as potential nursery habitat in Sabine Lake <i>Kole Kubicek, Lamar University</i>
<b>13</b>	Spatial-temporal habitat variation of three stream dwelling cyprinids: the Blacktail ( <i>Cyprinella venusta</i> ), Blackspot ( <i>Notropis atrocaudalis</i> ) and Sabine ( <i>N. sabinæ</i> ) in Texas streams <i>Eli Torrez, Stephen F. Austin State University</i>
<b>14</b>	The use of environmental DNA (eDNA) as a tool for assessing the presence of marine finfish in the coastal waters of Texas <i>Polly Hajovsky, Texas Parks &amp; Wildlife Department</i>
<b>15</b>	Quantifying movement of seven imperiled pelagic-broadcast spawning fishes in three Great Plains rivers <i>Lucas Stevens, Texas A&amp;M University</i>
<b>16</b>	Preliminary results from the Upper Galveston Bay Sustainable Oyster Reef Restoration Project: The influence of ENSO on monitoring results and project performance <i>William Rodney, Texas Parks and Wildlife Department</i>
<b>17</b>	Population trends of Red River Pupfish ( <i>Cyprinodon rubrofluviatilis</i> ) in three river-segments of the upper Brazos River, Texas: does abundance correlate with habitat conditions? <i>Caroline Crisp, Stephen F. Austin State University</i>
<b>18</b>	Winter storm Uri's impacts on Gray Snapper ( <i>Lutjanus griseus</i> ) in the Corpus Christi Bay ecosystem <i>Aaron Adams, Texas Parks and Wildlife Department</i>
<b>19</b>	Zebra Mussel invasion risk: Estimating the likelihood of spread and establishment of an Aquatic Invasive Species <i>David Creamer, Texas Tech University</i>
<b>20</b>	Trait-mediated species interactions drive co-occurrence of invasive and native species <i>Matthew Troia, The University of Texas at San Antonio</i>
<b>21</b>	Status survey of nine rare aquatic macroinvertebrates in East Texas and Louisiana <i>Alexandra Randall, University of Texas at Tyler</i>

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## Poster Presentations

Thursday, 23<sup>rd</sup>, 5:00 – 6:30 pm

POSTER LOCATION	POSTER PRESENTATION
22	Fishes of Texas Project update, and thoughts about where to go now <i>Dean Hendrickson, University of Texas at Austin</i>
23	High-resolution species distribution modeling of Texas crayfish species <i>Sarah Burgett, University of Texas at Tyler</i>
24	Texas Aquatic Bioblitz Initiative: 10 Years of Gap Sampling to Inform native fish conservation efforts in Texas <i>Stephen Curtis, Texas Parks &amp; Wildlife Department</i>
25	Phylogenetic analysis of four closely related species of crayfish in Central Texas <i>Schi-Lee Smith, University of Texas at Tyler</i>
26	Assessment of Headwater Catfish ( <i>Ictalurus lupus</i> ) genetics in Texas & New Mexico <i>Megan Bean, Texas Parks and Wildlife Department</i>
27	Assessing the feeding habits of an imperiled prairie river fish assemblage <i>Wade Wilson, Texas Cooperative Fish &amp; Wildlife Research Unit/Texas Tech University</i>
28	Monitoring Comanche Springs Pupfish, Pecos Gambusia, & Leon Springs Pupfish populations in West Texas <i>Megan Bean, Texas Parks and Wildlife Department</i>
29	Determining the viability of reconstructed wetlands <i>Justin Rea, The University of Texas at Tyler</i>
30	Using Eel Ramps and eDNA to detect recruitment of American Eel ( <i>Anguilla rostrata</i> ) in Texas <i>Jenny Oakley, University of Houston – Clear Lake</i>
31	Sexual dimorphism of tuberculation patterns in <i>Macrhybopsis</i> chubs <i>Amanda Pinion, Texas A&amp;M University</i>
32	Seasonal stream surveys to address project impacts—Is one-and-done enough? <i>Dave Peterson, Stephen F. Austin State University</i>
33	Anatomical survey of the Olfactory Apparatus in the Walking Catfishes ( <i>Siluriformes: Clariidae</i> ) <i>Cameron Olsen, Texas A&amp;M University</i>



