

Helene Olsen

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Education

The University of Texas at Austin

May 2021

B.S. Marine and Freshwater Science

Interdisciplinary Certificate in Environment and Sustainability

GPA: 3.78

National University of Singapore

Fall 2019

Study abroad semester

Research Interests

Polar ecology — Seeking a graduate student position in polar ecology, applying my experience with ecology and glaciology to study the effects of climate-induced changes on the polar marine system. I am adept at studying ecological interactions from small benthic animals to larger fish and birds. I have spent many hours in the mangroves in both the Gulf of Mexico and in Singapore researching the effects of climate change on the native biodiversity, and would like to apply that field experience to polar ecosystems. I currently research marine terminating glaciers and their sediment plumes using Python and Google Earth Engine. Learning more about this rapidly changing environment has only amplified my desire to study the effects of the climate induced changes on the polar ecological system.

Research Experience

The University of Texas at Austin - Catania Glaciology Lab

May 2020 - Present

Undergraduate Research Assistant

- Researching the effectiveness of identifying sediment plumes as indicators of glacial runoff remotely using satellite data and Python
- Using Google Earth Engine to make accurate measurements of marine terminating glacial termini in Greenland
- Will present research at end of the year Bridging Disciplines Program (BDP) poster session in front of professors, advisors, and other students

The University of Texas Marine Science Institute - Dunton Lab

Jan 2020 - May 2020

Semester by the Sea Independent Research Student

- Researched ecological and chemical habitat changes associated with mangrove expansion in coastal marsh ecosystems
- Conducted extensive field and lab research collecting and identifying several benthic and epibenthic species
- Wrote a 24 page research paper: "The Grass is Always Greener: Variation in Epifaunal Diversity between Mangrove (*A. germinans*) and Salt Marsh Grass (*S. alterniflora*) Sites in Coastal Marsh Systems"
- Presented research to undergraduates, graduate students, and professors at an end of the year research symposium

The University of Texas at Austin - FRI: Biodiversity Stream

Aug 2017 - Dec 2018

Undergraduate Research Assistant

- Designed an experiment to investigate effectiveness of various natural insect repellents on invasive Red Imported Fire Ants
- Performed DNA extraction and PCR on Red Imported Fire Ants
- Wrote research paper and presented research at the end of the year to FRI (Freshman Research Initiative) faculty and students

Work Experience

The University of Texas at Austin - Resource Recovery

Aug 2018 - May 2019

Zero Waste Workplace Intern

- Educated faculty and staff about zero waste and composting on campus
- Researched and implemented effective zero waste practices
- Facilitated the transition of 3 buildings into zero waste workplaces

Volunteer Experience

Amos Rehabilitation Keep (ARK)

Mar 2020 - May 2020

- Rescued and rehabilitated marine birds and turtles found sick or injured
- Prepared food, cleaned tanks and enclosures, assisted with releases
- Developed skills in handling wild animals

Leadership

UT Marine Science Club

May 2020 - Present

Secretary

- Implementing an events calendar and alumni database
- Keep the club organized by attending officer meetings, responding to emails, taking meeting minutes, planning events, and writing slides
- Host scientific talks given by marine researchers, particularly in underrepresented groups

Marine Ecology PLUS facilitator

Spring 2019

- Tutored 30+ students
- Met with the professor once a week to discuss the material
- Facilitated study groups with slides and discussions once a week

Conference Attendance

American Geophysical Union (AGU) Fall Meeting

Dec 2020

Virtual

5th Southeast Regional Sea Turtle Meeting (SERSTM)

Feb 2020

Corpus Christi, Texas

Texas Regional Alliance for Campus Sustainability Summit (TRACS)

Feb 2019

Austin, Texas

Recycling Right: Creating a Sustainable Campus

- A poster and oral presentation on resource recovery efforts done at UT Austin

Skills

Computer Skills: R Studio, Python, GIS, GEE, MS office, Google Drive

Research Skills: Laboratory, Remote, and Field Experience,
Experimental Design, Scientific Writing, Statistical Analysis

Awards

University of Texas Institute for Geophysics Undergraduate Fellowship

Fall 2020

Spring 2021

University of Texas Honors

Fall 2017

Spring 2018

Spring 2020

Fall 2020
