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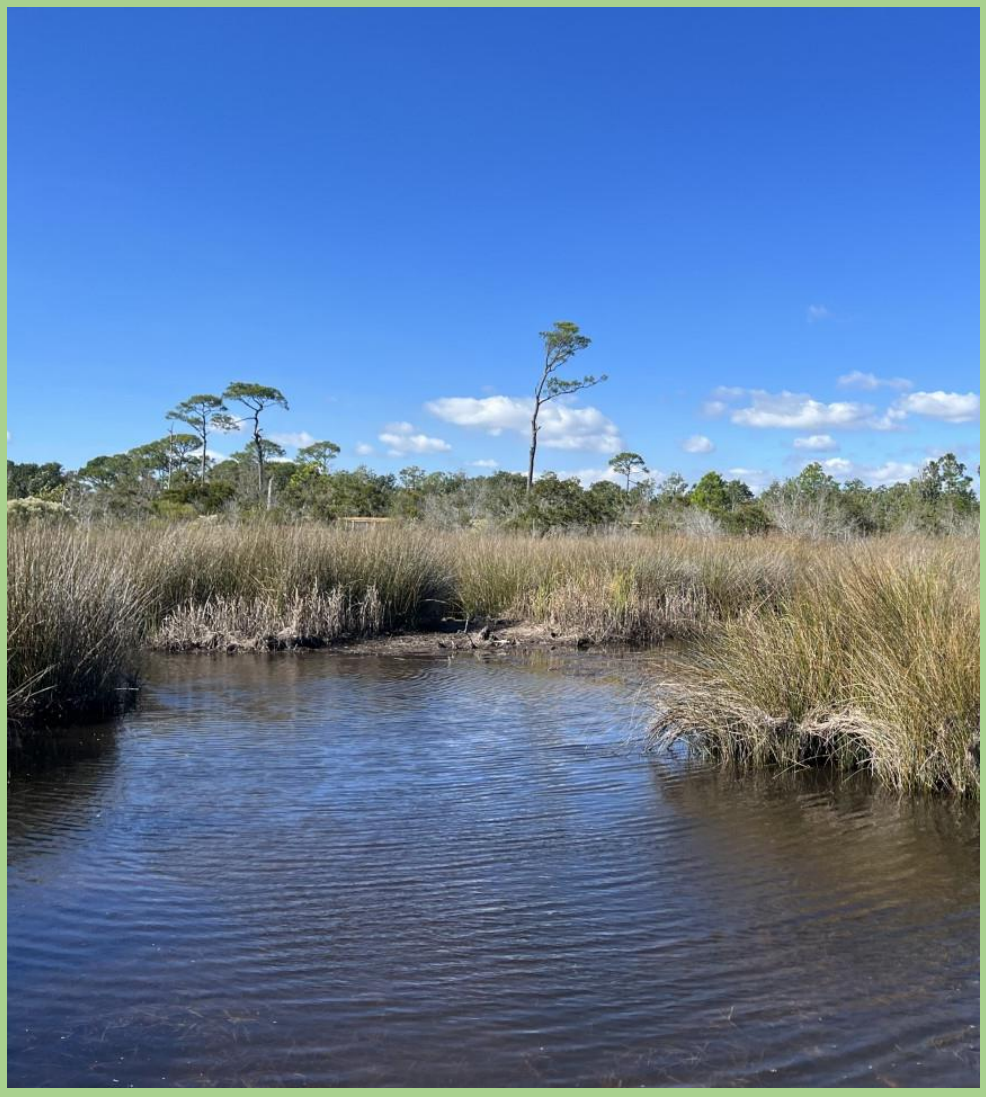

AFS Estuaries Section News Summer 2023: Pre-meeting Newsletter

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President's Message

Hello Estuary Section membership,

I am glad to be reaching out and I appreciate your support as your incoming president of the section. I want to start by thanking our outgoing president, John Mohan, for his leadership and time the past two years. I look forward to working with John and the rest of the executive committee during the transition. I will be attending the Annual meeting in Grand Rapids MI and hope to see you there! I will be attending the Monsters of Environmental Justice Event sponsored by the Section. Thank you for your support for this event which will help us provide future support for students to the Annual Meeting. This discussion promises to be an entertaining but intentional way to progress in aspects of this topic that is so passionate and personal for many.

Looking ahead, I would like to continue to strengthen our membership by working with the executive committee to recruit and spread the message about the section. We will also need your help for this as we need to get the message out about what you find beneficial about being a member of the Estuaries Section. We'll be sending out a survey this fall and use this for messaging. Until then, think about why you are a member?, How you started in the section? Things you would like to see to make the section even better?

I look forward to continuing the tradition of offering student awards for attending the Annual meeting. Our students today are the professionals of tomorrow and their attendance at the Annual meetings are so important in professional development and networking.

You will receive seasonal newsletters from us which will provide information on things like the student awards but also recent research and stories/news from our membership past and present.

Again, thank you for your membership and I look forward to 2024 and beyond!

Justin Stevens

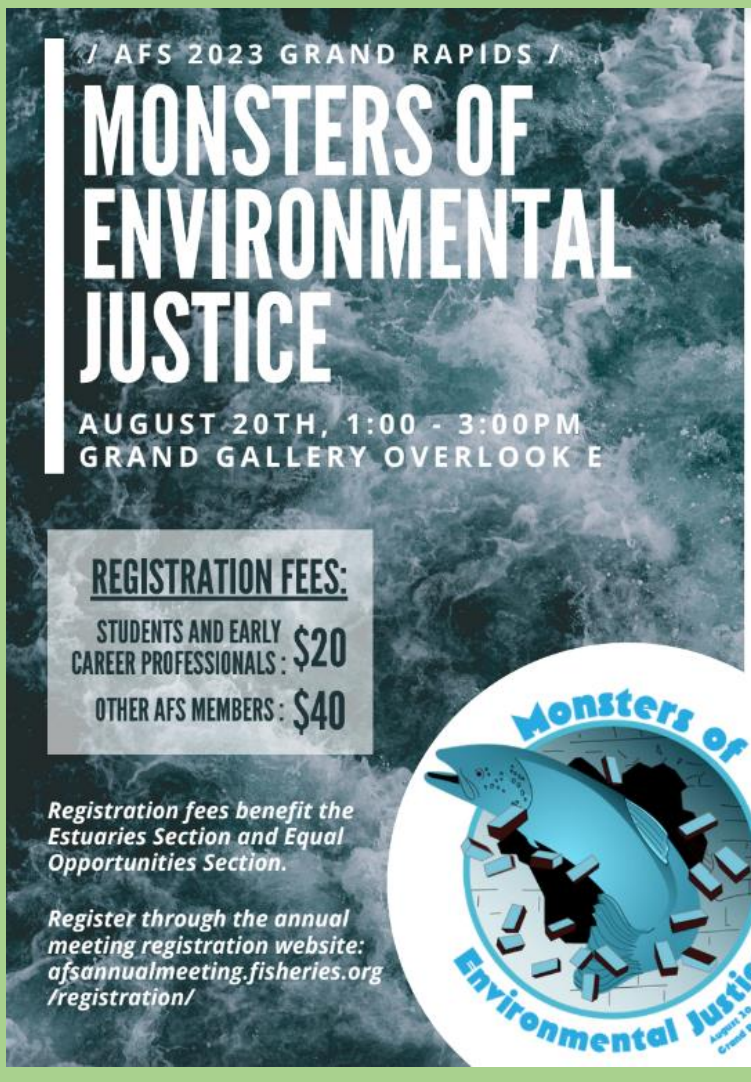
AFS Estuaries Section President

Justin Stevens

Monsters Event: Monsters of Environmental Justice

When: 1:00 PM – 3:00 PM, Sunday, August 20, 2023
Where: DeVos Place – Grand Gallery Overlook E

Following in the tradition of the "Monsters of Stock Assessment", "Monsters of Habitat Science", and "Monsters of Climate Science" fund-raising workshops for student travel, the AFS Estuaries Section and AFS Equal Opportunities Section are sponsoring a "Monsters of Environmental Justice" fund-raising workshop. Presenters including Dione Hoskins-Brown, Natasha White, Emma Rice, and Edith Gondwe will discuss their research and how it relates to their conceptions of environmental justice. This fun, informal event will include music and laser lights, and will help AFS support student travel to annual meetings. Don't miss it!



FEATURED MONSTERS:

AMBROSE JEARLD, JR., PHD
NOAA FISHERIES (RETIRED)
Environmental Justice: The Dilemma of Where to GO

EDITH GONDWE, MS
MICHIGAN STATE UNIVERSITY
Perspectives from Fisheries Social Scientists: Mixed Methods as a DEIJ Tool

NATASHA WHITE, PHD
NOAA OFFICE OF EDUCATION, EDUCATIONAL PARTNERSHIP PROGRAM WITH MINORITY SERVING INSTITUTIONS
Increasing Diverse Perspectives on NOAA Mission Aligned Environmental Justice Issues

HOLLY EMBKE, PHD
USGS MIDWEST CLIMATE ADAPTATION SCIENCE CENTER
Supporting Fisheries Climate Resilience through Indigenous Partnership

MARIE SCHAEFER, PHD
USGS SOUTHEAST CLIMATE ADAPTATION SCIENCE CENTER AND OAK RIDGE INSTITUTE FOR SCIENCE AND EDUCATION
Whose Science Matters? Weaving Indigenous Sciences and Western Sciences

DIONNE HOSKINS-BROWN, PHD
NOAA FISHERIES, SOUTHEAST FISHERIES SCIENCE CENTER, POPULATION AND ECOSYSTEMS MONITORING
Super Shrimp and the Big Move South

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Student Travel Award Winner Presentations

Author: Aaron Bunch, PhD Candidate
Co-authors: Joseph A. Mathews, Dennis R. DeVries, Rusty Wright, Fred Scharf, David Smith, Troy Farmer
Affiliation: Clemson University
Title: Fine-scale diadromous fish movement patterns at a large nature-like fishway
Session: Adapting Telemetry Tools, Techniques, and Analyses for Enhanced Understanding and Management of Fishes
Time and Date: 11:00 AM – 11:20 AM, Thursday, August 24, 2023
Location: DeVos Place – Grand Gallery Overlook H

Nature-like fishways are in-stream structures designed for continuous bi-directional passage that contain natural features such as rocks/boulders that create riffles and resting pools for fish and other aquatic organisms to traverse. Here, we tracked fine-scale (sub-meter accuracy) two-dimensional movement patterns of three diadromous fish species at a nature-like fishway during spring spawning migrations on the Cape Fear River, NC, prior to (2021) and following a modification (2022) that widened pathways and deepened pools. Twenty-four Innovasea-Vemco high residence receivers (HR3) were set to "HTI" mode which allowed for reception of HTI-495 series tags emitting 307 kHz tag pulses at 2-3 second intervals. HR3s were strategically placed in two arrays set upstream (n=7) and downstream (n=17) of the fishway. We tagged American Shad *Alosa sapidissima* (n=93; HTI-495LF), Atlantic Sturgeon *Acipenser oxyrhynchus oxyrhynchus* (n=14; HTI-495LY), and Striped Bass *Morone saxatilis* (n=91; HTI-495LY) below the fishway during springs of 2021 and 2022. A triangulation algorithm was used for positioning which required detection from at least three receivers to calculate each position and corresponding time stamp. We estimated individual and species-specific space-use with kernel density estimation, quantified horizontal swimming speeds, and evaluated passage routes and time duration of passage events pre- and post-modification. Overall, there were species-specific differences in space-use and horizontal swimming speeds. Atlantic Sturgeon did not pass the nature-like fishway but space use below the nature-like fishway was distinct from American Shad and Striped Bass and may indicate an area of likely spawning. American Shad displayed searching and staging patterns, as they appeared to search for upstream passage routes. Striped Bass movements were distinct from American Shad, possibly indicating foraging movements and upstream migratory patterns. Distinct movement pathways were evident with American Shad and Striped Bass with a higher number of individuals utilizing the river-right pathway.

Author: Pelumi Ojo OKE, Undergraduate student
Affiliation: Federal University of Technology, Akure, Department of Fisheries and Aquaculture Technology; Ondo State, Nigeria
Title: The effects of stocking density and background colour on the molecular stress markers in African catfish
Session: Contributed Papers
Time and Date: 8:40 AM – 9:00 AM, Thursday, August 24, 2023
Location: DeVos Place – Grand Gallery Overlook C

The effects of stocking density and background colour on the molecular stress markers and zootechnical performance in African catfish were assessed in this study. Fish with average weight of 15.00 ± 0.10g were stocked into glass tanks of 60cm ×45cm×45cm dimension in triplicate at stocking densities of 10, 20 and 30 biomass in blue, black and white tanks respectively. They were fed commercial diets containing 40% crude protein. After eight weeks of feeding, molecular stress indicators and zootechnical performance were assessed in the experimental fish. Result showed that growth and survival of fish were significantly reduced ($P < 0.05$) with increasing stocking density. Colours of the container also significantly influenced the stress markers and growth indicators in experimental fish. Moreover, molecular analyses of the HSP 70 genes showed that colour and stocking density significantly affected the stress upregulation of the biomarkers and molecular stress chaperone genes in African catfish.

Announcements

Social Networking Event

- **Who**: Cooperative Research with Stakeholders Section, Estuaries Section, and Marine Fisheries Section
- **What**: Social networking event in Grand Rapids, MI in conjunction with Stakeholder Engagement Day
- **Where**: Founders Brewing Co in the Centennial Room (235 Cesar E. Chavez Ave SW, Grand Rapids, MI 49503)
- **When**: Tuesday, August 22 starting at 5:30 PM

Upcoming Meetings

- 7th International Otolith Symposium: Vina del Mar, Chile, October 9-13, 2023

- CERF 27th Biennial Conference: Portland, Oregon, Nov 12-16, 2023

- 9th World Fisheries Congress: Seattle WA, March 3-9, 2024

- AFS 154th Annual Meeting: Honolulu Hawaii, September 15-19, 2024

Estuaries Section Treasurer's Report

respectfully submitted on 07/31/2023 by
Dr. Konstantine J. Rountos (Treasurer)

Date	Balance	Credit	Debit	Note
03/27/23	3,933.52			Treasurer's Report (Spring 2023 Estuaries Section Newsletter)
05/24/23	5,047.52	1114.00		2022 Estuaries Section dues
07/18/23	4,263.52		784.00	Check #995007 (AFS Invoice #GR-67073 – Student Membership support for three students & three L-M Country students for AFS 2022 parent society meeting)
07/31/23	4,263.52			Current balance

Check us out online!

Website: http://estuaries.fisheries.org

Twitter: @Estuaries_AFS

Facebook: http://www.facebook.com/EstuariesSectionAFS

LinkedIn: https://www.linkedin.com/groups/7443198