



Stony Brook University

College of Arts and Sciences

Department of Ecology and Evolution

Dear Alumni and Friends,

Spring greetings from the Department of Ecology and Evolution! As we emerge from the cold, dark days of winter and enter the season of rebirth and renewal, we find ourselves filled with joy and optimism. Spring is a time of growth and possibility, and we are thrilled to share with you all the exciting news and developments happening within our Department.

–Liliana M. Dávalos, John True & Tamara Gregorian, editors and compilers.

Welcome to another newsletter filled with the outstanding accomplishments of our students, post-docs and faculty — current and former. This year, we welcome a new faculty member, Beth Watson, and celebrate the many exceptional achievements of the E&E community. Thank you for your continuing support, which is a critical source of funding for our students' research.

–Resit Akcakaya, professor and chair

An introduction from new faculty member Elizabeth “Beth” Watson:



The goal of our lab's work is to better understand the impacts that humans are having on coastal ecosystems so that coastal environments can be better managed and restored. We combine field and laboratory research with geospatial analysis and modeling to examine the impacts of environmental change on coastal environments. We focus on ecosystem restoration, sea level rise, nutrient pollution and changing precipitation patterns. As a scientist who has spent the last two decades focusing on climate change impacts on coastal ecosystems and communities, and who has experienced impacts firsthand, a second focus of Watson's work is preparing students to confront the challenges brought by climate change through activities that span research,

teaching and service. This has included public engagement events, establishing community-engaged research projects and creating climate and sustainability internships through the [Consortium for Climate Risk in the Urban Northeast](#), among other actions.

–Beth Watson, associate professor, is a US-Australian dual citizen, happily divorced, and mom to two children, two cats and a hundred-ish houseplants.

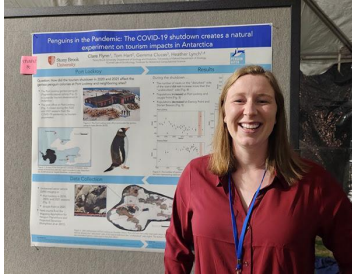
Spring 2023 - Student News



Nicholas Smith, a senior in the Honors College majoring in Human Evolutionary Biology, was URECA Researcher of the Month! For his senior honors thesis, Smith is working under the direction of Dr. Paul Kelton, Department of History, to research the origins of the 1918 influenza pandemic.



- **Elliot Ma**, a first-year MA student in the Padilla lab, collaborated with composer Angélica Negrón, cellist Yo-Yo Ma, and the Billion Oyster Project in a workshop that aimed to combine aspects of music and culture with marine biological sounds heard within NYC's harbor. Ma spoke and provided context for his underwater acoustic recording, while Angélica led the workshop recreating the marine soundscape using found objects and recycled materials. From old wind-up music boxes to empty cans, workshop participants found creative ways to imitate the high-frequency snaps of snapping shrimp and the foghorn calls of the oyster toadfish. The workshop culminated in a combined performance by workshop participants and cello superstar Yo-Yo Ma (no relation).



- **Clare Flynn**, a PhD student, won runner-up for best PhD poster award at the 50th Annual Pacific Seabird Group meeting. Flynn's poster, "Penguins in the Pandemic: the COVID-19 shutdown creates a natural experiment on tourism impacts in Antarctica," reported the surprising fluctuations in gentoo penguin population sizes that occurred when tourism to Antarctica ceased during the pandemic.
- E&E PhD students win multiple fellowships! This spring has been outstanding for student achievement: **José Moscoso** received the Stony Brook Foundation Board of Trustees Dissertation Completion Endowed Fellowship, **Urmi Poddar** was awarded the Madeline Fusco Fellowship, and **Anna Thonis** received the President's Award for Excellence in Teaching by a Graduate Student. How inspiring!



Spring 2023 Faculty Recognition

E&E faculty accolades and awards



John True has been awarded the 2023 Godfrey Award for Excellence in Teaching from the College of Arts and Sciences! True is being honored for his outstanding contributions to teaching the ecology and evolutionary biology introductory course. Congratulations!



Alistair Rogers, graduate program faculty, has been selected as an [American Association for the Advancement of Science Fellow](#)! Rogers is being honored “for distinguished contributions to advancing the mechanistic understanding of plant responses to anthropogenic environmental change and relating this knowledge to improving mathematical models of ecosystem function.” Congratulations!



Liliana M. Dávalos was the 2023 [Glaser Fellow](#). Over Spring Break, Professor Dávalos visited Florida International University, which was very warm and snow-free, and lectured as their 2023 Glaser Professor. Liliana joins a list of notable scholars in this role, including a few familiar to our department and program, such as E&E alumna Lacey Knowles, PhD '99. Congratulations to Liliana for finding such an auspicious home base for "spring" break!



Doug Futuyma, distinguished professor emeritus, and coauthor Mark Kirkpatrick published the fifth edition of their landmark textbook "Evolution" with Oxford University Press in December. This follows three editions of the book's predecessor, "Evolutionary Biology." Futuyma also published volume 53 of the Annual Review of Ecology, Evolution, and Systematics (the 21st volume for which he served as editor) and continued his service on the Editorial Board of PNAS for the 15th year.

Media spotlight on E&E faculty!



Rafael D'Andrea, an assistant professor, and **Athma Senthilnathan**, a postdoctoral researcher, advanced the theory of plant-soil feedback. While it is known that plant roots condition soils, modifying the environment for other plants, there is no theory to understand how such feedbacks occur. See their new article in [Ecology](#).

Liliana M. Dávalos joined an international, interdisciplinary team warning of irreversible losses should threatened mammals become extinct in Madagascar. A new study by a team of international scientists, including Professor [Dávalos](#), reveals that it would take 3 million years to recover the number of species that went extinct due to human activity in Madagascar. Published in [Nature Communications](#), the study also projects that if currently threatened species go extinct in Madagascar, recovering them would take more than 20 million years — much longer than what has previously been found on any other island archipelago in the world. The news coverage of the results included [Nature](#) and many other outlets.



The Madagascar sucker-footed bat belongs to an ancient family of bats found only in Madagascar. Picture by Chien C. Lee

- Research by the Dávalos lab was featured in the Washington Post. The inaugural article of the Washington Post's '[Animalia](#)' features collaborative research by PhD student **William Thomas** and Professor Dávalos on the molecular underpinnings of Dehnel's phenomenon, during which the common shrew brain grows, then

shrinks, then regrows(!). Funded by the Human Frontiers of Science Program, this research can illuminate how to change the trajectory of neurodegeneration in mammals.

Welcome, visiting scholar!



Anita George joined **Bob Thacker**'s lab as a Research Associate-Fulbright Academic & Professional Excellence Fellow. Based at the National Institute of Oceanography (Goa, India), Dr. George studies the phylogenetics of marine sponges from the coasts of India. As part of her fellowship, she will learn new methods of DNA sequencing and investigate the microbiomes associated with subtidal sponges across a latitudinal gradient.

A Highlight of Department Events



From left: Taveras, Gil Gomez, Norford, and Morantes Ariza during outreach at the library.

- **Alejandro Gil Gomez, Carlos Morantes Ariza, Sixto Taveras, Ariek Norford** and **Ashley Morris**, PhD students in the E&E doctoral program, participated in public outreach during Darwin Day! Last February, E&E continued the tradition of hosting Darwin Day. Thank you to Assistant Professor **Pascal Title** and all the students for organizing and sharing their enthusiasm for evolutionary biology!

- Publications edited by **Professor Dávalos** were featured at the College of Arts and



- Sciences annual Artists, Authors & Editors celebration! Welcome remarks were made by Stony Brook University President Maurie McInnis to showcase scholarly and creative works by university faculty. **Professor Dávalos** was featured for her excellent work as an [author](#) and [Quarterly Review of Biology](#) editor.



- **Jessica Gurevitch**, distinguished professor Emerita, retired after 37 years of service to the department and university. In her honor, E&E faculty, alumni, friends, and colleagues held a symposium and dinner party on campus last December, a testament to her many contributions to the field of ecology. Gurevitch is an outstanding researcher and leader whose work has significantly advanced our understanding of ecological patterns and processes. Her research focuses on plant community dynamics, the impacts of global change on ecosystems, and the importance of biodiversity for ecosystem functioning. A major contribution by Gurevitch is the development of meta-analysis, a statistical technique that synthesizes results from multiple studies to draw broader conclusions. She is the lead author of the foundational book "The Ecology of Plants," which has been widely used as a textbook and reference by ecologists and students worldwide. She has served as the president of the Society for Research Synthesis Methodology and has been recognized for her mentorship and outstanding contributions to the Ecological Society of America's Fellowship. Gurevitch's work has profoundly impacted our understanding of ecological processes, and her research and leadership will continue to inspire ecologists for decades to come. In addition to being an outstanding scientist, in 2023, Gurevitch generously funded one of the first two Giving Day challenges!



Jeffrey Levinton, distinguished professor emeritus, was honored with a dedicated symposium at the [51st Annual Benthic Ecology Society Meeting](#) in Miami in April. There was a session featuring some of his graduate students as speakers, along with a celebratory dinner. Levinton's work has shed light on a range of topics, from the evolution of marine invertebrates to the effects of human activity on coastal ecosystems. One of Levinton's notable contributions has been in the study of marine biodiversity. He has conducted extensive research on the patterns and drivers of species richness. Levinton's work has demonstrated the importance of understanding the role of biotic interactions, such as predation and competition, in shaping the diversity of marine communities. He has also made important contributions to the study of marine invertebrates, studying the molecular and morphological changes that have occurred over millions of years in mollusks. During the decades Levinton was active at E&E, he advised 22 PhD students, a record for our department and graduate program, a few of whom celebrated his achievement in Miami!

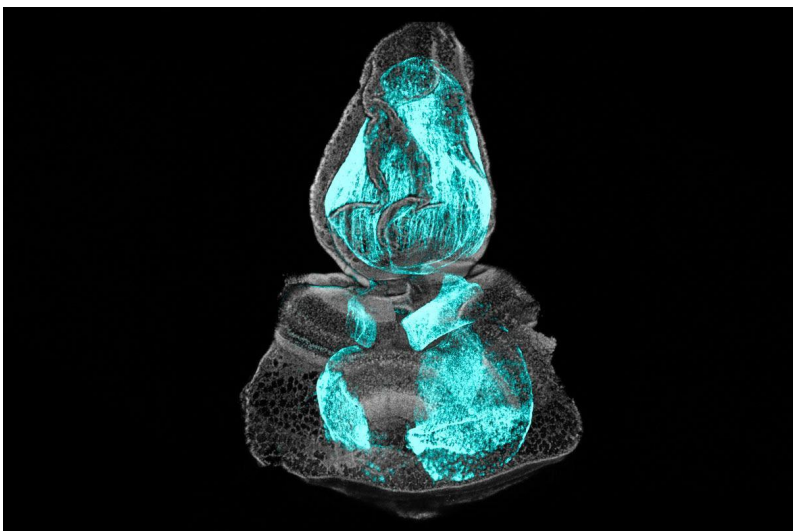
Alumni/Donor News



- **Shyamalika Gopalan, PhD '19**, and **Casey Youngflesh, PhD '18**, have accepted tenure-track assistant professor positions at Clemson University starting in Fall 2023. Congrats to both of them for their new positions and their successful navigation of the dreaded two-bodied search.



- **Niamh O'Hara, PhD '14**, talked recently at the United Nations about the role of genomics in pandemic preparedness. "Also speaking on the panel, O'Hara, CEO and co-founder of health tech company Biotia, stressed the importance of a "federated system" of data, particularly for international collaboration, where insights are connected and data sovereignty is preserved."
- **Chris Lowe, PhD '98**, traced the development of a hemichordate using single-cell sequencing! Formerly a graduate student at E&E, the work by Lowe and his student Paul Bump was highlighted in [Science](#). The story of cell flexibility in the transformation of function in development is remarkable. Take a look at the [article](#)!



As the California broken-hearted worm larva metamorphoses into an adult, its muscle cells (blue) are rearranged. Credit: Paul Bump



It is with great sadness that we report the passing of **Jennifer Mattei '94, PhD**, late last year. Mattei was a Stony Brook E&E doctorate student who became a professor of biology at Sacred Heart University in Connecticut. At SHU, Mattei led a long-term, community-based research and restoration program focused on horseshoe crabs in the Long Island Sound. You can read about Mattei and Project Limulus [here](#).

Thank you for your support!

Your donations continue to help advance student research! Read more about the funded projects [here](#).



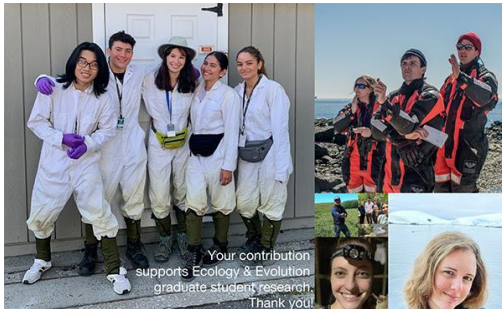
Imogene Welles (center) with her field research team, undergraduates Bentley Dong, Kevin Gonzalez, Gabriella Rodriguez Lopez, and Iveliz Hernandez (left to right), after a successful field season.

- **Imogene Welles** and her field team of four outstanding undergraduate researchers collected data in the pine barrens at Brookhaven National Laboratory from May to November. The team took daily samples and measurements from white-footed mice and their microhabitats as part of an isotopic study investigating how climate and landscape change affects individual diet and body condition in this widespread generalist species. Immy's work may hold the key to understanding how these populations, and their parasites, fluctuate in space and time.



Ariek Norford (third from left) with his field team in Colombia.

- For his PhD, **Ariek Norford** works with Professor Resit Akçakaya to connect biodiversity and ecosystem function. His research probed the biodiversity-ecosystem function relationship in the terra firme forest of Colombia by examining mammals' dispersal of large seeds.



This March, many **E&E alumni** —including E&E Champions Verrelli, PhD '00, Mitter, PhD '77, Kim, PhD '92, Stoecker, PhD '79, Aguirre, PhD '07, and Adams, PhD '99 — made Giving Day 2023 our best to date! Special thanks to Charles Mitter, PhD '77, for generously funding the 1970 matching challenge! Your generous contributions allow E&E graduate students to continue their research around the world. We are all grateful to our alumni for their [generous contributions this year](#)! Thank you!

Help support the next generation of scientists working in ecology and evolutionary biology! A full list of E&E's giving opportunities is posted [here](#). Please consider making a gift today; you may also speak with [Michael D'Ambrosio](#), Director of Development, at (631) 632-4061.

We look forward to your responses and hope that more of you will stay connected with us and other Department members. We love hearing where life has taken you and sharing your news with others! You can also follow us on [Twitter](#) and [Facebook](#).