Sara Grace Leuchtenberger

grace.leuchtenberger@gmail.com, sgleuch@uw.edu
Cell: (617)-418-0744

Ph.D. student in biology at the University of Washington and founder of Mental Health in Marine Science. Has four years of water quality, remote sensing, field data collection/analysis, experimental design, and project management experience. Has two years of mentorship experience, one year of education experience.

Education

Ph.D. Biology, University of Washington, Seattle, WA (September 2022-Present)

- Member of the Carrington Lab at the University of Washington, Seattle.

B.A. Biology, Carleton College, Northfield, MN (August 2017-June 2021)

- GPA: 3.83/4.0
- Cum Laude: Top 30% of the Class of 2021
- 4-year letter winner for Carleton's NCAA DIII varsity volleyball team, senior captain, and three-time academic all-conference player.
- Participated in SEA Semester study abroad and conducted an independent biological oceanography research project.
- Sung in the Carleton College Choir, was an official tour guide for the admissions office.

Publications and Presentations

- **Leuchtenberger SG.** (2023). Mental Health in Marine Science. Invited talk at the University of Texas Marine Science Institute. Received honorarium of $100.
- **Leuchtenberger SG**, Daleo M, Gullickson P, Delgado A, Lo C, Nishizaki MT. (2022) The effects of temperature and pH on the reproductive ecology of sand dollars and sea urchins: Impacts on sperm swimming and fertilization. **PLoS ONE** 17(12): e0276134. https://doi.org/10.1371/journal.pone.0276134.
- **Leuchtenberger**, **SG**, Daleo, M, Gullickson, P, Delgado, A, Lo, C, Nishizaki, M. The effects of temperature and pH on the reproductive ecology of sand dollars and sea urchins: impacts on sperm swimming and fertilization. Virtual poster presentation at the **Society of Integrative and Comparative Biology** conference, January 2022.
- **Leuchtenberger, SG,** Armstrong, M, Nishizaki, M. Mussel workout: Temperature fluctuation's effects on bay mussel metabolism. Virtual poster presentation at the **Western Society of Naturalists** conference, November 2021.

Datasets

- Carrington, E., Roberts, E. A., **Leuchtenberger, S. G.** (2022) Weather Station data from University of Washington Friday Harbor Laboratories, Friday Harbor WA, Cantilever

Point from 2006 to 2021. Biological and Chemical Oceanography Data Management Office (**BCO-DMO**). (Version 3) doi:10.26008/1912/bco-dmo.491262.3.

Research Positions

Research Technician I, University of Washington, Friday Harbor Laboratories (April 2022-September 2022)

- Piloted and led ecomechanics experiments for graduate and undergraduate students, respectively, in the Carrington Lab

Research Coordinator, Carleton College (June 2021 – March 2022)

- Directed undergraduate research in Dr. Michael Nishizaki's marine physiological ecology lab.

REU Student at Friday Harbor Labs (University of Washington) (June 2020-August 2020)

- Designed an experiment examining *Mytilus trossulus*'s physiological responses to field temperature fluctuations in an experimental setting under the mentorship of Dr. Michael Nishizaki.

Biology Lab Assistant, Carleton College (September 2019-June 2021)

- Independently conducted research in a marine ecology lab examining physical-biological linkages in marine and freshwater systems.

Awards, Scholarships, and Fellowships

Fellowships total: **$118,000** || Grants total: **$6,800**

National Science Foundation Graduate Research Fellowship (Spring 2023)

- Received three years of funding for a five year fellowship ($111,000)

W.T. Edmondson Award (March 2023)

- Received research funding from the University of Washington ($4,300)

Friday Harbor Labs Award (March 2023)

- Received research funding from the University of Washington ($1,000)

NSF Bioinformatics Workshop at Louisiana State University (July 2022)

- Chosen to participate in a fully funded week-long workshop with Dr. Morgan Kelly and Dr. Melissa Debiasse at Louisiana State University where I received training in ecologically relevant bioinformatics techniques ($500 travel grant plus room and board)

Friday Harbor Beatrice Crosby Booth Endowed Scholarship (June 2022)

- Received funding to live, work, and do research at Friday Harbor Laboratories ($3,000)

NSF Graduate Research Fellowship, Honorable Mention (2022)

RMBL REU Travel Grant (January 2022)

- Received funding to travel to the Society of Integrative and Comparative Biology's annual meeting ($1,000)

REU-Blinks NSF REU Fellowship (June-August 2020)

- Received fellowship to conduct independent research at Friday Harbor Laboratories, University of Washington ($4,000)

Exemplary Writing Award (July 2019)

- Awarded to top 8-10% of Carleton College students for excellence in writing.
- Selected after college-wide submission of writing portfolios to faculty committee.

Academic All-Conference (December 2018, 2019, 2020)

- Given to NCAA Division III athletes in the MIAC who started over 50% of matches and have a GPA above 3.5.

National Merit Scholar (Spring 2016)

- Scored within the top 1 percent of students on the PSAT.

Outreach and DEI

Founder, Mental Health in Marine Sciences (September 2022 to present)

- Running a Twitter account to increase awareness of mental health and mental illness in marine science fields. Grew from 0 to 150 followers in 6 months.
- Collaborating with other R1 institutions to spread mental health awareness via talks and building programming for mental health awareness at field stations.

Intertidal Field Guide for Shellfish Camp at the Sitka Conservation Society (March 2023)

- Created a bingo card for intertidal creatures for local students aged 6-12 as part of a tidepooling expedition, co-led with the Sitka Conservation Society, at Magic Island in Sitka, AK.

NSF REU Mentor, Friday Harbor Laboratories (Summer 2021 and 2022)

- Mentored BIPOC students in designing, implementing, and presenting research projects related to marine invertebrate ecophysiology.

Skills

- **Field Skills:** MOTC motorboat operator; CPR (adult and child); PADI Open Water SCUBA certified; HOBO and YSI sensor deployment, retrieval, and maintenance.
- **Computational:** Computational fluid dynamics modeling in COMSOL; Computer-assisted motion tracking in MatLab; Particle Image Velocimetry (PIV); Data analysis and visualization in R Studio; Basic knowledge of Python and HTML.
- **Wet lab:** PCR DNA amplification techniques; RT-qPCR RNA quantification techniques, respirometry, marine animal husbandry.
- **Research:** Writing and reviewing scientific papers, experimental design, research presentation, project management.

Teaching/Mentorship Experience

Foundations in Evolution and Systematics, TA, BIOL 354 (Winter 2022) Led three discussion sections of 30 students where they read, analyzed, and critiqued foundational research papers in the fields of evolution and systematics. Wrote exam questions for two exams, graded those questions, graded weekly assignments, held office hours, maintained grades and

assignments on Canvas, served as assistant instructor in lecture, helped design and graded the final project. Highlights from students:

- "Grace was very accessible and friendly, cared about student learning and participation deeply."

Introductory Biology, TA and Lab instructor, BIOL 180 (Fall 2022) Led two lab sections of 24 students doing activities related to hypothesis design and testing, data analysis on Excel, and phylogenetic tree construction; held office hours, graded exams for 900 students and served as an assistant instructor in lecture. Highlights from students:

- "Grace did a great job at posing questions that got me to think about class topics in a different way."
- "Grace is an absolute angel. She would never get frustrated with her students not understanding topics. She was honest with her students and truly wanted us to succeed."
- "Grace did a great job explaining everything and answering any questions my lab group had (which there were a lot of). Definitely my favorite TA this quarter!"

NSF-REU Mentor, **Friday Harbor Laboratories** (Summer 2021, 2022)

- Guided students in designing, implementing, and presenting research projects related to marine invertebrate ecophysiology