

AERS NEWS

The official publication of the Atlantic Estuary Research Society

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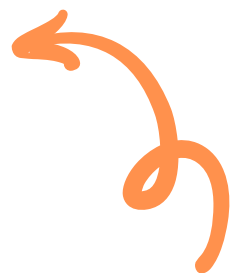
AERS SPRING 2023 MEETING

March 23rd-25th 2023
Monmouth University
West Long Branch, NJ



“COASTAL AND ESTUARINE SCIENCE IN A CHANGING CLIMATE”

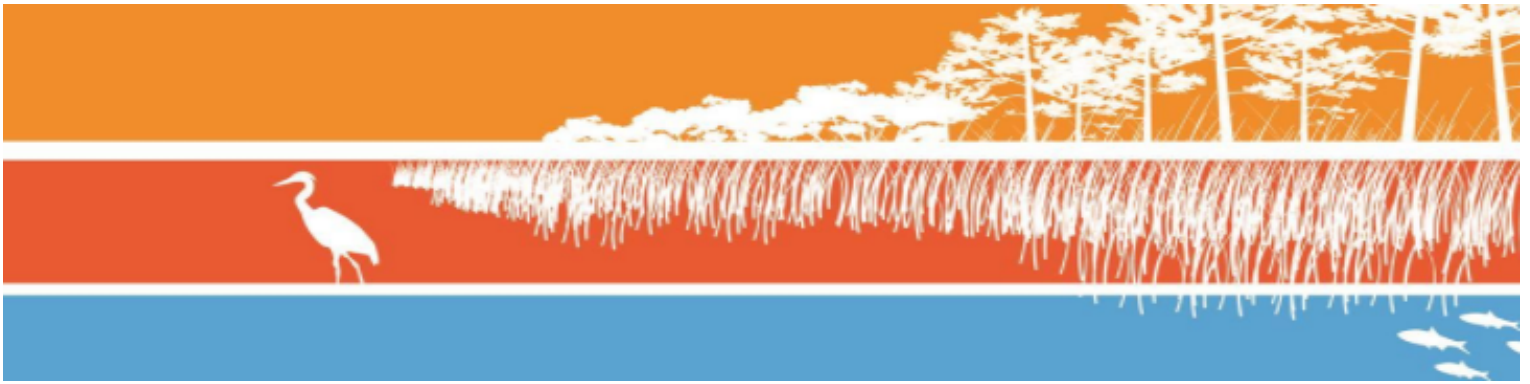
Estuarine areas may be the most sensitive to climate change and affected environmentally and socioeconomically. AERS scientists have spent countless hours monitoring, modelling, and assessing mid-Atlantic environments and trying to determine solutions for coastal vulnerabilities. Join us for an exciting meeting focusing on the importance of coastal and estuarine science in a changing climate.



Scan me

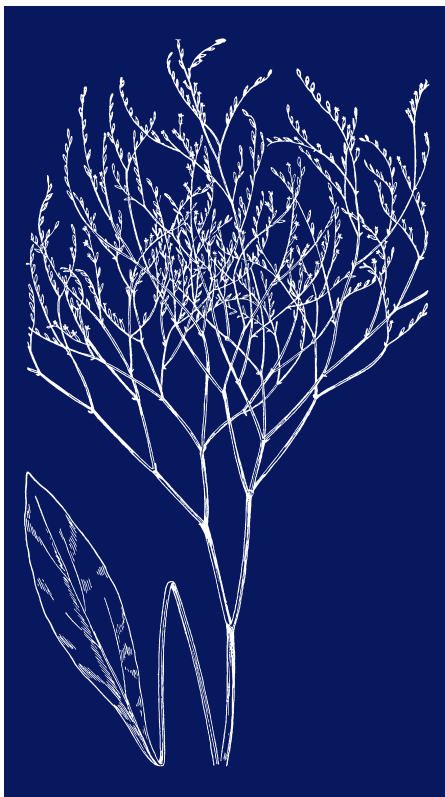
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PRESIDENTS REMARKS

Shelley Katsuki



It seems that time is flying by and I cannot believe it's already time for another AERSNews! A lot has been happening in the fast few months and I am so happy that we finally were able to have an in person meeting this past fall at Washington College. It was great to get back to what makes AERS so special and interact with so many wonderful people. I loved the campus and thought the light installation in the atrium was an added bonus for our poster session and welcome social. We had hoped to have a student social, planned by student rep Emily Coleman the first evening but weather didn't cooperate. Instead several students did still gather after the welcome social to get to know each other. Our keynotes were all fantastic and left attendees feeling inspired to work together with other groups to improve scientific research. The student presentations were even better than I remember and I know our judges found it to be a close competition. Two items to note from the fall meeting were the establishment of a new award and a new subcommittee, both of which I am very excited about and you can read about more in this newsletter. I am honored that I am able to be a part of the initiation of both of these! It was also my honor to present Nancy Mountford (AERS President, 1980) with the Venerable Clam and to finally be able to recognize our two most recent Presidents (Joe Luczkovich, 2018-2020 and Ben Fertig 2020-2022) for all the hard work they did during their presidencies. A knuckle salute for all!

As soon as one meeting is over, its on to planning for the next one. We had to cancel our Spring 2020 meeting at Monmouth University due to Covid-19, but are pleased that they would like to host again so we will be heading back to New Jersey March 23-25 th 2023. Registration and abstract submissions are now open, so check the AERS website for more information on how to register. CERF will also be having its biennial meeting in November of 2023. We hope we can have a strong AERS representation at the meeting! There will be student travel funds available and we are planning to have a silent auction at the Spring 2023 Monmouth meeting specifically to raise extra funds for student CERF travel. Expect abstract submission for CERF to also open soon, so be sure to submit abstracts for CERF and AERS! I have really been enjoying my time as President, meeting so many new people and seeing all the familiar faces this fall. I am looking forward to seeing many of you again soon at Monmouth.

AERS Fall 2022 Meeting Highlights

Anthony Himes

AERS hosted its first in person meeting in over two years at Washington College in Chestertown, MD on October 13-15, 2022! It was a great opportunity to see colleagues and friends once again in an engaging meeting with the theme of "Community and collaboration: the importance of shared research in a post-Covid world." The opening welcome social on the first day is always a great way to allow everyone to catch up with old acquaintances and meet new AERS members. Friday's line up of exciting presentations opened with a welcome address from AERS President Shelley Katsuki and the presentation of the Venerable Clam award to long time AERS member Nancy Mountford. A knuckle salute to Nancy!



Nancy Mountford receives the Venerable Clam award. Congratulations Nancy!

The day continued with research presentations interspersed around three exciting keynote presenters. The first keynote address came from Scott Budden, a partner at Orchard Point Oyster Co, titled "Science & Oyster Farming: A Nexus for Good" which spoke to many ways science and industry could mutually benefit from ongoing and future collaborations. The next keynote presentation titled "Transforming the Middle Branch into Baltimore's next generation waterfront" came from Brad Rogers, executive director for the South Baltimore Gateway Partnership. Brad's presentation covered the exciting work being done to rejuvenate the Middle Branch of the Patapsco River in Baltimore Harbor by restoring wetlands and improving public spaces. The final keynote presentation titled "Chesapeake Bay SAV Watchers: the vital role of volunteers in SAV monitoring" was given by Brooke Landry, a natural resource biologist at Maryland's Department of Natural Resources and Chair of the Chesapeake Bay Program's SAV Workgroup. Brooke's

presentation highlighted the importance of engaging citizen scientists in large scale monitoring efforts in order to both educate and engage members of the public in scientific efforts.

The AERS business meeting was held after oral presentations. A ceremonial passing of the gavel was finally able to take place between past Presidents Joseph Luczkovich and Ben Fertig before being past to current President Shelley Katsuki. Following the business meeting, a poster session was held highlighting even more impressive science being conducted throughout the region by members of AERS. The evening concluded with a banquet that stretched late into the night.



Keynote speaker Brooke Landry and John Zimmerelli of YSI

Saturday morning began bright and early with the first of three field trips to Washington College's River and Field Campus for a birding tour. Oral presentations then resumed for the final session of the meeting before concluding with the student award ceremony, where the many great presentations made for a close race. In total, 16 combined regular and ignite oral presentations were enjoyed by attendees across four different sessions. Following the closing remarks, the other two field trips were held: a tour of the Conquest Preserve and a Chester River Cruise.

A big thank you to our local meeting hosts Rebecca Fox and Eric Schott as well as the entire planning team: Shelley Katsuki, Elizabeth Lacey, Treda Grayson, LeeAnn Haaf, Anthony Himes, and Emily Coleman. And a special thank you to Washington College for hosting us as well as all our meeting sponsors for making this meeting possible.

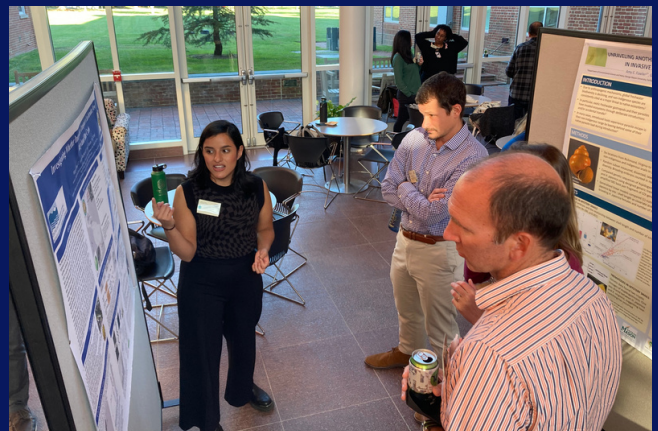
Fun Meeting Memories



AERS President Shelley Katsuki with the scavenger hunt winners Christina Rarick and Maizer Sparkman.



Jen Herrera, Khaled Geba, Zoma Atnafou, Eric Schott, Olivia Pares, and Allyson Kido pose after award presentation.



Jen Herrera gives presentation on blue crab viromics to fellow AERS members at the poster session.

Student Awards

Joe Luczkovich

A very impressive turnout of 18 student papers was presented at the AERS Fall 2023 meeting, showing a strong rebound in student participation in estuarine science. This year, student awards were given for best graduate student oral presentation, best graduate student poster, and best overall undergraduate presentation. Judges used an online Google Forms of the AERS Judging rubric, with ratings for presentation criteria ranging from 1 (poor) to 5 (excellent) so results were rapidly downloadable, and winning presentations were determined easily. It should be noted that judges were assigned at random, but potential conflicts of interest (co-authors and thesis committee members) were first identified and judges reassigned; also, student judges were not allowed to judge other students in their same presentation categories. Judges also had the opportunity to provide constructive feedback on various aspects of the presentations including Objectives & Hypotheses, Methods, Results, Significance, Conclusions, Take Home Message, Graphics, and Delivery. These constructive comments were shared with the student presenters later.

Best Undergraduate Presentation:

Zoma Atnafou, IMET, University of Maryland
Baltimore County

The dark false mussel plays an active role in removal of antibiotic-resistant bacteria from Baltimore harbor water.

Best Graduate Poster Presentation:

Rachel Owrutsky, University of Delaware
Blue carbon accumulation in the
Great Marsh, DE

Best Graduate Oral Presentation:

Raymond Czaja, Stony Brook University
Using meta-analysis to explore bivalve local adaptation in ocean acidification studies



"This student did a great job...It is very good to see young students with a strong interest in estuarine sciences. Keep up the good work!"
-Presentation Judge

"Good responses to questions and a good conversational style with respect to the subject matter."
-Presentation Judge

Student Awards Continued

Travel Awards: AERS has traditionally provided travel awards for students to attend the meeting and seven students applied and were given money (varying amounts depending upon the request of the students, i.e., some car-pooled and shared rooms, for a total of \$2,020) to help offset the costs of hotel, registration, and travel. These travel award winners are pictured below with AERS President Shelley Katsuki and Student Endowment Committee Chair Joseph J. Luczkovich:

Emily Andrade

Delaware State University

Christina Rarick

Virginia Institute of Marine Science

Stephanie Peart

Virginia Institute of Marine Science

Anji Cooper

University of Delaware

Tahera Attarwala

Delaware State University

Raymond Czaja

Stony Brook University

Juan Ramos

Delaware State University



Future AERS Student Research Award Planning: In the future, the Student Endowment Committee is considering making large research-based awards to our student members. A fund to establish competitive student research awards via submitted proposals was discussed at the recent AERS Board meeting. This would help promote proposal writing skills in the student membership and will result in a study that can be presented at a future meeting of AERS or CERF. Our committee welcomes contributions for this research fund to be established and we will be forwarding the proposed application for this award and the amounts to be awarded at the next AERS Board for approval. If you would like to join the Student Endowment Committee and help with this student research award initiative, please contact the chair (luczkovichj@ecu.edu) or AERS president Shelley Katsuki.

Acknowledgments: Thanks to our judges! We could not have done this judging without your help and your cell phones!

Gulnihal Ozbay, Delaware State University Rebecca Fox, Washington College, Eric Schott, UMCES-IMET, Christina Rarick, Virginia Institute of Marine Science, Joseph Luczkovich, East Carolina University, Brooke Landry, Maryland DNR/Chesapeake Bay Program, Shelley Katsuki, VIMS, Sara Blachman, Virginia Institute of Marine Science, Amy Fowler, George Mason University, PEREC, LeeAnn Haaf, Francis Reilly, LMI; Emma Dodsworth, Virginia Institute of Marine Science; Ben Fertig, Raymond Czaja, Stony Brook University, Paul Salib, East Carolina University.

STUDENT TRAVEL

Award Articles

Tahera Attarwala

Greetings! My name is Tahera Attarwala, and I am a graduate student in Natural Resources at Delaware State University. I have always had a passion for wildlife and conservation from a young age. When I got accepted into college, I had some idea of what I wanted to pursue, and what solidified it was the fact Delaware State University offered a degree in my dream field. I graduated from Delaware State University in 2021 with a B.S. in Wildlife Management and a minor in Environmental Science. My hard work and dedication throughout my undergrad, granted me the opportunity to continue my education at Delaware State in a master's program. The work I did in undergrad, also had a tremendous influence on my master's research. My research focuses on assessing oyster predation utilizing real-time monitoring and eDNA analysis in Delaware's Inland Bays.

This summer was my first official field season. Like many others during the summer, I spent my days out on the water under the sun. I deployed cameras at oyster aquaculture farms and artificial oyster reefs, collected water samples for eDNA analysis and water quality assessment, while assisting in a slew of other research projects. I have gained valuable field, laboratory, and research experience that have provided me with the skill sets to make me more qualified for future jobs. Upon completing my master's education, I plan to go into a Ph.D. program. My ultimate goal is to become a Wildlife Biologist and Conservationist or something related. I do not know where my endeavors will take me, whether its remaining in academia or shifting to an industry position, but I would like to have a position that allows me to work closely with wildlife and the environment and to be able to continue to do field work and research. I have also always had an interest in studying animal behavior so maybe that is something I can explore in the future. Whatever my future holds, I am excited for the journey and grateful for the experiences I have gained along the way.



Ray Czaja

Hi fellow AERS members! My name is Ray Czaja. I'm currently a PhD candidate the Marine Animal Disease Lab at the School of Marine and Atmospheric Sciences (SoMAS) at Stony Brook University. However, prior to my PhD at SoMAS, I received my M.S. at the University of West Florida. Traveling even further back in time, prior to my M.S, as a child, I often spent my free time snorkeling in subtidal habitats. I would wonder why I found certain organisms in certain places and at certain times. Lucky for me, I was able to answer this specific question for my M.S. work, which focused on habitat selection of seagrass associated invertebrates in the Gulf of Mexico. This work was the subject of my first ever talk as a graduate student at the virtual 2020 AERS meeting. The theme of environmental factors driving the distribution of organisms remained of interest to me, however, I wanted to incorporate climate change impacts and fisheries science.



This is what brought me to SoMAS, where I am assessing how climate change has impacted the New York State Atlantic surfclam (*Spisula solidissima solidissima*) fishery. I was also attracted to SoMAS, as I was interested in advancing my laboratory and modeling skills. My PhD advisor, Bassem Allam, trusted me to learn, apply and combine both laboratory and modeling techniques to address the mechanisms behind climate change contributing to the decline of the surfclam fishery. I am grateful for his support and trust, as we've recently developed unique approaches to incorporate our laboratory experiment results into models that predict surfclam habitat suitability. Bassem and I also became interested in learning and applying quantitative tools, such as meta-analyses, that had previously not been a part of our scientific toolbelt. We wanted to use meta-analysis to explore potential local adaption in bivalve responses to climate change, a common theme of our lab's work. I am therefore excited to present the results of our meta-analysis at this year's AERS meeting! My hope is that after listening to my talk, my fellow AERS members will be able to provide feedback that will strengthen our work, and perhaps even spark ideas for follow-up studies.

Juan Ramos

Hello, my name is Juan Ramos; born and raised in Kansas City, Kansas. I obtained my undergraduate degree at the University of Arkansas at Pine Bluff (UAPB), majoring in aquaculture and fisheries. Ever since I've developed a huge determination to work in a marine-based setting. As a graduate student at Delaware State University, I'm pursuing a master's in natural resources. To achieve my goal, my thesis project is a population characteristic study targeting the blue crab (*Callinectes Sapidus*) in Delaware inland Bay, specifically Rehoboth Bay. The duration of my crabbing study is from June-October. Once every two weeks, I require 2 days back-to-back for my research. I deployed 18 crab traps, 12 commercial-size traps, and six



recreational pots, each baited with two menhaden and deployed for about 24-36 hours. When retrieving these traps, each harvest ranges from 40-220 Individuals. Then each blue crab (also by-catch fish and spider crabs) is weighed (g), carapace width and length (cm), missing limbs are recorded, sex, maturity, egg-bearing, and invasive attachment (oysters & "slippers") is recorded. I can then use the registered units to make population-characteristic conclusions. Water quality is collected bi-weekly (physical and chemical) for the lab overall. Still, I mainly focus on the most sensitive parameters for the blue crab, such as dissolved oxygen, salinity, and pH. After my master's is completed, I plan on continuing with academia and pursuing a Ph.D. If not, I'd like to continue working in the marine field, conducting research as a leader for the underrepresented. I want to thank the Atlantic Estuarine Research Society (ARES) for getting me one step closer in my professional development journey. By allowing me to present my research in poster form and their conference at Washington College in Maryland, also while providing funds for my transportation, making it all possible.

A personal statement of mine is:

"My heart contains a huge love for aquatic animals, and I'm interested in working with marine organisms. My dream career goal is helping the aquatic environment through restoration efforts, as I feel that all aquatic organisms are not responsible for the living conditions, we put them through as humans."



Last Clam Standing

At this past AERS meeting (Fall 2022) a new award was initiated. As this was the first in person meeting since the COVID-19 pandemic, many spent a great deal of time catching up. Many attendees hung around chatting after the Friday night banquet ended, slowly petering out over time. The last group of attendees wound down their evening at 12:26 am, and President Shelley Katsuki decided that if one of them was present at the first talk the next morning, they would be recognized for it. Thus, the “Last Clam Standing” award came into being. Much like the coveted NEERS stickleback award, this is not necessarily presented at every meeting and is only awarded (at the discretion of the President) if all criteria are met. These are:



- 1) Attends the AERS banquet on Friday evening until the end
- 2) Is present and awake for the first presentation Saturday morning
- 3) Distinguishes themselves by asking thought-provoking questions throughout the meeting

The first awardee of this sure to be sought after award was Paul Salib, a graduate student at East Carolina University. Paul is pictured here socializing with Joe Luczkovich and Frank Reilly



CERF CORNER

NEWS FROM OUR FRIENDS AT CERF



Save the Date for CERF 2023!
CERF 27th Biennial Conference
Portland, Oregon
12 - 16 November 2023

NEW SUBCOMMITTEE ALERT!

JEDI

SUBCOMMITTEE

Justice, Equity, Diversity, and Inclusion

JEDI's Roles

Responsible for providing strategic guidance and implementation activities for AERS society's diversity, equity and inclusion plan and initiatives through their role in leading the Committee, staffing the Board Committee and advising the Executive Team. This subcommittee plays an important role in inspiring enthusiasm and momentum in society's efforts to cultivate diversity, promote equity, and foster inclusion.

JEDI's Mission

Foster, cultivate, and preserve a society's culture that is inclusive, fair, and equitable to its members and promote participation of people from diverse racial, cultural, and societal background.

Suggested Activities

- Suggesting the society to use and encourage using pronouns
- Reach out the minority serving institutions to introduce AERS and encourage students and faculty from those institutions to become members and participate in AERS Meetings
- Encourage participation of students and young professionals from diverse background to the committees and AERS Board
- Identify keynote speakers advocating JEDI in Estuarine Sciences

Please reach out to the JEDI committee if you have any ideas or would like to be involved!

Gulni Ozbay (gozbay@desu.edu)

Maizer Sparkman (mspar006@odu.edu)

Juan Ramos (jramos20@students.desu.edu)



ELECTION TIME



AERS Open Board Positions

Prior to the Spring 2023 meeting, we will hold an electronic election for two key leadership positions in AERS. The results of the election will be announced at the Spring 2023 AERS meeting in March at Monmouth University. It is time to open the call for nominations for these leadership positions of AERS:

President-elect

This person will become AERS President after a one-year position as President-elect starting after the Spring 2023 meeting. The duties of President-elect is to assist the President, then take over as President in Spring 2024 for a two-year term, followed by a one-year term as Past-President (4 years total). The President shall preside at all meetings. The President or his/her designated representative (e.g., President Elect or immediate Past President) shall serve on the governing board of CERF, and the President shall direct Society activities of the Board.

Secretary

It shall be the duties of the Secretary to keep minutes of regular meetings of the Board and business meetings of the society, and to distribute notices and send copies of meeting minutes. The Secretary shall submit meeting minutes and other pertinent data to the Historian for placement in the official Repository of the Society. The Secretary shall serve a two-year term commencing at the Spring Meeting preceding a CERF Meeting.

Nominations are now open! Self-nominations are welcome, and nominations of others are assumed to have the consent of the nominee. Send your nominations or any questions you may have to the Nominations Chair Ben Fertig at benfertig@gmail.com.

Below are two letters of interest for the President-Elect position. Please take the time to read these nominations for Dr Gulnihal Ozbay, Ph.D. and Dr. Jessie Jarvis, Ph.D. Both nominations have impressive resumes and a wealth of experience.



Dr. Gulnihal Ozbay, Ph.D.

Hello AERS Family! It has been a pleasure becoming part of this wonderful Society since I started my career as a junior faculty in Delaware in 2003. My first AERS meeting I attended was in the fall of 2003 and I absolutely loved it. Year after year I have brought my research interns, graduate students, technicians, post-docs and students from my Environmental Science class to the AERS Meetings. It has been a pleasure seeing many of my colleagues and meeting new ones every year.

I received my Ph.D. in Auburn University, Fisheries and Allied Aquacultures Program focusing on environmental quality and treatment strategies for the aquaculture effluents. I was also involved in oyster restoration efforts during my time at Auburn and this is how I started establishing viable research and outreach efforts in Delaware working with oyster gardeners and oyster revitalization efforts to promote restoration of this important keystone species. Although my primary research efforts focus on Delaware Inland Bays oyster restoration, I have also studied juvenile blue crab population assessment and feeding habits both in Blackbird Creek and Inland Bays in Delaware. My environmental monitoring efforts focus on some of the anthropogenic stressors, land use practices and change in marsh vegetation and aquatic ecosystems. I have mentored and advised over 300 undergraduate interns and graduate students in their environmental projects since 2003 many of whom have presented their research during the AERS Meetings. At my current position as a Professor of Natural Resources in Delaware State University, I serve as ONE Health Lab Director and Interim Director for the Center for Integrated Biological and Environmental Research.

As an active member of AERS since 2003, I have served as a Judge for students' presentations, moderate sessions, and co-hosted and assisted with several AERS Meetings in Delaware. I served as a Member-at-Large for the AERS for 3 years and had served as a Secretary and Treasurer for the U.S. Aquaculture Society for 2 years and currently serving as the Membership Committee Chair. I am very humbled to receive 2019 Venerable Clam Award from AERS for my service. I look forward to continue serving this great Society and promote AERS at various regional and local institutions. My vision as an AERS President-elect would be to increase our involvement for coordinated efforts in emerging environmental issues, assist developing our region in utilizing sustainable resources, conserve our environment, and foster mutually beneficial regional and national partnerships. Recruiting new members, especially minority students and young professionals and promoting the AERS organization among the minority serving institutions are some of my goals if I am selected as a President-elect. I am honored to serve as the first chair for the AERS JEDI Subcommittee focusing on justice, equity, diversity, and inclusion. I also find it rewarding for AERS to offer coordinated efforts to its members with other sister organizations.



Dr. Jessie C. Jarvis, Ph.D.

BIO: Dr. Jessie C. Jarvis is an Associate Professor in the Department of Biology and Marine Biology at the University of North Carolina Wilmington. She received Ph.D. in Marine Science from the College of William & Mary at the Virginia Institute of Marine Science. An active member of the AERS community since her first meeting as an undergraduate, Jessie has served as co-program chair, honorary membership chair, Secretary, and Treasurer for AERS over the years. She is also active outside of the society through her service to CERF and World Seagrass Association.

Jessie has an dynamic research lab involving the mentorship of both undergraduate and graduate students. Overall, her research focuses on the ecology of estuarine and coastal shallow water environments vegetated with seagrasses and other submersed aquatic vegetation. Her efforts in teaching, research, and service are focused on training and empowering the next generation of estuarine scientists to help solve the big issues of today and prepare for the unforeseen problems of tomorrow.

PLATFORM: AERS is the standard for excellence across the CERF Affiliate Societies. Since that first meeting in Morehead City, N.C. in 1949, AERS has repeatedly shown our leadership on all things estuarine science. Never has there been a more important time for AERS to step-up and show our excellence than now. We are faced with rapidly increasing threats of global climate change all while adapting to our new reality of living, teaching, and doing science in a world forever changed by COVID-19. In addition, we are challenged to answer the resounding call to action to embrace and promote diversity in all aspects of estuarine science and to do the hard work necessary to ensure that these actions result in permanent and positive change. I have no doubt that AERS can provide leadership on these topics and beyond, because I have seen the members of AERS step-up again and again since my first meeting as an undergraduate student in the Fall of 2002. Throughout my time as a member of AERS, I have been privileged to serve on the AERS Board as co-Program chair, Secretary, Treasurer, and most recently as Honorary Membership Chair. I have been a part of numerous hard and thoughtful discussions that have prepared me to help lead during times such as these. If elected President, I will continue to uphold the high standards of AERS and work with the Executive Committee, AERS Board, and the membership to ensure that we tackle the hard issues of today head on while still retaining the strong sense of community and focus on students which makes us AERS. AERS has been a significant part of my professional life, and I look forward to the opportunity to give back to AERS and its membership.

AERS membership

A sincere thank you to everyone who is continuing to pay their membership dues to AERS. AERS would not be able to continue without the continued support from every one of you. Dues (\$25 regular, \$15 student/retired) can be paid directly via www.aers.info or when renewing your CERF dues. As a reminder, we receive the CERF dues quarterly so there will be a delay in your payment reflecting in the AERS database and your membership might show "lapsed" until we receive that information. To speed up the process, please forward your CERF receipt reflecting your AERS dues payment to GOzbay@desu.edu so that I can adjust your membership in a more timely manner. This is especially important as you go to register for the spring meeting! AERS members will always receive a discount to attend our meetings, so be sure you show your support for our society AND get cheaper registration fees by joining AERS today.