

# Morgan Youngblood Curriculum Vitae

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**USCG Master 25GT w/ Towing Endorsement**  
**Reference #: 872278**

**Issued: May 2025**

## Education

**Bachelor of Science in Marine Science, University of Hawai'i at Hilo**  
**Pikes Peak Community College at Colorado Springs**

August 2021-May 2025  
August 2019-May 2021

## Honors, Awards, & Accomplishments

**National Science Foundation GRFP Honorable Mention (2025)**  
**STEM Research Honors Certificate Program (2025)**  
**Marine Option Program Certificate Specialty in Water Quality Research (2025)**  
**President, Marine Technology Society, University of Hawai'i Hilo Chapter (2025)**  
**College of Natural and Health Sciences Excellence Award in Marine Science (2024)**  
**University of Hawai'i Marine Option Program Certificate (2024)**  
**Dean's List (2023-2025)**  
**National Oceanic and Atmospheric Administration Ernest F. Hollings Scholarship (2023)**

## Relevant Coursework

- Small Boat Operations & Research
- Oceanography and Lab
- Marine Biology-Diversity and Lab
- Statistical Apps in Marine Science
- Applied Informatics
- Ecology and Evolution
- Writing for Science and Technology
- Teaching Marine Science
- Calculus 2
- Global Change
- Geology
- General Chemistry 2 and Lab
- Organic Chemistry 2 and Lab
- Physics 2 and Lab
- Pelagic Methods and Analysis and Lab
- Geological Oceanography
- Chemical Oceanography
- Physical Oceanography
- Public Speaking

## Research Experience

**Modeling Fish Community Structure in Upwelling Driven Systems**  
University of Hawai'i Hilo Senior Thesis Capstone Project

August 2024-Present

- Developed interactive Google Earth Engine applications to visualize multi-decadal datasets
- Architected automated R-scripts to synthesize multi-decadal biogeophysical datasets
- Implemented rigorous QA/QC protocols across cross-sector scientific databases.
- Forecasted fish community dynamics in response to environmental variables
- Implemented geospatial techniques to visualize community distribution patterns
- Generated insights to inform ecosystem-based management strategies

**Apex and Mesopredator Habitat Fidelity and Movement Analysis**

May 2024-May 2025

NOAA Hollings Internship Channel Islands National Marine Sanctuary

- Executed QA/QC and synthesis of decade-long Innovasea acoustic telemetry datasets
- Engineered R-based data pipelines to optimize inter-organizational big data management
- Managed cross-sector data-sharing protocols with West Coast species monitoring networks
- Authored technical manuscript for the National Marine Sanctuary network
- Assisted with on-board equipment retrieval and deployment

**Kona Coast Water Quality Assessment Project**

January 2023-May 2024

Marine Option Program (MOP) Student Lab and Field Assistant

- Conducted precision field sampling and laboratory analysis of coastal water quality parameters
- Cultured *Enterococcus faecalis*
- Performed geospatial analysis using ArcGIS
- Performed regulatory compliance analysis against State of Hawai'i public health standards

- Calibrated and operated precision instruments: YSI, Turbidimeter, pH Meter
- Prepared samples for Chlorophyll a,  $\delta^{15}\text{N}$ -, and  $\delta^{18}\text{O}$ -NO<sub>3</sub>- analysis

## Presentations

<b>Fish Assemblages in Wind-Driven Upwelling Zones in California: A Long-Term Perspective</b> AFS Inaugural meeting for the Pacific Islands chapter Honolulu, Hawai'i	April 2025
<b>Fidelity and Flux: Comparative Analysis of Marine Predator Residency</b> AAUS Diving for Science Symposium Seattle, Washington	March 2025
Western Society of Naturalists 105 <sup>th</sup> Annual Meeting Portland, Oregon	November 2024
NOAA Office of Education Science and Education Symposium Silver Spring, Maryland	August 2024
<b>Investigating Environmental Health and Sustainable Wastewater Infrastructure In Kailua-Kona, Hawai'i, USA</b> University of Hawai'i Marine Option Program Symposium Hilo & Kahului, Hawai'i	April 2024

## Contributions

### Presentation:

**Title:** Satellite and Acoustic Telemetry Reveals Deep Dives and Long Range Movements of the Bat Ray (*Myliobatis californica*) July 2024  
**Role:** Contributing Author  
**Speaker:** Dr. Ryan Freedman

### Publication:

**Title:** Predicting Sea Level Rise Impacts on Coastal Wastewater Infrastructure and Water Quality for Adaptive Planning and Increased Coastal Habitat Resilience January 2023-December 2024  
**Role:** Technical Field and Lab Assistant  
**Mentors:** Dr. Tracy Wiegner, Dr. Steven Colbert, Ihilani Kamau

## Work Experience

**Hilo Ocean Adventures** August 2022-May 2026  
 Captain/ Marine Operations Lead

- Execute commercial maritime operations for high-cadence marine excursions
- Captain and lead crew for contracts serving up to 12 passengers
- Implement safety protocols, pre-departure checks, and hazard assessments
- Manage operations, logistics, and briefings for scientific and recreational charters
- Mentor and direct junior crew in marine safety and field protocols

**UH Hilo Boat Program** November 2022-August 2025  
 Instructional/ Research Assistant

- Assisted captain during instructional or research cruises
- Deployed sampling gear: YSI, Plankton Net, Core Sampler, Niskin Bottle, Light Meter, Castaway CTD
- Deployed remote sensing equipment: PACIOOS Water Quality Monitoring Buoy
- Performed boat maintenance and preparation
- Handled lines

**UH Hilo Marine Science Department** August 2023-May 2025  
 Pelagic Methods and Analysis Field Lab Assistant

- Collaborated with professors on a weekly basis
- Prepared/calibrated sampling equipment
- Printed and reviewed coursework materials
- Transported students and gear to/from the field site
- Aided students in boat, lab, and field work
- Maintained order and cleanliness in department facilities

**Pikes Peak Bike Tours, Colorado Springs, CO** March 2018-August 2022  
 Business Development Associate & Lead Guide

- Expanded local business relations and partnerships
- Explored untapped markets through product development
- Prioritized quality of service and ethical use of natural resources
- Managed guide hiring and training protocols

- Oversaw backcountry tours for corporate groups of up to 50

**Sea Quest, Kona, Hawai'i**

December 2016-November 2017

In-Water Boat Crew

- Accrued extensive boat time
- Operated in a variety of conditions, including night, low visibility, and high surf
- Conducted manta ray snorkel tours
- Crewed snorkel excursions in historic and culturally significant locations

**Kona Boys, Hawai'i**

October 2016-March 2017

Ocean Guide

- Steered and directed *Wa'a* Hawaiian outrigger canoe tours
- Led kayak snorkel tours in historic and culturally significant locations
- Instructed stand-up paddle boarding lessons

**Technical Skills**

**Data Analysis & Software**

- Acoustic Telemetry Data Synthesis (Innovasea)
- Acoustic Telemetry: Innovasea VR2X, OTN network protocols
- Google Earth Engine: JavaScript API, ui.Panel, live app deployment
- Statistical Analysis: R (sf, terra, ncd4, ggplot2, mgcv, FSSgam, MuMIn, tidyverse)
- Geospatial Analysis: ArcGIS Pro, ArcGIS Online, Python (geopandas, pandas)
- Remote Sensing: MODIS, NOAA CDR Pathfinder, ETOPO1, PacIOOS/PIRAT
- Version Control: Git, GitHub (sci-youngblood)
- Microsoft Office Suite: Word, Excel, PowerPoint

**Laboratory Techniques**

- Spectrophotometry: Silica, Chlorophyll a analysis
- Total alkalinity analysis through titration
- Sample preparation for Chlorophyll a,  $\delta^{15}\text{N}$ -, and  $\delta^{18}\text{O}$ -NO<sub>3</sub>- analysis

**Marine Operations & Field Work**

- ROV & USV field observation (Blue Robotics)
- Launch and recovery systems
- Powerboat operations and maintenance
- Deployment and retrieval of buoyed remote sensing technology
- Water quality monitoring using precision equipment
- Calibration of sampling devices: YSI, Refractometer, Turbidimeter, pH Meter

**Certifications**

**PADI Advanced Open Water**

Completed: October 2023

PADI #: 23040D9295

**Lifeguarding with CPR/AED for Professional Rescuers and First Aid**

Completed: August 2025

Conducted By: Red Cross

Certificate ID: 012DDQ6

**Wilderness First Responder**

Completed: March 2019

Conducted By: Wilderness Medical Associates International

Course ID: 29286