

Katelyn Overstreet

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Education

Old Dominion University

Ph.D., Ecological Sciences (Coastal Plant and Ecotone Ecology Lab)

Principal Investigator: Erik Yando, Ph.D.

Norfolk, VA

August 2022- Present

Roosevelt University

M.S., Biological Sciences (thesis) – 3.86/4.0 GPA

Principal Investigator: Emily Dangremond, Ph.D.

Committee: Emily Dangremond, Ph.D., Norbert Cordeiro, Ph.D.,

Kelsey Poulson-Ellestad Ph.D., Robert Seiser, Ph.D.

Chicago, IL

August 2020 - July 2022

University of Texas at Dallas

B.S., Biological Sciences

Richardson, TX

August 2014 -December 2018

Research

Old Dominion University (present):

Expanding on my M.S. thesis, I plan to continue working with *Avicennia germinans* (the black mangrove), in terms of the implications of climate-regime shifts on North American black mangrove distribution. More specifically, I plan to focus on differences in regional variability and freeze-tolerance.

Roosevelt University M.S Thesis: Frozen- green leaves as potential nutrient subsidies in North American Mangrove Ecosystems (2020-2022):

In January 2018, a three-day freezing event caused substantial defoliation of green leaves in *A. germinans* (the black mangrove) near its northernmost range limit in St. Augustine, Florida. Plants that lost their leaves recovered within 1.5 years, prompting my thesis hypothesis — that is that freeze-killed leaves may have acted as a fertilizer. My thesis research focused on treating *A. germinans* (grown in-lab) from Ft. George (30.4194° N, 81.4389° W) and Amelia Island (30.6266° N, 81.4609° W), with litterfall collected from the aforementioned freeze event. Final results indicated substantial growth differences between plants fertilized using green leaves compared to those fertilized using senescent leaves.

Roosevelt University—Nutrient pulses and [HET] cycling in phytoplanktonic and zooplanktonic interactions (2021-2022):

Facilitated Dr. Kelsey Poulson-Ellestad in further research efforts regarding open ocean [HET] (Vitamin B) as it pertains to predator-prey relationships in zooplankton and phytoplankton (*O. marina* and *E. huxleyi*) in addition to (*Gyrodinium sp.* and *E. huxleyi*). Research addressed the hypothesis that [HET] concentrations within the 0.1 – 1.0um range would lead to elevated predator (zooplankton sp.) grazing rates on prey (phytoplankton sp.) compared to [HET] ranges below 0.1um and above 1.0um. Final results supported this initial hypothesis.

Professional Experience

Old Dominion University (Aug 2022- present)

Norfolk, VA

Teaching Assistant: General Biology Laboratory

Roosevelt University (2021-2022)

Chicago, IL

*Student Success Office: Mentor for science majors with learning disabilities:
Responsible for helping students organize, plan,
and overcome learning challenges.*

Roosevelt University (2021-2022)

Chicago, IL

*Student Success Office: Scientific writing coach for graduate school applicants:
Responsible for editing/providing feedback for undergraduate students seeking
admission to graduate degree programs. Letters of Intent, Statements of Purpose,
etc. Of the two students I helped, both were admitted into their program of choice.*

Roosevelt University (2021-2022)

Chicago, IL

Teaching Assistant: Biochemistry Laboratory

Roosevelt University (2020-2021)

Chicago, IL

Teaching Assistant: Plant Ecology

Private Tutor (2019-2022)

Chicago, IL

High school (senior AP biology) tutor for a number of high school students in my community (Humboldt Park/Ukrainian Village)

Inform Diagnostics

Dallas, Texas

Pathology Imaging Specialist: Responsible for imaging small cell, basal cell and GI-related cancers.

Municipal Mosquito

Dallas, Texas

Vector Internship: Responsible for the speciation, sexing and sample testing of vector carrying mosquito species (West Nile, Chikungunya, Zika Viruses).

Posters and Presentations

Coastal and Estuarine Research Federation (CERF, 2021) — Presenter in annual conference regarding mangrove nutrient cycling in estuarian ecosystems.

Research Interests

Going into my graduate career as a master's student at Roosevelt University, I knew I was very interested in plant ecology and climate change. I had the privilege of meeting Dr. Emily Dangremond, who cultivated my passion for mangroves and coastal wetland ecology. Mangroves serve multiple purposes — they are hubs for species biodiversity, sequester a large portion of net oceanic carbon, and contribute to primary productivity in coastal ecosystems through the production of leaf litterfall, which was the focus of my thesis research.

- Climate change in mangroves
- Coastal litterfall dynamics
- Implications of climate change on coastal species and ecosystems
- Nutrient cycling in coastal and marine ecosystems

Pending Publications

Roosevelt University M.S Thesis: *Frozen- green leaves as potential nutrient subsidies in North American Mangrove Ecosystems* (2020-2022):

Roosevelt University—Nutrient pulses and [HET] cycling in phytoplanktonic and zooplanktonic interactions (2021-2022):