

Haley Addison Davis  
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## EDUCATION

### **B.S. Environmental Science, Concentration in Natural Science, Minor in Biology**

Baylor University, Waco, Texas

2016-2020

GPA: 3.86

## RESEARCH EXPERIENCE

### **Research Technician – Bryan Brooks**

Baylor University Department of Environmental Science; Waco, Texas

*February 2021 -Present*

Collaborated with state and local partners to weekly collect waste water samples representative of populations across Texas; Quantified Covid-19 viral RNA load using QPCR; Assessed the stability of Covid-19 RNA in preserved samples over time; Coordinated sample collection

### **Field Technician – Mandi Gordon**

Environmental Institute of Houston; Clear Lake, Texas

*June -October 2020*

Conducted coastal surveys for the EPA's 5-year national coastal health assessments; Used nationally standardized sampling methods to collect fish tissue, water, sediment, invertebrate, and bacterial samples from designated sample sites; Recorded data in collaborative EPA sample collection app; Organized and tracked daily shipment of frozen and chilled samples from various field locations; Conducted field research on extensive travel for 4 consecutive months, Operated and trailered 21-26 ft vessels.

### **Hollings Scholar Undergraduate Researcher – Dr. Cheryl Woodley**

NOAA Hollings Marine Lab, Charleston, South Carolina

*May-August 2019*

Wrote protocols for and conducted 8 ecotoxicological experiments exposing 5 coastal marine organisms to various concentrations of a systemic pesticide; Maintained live animal (including coral) culture; Delivered oral presentation at NOAA Education Symposium in 2019 and at the Ocean Sciences Meeting in 2020.

### **Undergraduate Research Assistant – Dr. Cole Matson**

Baylor University Department of Environmental Science; Waco, Texas

*February 2017-June 2020*

Prepared and analyzed samples for ICPMS as a part of a multi-university mesocosm ecotoxicology study regarding nanoparticulate metal uptake; Led independent project in documenting the developmental stages of Gulf Killifish (*Fundulus grandis*); Conducted preliminary toxicological studies to determine embryonic resilience to PCB compounds in *F. grandis*; Assisted in conducting studies to better understand the toxicological response of *F. grandis* to PCB and PAH compounds.

### **Baylor Aquatics System Research - Dr. Thad Scott and Dr. Jacquelyn Duke**

Baylor University Department of Biology; Waco, Texas

*Fall 2018- Spring 2019*

Took on a lead role in the 2018-2019 cohort of Baylor's Aquatic Systems Research program; Researched the anaerobic activity of facultative anaerobes in freshwater systems in response to varying nutrient levels and suspended sediment concentrations; Led community outreach educating the public about important biological concepts; Orally presented results at ASLO 2019 conference.

### **Coral Reef Intern - Jennifer Keck**

Roatan Institute for Marine Science; Roatan, Honduras

*July - August 2018*

Led independent research project on the biodiversity of reef corals and correlated biodiversity of foundational corals; Statistically analyzed effect of Marine Park protection on fish and coral biodiversity; Identified Caribbean sponge, coral, invertebrate, and fish scientific names.

## WORK AND INTERNSHIP EXPERIENCE

### **Virtual Student Federal Service Intern**

NOAA Flower Garden Banks National Marine Sanctuary; Waco, Texas // Galveston, Texas

*September 2019-September 2020*

Created content for Flower Garden Banks National Marine Sanctuary's Facebook and Twitter pages as an internet-based intern; Used NOAA's photo library to illuminate the importance of marine sanctuaries and the creatures of the Flower Garden Banks; Created content for FGBNMS website.

### **American Chemical Society Conference of the Parties Representative**

Waco, Texas // Madrid, Spain

*August 2019-May 2020 // December 2019*

Selected as one of 9 undergraduate students to represent the American Chemical Society at the 25th annual United Nations Framework Convention on Climate Change Conference of the Parties; Blogged and used social media to increase climate change literacy in the college-aged population.

### **Aquatics Intern/volunteer**

Cameron Park Zoo; Waco, Texas

*May 2017 - Present*

Cared for coral culture tanks; Dove and cleaned exhibit tanks; Created presentations to engage and inform public; Prepared diets and enrichment for fish; Logged daily activities; Assessed water chemistry.

## ABSTRACTS

- **Davis, H.**, Peterman, K., Foy, G.: The cost of increasing atmospheric CO<sub>2</sub> on the economy and disaster mitigation of island nations. Prepared for the ACS 2020. Philadelphia, Pennsylvania
- **Davis, H.**, Bain, F., Walkup, R., Mansfield, C. M., Matson, C.: Metabolic rate and developmental pace in pollution-tolerant populations of Gulf killifish (*Fundulus grandis*). Poster Presentation. SETAC 2020 Young Environmental Scientists meeting. Waco, Texas
- **Davis, H.**, Woodley, C., May, L., Barnet, A., Miller, C.: Coral reef organisms: differential sensitivities to an agricultural pesticide. Oral Presentation. SETAC 2020 Young Environmental Scientists meeting. Waco, Texas. 2020 Ocean Sciences Meeting. San Diego, California. NOAA Education Symposium 2019.
- **Davis, H.**, Costanza, C., Alderman, D., Canava, K., Goehring, L., Jaffery, R., Leng, B., Spore, P., Duke, J., Scott, T.: Denitrification by facultative anaerobes in oxic waters. Oral Presentation.

Association for the Sciences of Limnology and Oceanography. 2019 Aquatic Sciences Meeting. San Juan, Puerto Rico.

- Canava, K., Spore, P., Alderman, D., Costanza, C., **Davis, H.**, Goehring, L., Jaffery, R., Leng, B., Duke, J., Scott, T.: Denitrification rates of facultative anaerobes in oxic turbid waters: a study of microhabitats on suspended sediments. Oral Presentation. Association for the Sciences of Limnology and Oceanography. 2019 Aquatic Sciences Meeting. San Juan, Puerto Rico.
- Jaffery, R., Leng, B., Alderman, D., Canava, K., Costanza, C., **Davis, H.**, Goehring, L., Spore, P., Duke, J., Scott, T.: The combined effect of suspended sediment and nitrate concentrations on water column denitrification rates of facultative anaerobes. Poster Presentation. Association for the Sciences of Limnology and Oceanography. 2019 Aquatic Sciences Meeting. San Juan, Puerto Rico.
- Alderman, D., Goehring, L., Canava, K., Costanza, C., **Davis, H.**, Jaffery, R., Leng, B., Spore, P., Duke, J., Scott, T.: Water Column Denitrification by facultative anaerobes increases with organic matter and nitrate concentration. Poster Presentation. Association for the Sciences of Limnology and Oceanography. 2019 Aquatic Sciences Meeting. San Juan, Puerto Rico.

## AWARDS AND HONORS

NOAA Hollings Scholar (2018-2020)

Baylor's Environmental Science Departmental Scholarships (2017-2020)

Baylor President's Gold Scholarship (2016-2020)

Excellence in Student Leadership Award (Spring 2018)

Student Engagement Scholarship (2016-2020; *four-time recipient*)

Ampersand Honor Society (2017-2020)

Dean's list (2016-2020; *semesterly*)

## SKILLS

- General lab research skills
  - Coral tissue regeneration assay
  - Dinoflagellate extraction
  - Sample preparation and analysis using ICPMS, MIMS, and GCMS
  - Gene extraction and QPCR
  - Fluorometric and colorimetric assays
  - Familiarity with electron microscopy
- Field Research Skills
  - Operating, working from, and trailering vessels 26' and under
  - Preliminary processing and preservation of biological samples
- Dive Skills
  - Underwater navigation
  - Deploying and surveying underwater line transects
  - Maintenance of underwater coral nurseries and subsequent outplantation
  - Atlantic/Caribbean fish, coral, and sponge identification
  - Search and recovery, knot tying
  - Night diving

- Software Skills
  - Coral Point Count
  - GIS, GPS integration
  - Basic Familiarity with R
- Science Communication and Teaching
- Leadership
- Project Planning and protocol design
- Marine vertebrate and invertebrate husbandry
- Spanish comprehension and translation
- Website creation, editing, and design

## CERTIFICATIONS

### **Open Water Dive Instructor- PADI (and all pre-requisite certifications)**

Cozumel Dive Academy; Cozumel, Mexico

Jan 2021

### **Texas and Louisiana Boater Safety**

Boat US; online

*Spring 2020*

### **GIS**

Baylor University; Waco, Texas

*Spring 2020*

- ESRI Basics of Map Projections
- ESRI Intro to Spatial Analysis
- FEMA Emergency Management
- UCAR Geodesy and Mapping

### **SSI Nitrox Certification**

Salty Endeavors; Cozumel, Mexico

*January 2020*

### **Riparian Zone Management**

Texas A&M AgriLife; Salado, Tx

*March 2018*

### **Texas Watch Stream-Team Citizen Scientist/Volunteer**

Baylor CRASR; Waco, Texas

*February 2018*

### **Laboratory Safety for Researchers, Animal Worker Health and Safety, Basic Biosafety Training**

Baylor University; Waco, Texas

*February 2017- Present*