

Beth Y. Davis

bedavis@csumb.edu | bdavis@mlml.calstate.edu

EDUCATION

California State University Monterey Bay

M.S. Marine Science

2020 —

Oregon State University

B.S. Integrative Biology, Marine Biology Option

2016 — 2020

James Cook University

Study Abroad Program: Marine Biology

Jul-Nov 2018

RESEARCH EXPERIENCE

Research Volunteer – Oregon State University - Menge Lab

STARS Intertidal Changes in Biodiversity Project

Dec 2019-

- Analyze photos taken annually at established field sites to calculate changes in percent cover and abundance of intertidal species in response to decline in predator *Pisaster ochraceus*

Coralline Algae Identification and Acidification Project

Nov 2018-

- Tested genetic methods for adaptation to coralline algae
- Extracted and sequenced genomes to create phylogenetic trees and identify samples
- Analyzed photos to determine percent cover and abundance of major algae and invertebrate

Metadata Curator – Genomic Observatories Metadatabase (GEOME)

Jul-Aug 2020

- Conduct extensive literature reviews to collect missing geospatial and temporal data to create a public-access metadata library able to link genomic and ecological data

Research Volunteer – Oregon State University - Menge Lab

Field Collection Volunteer

Jun '18 – Jun '20

- Monitored long term research projects in the intertidal
- Established new plots for long term research
- Worked as part of a team to collect data and monitor experimental plots

Marine Ecology Intern - University of Maine – Steneck Lab

Lobster Size Frequency Study

Jun-Aug 2019

- Collected lobster size and sex data on SCUBA across numerous Maine regions
- Compiled, organized, and analyzed size frequency and density data from the dive team

Student Research Assistant – Oregon State University - Barreto Lab

Copepod Heat Tolerance Study

Aug '17- Jun '19

- Used small animal husbandry techniques to maintain multiple stock lineages of *Tigriopus californicus* for usage in lab experiments
- Carried out heat shock experiments to determine the heritability and sex differentiation of temperature tolerance genes

Student Research, Oregon State University, Department of Integrative Biology

Occurrence and Trophic Transfer of Microplastics Study

Jun 2018

- Isolated microplastics from mussels and whelks from the Oregon intertidal zones
- Used statistical analysis to determine the presence of spatial and body mass relationships with microplastic abundance
- Created contamination protocols to isolate samples from air and clothing contamination

Student Laboratory Assistant – Oregon State University - Denver Lab

Bodhi Tree Project

Jan '17-May '18

- Used genomic techniques to identify potential DNA barcoding loci in *Ficus religiosa*
- Created germination and care protocols for in-lab specimens

SKILLS

- Proficiency in R Statistical Programming, ArcGIS, Microsoft Office, PhotoQuad
- Experience in fish and invertebrate sampling methods using seining, SCUBA surveys, trawling, and submarine dives
- Proficient in the handling and operation of small boats

DIVE EXPERIENCE

- o 71 total dives
- o Max depth: 103 ft (recreational)
- o 31 cold water dives (47-55F)
- o 40 warm water dives (70-80F)
- o Proficient with lift bags, reels, and search patterns
- o Experience collecting video, picture, transect, and quadrat data on SCUBA
- o SSI Open Water – Jul 2018
- o SSI Advanced Open Water – Jul 2018
- o PADI Rescue – Sept 2018
- o O2/First Aid/CPR – Sept 2018
- o AAUS Scientific (60ft)– June 2019
- o NAUI Master – June 2019
- o SDI/TDI Nitrox – Jun 2019

