

Anna S. Heasley

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Education

M.S. in Marine Science, Expected Graduation August 2023 – Moss Landing Marine Laboratories (MLML)/San Jose State University (SJSU), CA

Relevant courses

- Invertebrate Zoology
- Molecular Techniques
- Sampling and Experimental Design
- Advanced Topics in Marine Invertebrates
- Marine Ecology
- Scientific Diving
- Geological Oceanography

B.S. in Biology, December 2019 – Slippery Rock University (SRU), PA

Research Experience

It shucks to be inbred: effects of small population sizes on genomic diversity of captive-bred Olympia oysters (*Ostrea lurida*) (MLML/SJSU, Fall 2021-Present)

Analyzing population structure and connectivity of aquacultured Olympia oysters over space and time using low-coverage whole genome sequencing (lcWGS) and non-lethal DNA procurement methods.

Dose-dependent disruptive effects of melatonin in *Phagocata gracilis* (SRU, Spring 2019)

Analyzing dosage effects of melatonin, a natural hormone with antioxidant effects, on the planarian *Phagocata gracilis* ability to regenerate lost extremities.

Quantification of anthropogenic hydrocarbon inputs and bioaccumulation in eastern oysters (*Crassostrea virginica*) within the Lafayette River, VA (National Science Foundation REU-- Old Dominion University, Summer 2019)

Measuring alkane hydrocarbon bioaccumulation in Eastern oysters (*Crassostrea virginica*) deployed in the Elizabeth River, VA. This research was presented to the Ocean, Earth and Atmospheric Sciences Department at Old Dominion University following my study.

Coastal hazards of Chincoteague Island, VA: storm history and projected sea level rise (Shippensburg University, Summer 2018)

Using ArcGIS, models, and property value databases to demonstrate the impact of future tropical storms for Chincoteague Island, VA. The findings of this study were presented in a poster at the 50th anniversary of the Chincoteague Bay Field Station, VA.

Relevant work

Graduate Research Assistant (MLML/SJSU, Summer 2021-Present)

Working under Dr. Jonathan Geller in the Invertebrate Zoology and Molecular Ecology laboratory as a research assistant for the Invasive Species Monitoring project. My duties include extracting DNA from bulk plankton samples, settlement plates, and voucher samples, quantifying and assessing quality of DNA, and PCR.

Graduate Assistant (MLML/SJSU, August 2022-Present)

Assisting Dr. Sarah Smith in the lab section for MS206/Molecular techniques. My duties include setting up and leading lab activities, maintaining the lab space, grading assignments, and tending to student needs.

Graduate Research Assistant (MLML/SJSU, Fall 2020-Spring 2021)

Assisting Dr. Amanda Kahn in the Invertebrate Ecology laboratory to characterize a newly discovered, carnivorous, sponge species. My responsibilities included making and analyzing spicule preparations using microscopy, taking whole-sponge and spicule measurements, and recording/compiling sample data.

Fish Laboratory Assistant (SRU, 2017-2018)

Assisting Dr. Simon Beeching in maintaining his research cichlid tanks. My duties included feeding and acclimating fish, maintaining aquaria pumps, and filters.

Microbiology Laboratory Assistant (SRU, 2017-2018)

Working under Dr. Steven Strain to set up laboratory activities including making media for lab sections and maintaining an aseptic laboratory.

Open Ocean Exhibit Intern (The Pittsburgh Zoo and PPG Aquarium, 2018-2019)

Assisting aquarist Ariella Weiner in maintaining the Open Ocean exhibit at PPG Aquarium. My duties included preparing diets for and target feeding the larger aquarium species, tactile training with the zebra sharks, and cultivating the nudibranch species *Berghia stephanieae* used to decrease Aiptasia, the nuisance anemone.

Tutor (SRU, 2017-2018)

Tutoring various biology courses including introductory biology and botany.

Scientific Research Skills

- DNA extraction (Qiagen's DNeasy)— Blood and Tissue kit, PowerMax Soil kit, PowerSoil Pro kit
- DNA purification/quantification— NanoDrop, PicoGreen, Qubit, Gel electrophoresis
- PCR and primer design
- Sponge spicule preparation
- GC-MS/FID
- Aquaria maintenance
- Microscopy
- Statistical and Mapping software proficiencies: R, Minitab, Excel

Certifications

- AAUS Scientific Diver
- First aid certified

Scholarships & Grants

MLML WAVE award
 Dr. Earl and Ethyl Myers Trust
 Rock Opportunity
 SRU Achievement Award
 PASSHE AT&T Scholar
 Mercer County Antique Power Association
 Hilcorp Future Leaders of America
 Rotary District 728

Crisci Memorial Foundation
 Lawrence County Bar Association
 Lawrence County Realtors Association
 Wilmington Area Education Foundation
 Wilmington High School Alumni
 Burger King Scholar
 Junior Miss Self Expression Scholarship

Activities & Volunteerism

- MLML Open House Co-Chair
- AmeriCorps Civic Action Fellow through SJSU Research Foundation
- Member of biology honorary club: Tri-Beta
- Secretary for Student Union of Multicultural Affairs
- Note Taker for SRU's Office of Disabilities
- Mentoring new biology students through the SRU Honors College
- Blood drive Coordinator
- Global Ambassador Program Mentor