CERF's Up!

Volume 49 • Number 3 • September 2023

The Latest Hope Spot

From Restaurants to Oyster Reefs

CERF 2023 Biennial Conference

A new wave of information from the Coastal and Estuarine Research Federation

CERF's Up!

Volume 49 • Number 3 • September 2023

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The cover art for this issue is "Elkhorn Slough Estuary," by Lena Champlin, a graduate student at Drexel University and the winner of the CERF 2023 art contest. Her artwork is featured as part of the 2023 CERF Conference theme.

Back Cover: Shad Creek off Rowley River, Plum Island Sound, Massachusetts, USA. April 2021 Jane Tucker

Call for Cover Photos for *CERF's Up!*

Would you like to see your favorite estuary displayed on the cover of *CERF's Up!*? If so, send high-resolution shots showing the place's natural beauty, along with a short caption and photo credit, to bulletin@cerf.science.

President's Message

Leila Hamdan
CERF President

"Be Humble, and Do What Makes You Happy"

I titled this article with the two pieces of advice given by my father, Hamdan Mousa Hamdan, that still echo in my mind more than two decades after I last heard him speak them. The first was something he drilled into the minds of me and my sisters from our earliest days. I have always understood and benefited from these words as a person and a professional. The second, I am sad to say, I once thought a bit of lazy, even throwaway, advice until much later in my life when those simple words snapped into clear and urgent focus.

Be Humble

Humble, being a very old word, has more than a dozen meanings, not all positive, especially in an aspirational context, which CERF's incredibly talented, patient, and giving Executive Director, Susan Park, has always encouraged me to be with this article. My father did mean it to be positive, even motivating, owing to its roots. The Latin root is *humus*—ground, or earth, that which is necessary under our feet to allow us to stand. This evolved to *humilis*—low. For a benthic scientist like me, there is deep (pun intended) importance in what is low, and beneath our estuaries and coasts. The practice of this advice, to be humble, has guided my work leading the CERF 2021–2023 Governing Board these last two aspirational years. It has opened my ears to the words and needs of the membership, permitted me to heed the advice, again and again, of the dedicated members of the Governing Board, and attach to a foundation that can help the federation grow. We, together, can now shape our progress with a grounded and ambitious strategic plan, Visions V.

In the last few months, the Governing Board has taken the next important and practical step with Visions V, turning it into an Action Plan that will implement short- and long-term activities to maintain progress with three strategic goals:

To Advocate for Estuaries and Coasts,

To Enhance Member Value,

To Promote and Support Equity and Justice

Each goal will take volunteers from the membership, time, effort, and action to achieve vision. These goals will also take considerable bravery, humble appreciation of our strengths and weaknesses, and an unfaltering commitment to being relevant and responsive to the needs of current and future members as well as society, which is impacted by the work we do in science, education, management, and policy.

Be Happy

This simple advice, once discarded, has become a treasured and essential aspect of my work and the core of my mentoring. In a frame of happiness, we do things with focus and energy. More often than not, happiness in our work leads to carefully crafted processes that result in substance. The things that have made me most happy during my term as CERF President have been listening and learning from the membership, the Board, and especially, Susan Park. I took great happiness in the Board's decision to conduct a member survey that has been one of the most well-crafted and well responded to in five decades. That survey is data that will continue to help us fine-tune what we do well and recognize where we need to do better. I cherish the time spent last summer writing a National Science Foundation proposal on culture change that is now having an impact on the strategic plan. This summer, we had the biggest response to the call for applications for the Rising TIDES Program in our history, and we received over 100 applications to the CERF Inclusive Leadership Program, which will welcome its first cohort in Fall 2023. We discovered a need, assembled a team, and are about to provide an innovative training program to fill and fuel the CERF leadership bench for the future. I imagined many ways I could use my time as President to contribute to our present and future, and I found happiness in doing creative and brave things that only CERF can do.

With a humble mind and a happy heart,

Leila Hamdan

The Latest Hope Spot: The New York/New Jersey Harbor Estuary

Judith S. Weis
Department of Biological Sciences, Rutgers University, Newark, New Jersey, USA
jweis@newark.rutgers.edu

Whale in New York Harbor

We are delighted that our estuary, the New York/New Jersey (NY/NJ) Harbor Estuary, has been designated as the newest "Hope Spot" by Mission Blue (Sylvia Earle's organization). While most previous Hope Spots are pristine regions with special animals, ours is an urban estuary that was terribly degraded but is making a remarkable recovery—clearly a reason for hope! During much of the 20th century, it was severely degraded by industry, unregulated discharge of garbage, sewage, and other pollutants into the water, and filling of marshes for development. Heavy industry and garbage dumps lined the waterfront. There was little public access; in any case, few people would have been interested in access to polluted, smelly waters.

As documented in the nomination by Judith Weis and the New York-New Jersey Harbor & Estuary Program, the trajectory of change is amazing and inspiring. The Clean Water Act required building sewage treatment plants, which ended (most of) the raw sewage going into the water. While rainstorms can overwhelm them and untreated sewage can be released, this is being reduced by constructing rain gardens, bioswales, green roofs, etc. to absorb rainwater. "By all rights, this region could have been considered an ecological write-off; instead, because of community concern, the NY/NJ Harbor Estuary is an incredible environmental comeback story that epitomizes a "Hope Spot," said Greg Remaud, NY/NJ Baykeeper.

Dissolved oxygen, critical for fish, is increasing. Contaminants in sediments are being reduced as cleaner sediments cover highly contaminated ones from decades ago. The most contaminated areas are Superfund sites, which will be dredged to remove the worst contamination. "Mission Blue's designation of the NY/NJ Harbor Estuary as a Hope Spot is an important and shining affirmation of positive improvements made in the harbor complex," said EPA Region 2 Water Director Javier Laureano. "It also gives us further resolve to affect more critical improvements to the estuary and water quality, which benefits people and the ecosystem."

There has been a great increase in the diversity of life. Fish communities, once dominated by small, pollution-tolerant killifish, now are increasing in diversity and include sturgeon, American eels, striped bass, and herring. Benthic communities are doing the same. Horseshoe crabs crawl up on beaches to mate and lay eggs. Birds have increased greatly in numbers and diversity. "When I founded Hackensack Riverkeeper back in 1997, I used to think that maybe, someday, we'd see an osprey or even a bald eagle over the river," recalls Captain Bill Sheehan. "Well, twenty-five years later—and just in the greater Meadowlands area alone—we counted 25 osprey pairs and five pairs of nesting eagles. And all of that was due to cleaner water and the return of menhaden and many other forage fish." Uninhabited islands are nesting grounds for egrets, herons, and ibis. Other birds, including terns, skimmers, plovers, and oystercatchers, breed on beaches.

Charismatic whales and dolphins have also returned; whale-watching trips leave from New York City, which would have seemed ridiculous a few decades ago. "The images we've seen lately, of whales and dolphins against the backdrop of New York City, truly have the power to inspire. Here in our densely populated region, home to millions, members of the public are eager for signs of hope that the life in our waters can rebound. And we've seen that they are willing to step up as activists for the protection of these waters" said Tracy Brown, President of Riverkeeper.

After centuries of filling marshes, in

Ecotour in New Jersey Meadowlands

the late 20th century people realized the importance and benefits they provide to marine life and humans. Filling marshes is now restricted but wetland loss continues, largely due to development and sea-level rise. Restoration is a major activity by the National Park Service, New York City Parks, NY Restoration Project, Army Corps of Engineers, and NJ Sports Exposition Authority, and partially compensates for the losses. Oysters filter and purify water and grow together forming a reef that supports many marine animals. Oysters were abundant until around 1900, when overharvest and sewage pollution caused populations to crash and dwindle to a few animals in the harbor. Now, the Billion Oyster Project in New York City and the NY/NJ Baykeeper in NJ are actively restoring oysters to our waters.

Garbage dumps in the NJ Meadowlands, Staten Island, and Brooklyn have been closed and some turned into parks. For example, the Fresh Kills Landfill in Staten Island was the largest in the world before closing in 2001. The land was engineered with layers of soil and infrastructure, and the area has become a park, with coastal meadows, wetlands, and woodlands that attract birds and other wildlife and provide numerous recreational activities for people. Public access has improved greatly as the environment has been cleaned up. Of NYC's 520 miles of shoreline, hundreds of miles are publicly accessible, including beaches, boardwalks, piers, esplanades, trails, lawns, and ballfields, offering activities such as biking, fishing, walking along the shoreline, swimming and paddling a boat, community events, educational programs, and enjoying views.

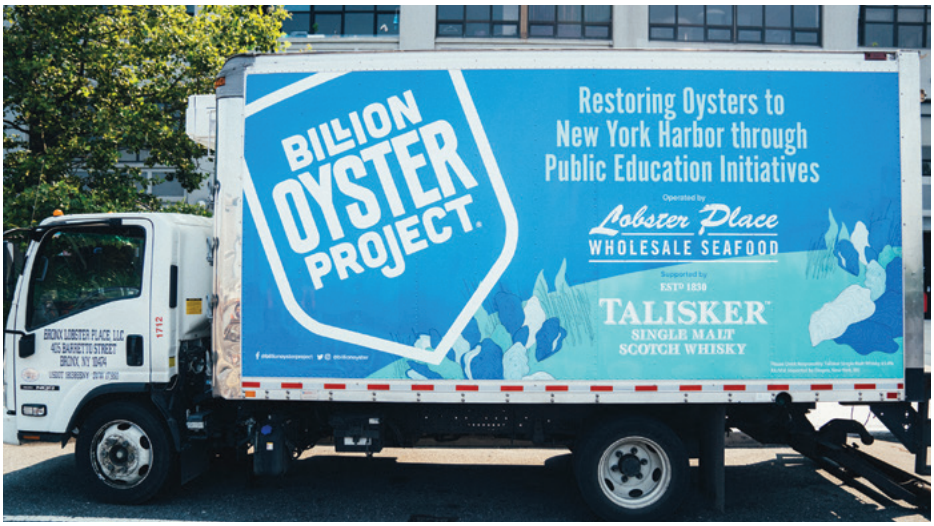
Parks and walkways have been built along New Jersey waterfronts as well. "It wasn't too long ago that no one wanted to go to the edge of the Hackensack and Passaic rivers, Newark and Raritan bays, or any of the waterways of New York City," recalls Hugh Carola of Hackensack Riverkeeper. "Nowadays people can't seem to get enough and they come back and again."

Terry Doss of NJ Sports Exposition Authority said "The NY-NJ Harbor Estuary Hope Spot is a beacon of hope for the millions of people that live, work, travel, and recreate in the region."

Challenges remain. There are still areas where access and transit to a waterfront open space are limited. They tend to be in less wealthy communities of color. Liberty State Park in NJ includes Caven Point, a natural area with sandy beach, coastal marsh, tide pools, mud flats, and upland maritime forest—critical habitat and nesting grounds for many brackish and upland species. It is under threat from a developer who wants to turn it into part of a golf course. Plastic pollution remains a problem. "The estuary has faced countless threats over time, including industrialization; pollution; biodiversity loss, and now faces its greatest challenge: climate change," said Cortney Koenig Worrall, President and CEO of the Waterfront Alliance. "Like the communities who depend on it, the NY/NJ Harbor Estuary has remained resilient in the face of these challenges. This critical ecosystem is a shared place of strength and hope for our region." We still have a lot of work to do but are delighted and proud that the work we have accomplished has been recognized and rewarded by our designation as a Hope Spot.

From Restaurants to Reefs: Millions of New Oysters are Finding a Home on Shucked Oyster Shells in New York Harbor

Charlotte Boesch, Billion Oyster Project, New York City, New York, USA
cboesch@billionoysterproject.org



Billion Oyster Project's Shell Collection Program truck. Photo: Jose Silva

Oysters were once a prevalent species in the New York City area, serving as a staple food source for Indigenous people. Post-colonization, population spikes increased demand for New York City oysters. From famous establishments like Delmonico's and Downing Oyster House, owned by Black oysterman Thomas Downing, to food carts that shucked them on the streets, oysters were incredibly popular. Oysters traveled further west with improvements like refrigerated rail cars and the invention of canning. Demand for the oyster was so high that the city became known as The Big Oyster.

Overharvesting, dredging, and industrialization decimated the oyster population. In 1927, the last oyster beds closed after numerous reports of cholera and other disease. It wasn't until water quality regulations like the Clean Water Act of 1972 that a more habitable environment for oysters to thrive was created. However, since established oyster reefs collapsed, the harbor lacked broodstock and substrate for oyster spat to settle. Oysters were functionally extinct.

Fortunately, oysters from other areas are still a popular food source among New York City diners. Discarded oyster shells are being collected, seeded with larvae, and returned to New York Harbor to repopulate the species. At Billion Oyster Project, we collect oyster shells from 70 restaurants in the city. The shells undergo a rigorous, six-month to year-long curing, or sterilization, process. Shells dry out in piles no higher than 3 feet, wiping out pathogens or disease that could potentially transfer to marine life in the harbor. Our organization seeds the shells with spat in large, refurbished tanks. We deploy the spat-on-shell loosely or contained in cages or bags. To date, we've restored 100 million oyster spat and deployed over 1 million pounds of oyster shell to the local ecosystem.

At Billion Oyster Project, we conduct our shell collection program via a third-party operator called The Lobster Place, a wholesale seafood company in the Bronx. Trucking in the city requires expertise that, as a nonprofit, wasn't practical for us to invest in. The Lobster Place has long-standing recognition with restaurants, which quells unease when restaurants are nervous about reliable pickup schedules. Their drivers also have established relationships with early morning porters and receivers, which assists with seamless and efficient pickups.

We supply restaurants with five-gallon buckets or 32- or 64-gallon tote containers to store shells. Typically, restaurants with small storage spaces like those in lower Manhattan use five-gallon buckets stored in walk-ins. Restaurants that have access to storage in loading docks or outdoor trash areas usually store shells in the tote containers.

The program recycles shells from 70 restaurants to date and diverts on average 7,000 pounds of shell a week from landfills. A combination of corporate, foundation, and private grants enables free pickup service for restaurants. In New York City, restaurants pay for waste collection by weight. Diverting shells from their typical waste stream can save restaurants a few thousand dollars a year.

Zero-waste initiatives are gaining popularity as more local governments are worried about maxing out landfill capacities, the increased cost of waste removal, and greenhouse gas emissions created by throwing away food waste. Shell recycling

initiatives should be considered. Both New York City[1] and New York State[2] have bills that require food waste separation for commercial establishments over a certain size. The City Council recently passed a mandated compost bill[3] for residents. Oyster shells are not always accepted by composters since they don't break down as typical food waste. Oyster shell recycling could be a part of these food waste reduction initiatives.

Shell recycling initiatives funded through zero-waste grants and partnerships or mandated through zero-waste legislation can create more sustainable restoration programs. Recycling shells in New York requires a six-month to one-year minimum curing process. Curing time may be over a year as it could take a few months to collect the needed amount of shell before it cures. To combat this, collection programs should be an ongoing initiative instead of project specific. This enables restoration practitioners to formulate projects based on need, rather than being restricted by shell availability.

There are many roadblocks to having ongoing collection programs, such as funding and lack of curing space for longer-term shell storage. To advance substrate availability, we need greater coordination between recycling programs, local governments, and zero-waste initiatives. As restaurants are being held to a higher zero-waste standard, diverting shells for habitat restoration should be considered.

A dump truck unloads about a month's worth of oyster shells at Billion Oyster Project's shell pile on Governors Island. These oyster shells were collected from 70 restaurants in New York City. Photo: Charlotte Boesch

Billion Oyster Project staff loads oyster setting tanks with cleaned oyster shells in Red Hook Shipping Terminals. Soon, harbor water and oyster larvae will be released in the tanks to create spat-on-shell. Photo: Steven DeWitt

References

1. https://www.nyc.gov/assets/dsny/site/services/food-scraps-and-yard-waste-page/commercial-requirements

2. https://www.dec.ny.gov/chemical/114499.html

3. https://www.nytimes.com/2023/06/08/nyregion/food-composting-nyc.html

Meet CERF's 2023–2025 Governing Board

We are pleased to present the CERF 2023–2025 Governing Board! Please join us in congratulating CERF's new President-elect, Secretary, Members-at-Large, and Student Member-at-Large. Thank you also to our continuing Board members, and our new Affiliate Society representatives.

2023–2025 GOVERNING BOARD

Linda Blum, President
University of Virginia
Charlottesville, VA, USA

Leila Hamdan, Past President
University of Southern Mississippi
Ocean Springs, MS, USA

Sharon Herzka, President-Elect
The University of Texas at Austin Marine Science Institute
Port Aransas, TX, USA
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Eugene, OR, USA

Erik Smith, Treasurer
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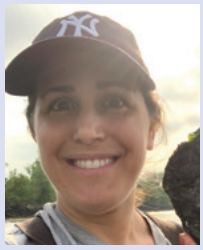
Treda Grayson, Member-at-Large (2021–2025)
US Environmental Protection Agency
Washington, DC, USA

Catherine Lovelock, International Member-at-Large (2021–2025)
University of Queensland
St. Lucia, Queensland, Australia



Allison Fitzgerald, Member-at-Large (2023–2027)
New Jersey City University
Jersey City, NJ, USA

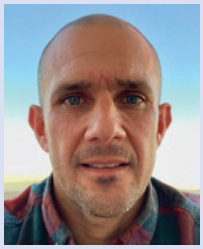
Benjamin Walther, Member-at-Large (2023–2027)
Texas A&M University – Corpus Christi
Corpus Christi, TX, USA

Sommer Starr, Student Member-at-Large (2023–2025)
Florida State University
Tallahassee, FL, USA

Affiliate Society Representatives

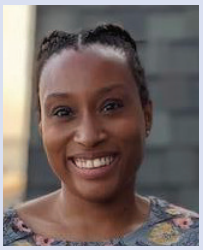
Jeff Clements
ACCESS Representative
Fisheries and Oceans Canada
Moncton, NB, Canada

Jessie Jarvis
AERS Representative
University of North Carolina Wilmington
Wilmington, NC, USA



Julio Lorda
CAERS Representative
Universidad Autónoma de Baja California
Ensenada, Mexico

Charlie Martin
GERS Representative
University of South Alabama and Dauphin Island Sea Lab
Dauphin Island, AL, USA



Danielle Perry
NEERS Representative
National Oceanic and Atmospheric Administration
Narragansett, RI, USA

Jason Stutes
PERS Representative
GeoEngineers
Redmond, WA, USA

Amanda Kahn
SEERS Representative
South Florida Water Management District
West Palm Beach, FL, USA

UPCOMING EVENTS

2023 Restore America's Estuaries Living Shorelines Tech Transfer Workshop

23–25 October 2023
Galveston, Texas

https://estuaries.org/living-shorelines/

CERF 2023 Conference

12–16 November 2023
Portland, Oregon

https://conference.cerf.science/

Call for 2023–2025 Committee Volunteers

Calling all CERFers! The functioning of CERF and CERF's future directions depend upon active, engaged members serving on federation committees. Our volunteers are the lifeblood of CERF. Volunteering not only serves CERF but is also personally rewarding to members at all career stages and professional pathways. Volunteering benefits individuals by providing opportunities to identify personal strengths, refine leadership skills, build professional connections, and gain important professional skills and experiences.

Don't miss this opportunity and the chance to keep CERF responsive to member needs.

CERF is accepting applications though 30 October 2023. Committee service will begin at the 14 November 2023 Business Meeting during the Biennial Conference in Portland, Oregon. Sign up to volunteer at https://bit.ly/CERFvolunteer.

There are volunteer openings on all CERF committees including:

- **2025 Biennial Conference:** develops the theme for the next biennial conference, and the scientific and attendee experience programs.
- **Career Development and Education:** determines ways that CERF can assist members at all career stages, disciplines, and affiliations to achieve their career goals by developing programming for the next biennium to meet those needs.
- **Development and Corporate Sponsorship:** identifies and secures sources of revenue to ensure long-term sustainability CERF that supports CERF's mission and members.
- **Finance and Investment:** provides oversight of the federation's financial status and makes recommendations to the Governing Board about CERF's investment asset allocations and financing activities.
- **Inclusive Culture Council:** oversees all diversity, equity, inclusion, justice, and accessibility activities of CERF to ensure coordination and constant improvement.
- **International:** works to engage members and non-members who are based outside of North America.
- **Nominations and Leadership Development:** develops mechanisms to identify and cultivate current and future CERF leaders and recruits and recommends nominees for the next board election.
- **Policy and Advocacy:** develops activities to meet CERF's mission of translating science to policy and management.
- **Publications:** works to coordinate all CERF publications and to improve and promote our publications to maximize their impact.
- **Webinar:** identifies the theme for the next biennium's webinar series, recruits speakers, and promotes and moderates the webinars.

Meet CERF's C-COAST Program Coordinator

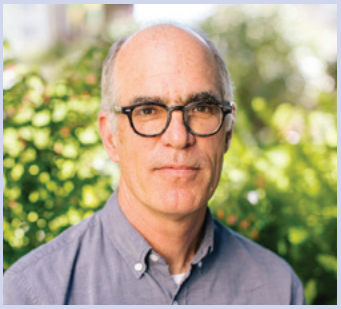
Amara (Huddleston) Foster has joined CERF as the new Program Coordinator for C-COAST (Changing the Culture of our Occupations to Achieve Systemic Transformation). Previously, Amara supported the Educational Partnership Program with Minority Serving Institutions Undergraduate Scholarship Program in the National Oceanic and Atmospheric Administration (NOAA) Office of Education (OED). Before joining OED, she was a 2019 Sea Grant Knauss Fellow where she served as the Communications Specialist for the Modeling, Analysis, Predictions, and Projections Program in the NOAA Research Climate Program Office. Amara has an MS in evolution, ecology, and organismal biology from The Ohio State University and a BS in biology with a specialization in marine biology from Bowling Green State University. When not working, Amara enjoys cooking, hiking, gardening, doing yoga, and spending time with her husband, dog, and cat.

C-COAST aims to recruit and retain the next generation of CERF scientists and managers while dismantling inequities at the root of low diversity, equity, and inclusion in our field by empowering our members and leaders to become change agents. C-COAST will build on CERF's successful Rising TIDES (Toward an Inclusive, Diverse, and Enriched Society) program[1] for students from

marginalized backgrounds, expanding it to a 16-month program and including funding to support students to attend a CERF conference, Affiliate Society meeting, and Restore America's Estuaries Summit. CERF has also developed an 18-month Inclusive Leadership Program[2] to provide training and mentorship to current and future CERF leaders to effect culture change. As Program Coordinator, Foster provides support for the day-to-day activities associated with all aspects of C-COAST.

1. https://conference.cerf.science/rising-tides-program 2. https://www.cerf.science/inclusive-leadership-program-ilp-

Q&A with the CERF 2023 Conference Co-Chairs



John Callaway

John Rybczyk

We have been so fortunate to have CERF 2023 led by the dynamic duo of John Callaway (Professor, University of San Francisco) and John Rybczyk (Professor, Western Washington University). With CERF 2023 fast approaching, we asked them some questions about the conference, and here are their responses:

Q: What are you most looking forward to at the conference?
A: Being back together in person for the first time since 2019! The 2021 virtual conference was outstanding, but nothing beats the chance to connect with colleagues at CERF, plus the chance to meet new colleagues and make new friends.

Q: What has been your favorite part of the planning process?
A: The most important thing a conference chair does is to recruit the volunteers for our conference planning committee. There are over 50 CERFers, on various conference committees, working to ensure that the conference is a success and open and welcoming to everyone involved. By far, our favorite part of the planning process has been getting to know and work with this incredible group of devoted volunteers.

Q: What advice would you offer to first-time attendees?
A: Remember that there is MUCH more to a conference than the oral presentations. Take advantage of the many avenues for engaging at the conference, including the student events, the mentorship program, workshops, field trips, and the early career network event, just to name a few. Also, everyone always says that conferences are great for networking. That is absolutely true, but not everyone feels comfortable "networking." So, our advice is, go to the poster sessions! We love the poster sessions! This is a great, easy, built-in way to network and talk science without the time limits and rushing around embodied in the oral sessions. Plus, there's food and drink!

Q: Why, in your opinion, is this conference so important for the coastal and estuarine science and management community?
A: Although everyone obviously knows that estuaries are the most important and fascinating ecosystems on the planet, the fact remains that estuarine science and management is a sub-discipline within a sub-discipline and sometimes it doesn't seem like there are enough of us around to do all the important work that needs to be done. CERF is the most effective international meeting to bring together our band of scientists and managers so that we can all learn from each other and improve the conditions of our coasts and estuaries, and it's fun and welcoming!

Notice of 2023 Annual Business Meeting

CERF will hold its Annual Membership & Business Meeting on Tuesday, 14 November 2023 from 4:30 – 5:30 PM PST. The meeting will be held in Portland Ballroom 253-254, 257-258 at the Oregon Convention Center. All members are invited and encouraged to attend.

2023 CERF Achievement Awards

Join us in celebrating the 2023 CERF Award Recipients! The recipients of these awards embody the mission of CERF to advance understanding and wise stewardship of estuarine and coastal ecosystems worldwide by promoting research; supporting the education of scientists, decision-makers, and the public; and facilitating communication among these groups.

The federation thanks our Scientific Awards Committee chair, Ruth Carmichael, as well as all the subcommittee chairs and committee members, for their tireless efforts to recruit and select the outstanding recipients of this year's awards. CERF also thanks the many nominators and letter writers who supported the exceptional nominations received this year.

Award Recipients

Odum Lifetime Achievement Award

The Odum Award is named for the three outstanding ecological scientists in the Odum family: Dr. Howard T. Odum; Dr. Eugene P. Odum; and Dr. William E. Odum, III. It honors an individual with a record of sustained accomplishments who has made important contributions to our understanding of estuaries and coastal ecosystems.

***R. Eugene Turner**, Boyd Professor, Louisiana State University*

The Odum Award Committee unanimously selected Dr. R. Eugene Turner for the 2023 award. This was not an easy decision. There were several nominations this year and all would be worthy recipients of the Odum Award.

What placed Turner first among the committee members was his embodiment of what CERF stands for. He has consistently throughout his career focused his attention on documenting and understanding processes in marsh, estuarine, and coastal ecosystems. As his nomination letter says, he is "a guru in estuarine, coastal, and wetland sciences." Over a 50-year period he "developed and sustained an extremely active and eminent record in research, teaching, and service." To support his eminent record, he published over 250 articles, being first author on 110. Particularly remarkable is that 40 of his papers were published in CERF's journal Estuaries and Coast or its predecessor Estuaries, with 11 cited more than 100 times. Between 2005 and 2009, his work was also among the top-50 most cited articles in Marine Pollution Bulletin.

Turner also has a distinguished record of professional service, is still committed to educating students, and is working with Louisiana Indigenous communities. As one of his supporting letters says, "He has been a vocal advocate for the importance of linked ecosystems in estuarine research and conservation, and his leadership and vision have helped to shape the direction of the field." Another said, "His dedication to the [student] education is impressive and my students admire his vast knowledge, love him, and want to be like him."

Cronin Early Achievement Award

This award recognizes the significant accomplishments of an estuarine scientist who is in the early stages of their career development. The recipient will have shown great promise with work carried out during the first six years past the PhD.

***Michael Sievers**, ARC DECRA Fellow, Griffith University*

The Cronin Award Committee is thrilled to announce that Dr. Michael Sievers is the recipient of the 2023 CERF Cronin Award. Sievers is currently an Australian Research Council Discovery Early Career Researcher Award Fellow at the Australian Rivers Institute within Griffith University. In this highly prestigious fellowship, Sievers' research aims to improve the outcomes of coastal ecosystem restoration efforts by shifting focus towards the animals, both in terms of enhanced monitoring capabilities and how we can harness and manipulate positive species interactions. Sievers graduated with a PhD from the University of Melbourne in December 2018. He joined Griffith University shortly thereafter as a

Research Fellow within the newly formed Global Wetlands Project. Sievers is a rising star in estuary conservation and ecology, demonstrating acumen in both research and mentorship. His research addresses the value of coastal wetlands to wildlife and the assessment of coastal and estuarine health. He has published on these topics widely and in high-impact journals such as Trends in Ecology and Evolution, Bioscience, Ecology Letters, and Biological Conservation. This work is expected to have a direct impact on conservation. For example, his research increased the number of marine megafauna with known coastal habitat associations by 59% above current IUCN estimates, thereby identifying an overlooked element of coastal habitat conservation. Notably, these findings were included in the 2020 United Nations Seagrass Report.

Sievers has also demonstrated the ability to "think outside the box" by deploying novel experimental designs to study stressors in coastal wetlands and by incorporating cutting-edge technology such as AI into his research. Further, a quick review of his recent papers reveals that he is adept at collaborating with a diverse array of co-authors on a wide span of research topics relevant to estuarine science, from coastal wetland assessment to blue carbon to invasive species. Finally, Sievers has been recognized by both his mentees and mentors as a giving and dedicated mentor to the students he is working with. They highlighted his positive attitude, professionalism, and collegiality.

In summary, Sievers truly represents the spirit of the Cronin Award. In his early career, he has staked out a path based on high-quality, impactful research, broad scientific collaborations, and generous mentorship of the next generation of estuarine scientists.

William A. Niering Outstanding Educator Award

To recognize the central role that education plays in achieving the objectives of our society, the federation's Governing Board established an award named for a leader in estuarine education, Dr. William A. Niering. The award is for an individual who has played a particularly important role in education at any level—from primary school to the graduate level, inside or out of the classroom, or in the education of the general public through outreach activities.

***Pedro Morais**, Training Coordinato, S2AQUA - Collaborative Laboratory, Association for a Sustainable and Smart Aquaculture*

The Niering Outstanding Educator Committee has selected Dr. Pedro Morais as the recipient of the 2023 award for his active leadership role as a mentor, collaborator, and teacher. Morais inspires interest in estuarine science and facilitates the success of other scientists, including collaborators and aspiring researchers. He stands out as an effective mentor to emerging researchers through his generosity with his time, ideas, and positive encouragement and support, contributing to the productive careers of numerous researchers.

In addition, Morais' role in public education, citizen science, and in educating K-12 groups stand out as exemplary. Over the last decade, he has impacted numerous K-12 students through many avenues, including his leading role in the Biodiversity section of Frontiers for Young Minds and collaborating in the development and publication of the Frontiers for Young Minds special issue on the San Francisco Estuary and Delta, targeting middle and high school students. This selection of articles has garnered over 430,000 views and served to educate numerous middle school children in science writing, review, and publication.

Morais has a long history of public outreach, with over 80 radio, newspaper, and magazine articles featuring his work or that he has authored over the last 15 years. Morais is awarded the William A. Niering Outstanding Educator Award due to this record of mentorship, outreach, and education.

Pritchard Outstanding Physical Oceanography Paper Award

This award was established to honor Dr. Donald W. Pritchard, whose insightful research on the physical dynamics of coastal systems set the stage for much of the research in physical oceanography that is being conducted today. The Pritchard Award recognizes the author(s) of the best physical oceanography paper published in Estuaries and Coasts *within the two-year interval between CERF conferences.*

***Authors: Sohaib Alahmed**, Graduate Civil Engineer, Halff Engineering and Architecture Firm; **Lauren Ross**, Associate Professor, University of Maine; **Sean M.C. Smith**, Associate Professor, University of Maine*

***Paper:** Coastal Hydrodynamics and Timescales in Meso-Macrotidal Estuaries in the Gulf of Maine: a Model Study,* Estuaries and Coasts *45(7):1888–1908*

Sohaib Alahmed

Lauren Ross

Sean M.C. Smith

The Pritchard Award Committee is excited to select "Coastal Hydrodynamics and Timescales in Meso-Macrotidal Estuaries in the Gulf of Maine: a Model Study," authored by Sohaib Alahmed, Lauren Ross, and Sean M.C. Smith as the 2023 CERF Pritchard Award recipient. Alahmed, et al. use a numerical model of three connected estuaries to study the influence of variable freshwater input, tidal dynamics, and morphometry on transport timescales. They employ a Lagrangian analysis of conservative, neutrally buoyant particles tracked over a month to evaluate residence time and connectivity. Residual flow and eddy length scales are quantified using the horizontal streamlines of the residual flow field. In the estuary where the residual eddy length is unconstrainted by local morphometry, transport timescales are driven by residual flows and therefore freshwater input and the density gradient. In the more complex estuaries, the residual eddy length is suppressed, the tidal excursion is enhanced, and transport timescales are driven by tidal range. They generalize their findings by outlining three transport regimes based on the ratio of estuary length to tidal excursion, aspect ratio, densimetric tidal Froude number, and residence time. Estuaries in the tidal transport regime have long tidal excursions, are narrow, and have a residence time less than one tidal cycle. Residual transport is likely in wide systems with short tidal excursions and density-driven flow, resulting in a residence time greater than a tidal cycle. Estuaries that fall into the third category of mixed tidal and residual transport have moderate tides, complex geometry, variable density gradients, and spatially variably residence times. The results of Alahmed, et al., provide valuable insight to stakeholders and resource managers grappling with coastal pollution in morphometrically complex coastal areas. Additionally, by generalizing their results and thoughtfully placing them within existing literature, they clearly communicate useful first-order metrics to coastal managers that do not require a resource-intensive numerical model.

You can read the full text of the article at https://rdcu.be/dhUQC.

Coastal Stewardship Award (organization)

CERF established the Coastal Stewardship Award to honor notable achievements in promoting the wise management of estuarine and coastal systems. This award recognizes specific projects, programs, and organizations for their exemplary stewardship activities, including success in management, policy, restoration, and conservation efforts. CERF appreciates the multiple scales at which impacts may be achieved; accordingly, the Coastal Stewardship Awards are occasional awards and may represent a hierarchy of recognition at CERF biennial conferences.

***The Nature Conservancy**, Alabama Chapter*

The Coastal Stewardship Committee is happy to present the Coastal Stewardship Award to the Alabama Chapter of The Nature Conservancy (TNC-AL). The projects being implemented by TNC-AL in the northern Gulf Coast area of the United States demonstrate strong commitment to stewardship, engagement of local stakeholders, and innovative and adaptive management, and will have long lasting benefits to the coastal ecosystem and community. As the area struggled to recover from the impacts of the BP oil spill, TNC-AL leveraged funds to construct breakwater reefs to improve and protect habitats, provide jobs at a critical time, and provide fisheries enhancement for oysters and finfish. TNC-AL employed innovative adaptive management strategies by repurposing reef material from aging projects for other habitat enhancement projects. Since then, they have implemented many more projects and continue to receive funding and support from local, state, and federal partners. They work closely with governments and academics to build partnerships to identify, design, build, and monitor projects and to share lessons learned throughout the process. Their projects are award-winning due to constant utilization of innovative engineering, enthusiastic collaboration with a wide realm of partners, and untiring cooperation with grassroots organizations and local volunteers leading to successful restoration projects that will have long-lasting impacts on the Gulf Coast's ecosystems, communities and economy.

Margaret A. Davidson Stewardship Achievement Award

This award was established to honor Margaret A. Davidson's distinguished career in coastal resource management and her support of the application of science to the wise stewardship of estuaries and coasts. The Davidson award recognizes an individual who demonstrates extraordinary leadership, service, innovation, and commitment to the management of estuarine and coastal systems. This award recognizes those who have worked in the estuarine and coastal arena and excelled in management and policy.

***David Eggleston**, University and Alumni Distinguished Professor, North Carolina State University; Director, NCSU Center for Marine Science and Technology*

The Davidson Stewardship Achievement Award Committee is excited to announce the selection of Dr. David B. Eggleston for this year's award. Eggleston is the consummate steward, focusing much of his professional career on the sustainable management of estuarine and coastal resources. As a member of the faculty at North Carolina State University since 1993, Eggleston built research programs focusing on the biology and fisheries ecology of the blue crab, which is North Carolina's most important commercial fishery, and oyster restoration and sustainable oyster fisheries management. The rich and long-lasting impacts of these research programs inform state and national level resource management and restoration decisions. Eggleston is a true steward of estuaries across the world and his expertise and service are sought after to address coastal

resource stewardship concerns, including valuation of coastal habitats for exploited species with a focus on the Baltic; critical evaluation and management of fisheries stock enhancement in Japan and North Carolina; understanding the ecological effects of invasive beaver on stream and river ecosystems in Tierra del Fuego; and characterization and management of nearshore fish communities from Ghana, West Africa, the Caribbean, and the Gulf of Mexico. In his capacity as the President of the Southern Association of Marine Labs and a member of the Executive Advisory Board and incoming President of the National Association of Marine Labs, which represents over 100 marine labs in the US and advocates for specific policies and funding at the federal level, Eggleston interacts directly with key Senate and House staffers, as well as science and technology leads from the White House and other federal executive agencies. What comes through in his support letters is Eggleston's guiding philosophy and remarkable record in promoting stewardship of estuarine and coastal systems. He leads by example, promotes diversity across a broad range of programs and partnerships, and excels at bringing people together to tackle difficult issues. As stated in one letter of support, "Dave's work is rooted in conserving habitats while also supporting sustainable fishing practices. He approaches every research question with a focus on the people who will be directly impacted by the results, and has consistently emphasized the importance of involving end-users, stakeholders, and local community members throughout the scientific process.... His inclusion of historically excluded groups has resulted in many successful management outcomes that have critical support from the local community. He immerses himself in these communities to build trust and foster productive relationships and works collaboratively with them to build resilience." For these reasons, we award David B. Eggleston the Margaret A. Davidson Stewardship Achievement Award.

Diversity, Equity, Inclusion, and Justice Champion Award

This award recognizes the significant contributions of an individual who has worked for greater diversity, equity, inclusion, and justice in estuarine and coastal science, management, education, and/or stewardship. It honors a person who demonstrates exceptional long-term or emerging leadership and commitment to positive change.

***Tiara Moore**, Chief Executive Officer, Black in Marine Science*

The Committee is delighted to announce Dr. Tiara Moore as the recipient of the prestigious CERF DEIJ Champion Award. With a PhD in Biology from the Ecology and Evolutionary Biology department at UCLA, Moore has emerged as a trailblazer in the field of marine science and a champion of diversity, equity, inclusion, and justice (DEIJ).

As the CEO and founder of Black in Marine Science, she has created a platform that celebrates Black marine scientists, raises environmental awareness, and inspires the next generation of scientific thought leaders. Through this initiative, she has shed light on the need for greater inclusivity in marine science and highlighted the intersectional nature of marine conservation.

Moore also founded A WOC Space, an organization dedicated to transforming the workplace culture for women of color. By establishing a supportive community and offering specialized training, she provides an affinity space for women of color in institutions where their representation and institutional support may be lacking. A WOC Space also conducts workshops for institutions, particularly marine science labs, to facilitate discussions on diversity and inclusion and personalize these concepts to foster a more inclusive environment.

Moore's leadership in DEIJ is evident through her advocacy work, involvement in professional organizations, facilitation of DEIJ workshops, mentorship, op-eds, presentations on intersectional environmentalism, numerous funded grants for DEIJ initiatives, and engagement with social media. She has effectively utilized social media platforms to connect with a broader audience and foster meaningful discussions on DEIJ topics. Her multifaceted approach and commitment to amplifying underrepresented voices have positioned her as the strongest emerging leader in promoting inclusion and justice within the coastal sciences community.

We applaud Dr. Tiara Moore for her outstanding contributions and dedication to DEIJ in the marine science field. Her exemplary work serves as an inspiration to researchers and professionals alike, paving the way for a more equitable and diverse future in coastal sciences.

Distinguished Service Award

The Distinguished Service Award recipient is selected by the CERF President for their exceptional volunteer service to the Federation.

***Treda Grayson**, Supervisory Life Scientist, US Environmental Protection Agency*

Dr. Treda Smith Grayson is the recipient of the 2023 CERF Distinguished service award. Grayson first attended a CERF—then ERF—meeting in 1997 and has maintained both a consistent and truly distinguished record of service to CERF and the Affiliate Societies for the past 16 years. For over two decades, she has also contributed her expertise, knowledge, and commitment to science, scientists, and the communities we serve through her service with the US Environmental Protection Agency (EPA).

Grayson began her contributions to CERF as Treasurer for the Atlantic Estuarine Research Society (AERS) in 2007, while she was still a graduate student. She was a new member of AERS as she considered taking on one of the most consequential and challenging roles for any professional society, but recognized a need that had to be met with skill and seriousness. From that point, she continued to advance AERS's mission as Membership Committee chair, chair of numerous Program Committees, and ultimately AERS President. Grayson joined the CERF Governing Board as AERS president in 2014 and has remained deeply involved and invested in the work of the federation for nearly a decade. She is a founding chair of CERF's Broadening Participation Council (now the Inclusive Culture Council) and continues as co-chair. In that role, she has had a seismic impact on CERF as a leader in recognizing needs and means for the federation to be inclusive, welcoming, diverse, and equitable. In this work, she draws inspiration from her own experiences and brings deep professional expertise gained from the impactful work she contributes at EPA as a leader and Supervisory Life Scientist. At EPA, she contributes at the front line working towards environmental justice, safe drinking water, and coastal management practices that benefit at-risk communities. Grayson is currently a Member-at-Large on the CERF Governing Board, and co-chair of the CERF 2023 Scientific Program Committee. She has contributed her energy and expertise to every CERF conference committee going back to 2017 and has been a pivotal contributor to four NSF-funded programs lead by CERF aimed at inclusion, lowering barriers to coastal science, and filling the leadership bench for the future.

Grayson is one who listens deeply, gathers, and synthesizes evidence, and acts from a place of understanding in all of the work she does. On the CERF Governing Board, she is a consistent voice of reason, bringing logic, fairness, and experience to the work of the Federation. She is also a source of deep care and empathy and can ignite kindness and wellness in others. She shares, unselfishly, her reflections on her journey as a scientist, and in the process, she makes space for others to be as they are and reach for achievement.

Keynote Speakers

Resilience Initiative for Coastal Education (RICE)

The keynote will discuss the power of community partnerships and engagement using citizen science and other innovative data visualization tools to mitigate climate change, sea level rise, and aquatic debris risks in traditionally underserved communities in the South Atlantic Bight region of the US.

About the Presenters

Albert George

Albert George had the honor of serving as the first Director of Conservation for the South Carolina Aquarium and is also the co-founder of the Amazon Reforestation Project. Prior appointments include Director of Education for the Georgia Aquarium, Inc., Strategy Management Consultant for Booz Allen Hamilton, and Research Associate for the Center for Marine Environmental Science and Biotechnology.

George completed his BS in Marine Biology and Chemistry from Savannah State University and the PREP program at Yale University concentrating in marine physiology cellular molecular genetics. He then completed a program of study from the Harvard University John F. Kennedy School of Government/MIT in addition to completing a Master of Science from the Georgia Institute of Technology. He is also the founder of the Georgia Green Economy Summit and the Resilience Initiative Coastal Education (RICE) which has worked to promote green economy growth and resilience strategic planning in the state of Georgia and the Lowcountry of South Carolina.

Keynote Speakers *continued*

John Carr

John W. Carr Jr. is a native of Charleston, South Carolina, and a long-time member of the Maryville-Ashleyville Neighborhood Association.

He is the heir of an ancestral property at 1039 Main Street in Ashleyville, located in the most historic part of Charleston. This area was previously known as the Township of Maryville, an independently governed township widely known as "A Model of Black Self Government." This totally African American-owned township, the oldest in South Carolina, was chartered in 1886 and incorporated by the South Carolina General Assembly in 1888. This township grew, developed, and thrived as a town until 1 May 1936, when its charter was revoked. Carr's grandfather, Thomas Tobias Carr, Sr., was the last mayor of the Township of Maryville.

Carr is honored to partner with the Marshland Restoration Project by providing his property to the volunteers of the South Carolina Department of Natural Resources and the South Carolina Aquarium so they can easily access the marshland, which is located in Ashleyville between his historic home and the historic 1680 Charles Town Landing Settlement.

In his cultural affiliation with The United Sabaean Nation Worldwide, Inc., he practices animism and ancestral origin. Therefore, he has a huge appreciation for the work being done in this project in restoring and preserving natural nature. Carr is a retired Air Force Reservist and currently a Longshoreman with International Longshoremen's Association Local 1422. He is married to Wiya Boynton-Carr, and they are enjoying raising his 17-year-old son John Wesley Carr, IV.

Workshop Spotlight: Fostering Inclusive Fieldwork Experiences

Join us for a two-hour panel and breakout discussion covering best practices for fostering inclusive and safe field experiences among researchers and students of all identities. Topics will include field safety considerations, physical and financial access to field environments, accessible field equipment and attire, fostering an open and safe culture of dialog about concerns in the field, and potential steps for furthering inclusivity in your own work.

To enrich our breakout discussions, attendees are asked to come prepared with a few examples of positive fieldwork experiences and/or successful strategies for enhancing inclusive fieldwork. Following the workshop, the hosts will compile a resources document including main takeaways from panelists and breakout discussions to be shared with all participants.

1. https://www.anjaliboyd.com/
2. https://www.trevyntoone.com/

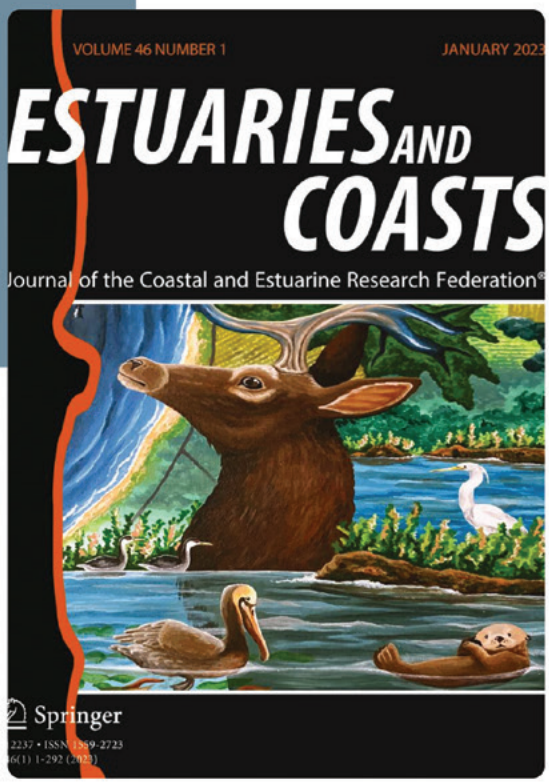
Meet our panelists:

Anjali D. Boyd[1] (she/her) is a marine ecologist, educator, entrepreneur, and elected official. At Duke University, she is a Marine Science and Conservation Ph.D. Candidate in the Nicholas School of the Environment. Her research focuses on developing more efficient and cost-effective restoration and management practices to restore and conserve vulnerable marine ecosystems in both temperate and tropical environments and in a variety of marine ecosystems (e.g., seagrass, salt marshes, mangroves, and coral reefs). Through her research endeavors, Boyd aspires to help bridge the gap between community ecology, restoration ecology, and coastal resource economics and management. As a field ecologist, she has developed a suite of best practices to create a more inclusive space for herself and her students; two of her golden rules for field work is to never do it alone and to always bring a satellite GPS/phone in case of emergencies.

Trevyn Toone[2] (he/they) is a postdoctoral researcher at North Carolina State University. Toone has worked in a variety of coastal ecosystems over the last eight years including seagrass beds, salt marshes, and shellfish reefs, primarily in North Carolina and New Zealand. When it comes to fieldwork inclusivity, his biggest recommendation is to act proactively rather than reactively by talking through potential risks and safety measures with your team before they are needed.

ESTUARIES AND COASTS

Submit your CERF 2023 paper



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Co-Editors-in-Chief:
- Linda Deegan - ldeegan@woodwellclimate.org
- Paul Montagna - paul.montagna@tamucc.edu

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- Ken Heck - kheck@disl.org

www.springer.com/journal/12237

Schedule-at-a-Glance

12 Nov. | Sunday

Various	Field Trips
Various	Workshops
1:00 PM-6:00 PM PT	Student Worker Orientation and Training
4:00 PM-5:30 PM PT	CERF 2023 VIP Reception (by Invitation)
5:00 PM-5:45 PM PT	First Timer Orientation
6:00 PM-8:00 PM PT	Opening Awards Ceremony and Keynote Address: Resilience Initiative for Coastal Education (RICE)
8:00 PM-10:00 PM PT	Silent Auctions Open
8:00 PM-10:00 PM PT	President's Welcome Reception

13 Nov. | Monday

6:15 AM-7:15 AM PT	CERFers on the Run
6:30 AM-8:00 AM PT	Mentorship Program Breakfast (By Invitation)
8:00 AM-9:30 AM PT	Early Morning Sessions (Session 1)
9:30 AM-10:00 AM PT	Break
10:00 AM-11:30 AM PT	Late Morning Sessions (Session 2)
11:30 AM-1:00 PM PT	Lunch on Your Own
11:45 AM-1:00 PM PT	"Reasons for Hope" Town Hall
1:00 PM-2:30 PM PT	Early Afternoon Sessions (Session 3)
2:30 PM-3:00 PM PT	Break
3:00 PM-4:30 PM PT Center of the World	Plenary: Coastal and Estuary Consrvation at the
4:30 PM-7:00 PM PT	Poster Session
7:00 pm-9:00 PM PT	Early Career Networking Event
9:00 PM-midnight PT	Student Night on the Town

14 Nov. | Tuesday

6:15 AM-7:15 AM PT	CERFers on the Run
7:00 AM-8:00 AM PT	President's Breakfast (by Invitation)
8:00 AM-9:30 AM PT	Early Morning Sessions (Session 4)
9:30 AM-10:00 AM PT	Break
10:00 AM-11:30 AM PT	Late Morning Sesions (Session 5)
11:30 AM-1:00 PM PT	Lunch on Your Own
11:30 AM-1:00 PM PT	Panel: Working Across Discipline and Difference to Address Complex Coastal Issues
1:00 PM-2:30 PM PT	Early Afternoon Sessions (Session 6)

14 Nov. | Tuesday *continued*

2:30 PM-3:00 PM PT	Break
3:00 PM-4:30 PM PT	Late Afternoon Sessions (Session 7)
4:30 PM-5:30 PM PT	Annual CERF Business Meeting
5:30 PM-6:30 PM PT	Affiliate Society Meetings
7:00 PM-10:00 PM PT	Social Event (Ticketed)

15 Nov. | Wednesday

6:15 AM-7:15 AM PT	CERFers on the Run
7:00 AM-8:00 AM PT	*Coastal and Estuarine Science News* Editorial Board Meeting (by Invitation)
8:00 AM-9:30 AM PT	Early Morning Sessions (Session 8)
9:30 AM-10:00 AM PT	Break
10:00 AM-11:30 AM PT	Late Morning Sessions (Session 9)
11:30 AM-1:00 PM PT	Lunch on Your Own
11:30 AM-1:00 PM PT	*Estuaries and Coasts* Editorial Board Meeting (by Invitation)
1:00 PM-2:30 PM PT	Early Afternoon Session (Session 10)
2:30 PM-3:00 PM PT	Break
3:00 PM- 4:30 PM PT	Plenary: The Role of Land Use Planning an Design: Lessons Learned and Not Learned to Address Natural Hazards Risk Reduction, Disaster Recovery, and Climate Change Adaptation
4:30 PM-7:00 PM PT	Poster Session
6:00 PM	Silent Auction Closes

16 Nov. | Thursday

6:15 AM-7:15 AM PT	CERFers on the Run
7:00 AM-8:00 AM PT	CERF 2025 Committee Breakfast (by Invitation)
8:00 AM-9:30 AM PT	Early Morning Sessions (Session 11)
9:30 AM-10:00 AM PT	Break
10:00 AM-11:30 AM PT	Late Morning Sessions (Session 12)
11:30 AM-1:00 PM PT	Lunch on Your Own
1:00 PM-2:30 PM PT	Early Afternoon Session (Session 13)
2:30 PM-3:00 PM PT	Break
3:00 PM-4:30 PM PT	Late Afternoon Sessions (Session 14)
4:30 PM-5:00 PM PT	CERF 2023 Committee Reception (by Invitation)
5:30 PM-8:30 PM PT	Close Out Party and Student Awards Presentation

CERF 2023 Conference Committees

CERF extends its deepest gratitude to the volunteers who have made CERF 2023 possible. Thank you!

Conference Co-Chairs

John Callaway, University of San Francisco
John Rybczyk, Western Washington University

Attendee Experience Committee Co-Chairs

Chanda Littles, US Army Corps of Engineers
Johnny Quispe, The Nature Conservancy
Theresa Talley, California Sea Grant

Ambassadors Program
Shelley Katsuki, Virginia Institute of Marine Science
Ashley Smyth, University of Florida

Family Friendliness
Allison Fitzgerald, New Jersey City University

Field Trips
Tom Josephson, Columbia River Estuary Study Taskforce

Mentoring Program
Allison Holevoet, University of the Virgin Islands
Geno Olmi, National Oceanic and Atmospheric Administration

Silent Auction
Beth Darrow, Bald Head Island Conservancy

Social Event
Alexandra Tossit, Portland State University
Lisa Cox, Oregon Department of Environmental Quality

Social Media
Sara Grady, North and South Rivers Watershed Association
Allison Holevoet, University of the Virgin Islands

Student Career Networking Event
Ashley Bulseco, Woods Hole Marine Biological Laboratory
Geoffrey Cook, University of Central Florida
Serina Wyttingham, Virginia Institute of Marine Science

Student "On the Town" Night
Anita Arenas, California State University Long Beach

Student and Early Career Participation
Helen Cheng, Northeastern University
Brian Donnelly, Northeastern University

Wellness Group
Jim Hagy, US Environmental Protection Agency

Inclusive Culture Committee Co-Chairs

Kristy Lewis, University of Central Florida
Jenni Schmitt, South Slough National Estuarine Research Reserve

Scientific Program Committee Co-Chairs

Treda Grayson, US Environmental Protection Agency
Drew Talley, University of San Diego
Christine Whitcraft, California State University Long Beach

Cultural Heritage/Coastal Humanities
Matthew Bethel, Louisiana Sea Grant
Guillermo Giannico, Oregon State University
Samantha Chisholm Hatfield, Oregon State University

Design Competition
Jori Ann Erdman, James Madison University
Tiffany Troxler, Florida International University

Education
Michelle Woods, US Environmental Protection Agency
Serina Wyttingham, Virginia Institute of Marine Science
Erin Peck, University of Delaware

Oral Sessions
Amy Borde, Pacific Northwest National Laboratory
Katrina Poppe, Western Washington University
Kathryn Sobocinski, Western Washington University

Plenary Sessions
Wally Fulweiler, Boston University
Robert Twilley, Louisiana State University
Elliott White, Jr., Stanford University

Poster Sessions
Pedro Morais, University of Algarve
Carolyn Weaver, Millersville University

Student Judging
Zack Darnell, University of Southern Mississippi
Kelly Darnell, University of Southern Mississippi

Workshops
Kim de Mutsert, University of Southern Mississippi

CERF Conference Staff
Susan Park, Executive Director
Todd Fake, Database Manager
Megan Miller, Event Director

Estuaries and Coasts Acknowledgements of Outstanding Associate Editors and Reviewers

With each biennial conference, the editors of *Estuaries and Coasts* acknowledge outstanding contributions by Associate Editors (AEs) and Peer Reviewers. The success of the journal is based upon the volunteer work performed by AEs and reviewers. The diligent contributions of AEs and peer reviewers contributed to significant improvement of journal performance (with a median time to first decision of just eight days) and an increased five-year impact factor (to 2.8 in 2022). Many AEs and reviewers perform well above expectations, but a few are simply outstanding, and are recognized for work performed between 2021 and 2023.

Estuaries and Coasts had 47 AEs during the biennial period. Outstanding performance is based on three characteristics: the number of papers handled, the number of days to first reviewers being assigned, and the number of days to make a decision. The top 10 AEs are:

Ronald Baker, University of South Alabama, USA
Brian Barnes, University of South Florida, USA
Marco Bartoli, University of Parma, Italy
Mark Brush, Virginia Institute of Marine Science, USA
Just Cebrian, Mississippi State University, USA
Judith Grassle, Rutgers University, USA
Holly Greening, Coastal Wise Partners, USA
Lijun Hou, East China Normal University, China
Neil Kamal Ganju, US Geological Survey, USA
David Kimmel, National Oceanic Atmospheric Administration, USA
Hongbin Liu, Hong Kong University of Science & Technology, Hong Kong
Jill Olin, Michigan Technological University, USA
Mark Peterson, University of Southern Mississippi, USA
James Pinckney, University of South Carolina, USA
Eric Powell, University of Southern Mississippi, USA
David Ralston, Woods Hole Oceanographic Institution, USA
Charles Roman, University of Rhode Island, USA
Arnoldo Valle-Levinson, University of Florida, USA
Melisa Wong, Bedford Institute of Oceanography, Canada

In the two-year period between 2021 and 2023, *Estuaries and Coasts* sent 3,057 review requests. Only 35% of review requests were completed. Of the 721 people providing reviews, only 73 provided three or more reviews. Outstanding performance was based on the number of reviews completed. The top reviewers are:

Platinum Level - 10 reviews
Tracy Elsey-Quirk

Gold - 5–7 reviews
Arthur Chen-Tung
James Hagy
Matthew Kimball
Michael Osland
Paul Rudershausen
Philip Stevens
Alan Whitfield
Guoyu Yin

Silver Level - 4 reviews
Anthony Campbell
Georgenes Cavalcante
Victoria Congdon
Anne E. Giblin
LeeAnn Haaf
Scott Hamilton
Christopher Henderson
Kimberly Huguenard
Robert Isdell
Braulio Juarez
Yonggang Liu
Javier Lloret
Marguerite Pelletier
Paul Renaud
Neil Saintilan

Bronze Level - 3 reviews
Marco Bartoli
Richard Batiuk
Marcus Beck
Camilla Bertolini
Naishuang Bi
Keith Bouma-Gregson
Joshua Breithaupt
Yihua Cai
John Callaway
Robert Christian
Denise Colombano
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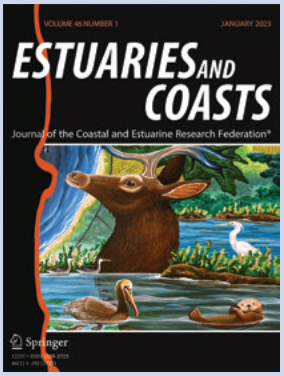
Marta Rodrigues
Ken Schoutens
Erik Smith
S. Gregory Tolley
G.J.C. Underwood
Michael Wetz
Shannon Whaley
Patricia Wiberg
Jie Xu
Wei-dong Zhai
Shelby Ziegler
Ian Zink

Estuaries and Coasts Editor's Choice Papers



June 2023
Mosman, J.D., et al. 2023. Multiple Fish Species Supplement Predation in Estuaries Despite the Dominance of a Single Consumer. *Estuaries and Coasts* 46 (4): 891–905. https://rdcu.be/dhUBc

July 2023
Bardou, R., et al. 2023. Rapidly Changing Range Limits in a Warming World: Critical Data Limitations and Knowledge Gaps for Advancing Understanding of Mangrove Range Dynamics in the Southeastern USA. *Estuaries and Coasts* 46 (5): 1123–1140. https://rdcu.be/dhUBF

September 2023
Hutton, P.H., and S.B. Roy. 2023. Extension of the Practical Salinity Scale to Estimate Major Ion Concentrations: Application to the San Francisco Estuary. *Estuaries and Coasts* 46 (6): 1375–1386. https://rdcu.be/dhUBU

CESN coastal & estuarine science news

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CESN is an electronic newsletter that is put out on a bimonthly basis (6 issues per year) and serves as a companion to the journal *Estuaries and Coasts*. Each issue of *CESN* provides a summary of four articles from the journal, written for an audience of coastal managers and other interested stakeholders and emphasizing the management applications of scientific findings. Issues are posted online and emailed to subscribers. Go to the *CESN* website at www.cerf.science/cesn to read the full summaries and sign up to have future issues delivered to your email inbox.

2023 Issue 3

How Will Diked Systems Respond to Sea Level Rise?
Forecasting inundation in diked and tidally restricted coastal lowlands

Source: Befus, K.M. et al. 2023. Forecasting Sea Level Risedriven Inundation in Diked and Tidally Restricted Coastal Lowlands. *Estuaries and Coasts*. DOI: 10.1007/s12237-023-01174-1
https://rdcu.be/dbGAb
https://cerf.memberclicks.net/cesn-2023-issue-3#Article1

Identifying Management Priorities in Coastal Seascapes
Bright spots and management sites in Queensland estuaries

Source: Gilby, B.L. et al. 2023. Drivers of Ecological Condition Identify Bright Spots and Sites for Management Across Coastal Seascapes. *Estuaries and Coasts*. DOI: 10.1007/s12237-023-01187-w
https://rdcu.be/c8plT
https://cerf.memberclicks.net/cesn-2023-issue-3#Article2

Estimating Juvenile Salmon Carrying Capacities
A tool for designing and evaluating restoration projects

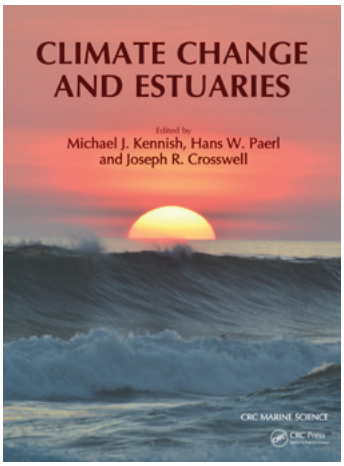
Source: Hall, J. et al. 2023. Estimating Juvenile Salmon Estuarine Carrying Capacities to Support Restoration Planning and Evaluation. *Estuaries and Coasts*. DOI: 10.1007/s12237-023-01185-y
https://rdcu.be/c8plD
https://cerf.memberclicks.net/cesn-2023-issue-3#Article3

Undersized Mediterranean Lagoons are Understudied
Size matters

Source: Ligorini, V. et al. 2023. Small Mediterranean coastal Lagoons Under Threat: Hydro-ecological Disturbances and Local Anthropogenic Pressures (Size Matters). *Estuaries and Coasts*. DOI: 10.1007/s12237-023-01182-1
https://rdcu.be/c8UhE
https://cerf.memberclicks.net/cesn-2023-issue-3#Article4

New Book: *Climate Change and Estuaries*

Michael J. Kennish, Hans W. Paerl, and Joseph R. Crosswell (Editors)



Climate change is having an increasing impact on coastal, estuarine, and marine environments worldwide. This book provides state-of-the-art coverage of climate change effects on estuarine ecosystems from local, regional, and global perspectives. With editors among the most noted international scholars in coastal ecology and estuarine science and contributors who are world-class in their fields, the chapters in this volume consist of comprehensive studies in coastal, estuarine, and marine sciences, climate change, and coastal management and provide an extensive international collection of data in tabular, illustrated, and narrative formats useful for coastal scientists, planners, and managers.

Comprised of three sections [(1) physical-chemical aspects, (2) biological aspects, and (3) management aspects], the book not only examines climatic and non-climatic drivers of change affecting coastal, estuarine, and marine environments but also their interactions and effects on populations of organisms, communities, habitats, and ecosystem structure and function.

Pulling together today's most salient issues and key literature advances for those concerned with coastal management, it allows the reader to see across direct and indirect interactions among disciplinary and ecosystem boundaries.

Climate Change and Estuaries meets the research needs of climate scientists, estuarine and marine biologists, marine chemists, marine geologists, hydrologists, and coastal engineers, while students, professors, administrators, and other professionals will also find it an exhaustive reference.

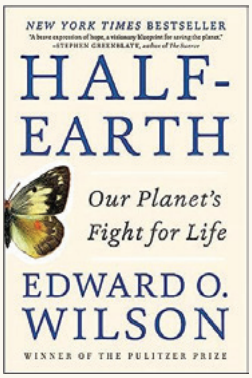
https://www.routledge.com/Climate-Change-and-Estuaries/Kennish-Paerl-Crosswell/p/book/9780367647520

Editors' Note: This book was published September 2023 by CRC Press as part of the Marine Sciences Series

Community oyster reef installation in Coney Island Creek, Brooklyn, USA
Photo: Helene Hetrick

Half-Estuaries: Protect Fifty Percent of Estuaries for Nature by 2050?

Stephen S. Hale, Associate Editor
stephenshale@gmail.com



Half-Earth, E.O. Wilson's 2016 book, promotes the idea that to ensure a healthy level of global biodiversity, we need to protect half of Earth's lands and waters for nature. Human actions are causing a widespread decline of biodiversity. According to the *Global Assessment Report on Biodiversity and Ecosystem Services*, the current global rate of species extinction is tens to hundreds of times higher than it has averaged over the past 10 million years. The top five drivers are changes in land and sea use, climate change, pollution, exploitation of natural resources, and invasive species.

Last December, over 190 countries at the UN Biodiversity Conference in Montreal agreed to slow and halt global loss of biodiversity. One target is to protect 30% of Earth's lands and waters by the year 2030 (30x30). Although the US is not a party to the UN Convention on Biological Diversity, a 2021 Presidential Executive Order made an American commitment for a national 30x30 goal.

For 30x30 plans to achieve their goals, they need to consider not just total area of lands and waters protected but ones that represent the full diversity of habitats and biodiversity from genes to ecosystems. Moravek and others, writing in *Frontiers in Ecology and the Environment* in 2023, argued that terrestrial 30x30 designations be done by watersheds so that important freshwater biodiversity and ecosystem functions will be preserved. Including the estuarine portions of rivers would provide additional biodiversity benefits.

The US and Canada have several existing tools to implement 30x30 in marine areas. On top of that, subnational jurisdictions and NGOs have their own initiatives, e.g., the 30x30 California and Oregon plans have strong marine components. At present, www.protectedplanet.net/en estimates that about 19% of America's and 9% of Canada's marine waters are protected.

Outright extinctions of large marine animals, many with wide ranges and migration patterns, are less common than those of large land animals. And estuarine species, living in widely varying environments, often have wide tolerance limits. However, many estuaries, hosting cities and ports, and receiving pollutants from their rivers, have suffered severe degradation and loss of habitat, leading to local extinctions of species and the accompanying loss of vital ecosystem functions. Could 30% of estuarine areas be protected to help stem these losses?

Many governments and organizations work to restore biodiversity and ecosystem functions that have been lost or diminished. People restore salt marshes that had been filled, replace small-diameter culverts with ones that can handle the natural tidal range, and elevate marsh surfaces at risk of being lost to sea-level rise. They plant eelgrass beds and mangrove forests and install oyster reefs. They restore biodiversity and ecosystem functions by cleaning up pollution in areas that had been lost to pollution (see the Hope Spot article in this issue).

For lands and waters worldwide, the Half-Earth Project estimates that conserving half by 2050 would protect about 85% of Earth's remaining species. What benefits would accrue by protecting 50% of estuarine areas by 2050? How can we achieve that?

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Contact Information

Coastal & Estuarine Research Federation
2150 North 107th Street, Suite 205
Seattle, WA 98133-9009
(206) 209-5262
info@cerf.science

Executive Director
Susan Park
(804) 381-6658
spark@cerf.science

Chief Operating Officer
Louise S. Miller
info@cerf.science

CERF's Up! Bulletin

Editor	Allison Fitzgerald
Associate Editor	Stephen Hale
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Comments or questions on any piece in this issue? Email bulletin@cerf.science

COASTAL & ESTUARINE RESEARCH FEDERATION
2150 N 107th St, Ste 205
Seattle, WA 98133
Phone: (206) 209-5262
Website: www.cerf.science
Email: info@cerf.science