

Berit E. Batterton

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RESEARCH INTERESTS

I am interested in the relationship between marsh carbon balance and environmental factors along Texas' coast. First, I am evaluating the change in marsh vegetation assemblages as a function of freshwater inflows. Second, I am leveraging three decades of vegetation and environmental monitoring data to infer possible climatic or anthropogenic drivers of changes in marsh condition. Finally, I am investigating the impacts of experimental and real-world drought on marsh plant photosynthesis and carbon dynamics.

EDUCATION

Ph.D., Marine Science

2020–Present

University of Texas at Austin, Marine Science Institute

Port Aransas, TX

- Dissertation: Climate change impacts on carbon and water dynamics in Texas' estuarine marshes
- Advisor: Dr. Ken Dunton

B.A., Environmental Science and Biology with Honors

2016–2020

University of Pennsylvania

Philadelphia, PA

Magna cum laude; Certificate in Spanish Language; Varsity Athlete

- Thesis: Using remote sensing to study effects of dam sediment capacity on seagrass in the Chesapeake Bay
- Advisor: Dr. Jane Dmochowski

PROFESSIONAL EXPERIENCE

Marine Science Institute (UT)

Port Aransas, Texas

Graduate Research Assistant

2020–2025

Dmochowski Lab (UPenn)

Philadelphia, Pennsylvania

Undergraduate Research Scientist

2019–2020

- I led analysis of coupled remote sensing and in-situ data collected for seagrass and water quality in the Chesapeake Bay. My undergraduate honors thesis was composed of two projects that I worked on independently: 1) Writing a script in Google Earth Engine for classifying water quality based on MODIS images and 2) Analyzing the impacts of reduced upstream dam sediment capacity on seagrass.

Betley Lab (UPenn)

Philadelphia, Pennsylvania

Undergraduate Research Assistant

2018–2019

- I was responsible for performing behavioral assays and preparing brain slices of mice exposed to various survival stimuli. Data were used as part of a larger study that aimed to determine how the brain senses, processes, and prioritizes sensory information.

PEER-REVIEWED PUBLICATIONS

NOTE: * = Equal Contribution; + = UT Undergraduate Student; # = UT Graduate Student

Batterton, B. E., & Dunton, K. H. (*In prep-a*). Climate-driven alterations in freshwater inflows impact a Texas delta marsh.

- Batterton, B. E.**, & Dunton, K. H. (*In prep-b*). Long-term marsh vegetation community dynamics in the Nueces Delta (TX, USA) are driven by climate change.
- Batterton***, **B. E.**, Neill*[#], C. M., Biggs, C. R., & Rempel[#], H. S. (2024). A framework for training graduate students and campus communities in inclusive teaching. *Journal of Microbiology & Biology Education*, 25(3), e00125–24. <https://doi.org/10.1128/jmbe.00125-24>

OTHER PUBLICATIONS (REPORTS, CHAPTERS, ETC.)

- Capistrant-Fossa[#], K. A., **Batterton, B. E.**, & Dunton, K. H. (2025). Submerged aquatic vegetation, marshes, and mangroves. In P. A. Montagna & A. R. Douglas (Eds.), *Freshwater Inflows to Texas Bays and Estuaries: A Regional-Scale Review, Synthesis, and Recommendations*. Springer Cham. https://doi.org/10.1007/978-3-031-70882-4_10
- Batterton, B. E.**, Person⁺, M., & Dunton, K. H. (2024). *Use of Historical Data to Assess Climate Change Effects: Nueces Delta*. Coastal Bend Bays and Estuaries Program.
- Batterton, B. E.**, Swanson, K., & Dunton, K. H. (2024). *Relative Sea Level Rise and Habitat Assessment in the Nueces Delta*. Coastal Bend Bays and Estuaries Program.
- Batterton, B. E.**, Swanson, K., & Dunton, K. H. (2023). *Relative Sea Level Rise and Habitat Assessment in the Nueces Delta*. Coastal Bend Bays and Estuaries Program.
- Batterton, B. E.**, & Dunton, K. H. (2022b). *Lavaca River Delta Marsh Assessment*. Texas Water Development Board.

MISCELLANEOUS WORKS

- Rempel[#], H. S., **Batterton, B. E.**, Neill[#], C. M., & Biggs, C. R. (2024). “4-5th Grade Lesson on the Amazing Adaptations of Earth’s Organisms”. *OER Commons*. <https://oercommons.org/courseware/lesson/117333>
- Batterton, B. E.** (2023a, September). “Joys of marsh field work”. *Port Aransas South Jetty*. <https://www.portasouthjetty.com/articles/joys-of-marsh-field-work/>
- Batterton, B. E.** (2023b, May). “Please send my thanks to the kids”. *Port Aransas South Jetty*. <https://www.portasouthjetty.com/articles/please-send-my-thanks-to-the-kids/>

PRESENTATIONS

NOTE: * = Co-Presenters; ⁺ = UT Undergraduate Student; [#] = UT Graduate Student

- Batterton, B. E.**, & Dunton, K. H. (2025a). *Salt marsh functional diversity: Integrating intraspecific trait variation in functional traits to understand plant carbon responses to environmental change* [Oral]. Coastal and Estuarine Research Federation Meeting. Richmond, VA.
- Batterton, B. E.**, & Dunton, K. H. (2025b). *Salt marsh functional diversity: Integrating intraspecific trait variation in functional traits to understand plant carbon responses to environmental change* [Oral]. Ecological Society of America Meeting. Baltimore, MD.
- Rempel*[#], H. S., **Batterton***, **B. E.**, & Neill*[#], C. M. (2025). *Inclusive Teaching and Outreach Workshop*. Texas Chapter of the Society for Women in Marine Science. Virtual.
- Batterton, B. E.**, & Dunton, K. H. (2024a). *Beyond a reasonable drought: Monitoring the health of Texas’ salt marshes* [Invited talk]. UTMSI Marine Science Advisory Council Meeting. Port Aransas, TX.
- Batterton, B. E.**, & Dunton, K. H. (2024b). *Impacts of regional climate change on South Texas marsh vegetation dynamics* [Oral]. Texas Bays and Estuaries Meeting. Port Aransas, TX.
- Batterton, B. E.** (2023c). *Shifts in vegetation diversity and abundance in a Texas Coastal Bend marsh* [Invited lightning talk]. National Association of Marine Laboratories Annual Meeting. Virtual.

- Batterton, B. E., & Dunton, K. H. (2023).** *Long-term marsh vegetation community dynamics in the Nueces Delta (TX, USA) are driven by climate change* [Oral]. Coastal and Estuarine Research Federation Meeting. Portland, OR.
- Batterton, B. E., Rempel[#], H. S., & Dunton, K. H. (2023).** *Benefits of a long-term university and K-12 partnership for coastal science education* [Oral]. Coastal and Estuarine Research Federation Meeting. Portland, OR.
- Batterton, B. E., & Dunton, K. H. (2022a).** *Climate-driven alterations in freshwater inflows impact Texas coastal marshes* [Oral]. Joint Aquatic Sciences Meeting. Grand Rapids, MI.
- Batterton, B. E., & Dunton, K. H. (2022c).** *Long-term lack of liquids limits leafy life in Lavaca marsh* [Poster]. Texas Bays and Estuaries Meeting. Port Aransas, TX.
- Batterton, B. E., & Dmochowski, J. E. (2020).** *Impacts of upstream dam sediment capacity on seagrass through coupled remote sensing and in-situ data* [Oral]. University of Pennsylvania Department of Earth & Environmental Sciences Honors Symposium. Philadelphia, PA.
- Batterton, B. E., & Dmochowski, J. E. (2019).** *Using seagrass as an indicator of the health of the Chesapeake Bay* [Oral]. University of Pennsylvania Hayden Scholars Summer Research Symposium, Philadelphia, PA.

FUNDING ACQUIRED (TOTAL: \$214,500)

- Coastal Bend Bays and Estuaries Program, lead scientist 2024–2025
Climate and restoration-driven habitat change: Nueces Delta (\$55,500)
- Coastal Bend Bays and Estuaries Program, lead scientist 2024–2025
Relative sea level rise and habitat assessment in the Nueces Delta (\$7,100)
- Coastal Bend Bays and Estuaries Program, lead scientist 2023–2024
Use of historical data to assess climate change effects on marsh vegetation: Nueces Delta (\$54,000)
- Coastal Bend Bays and Estuaries Program, lead scientist 2023–2024
Relative sea level rise and habitat assessment in the Nueces Delta (\$7,000)
- UT Austin Center for Teaching and Learning, co-lead organizer 2023
Instructor Learning Community Grant- Developing inclusive teaching frameworks for campus and community STEAM education (\$2,500)
- Coastal Bend Bays and Estuaries Program, lead scientist 2022–2023
Relative sea level rise and habitat assessment in the Nueces Delta (\$7,000)
- UT Austin Center for Teaching and Learning, student partner 2022–2023
Students as Partners Grant- Revising undergraduate research curriculum at the UT Austin Marine Science Institute (\$1,000)
- Lower Colorado River Authority, lead scientist 2022
Small pond inventory pilot study (\$7,000)
- Texas Water Development Board, lead scientist 2020–2022
Lavaca River Delta marsh assessment (\$75,000)

SCHOLARSHIPS AND AWARDS (TOTAL: \$402,900)

- The Honor Society of Phi Kappa Phi 2025–present
- APS Lewis & Clark Fund for Exploration & Field Research Grant (\$5,000) 2024–2025
- UT Austin University Graduate Continuing Fellowship (\$52,000) 2024–2025
- Texas Gulf Coast Research Center Predoctoral Award (\$20,000) 2024–2025
- UTMSI Marine Science Endowed Fellowship (\$50,000) 2022–2024

• UTMSI Student Research Excellence Award	2025
• Coastal and Estuarine Research Federation Conference Travel Grant (\$450)	2023
• Coastal Conservation Association Scholarship (\$5,000)	2023
• UT Austin Graduate School Summer Fellowship (\$11,000)	2023
• Texas Chapter of the American Fisheries Society Student Scholarship (\$1,500)	2023
• Southern Association of Marine Laboratories Larry Pomeroy Student Support Award (\$500)	2023
• UTMSI Graduate Travel Award (\$2,000)	2022–2023
• National Science Foundation GRFP Honorable Mention	2022
• UT Austin Graduate School Professional Development Award (\$500)	2022
• Coastal and Estuarine Research Federation Conference Travel Grant (\$450)	2022
• University of Pennsylvania Rosalie Gilles Scholarship (\$50,000)	2018–2020
• University of Pennsylvania James & Gail Riepe Scholarship (\$100,000)	2016–2020
• University of Pennsylvania Fritz K. Hallock Scholarship (\$100,000)	2016–2020
• University of Pennsylvania Hayden Scholars Research Fellowship (\$4,500)	2019
• National Fastpitch Coaches Association Scholar-Athlete All-America	2017, 2019

TEACHING EXPERIENCE

• Guest Lecturer at The University of Texas <i>Science Communication (MNS 191)</i>	Spring 2025
• Teaching Assistant at The University of Texas <i>Biology of Fishes (MNS 354C)</i>	Summer 2023
• Teaching Assistant at The University of Texas <i>Marine Phytoplankton Diversity (MNS 357)</i>	Spring 2023
• Teaching Assistant and Guest Lecturer at The University of Texas <i>Estuarine Ecology (MNS 352C)</i>	Summer 2022
• Teaching Assistant at The University of Texas <i>Field Methods in Marine Ecology (MNS 120L)</i>	Spring 2021 & 2022
• Scientist-in-Residence Fellow at Port Aransas Independent School District <i>Fourth, Fifth, and Eighth Grade Science</i>	2021–2022
• Teaching Assistant at The University of Texas <i>Introduction to Oceanography (MNS 307) and Marine Science Seminar (MNS 101)</i>	Fall 2020
• Teaching Assistant at The University of Pennsylvania <i>Introduction to Geology (GEOL 100)</i>	Fall 2019
• Tutor at The University of Pennsylvania <i>Department of Recreation and Intercollegiate Athletics (BIOL 101, 102, GEOL 100, ENVS 100, PHYS 101, SPAN 110-219)</i>	2016–2020

UNDERGRADUATE MENTORING

• Sophia McKelvey , UT Austin Semester by the Sea <i>Project: Salt marsh plant functional trait variation as an indicator of drought resilience (Presented at 2024 Texas Aquatic Plant Management Society Meeting)</i>	2024
• Danica Larwill, Delaney Smith, & Dakota Farmer <i>University of Pennsylvania Young Alumni Mentorship Program</i>	2023–2024

- **Carole-Lynna E. Benhamou**, UT Austin Environmental Science Capstone 2023
*Project: Primary productivity of *Spartina alterniflora* following freeze-induced mangrove loss in south Texas (Presented at 2023 Coastal and Estuarine Research Federation Meeting)*
- **Malvika Patil**, UT Austin Independent Research 2023
Project: Decadal changes in Nueces Delta marsh abiotic conditions in response to local climatic change
- **Mona Birgisson**, UT Austin Semester by the Sea 2021–2022
Project: Freeze responses of marsh and mangrove communities: A biogeochemical and ecological assessment
- **Technician Supervision:** Courtney Bass, Katie Wiley, Monroe Person, Malvika Patil 2021–present

SERVICE

- Letters to a Pre-Scientist Pen Pal 2024–present
- Ad-Hoc Reviewer, Aquatic Botany 2023–present
- UTMSI Summer Science Camp Instructor 2022–present
- Port Aransas ISD 4/5th Grade Science Fair Judge 2021–present
- Port Aransas ISD 8th Grade Science Fair Judge 2021–present
- Texas Bays and Estuaries Meeting Volunteer 2025
- UTMSI Women in Marine Science Day Volunteer 2025
- UTMSI Graduate Education Improvement Committee 2024
- Abstract Review Committee, Society for Wetland Scientists Student Virtual Conference 2023–2024
- UTMSI GSA President 2023–2024
- UT Austin Dean’s Office Graduate Council 2023–2024
- “Emerging Voices in Botany” Special Issue Award Review Panel, Annals of Botany Plants 2023–2024
- UTMSI Coordinator for STEM Girl Day Community Partnership 2023–2024
- Texas Bays and Estuaries Meeting Planning Committee 2022–2024
- Texas SWMS Mentorship/Career Development/Outreach Committee 2023
- UT Austin Undergraduate Research Forum Judge 2023
- UTMSI Student-Led Seminar Series Coordinator 2023
- UTMSI GSA Vice President 2022–2023
- UT Austin Society for the Advancement of Gender Equity in STEM Mentor 2022
- UT Austin Interim Marine Science Coordinator 2022
- UTMSI Representative for Whooping Crane Festival 2022
- UTMSI GSA Social Chair 2021–2022
- Big Brothers Big Sisters Mentor 2018–2020
- West Philadelphia Tutoring Project Tutor 2018–2020

PROFESSIONAL DEVELOPMENT

- **Concentration in Teaching and Mentoring** 2020–2025
UT Austin College of Natural Sciences
- **Advanced Teaching Preparation Series** 2024
UT Austin Center for Teaching and Learning
- **Science Communication Certification** 2024
UWyoming Science Communication Initiative

- **Course Curriculum Development** 2023–2024
UT Marine Science Institute
- **Phys Fest 4 Plant Ecophysiology Workshop** 2023
Hosted by Sevilleta National Wildlife Refuge
- **Inclusive Classrooms Leadership Certification** 2023
UT Austin Division of Diversity & Community Engagement
- **Concentration in Science and Public Policy** 2022
UT Austin College of Natural Sciences
- **Fundamentals of Teaching (GRS 097)** 2020
UT Austin Center for Teaching and Learning

PROFESSIONAL SOCIETIES

- Ecological Society of America
- Association for the Sciences of Limnology and Oceanography
- Coastal and Estuarine Research Federation
- Ecological Forecasting Initiative
- Society for Wetland Scientists
- International Association for Vegetation Science
- National Marine Educators Association
- Society for Open, Reliable, and Transparent Ecology and Evolutionary Biology
- Society for Women in Marine Science