



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.

Davidson Fellowship Webinar Series

In honor of January being National Mentoring Month, we are hosting a special edition of the Davidson Fellowship Webinar Series. Join us to learn about a collaborative effort between Kira Allen, a Davidson Fellow, and her university advisor and reserve mentor, centered on Kira's research at the Apalachicola Reserve.

[Registration link](#) for the webinar on January 18, 2024, 2:30 to 3:30 p.m. Eastern (11:30 to 12:30 p.m. Pacific; 9:30 to 10:30 a.m. Hawaii).

Want to receive updates about future webinar opportunities? Email ocm.davidsonfellowship@noaa.gov to join our email list.

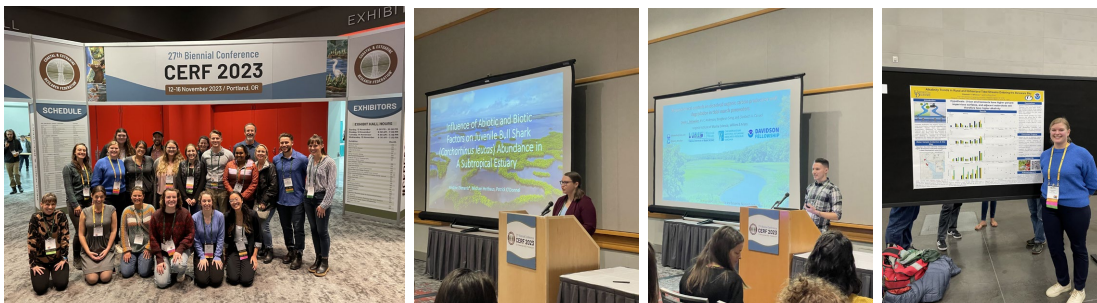
Fellow Highlights



Helen Cheng was featured on National Public Radio (“[Rising Ocean Temperatures Mean Blue Crabs Are Showing Up in Maine Lobster Traps](#)”), where she talks about her work to understand what the arrival of blue crabs

could mean for Maine's traditional fisheries. Helen conducted an impressive multi-state trap survey across three estuaries in New England, two of which are part of the National Estuarine Research Reserve System.

Davidson Fellows show off their science communication skills at the 2023 Coastal Estuarine Research Federation Conference in Portland, Oregon.



Featured Products and Publications



Elisabeth (“Lizzy”) Powell was the 2020 to 2022 Davidson Fellow at the Delaware Reserve.

She used remote sensing techniques, such as light detection and ranging (lidar) and imagery from the National Agriculture Imagery Program, to classify areas of forest loss in the coastal regions of Delaware. Check out her [published manuscript](#) in the journal *Remote Sensing* to learn more.

And congratulations to Lizzy for being awarded “Best Graduate Student Poster” at the 2023 Coastal Estuarine Research Federation Conference in Portland, Oregon!



Kyle Runion (2022 to 2024 Davidson Fellow at the Mission-Aransas Reserve in Texas) developed this [graphic of predicted *Spartina alterniflora* belowground biomass](#) over 14 square kilometers around the Duplin River on Sapelo Island, Georgia.

Belowground biomass in salt marshes is an important measure of ecosystem resilience, since the accumulation of this biomass can help salt marshes gain elevation and avoid drowning during sea level rise.

Kyle used a machine learning modeling framework that applied satellite observations, climate data, and tide measurements to predict belowground biomass of a widespread salt marsh species, *Spartina alterniflora*, in the Duplin River watershed on Sapelo Island, Georgia. Measuring belowground biomass can be labor intensive and vary greatly across short distances or among years. This predictive modeling approach helps to resolve variation across the landscape and through time, and ultimately better understand ecosystem resilience.

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 2022 to 2024 cohort, visit coast.noaa.gov/nerrs/research/davidson-fellowship.html.

Program Timeline

Call for applications is closed for the 2024 to 2026 cohort
(applications were due December 4, 2023)
May/June 2024 – Applicants notified of selection results
August 1, 2024 – Start date for the 2024 to 2026 cohort

