

Newsletter

SPRING 2024

DIRECTOR'S NOTE

Dear Friends and Alumni of the Boston University Marine Program,

Welcome to our first-ever 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 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 five years. The number of faculty actively engaged in the program has increased to over 20, primarily from the departments of Biology and Earth & 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 ranks as students' number one reason to study Marine Science at BU and also ranks as 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 later in this newsletter. The Marine Semester makes the most of our fantastic marine teaching labs on campus and the marine and coastal environments of New England, as well as our field site at Calabash Cay Field Station and partnership with the University of Belize (exciting news on that below).

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
Director of the BU Marine Program



Field courses in Belize have long been a highlight of our program. In 2012, we started using the University of Belize, Calabash Caye Field Station for these courses. Since then, the field station and its staff have been a vibrant and integral part of our program, and the field courses have been life changing for many of our students. We are thrilled to announce that as of April 1, 2024, Boston University and the University of Belize have signed a formal partnership. This formal partnership provides a solid foundation on which the two institutions can build stronger, more integrated, research collaborations and educational opportunities.

Student Spotlight



Ninon Martinez, a Research Fellow at the [University of Belize Environmental Research Institute](#) (UB-ERI), symbolizes the growing collaboration between the two universities.

Since starting at UB-ERI in 2015, Martinez has worked closely with BU students and researchers at Calabash Caye Field Station. In fall 2023, Ninon started working toward her PhD at BU under former Director of BUMP Associate Professor John Finnerty's mentorship. Her focus on corals in alternative habitats aligns with foundational work by BUMP students, fostering collaborative research and strengthening ties between UB-ERI and BU.

In May 2023, we once again celebrated our Marine Science graduates with our intimate **Marine Science Convocation**. Congratulations to the class of 2023! And thank you to everyone who made BUMP Convocation such a great event. We look forward to celebrating the class of 2024 in May!



PROGRAM HIGHLIGHTS

In February 2024, former Director of BUMP and Professor of Earth & Environment Wally Fulweiler gave an [invited plenary at the Ocean Sciences Meeting](#).

This is a conference for the ocean sciences community, welcoming a “diverse community of scientists, students, journalists, policymakers, educators and organizations who are working toward a world where our global collaborations and partnerships can carry us into a sustainable future.” [Fulweiler's research](#) delves into energy flow, nutrient cycling, and anthropogenic impacts on ecosystems, with a focus on global climate change. She is a fierce advocate for an equitable scientific community.

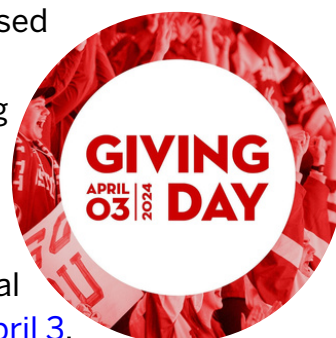


We were honored to host [Gretchen Hofmann](#) as the 2023 Lang Lecturer.

[The Lang Lecture](#) is an invited lecture series, started by BUMP faculty in honor of Fred Lang, an invertebrate physiologist. In April 2023, Hofmann met with faculty, undergraduate, and graduate students in BUMP. She delivered a lecture titled “Riding the Marine Heatwave: Studying Thermal Stress in the Kelp Forest Community of Coastal California.” We look forward to hosting [Margaret McFall-Ngai](#), senior staff scientist at the Carnegie Institution for Science and California Institute of Technology, and Faculty Associate at California Institute of Technology, as our 2024 Lang Lecturer on April 29.



Giving Day 2023 was a huge success! Thanks to the generous donations of Bryan Biniak (CAS'90) and 47 other supporters we raised \$13,347 to enhance the experience of students at the Calabash Caye Field Station. Looking forward to Giving Day 2024, we have already secured an exciting new donation to create an Undergraduate Gear Fund. With this pledge, we will be able to provide waders, snorkel gear and other necessary items for students in financial need in the Marine Semester. [Giving Day 2024 is on April 3.](#) Please save the date!



HONORS & AWARDS

Duncan FitzGerald, Professor of Earth & Environment, received the [Shepard Medal for Excellence in Marine Geology](#)

E Schlatter (GRS '25) won the 2024 Alistair Economakis fellowship, made possible through the generosity of Alistair Economakis (CAS'94, GRS'00), for their project, "Evolutionary causes and consequences of marine larval dispersal."

Morgan Bennett-Smith (GRS '29) won the 2024 Dana Wright Award, for their project, "Context dependency in a model marine mutualism"

Dr. Hannah Aichelman (GRS'23) won the 2023 Belamarich Award for Outstanding Dissertation in Biology. The title of Aichelman's dissertation is "Exploring Coral Symbiosis Under Climate Change Stress Across Spatial and Temporal Scales"

Nia Bartolucci (GRS'24) was named a 2023 [Switzer Environmental Fellow](#)

Xiaozhou Ruan, Assistant Professor of Earth & Environment, was selected as a [2023 Hariri Junior Fellow](#)

Congratulations to the winners of the 2023 Director's Award for extraordinary efforts to help the BU Marine Program:

- **Ranjan Muthukrishnan**, Research Assistant Professor of Biology
- **Giovanna Nordio** (GRS'24), PhD student of Earth & Environment
- **Alyssa Novak**, Research Assistant Professor of Earth & Environment

Robin Francis (GRS '23) received the 2023 Outstanding Teaching Fellow in Marine Science Award

Congratulations to the winners of the 2024 Warren McLeod Awards!

- Warren McLeod Annual: **Caroline Fleming Ianniello** (GRS'27), "Building a dynamic energy budget for *Astrangia pocolata*: probing the dynamics of symbiosis and mechanisms of coral resilience"
- Warren McLeod Summer: **Sawyer Balint** (GRS'30), "Quantifying ecosystem metabolism in Narragansett Bay, RI using two decades of dissolved oxygen data and underwater mass spectroscopy."
- Warren McLeod Summer: **Mu-Han Chen** (GRS'30), "Symbiodiniaceae-bacteria interactions: a hidden key shaping coral holobionts."
- Warren McLeod Summer: **Maria Valadez Ingersoll** (GRS'27), "Molecular Drivers of Symbiosis Across the Phylum Cnidaria."
- Warren McLeod Summer: **Chunyu Ren** (GRS'30), "The importance of tidal rectification in wind-driven coastal upwelling."

Congratulations to the Undergraduate Students who received awards at the 2023 convocation ceremony!

- Honors Research:
 - **Abigail Grassick** (CAS'23)
 - **Annabel Hughes** (CAS'23)
 - **Natalia Karadimitriou** (CAS'23)
 - **Ian Kwit** (CAS'23)
 - **Boyuan Tan** (CAS'23, GRS'26)



Pictured from left to right: Boyuan Tan (CAS'23, GRS'26), Natalia Karadimitriou, (CAS'23) Abigail Grassick (CAS'23), Ian Kwit (CAS'23).

- Lara Vincent Award: **Natalia Karadimitriou** (CAS'23)
- Senior College Prize in Marine Science: **Abigail Grassick** (CAS'23)
- Binland Lee Service Award: **Calvin Yu** (CAS'23, GRS'23)
- Provost Scholars Award: **Ilana Jacobs** (CAS'25)
- NSF Graduate Research Fellowship Program: **Annabelle Hughes** (CAS '23)



[“The complex social lives of clownfish and their anemones”](#) was featured in [the BU Brink](#). Director of BUMP and Associate Professor of Biology Peter Buston, his students and collaborators, have been generating new insights into the behavior and habits of clownfish — the fish made famous by Disney’s “Finding Nemo” ([Branconi, et al, 2020](#)).

[“The discovery of widespread cryptic species in corals,”](#) was featured in the [CAS Arts x Sciences news](#). Assistant Professor Sarah Davies, her students, postdocs, and collaborators found evidence of at least 24 examples globally where coral with similar appearances live on the same reef but have different DNA ([Grupstra, et al., 2024](#)).

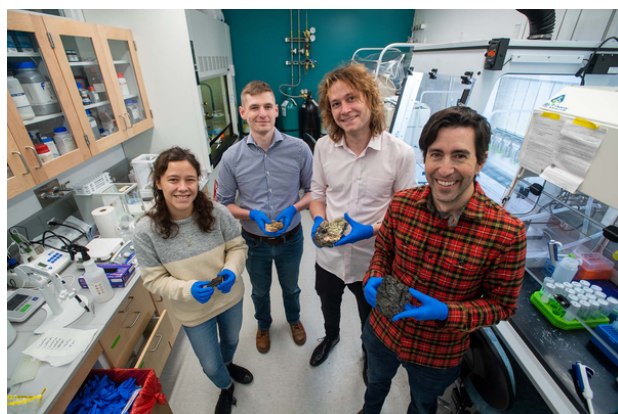


[The puzzle of corals living in dark, dank mangroves](#) was featured in [Arts x Sciences](#). Associate Professor John Finnerty, his graduate students, undergraduates, and collaborators, found evidence of rampant asexual reproduction and limited dispersal in a mangrove population of a coral ([Scavo Lord, et al., 2023](#)).

[“Are microplastics spreading infectious disease?”](#) featured in [PNAS](#). Research Associate Professor Randi Rotjan, whose graduate students, undergraduates, and collaborators have worked on microplastics in corals and seagrasses, shared her thoughts ([Rotjan, et al., 2019](#)).

[“Sharks, bacteria, no lifeguards: is this the end of swimming in New England?”](#) was featured in [The Brink](#). Professor Phil Lobel, who teaches our wildly popular shark biology course, and Assistant Professor Jeff Marlow, who researches microbial ecology in extreme environments shared their thoughts.

[“A quest for extreme life — what microbes can tell us about life on Earth and in Space”](#) was featured in [The Brink](#). Assistant Professor Jeff Marlow, his students and collaborators, have been visiting the planet’s most hostile habitats to generate new insights into how microbial communities form ([Marlow, et al., 2021](#)).



[“The Boston Harbor Islands are eroding, and fast,”](#) was featured on [WBUR in Earth Week](#). Professor Duncan FitzGerald and Research Assistant Professor Zoe Hughes shared how rising sea levels and intense storms are impacting this unique environment and the history it holds ([Hanegan, et al., 2023](#)).

New Faculty and Staff



Dr. Xiaozhou Ruan (Fall 2022) is an Assistant Professor in Earth & Environment. He joined the BU Marine Program upon his arrival in fall 2022. Xiaozhou's research focuses on the physics of the ocean circulation, particularly small-scale ocean dynamics. With his expertise in physical oceanography, we have been able to expand course offerings in this area.



Dr. Cyndi Bradham (Fall 2023) is an Associate Professor in Biology and she has become more actively involved in the BU Marine Program since fall 2023. Cyndi's research and teaching focus on developmental biology, especially in echinoderms, and her active involvement in the program adds a new dimension to the program and creates new opportunities for our students.



Lizzie McNamee (Fall 2023), MSc, MEd joined Boston University as the new dive safety officer in the Environmental Health and Safety Department. See more below.

Alumni Spotlight

In fall 2023, the University welcomed back [Elizabeth \(Lizzie\) McNamee](#) (CAS`10) as the new Dive Safety Program Manager in BU Environmental Health & Safety and the Dive Safety Officer for the [BU Scientific Diving Program](#). Lizzie graduated with the first class of BU Marine Science Majors in 2010. She went on to complete a Master of Science in Environmental Science from Florida Atlantic University, and a Master of Education in Environmental Education from Florida Atlantic University.

As the new Dive Safety Program Manager, Lizzie is responsible for ensuring that all BU-sponsored scientific underwater diving activities, international and local, are carried out in an effective and safe manner and in accordance with BU policy, state and federal regulations, as well as with the American Academy of Underwater Sciences standards for scientific diving. Her responsibilities also include the instruction of the Scientific Diving course (CAS MR533) in the [Marine Semester](#).

