

# Abigail G. Grassick

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## Education

### Cornell University

Ithaca, NY

August 2023-Current

Ph.D. in Computational Biology

*Activities:* Graduate Student Outreach Program, Club Water Polo, CALS Diversity Equity and Inclusion, Graduate Women in Science

*Relevant Coursework:* Dynamic Models in Biology, Data Driven Models in Biology

### Boston University

Boston, MA

August 2019-May 2023

B.A. in Marine Science

Minor in Biology

GPA: 3.81 | Deans List: *Spring 2020, Fall 2020, Spring 2021, Fall 2021, Spring 2022, Fall 2022, Spring 2023*

*Activities:* Beta Psi Omega Professional Biology Fraternity (E-Board: Service Chair, Judiciary Chair), Kilachand Honors College Peer Mentor, BU Emerald: Staff Writer, Club Water Polo

*Relevant Coursework:* Marine Genomics, Evolution, Evolutionary Ecology, Marine Urban Ecology, Quantitative Fisheries

Analysis, Coastal Ecosystems, Tropical Marine Invertebrates, Aquatic Optics and Remote Sensing, Organic Chemistry, Genetics, GIS, Physical Climatology, Marine Biogeochemistry

*Honors and Awards:* Cum Laude, Honors in Major, College Prize for Excellence in Marine Science

## Research Experience

### Hein Lab

August 2023 – Present

PhD Researcher

- Designed and implemented field protocols for data collection in Curaçao
- Created a computer vision model to identify various species of fish found in field data
- Applies machine learning methods to ecological data

### SEA

June- August 2023

Visiting Scientist

- Oversaw the deployment and processing of 113 net deployments for the collection of biological samples in the Central Pacific
- Mentored 9 students' scientific research projects, helping them develop research questions and appropriate methods, analyze data, and write scientific reports on their findings.
- Prepared biological samples for travel and shipping.
- Participated in other sailing tasks such as sail handling and helming as needed.

### Honors Thesis

Defense Spring 2023

*"Co-associates among invertebrate plankton and larval fishes in the Phoenix Islands"*

Committee members: Dr. Randi Rotjan, Dr. Ethan Deyle, Dr. Les Kaufman

- An assessment of the assemblage patterns and drivers behind ichthyoplankton and invertebrate zooplankton across 5 years in the remote pacific.

### Rotjan Marine Ecology Lab

January 2020-Present

Undergraduate Researcher

Boston, MA

PIPA Plankton Sorting: Project Lead

- Expert in morphological taxonomic identification of invertebrate zooplankton and larval fish from one of the least-explored pelagic ocean habitats in the world (Remote central equatorial Pacific)
- Assisted in data management for hundreds of samples across 7 years of sampling effort.
- Quantified planktonic assemblages and biodiversity.
- Assisted in the development of quality control procedures to ensure data accuracy.

- Conducted interviews as well as the hiring and training of new Undergraduate researchers.
- Managed 15 undergraduate students on the project and assists in their needs for project design and proposal preparation.
- Participation and presentation of preliminary results during lab meetings

#### **Boston University Marine Semester 2021**

- Utilized RTK and remote sensing data to assess and characterize the spread of Potholes in the Great Marsh
- Defined regions of pothole growth.
- Analyzed morphological differences between mangrove and reef coral transplants to assess morphological plasticity.
- Modeled the impacts of parrotfish on the existence of multiple algal-stable states in reef ecosystems.
- Employed the use of various field techniques to assess the health and wellness of urban ecosystems in the Boston Area

#### **Service**

##### **Grasshopr Fellow**

*Cornell Einhorn Center*

**Spring 2024**

Ithaca, NY

- Developed and taught an introductory programming course for middle and high school students at a low-income school with low performance in math and science
- Tailored curriculum to students with Individualized Education Programs and special education needs
- Engaged with local schools and teachers to bring research to their classrooms in an accessible way
- Completed 50+ direct and indirect community service hours

##### **The Florida Aquarium: Center for Conservation**

*Responsible Piers Initiative Intern*

**May 2021-August 2021**

Apollo Beach, FL

- Conducted surveys on Florida piers regarding sea turtle sightings and by-catch.
- Determined the need for and installs educational signage on piers based on data collected at each pier location
- Increased public engagement and awareness of the Florida Aquarium and Center for Conservation through education on their programs and involvement in the community.

#### **Publications and Presentations**

**A Grassick** and R Rotjan. *In preparation*. Co-associations among larval fishes and invertebrates in the Phoenix Islands Protected Area.

**Grassick, A.**, 2023. Examining co-associations among larval fishes and invertebrates in the Phoenix Islands. Boston University Marine Program Honors Symposium. Boston, Ma.

#### **Awards and Honors**

College Prize – *awarded to one outstanding student for their efforts in research, leadership, and service*

#### **Other Skills, Certifications, and Interests**

##### **Field Work:**

Sample Preservation, Pelagic/Intertidal/Coastal Ecology, RTK, Sailing, Underwater Videography, Field experimentation (underwater), Freediving

##### **Language/Communication:**

Spoken and written French, copy editing, article writing, scientific literature searching, scientific writing, scientific communication

**Statistical and Spatial Software:** R, MATLAB, JMP, ArcMap, Python, QGIS, PRIMER-e

**Image Processing:** Adobe Photoshop, ImageJ

Favorite marine organism: *Phronmia sedantaria*