

Newsletter

SPRING 2025

DIRECTOR'S NOTE

Dear Alumni and Friends of Boston University Marine Program,

Welcome to this year's BUMP newsletter. We hope that this annual newsletter will provide you with an update on our wonderful community of undergraduate students, graduate students, researchers, faculty, staff, and alumni, as well as an insight into all of the exciting goings on in our world class marine program. If you have your own updates, please do send them to us and we will try to include them in our next newsletter.

BUMP has grown a lot in the last few years. The number of faculty actively engaged in the program has increased to over 20, primarily from Biology and Earth and Environment, but also from Archaeology and the College of General Studies. The number of Marine Science majors and minors has more than doubled to over 140. The number of courses offered in our unique Marine Semester has increased to 16: every student participates in the Marine Semester, and we now accommodate 60 students every year!

The Marine Semester is students' number one reason to study Marine Science at BU and is the highlight of our students' experience when they are at BU. Some courses impose financial challenges for some of our students, but we are working hard to address those challenges, as you will read in this newsletter. The Marine Semester makes the most of our fantastic marine teaching labs on campus, the marine and coastal environments in New England, as well as our field site at Calabash Cay Field Station and partnership with the University of Belize, which continues to go from strength to strength.

We hope this spring finds all of you doing well, and we look forward to hearing your news. Kind regards,



Pete Buston
Associate Professor of Biology
Boston University Arts & Sciences
Director of the BU Marine Program



The BU Marine Program remains committed to providing a full field experience for all of our students. We received a generous donation to start an Undergraduate Gear Fund, which allows us to loan snorkel gear, dive equipment, and more to undergraduates enrolled in the Marine Semester. With the help of the Biology Department, we were able to build a locker where we can store this gear and have it accessible to students in need. "I'm grateful to have been provided gear when I wouldn't have been able to supply myself... and I'm so glad I was able to get to go to Belize!"

Student Spotlight



Ilana Jacobs (CAS'25) is a Marine Science major graduating this year. She started undergraduate research in the Fulweiler lab in her sophomore year, choosing to focus on urban greenhouse gas fluxes. This spring, Ilana will defend her senior honors thesis on the work she has done. Ilana was awarded a Lara Vincent Research Award, which will allow her to present her research at the New England Estuarine

Research Society Conference.

Outside of BU, Ilana completed an REU at the University of Rhode Island's Graduate School of Oceanography, and conducted research on the genetics of ciliates as a guest student at WHOI and Harvard, for which she won the BU Provost's Scholars Award in 2023.

After graduating, Ilana will begin a graduate program in earth and environmental science at Boston College with focus on chemical and biological oceanography.

In May 2024 we celebrated our Marine Science graduates with our intimate **Marine Science Convocation**.

Congratulations to the class of 2024! And thank you to everyone who made BUMP Convocation such a great event. We look forward to celebrating the class of 2025 in May!



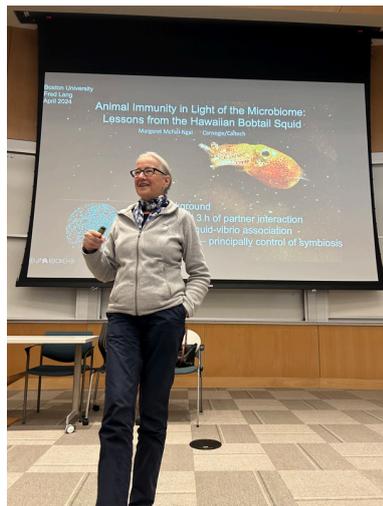
Wally Fulweiler, former Director of BUMP and Professor of Earth & Environment received the 2024 Simons Foundation Fellowship

The [Simons Foundation Pivot Fellowship](#) supports researchers who have a strong track record of success and achievement in their current field, as well as a deep interest, curiosity, and drive to make contributions to a new discipline, in fields of natural sciences, mathematics, engineering, data science and computer science at academic to low-cost technology for democratizing science.

Dr. Fulweiler will use the Simons Foundation Pivot Fellowship to lay the foundations of a research program in data science. She will be mentored by Mark Crovella, a professor in the Department of Computer Science at Boston University and an expert in data science and machine learning, with a focus on computational biology, social impacts of computing and computer networking. Together, they will use cutting-edge data science methods to answer the following questions: How do we distinguish quantitatively between different types of coastal systems? How can we place the discussion of coastal system types into a taxonomy with objectively testable criteria? These questions are important because coastal ecosystems have a disproportionate impact on the functioning of our planet and are also on the front line of human impacts. By using the available data and harnessing the power of machine learning models, they will define emergent ecosystem properties for the creation of a data-driven taxonomy for coastal environments.



We were honored to host Margaret McFall-Ngai as the 2024 Lang Lecturer.



The Lang Lecture is an invited lecture series, started by BUMP faculty in honor of Fred Lang, an invertebrate physiologist. In April 2024, McFall-Ngai met with faculty, undergraduate, and graduate students in BUMP. She delivered a lecture titled “Animal Immunity in Light of the Microbiome: Lessons from the Hawaiian Bobtail Squid.” We look forward to hosting Barbara Block, as our 2025 Lang Lecturer on April 10.

Giving Day 2024 was a huge success! Thanks to the generous donations of Bryan Biniak (CAS'90) and 22 other supporters we raised over \$20,000 to enhance the experience of students at the conducting research in marine science.

This year, thanks to an anonymous donor, we have a dollar for dollar match, up to \$5000.

[Giving Day 2025 is on April 9.](#)

Please save the date!

**GIVING
DAY 2025**

HONORS & AWARDS

Ethan Deyle and **Sucharita Gopal** awarded 2024 Pardee Center Faculty Research Fellowship

Fabio Buitrago (GRS'27) wins the Ocean Torchbearer Award, recognizes PADI Members who are leaders in their communities, actively working toward a better balance between humanity and the ocean

Emma Sanchez (CAS'26) awarded the Zale and Saxon Memorial Basic Dive Training Grant, sponsored by friends of Evelyn and Suzie Dudas from the Women Divers Hall of Fame (WDHOF)

Cat Hauser (GRS'29) awarded the Advanced Dive Training Grant - Professional Diving, sponsored by Women Divers Hall of Fame

JK Da-Anoy (GRS'26) won the 2025 Alistair Economakis fellowship, made possible through the generosity of Alistair Economakis (CAS'94, GRS'00), for his project, "Sex-specific innate immunity in cnidarians."

Ninon Martinez (GRS'28) won the 2025 Dana Wright Award, for their project, "Corals Across Habitats: Understanding Coral Survival in Non-Reef Habitats"

Congratulations to the winners of the 2024 Director's Award for extraordinary efforts to help the BU Marine Program:

- **Ethan Deyle**, Research Assistant Professor of Biology
- **Zoe Hughes**, Research Assistant Professor of Earth & Environment

Lili Vizer (GRS'26) received the 2025 Outstanding Teaching Fellow in Marine Science Award

Congratulations to the winners of the 2025 Warren McLeod Awards!

- **Pedro Figueroa** (GRS'29), "Upwelling Pathways in a Submarine Canyon in the Presence of an Undercurrent"
- **Jacob Jaskiel** (GRS'26), "Investigating Larval Ecology and Population Dynamics of Tropical Tunas in the Central Equatorial Pacific"
- **Hangjie Lin** (GRS'28) "Understanding Suspended Sediment Dynamics in U.S. Coastal Bays: A Continental-scale Analysis of Variability, Drivers, and Vulnerability using Remote Sensing"
- **Amirhossein Noori** (GRS'28), "Investigating Coastal Forest Retreat: Impacts of Sea Level Rise and Storm Surges on Vegetation Dynamics"
- **Peter Schroedl** (GRS'26), "Exploring the Microbial Role in Recently Discovered Dark Oxygen Production by Clarion Clipperton Zone Polymetallic Nodules"
- **Lili Vizer** (GRS'26), "Phenotypic Plasticity Associated with the Adoption of Social Roles in the Clownfish"

Congratulations to the Undergraduate Students who received awards at the 2024 convocation ceremony!

- Honors Research:
 - **Douglas Alvarado** (CAS'24, GRS'24)
 - **Brenden Blakley** (CAS'24)
 - **Reece Ciampitti** (CAS'24)
 - **Zoe Erturk** (CAS'24)
 - **Grace Hicks** (CAS'24)
 - **Flora Kerner** (CAS'24)
 - **Reid Thomson** (CAS'24)

- Lara Vincent Award: **Grace Hicks** (CAS'24)
- Senior College Prize in Marine Science: **Abigail Sloat** (CAS'24)
- Binland Lee Service Award: **Taylor Walker** (CAS'24)



[Researchers address ocean paradox with 55 gallons of fluorescent dye.](#) Xiaozhou Ruan and collaborators observed diapycnal upwelling within a sloping submarine canyon. (Wynne-Cattanach, et al, 2024).

[Algae, Disease-Bearing Ticks, Erratic Snowfall, Tainted Oysters, Costly Insurance, Extreme Temperatures—Is Climate Change Ruining Our New England?](#) Bruce Anderson provides valuable insights into the ecological impacts of climate change in New England. (Hayhoe, et al, 2006).

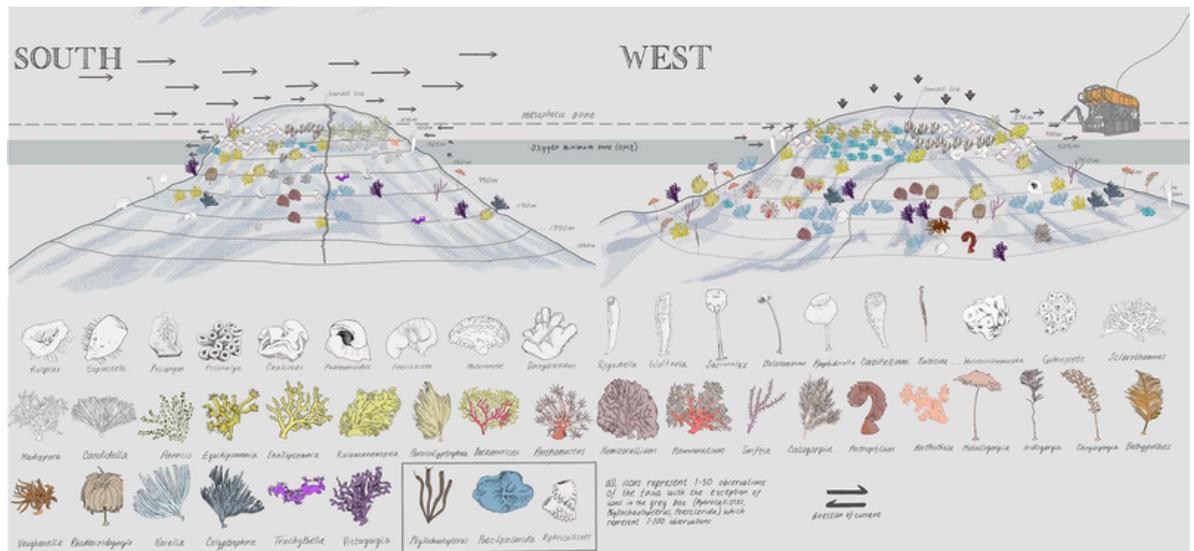


[Nature as Teacher.](#) Sarah Davies featured in Arts & Sciences Magazine. Sarah Davies has spent over two decades studying coral reefs and their symbiotic relationship with algae. Davies' research focuses on how corals are evolving to survive in climate change conditions, and she draws parallels between coral adaptation and human resilience in the face of ecological challenges. Her work underscores the lessons humans can learn from nature's evolutionary responses to climate stress. (Davis Reimer, et al, 2024).

[Oxygen Produced in the Deep Sea Raises Questions about Extraterrestrial Life.](#) Jeff Marlow and collaborators hypothesize that seawater electrolysis may contribute to dark oxygen production on the polymetallic nodule-covered abyssal seafloor in the Pacific Ocean (Sweetman, et al, 2024).



[See the First Detailed Illustration of an Ancient Deep-Sea Mountain.](#) Brian Kennedy (GRS'), Randi Rotjan, and colleagues have created the first detailed artistic illustration of an ancient deep-sea mountain in the Pacific, revealing its rich biodiversity and geographic features through data collected via remotely operated vehicles. (Kennedy, et al, 2025).



New Faculty



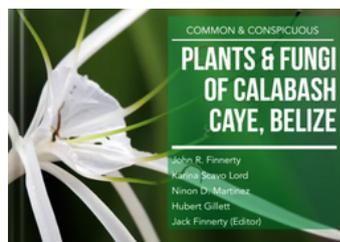
Karina Scavo Lord joined the faculty as a Lecturer in Biology and the Boston University Marine Program. She currently teaches two classes in the Marine Semester: Scientific Diving and Corals Across the Seascape, and two classes each spring semester: Forest Ecology and Biology of Global Change.

Dr. Scavo Lord works closely with the [Finnerty lab](#) and [Novak lab](#) on two main research themes: coral adaptation and resilience and eelgrass resilience and restoration.

Her research on coral adaptation focuses on coral resistance and resilience in light of anthropogenic local and global stressors. Specifically investigating the role that mangroves and other non-reef habitats (e.g., seagrass meadows) play in coral survival and evolution. This work contributes to understanding the ecological interdependencies within the tropical seascape and highlights the potential for these habitats to serve as refugia or “resilience reservoirs” for corals under threat from global change.

Dr. Scavo Lord’s research on eelgrass resilience and restoration focuses on investigating the physiological responses and genomic underpinnings of thermal tolerance of populations of the eelgrass (*Zostera marina*) across the eastern U.S. She aims to understand if and how these populations adapt to rising temperatures and variable environmental conditions, which has direct implications for conservation and habitat restoration. This research not only provides insights into eelgrass resilience but also informs the design and implementation of effective restoration and monitoring programs to support the health of coastal ecosystems.

New Books



Dr. John Finnerty, Dr. Karina Scavo Lord, Ninon Martinez (GRS’28), and Hubert Gillett of Turneffe Atoll Sustainability Association, recently announce the availability of their new book — the first of a planned series on the natural history of Calabash Caye, Belize.



Dr. Suchi Gopal has published her book, titled “The FinTech Revolution: Bridging Geospatial Data Science, AI, and Sustainability” (Springer, 2024), exploring how financial technology, geospatial data science, and artificial intelligence are converging to address the most pressing global challenges of our time: climate change and sustainability.