



DAVIDSON FELLOWSHIP

Margaret A. Davidson Graduate Fellowship Newsletter

This newsletter features highlights of Margaret A. Davidson Graduate Fellows conducting research at the [national estuarine research reserves](#).

Fellowship Highlights

In October 2024, we welcomed and celebrated our largest cohort to date at the NERRS/NERRA Fall System Meeting in Maine. These [30 fellows](#) received training in collaborative science and joined a total of 44 mentors in peer-sharing and learning opportunities to formally launch their two-year tenure as Margaret A. Davidson Graduate Fellows.



Davidson Fellowship Webinar Series

New recordings are available!

The Margaret A. Davidson Graduate Fellowship Webinar Series serves as a platform for peer-sharing opportunities and showcases the important work undertaken by current and former Davidson Fellows for the National Estuarine Research Reserve System.

You can find [recordings of past webinars](#) on our website, with two new additions, including:

- A Tale of Three Estuaries Conducting Trap Surveys (Helen Cheng, Wells Reserve)

- The Ebb and Flow of Alkalinity Patterns (Elizabeth Whitney, Delaware Reserve)

Email ocm.davidsonfellowship@noaa.gov to receive updates about future webinars.

Meet the Fellows

Learn more about our current cohort of 2024 to 2026 Davidson Fellows hosted by reserves in the Southeast U.S. and Puerto Rico.



Jacob Simon, University of Georgia and ACE Basin Reserve

Project title: Using Deep Learning and Satellite Imagery to Identify and Track Unvegetated Features in Salt Marshes of the ACE Basin

Who, or what, inspired you to pursue this fellowship, and why?

Doing field work in the ACE Basin National Estuarine Research Reserve, as well as others (Sapelo Island, Guana Tolomato Matanzas, North Inlet-Winyah Bay), and talking to the folks there got me excited to apply and see if my work could help further the mission of the reserves.



Meredith Pratt, University of Central Florida and Guana Tolomato Matanzas Reserve

Project title: Developing a Predictive Framework for Understanding the Effects of Climate and Management Strategies on Fish Community Assemblages in a Dynamic Estuary

Who, or what, inspired you to pursue this fellowship, and why?

Learning about the field of science policy inspired me to pursue this fellowship. Being able to address management needs and priorities via research and then have that information distributed to the reserve to use for management is transdisciplinary work that I want to pursue in my career.



Alexandria Sangermano, University of New Hampshire and Jobos Bay Reserve

Project title: Evaluating Restoration Success of Mangrove Habitats in Jobos Bay NERR, Puerto Rico: A Multidisciplinary Approach to Ecosystem-Based Habitat Monitoring

Who, or what, inspired you to pursue this fellowship, and why?

My first Caribbean research experience was during an undergraduate course that allowed me to travel to Belize for two weeks and observe the relationship between fish species and corals in both lagoons and mangroves. At this point, I had already known I wanted to continue working in salt marshes due to a previous course, but then I felt equally drawn to the Caribbean mangrove habitats. For my master's research I focused on salt marsh restoration, but my advisor and I have always been thinking about possible research projects that can branch me into Caribbean habitats for my doctoral work. Once we learned that the Jobos Bay Reserve had management needs that aligned with our research interests and goals, we were determined to form a relationship with the reserve. This inspired me to pursue the Margaret A. Davidson Fellowship.



Mina Surprenant, University of North Carolina - Wilmington and North Carolina Reserve

Project title: Using Drones to Develop a New Method for Predicting Marsh Response to Sea Level Rise

Who, or what, inspired you to pursue this fellowship, and why?

My current research inspired me to pursue this fellowship, as I recognize the serious threat posed by sea level rise to tidal marshes. These valuable coastal ecosystems are at risk, and I believe that modeling is an effective tool for studying them and predicting their fate. Byron Toothman also played a significant role in motivating me to apply. After visiting several North Carolina reserve sites with him and discussing his concerns about local marshes, I was driven to apply my ongoing research to the marshes in North Carolina. The incorporation of drones into this project was motivated by the labor-intensive fieldwork I have encountered during my first few years in my doctoral program. Utilizing drone imagery to collect data will facilitate the development of a non-destructive sampling method and greatly enhance the efficiency and effectiveness of this research.



Liam Batchelder, University of South Carolina and North Inlet-Winyah Bay Reserve

Project title: Quantifying Dynamics of Penaeid Shrimp Nursery Habitat Use to Inform Ecosystem Based Management in a Changing World

Who, or what, inspired you to pursue this fellowship, and why?

I pursued my Ph.D. position because it gave me the opportunity to work in the reserve system on a NERRS Science Collaborative project. The Davidson Fellowship allows me to continue working in an incredible reserve with a collaborative team of researchers and educators. The work I proposed is an extension of the Science Collaborative project and should provide exciting context related to the work already conducted on shrimp and these habitats.



Ember Crutchfield, Georgia Southern University and Sapelo Island Reserve

Project title: Effects of Saltwater Intrusion on Mature *Pinus taeda* Health and Water Use in Barrier Island Maritime Forests

Who, or what, inspired you to pursue this fellowship, and why?

I was inspired to pursue this fellowship for three main reasons. First, I am extremely passionate about pursuing novel research that promotes the conservation of biodiversity in response to increasing environmental instability from global climate change. I have decided to dedicate my life and career to doing my part in preserving the natural world for future generations, as well as for the countless organisms we share this planet with. The second reason I specifically decided to pursue this fellowship is because people and the environment are not separate; that is to say that communities are impacted by environmental changes and the loss of biodiversity, as well. I strongly believe that it is the duty of the government to serve its people, and pursuing this fellowship with NOAA allows me to gain insight into a governmental agency that advocates for policies and management that support actual communities. The final inspiration for me was more personal. My parents have always encouraged me to be the most successful version of myself. When I was first introduced to the Davidson Fellowship, I almost didn't apply because I believed my chances were slim. However, my parents told me not to doubt my own capabilities and apply anyway, which I am so thankful for!



About the Program

This fellowship program honors the legacy of Margaret A. Davidson, a visionary and pioneer in the world of coastal resource management. The Margaret A. Davidson Graduate Fellowship emphasizes professional development, mentoring, and innovation, and offers students admitted to or enrolled in a master's or doctoral program the opportunity to conduct research within one of the 30 [national estuarine research reserves](#). For more information and to see a list of the full 2024 to 2026 cohort, visit coast.noaa.gov/nerrs/research/davidson-fellowship.html.

Program Timeline

The call for applications is closed for the 2024 to 2026 fellowship cohort.

August 1, 2024: Start date for the 2024 to 2026 cohort

The next call for applications is expected to open in summer 2025.



NOAA's Office for Coastal Management

National Estuarine Research Reserve System