



# Stony Brook University

## College of Arts and Sciences

### Department of Ecology and Evolution

*Newsletter, Fall 2021*

Dear Alumni and Friends,

Greetings from the [Department of Ecology and Evolution](#)! We hope this finds you and yours well during these challenging times in our world. We're happy to share some of the latest news and accomplishments for the department, our students and faculty.

– *Liliana M. Dávalos & John True, compilers*

#### Meet our Co-Chairs



I arrived at E&E twice: the first time in August 1984 as a first-year PhD student (graduating in 1989), and the second time in August 2007 as a Professor. Although this is my first time as co-Chair, I served as Graduate Program Director for three years. My work focuses on the biodiversity crisis; I've been working on quantitative methods for estimating species extinction risks, modeling climate change impacts on species, measuring species recovery, and assessing the impact of conservation measures. Since 1999, I've been working to put these methods into practice, through my participation in [IUCN's Species Survival Commission](#), the world's largest network of conservation scientists and practitioners. Presently, I co-teach the graduate Ecology course, and teach Landscape Ecology, a computer lab course.

– ***Resit Akcakaya, professor***

I like to say I arrived back in the Paleozoic, in August 1985. While I previously served as Department Chair from 2006-2012, this is also my first time sharing responsibilities with a co-Chair. As a plant ecologist with broad interests, over the years my work has taken me in new directions, from plant population and community ecology and biological invasions to research synthesis in ecology and other fields. Recently, I've become interested in climate change and [climate intervention impacts on ecological systems](#). I am very active in several scientific societies and am currently Secretary of the [Ecological Society of America](#), the nation's largest organization of professional ecologists. Currently, I teach Ecology, Plant Ecology, and Intermediate Statistics, but I've also taught a wide range of other courses from freshman seminars to graduate courses.  
 – **Jessica Gurevitch, distinguished professor**



### Fall 2021 Outlook – Students:

- **Priya Aggarwal**, a Human Evolutionary Biology major working with E&E faculty **Joshua Rest** and Graduate Program Faculty **Jeroen Smaers** was awarded the Provost's Award for Academic Excellence in May 2021 for her work on the genomics of brain size evolution.
- **Justin Goodridge and Lucy Gordon**, both funded through the URECA program, published their [three-year study](#) on faculty change with E&E's [Gena Sbeglia](#) and [Ross Nehm](#) just in time for graduation!
- **Laura Roesch**, UG researcher at the Thacker Lab, has been selected to represent [Stony Brook University in the Congress-Bundestag Youth Exchange for young professionals](#) (CBYX), a professional development fellowship funded by the U.S. Department of State and the Bundestag, Germany's federal parliament.
- URECA researcher of the month September 2021 loves E&E! **Sarah Vaccaro** has been working at E&E's Veeramah lab on a project to discover genetic mechanisms of parallel adaptation in stickleback. She also joined the Dávalos lab hoping to reveal how [bats went extinct on various Caribbean islands](#), and recently started work at Brookhaven National Lab sampling small mammals with the Smiley lab.
- **Sam Vee**, a MS student at Graduate Program Faculty [Andreas Koenig's](#) lab, was awarded a Ruppenthal Student Travel Award from the American Society of Primatologists to attend the 2021 Meeting in Oklahoma City in November. Sam will present the results of her capstone project on "Allomaternal care in Phayre's leaf monkeys."
- Pollination gets a lot of love, but what about seed dispersal? In his [Mongabay commentary](#), **Ariek Barakat Norford** highlights this vital ecological service and its importance in mitigating the 6th mass extinction.



- [Connect the Clues](#): Last year, **Anna McPherran**, a PhD student at the [Dávalos lab](#), received NSF funding for her internship with New York Hall of Science. Now, her exhibit is online and available to high school educators!
- **Anna Thonis**, PhD student at the [Akcakaya lab](#), received a likely record of four awards for her fieldwork from the American Museum of Natural History, the [Association for Tropical Biology and Conservation](#), [Herpetological Conservation International](#), and [SBU's Latin American and Caribbean Studies](#)!
- This summer, second-year [Smiley lab](#) PhD student **Imogene Welles** (right) began seasonal field work in the pine barrens on the Brookhaven National Laboratory property. With assistance from students in the Department (**Megan Wyatt**, left), she is trapping small mammals and insects, deploying seed baskets, and conducting vegetation surveys.
- **William Thomas**, PhD student at the Dávalos lab, received a highly competitive [Society for Systematic Biologists Graduate Student Research Award](#) to study the population genetics of Dehnel's phenomenon, a poorly understood adaptation that enables small mammals such as the Eurasian shrew to survive harsh winters by shrinking their brain and other organs.
- **Allison Rugila**, a PhD student at the [Thacker lab](#), received research funding from the [Lerner-Gray Memorial Fund for Marine Research](#) at the American Museum of Natural History! This award will support her work on the responses of clams to ocean acidification and hypoxia.
- Congratulations to all our 2020/2021 graduates! In the MA program, we congratulate Emmalea Hearthstone, Thomas Kelly, Riley Pena, Miranda Turner, and Qinnan Zhu. In the PhD program, we congratulate Drs. Alex Borowicz, David Charifson, Alyssa Liguori, Lisa Prowant, and Bilgecan Sen. All of you make us proud!



### Fall 2021 Faculty News:

- **New E&E faculty projects funded!**
  - This past spring, E&E Assistant Professor [Natasha Vitek](#) was awarded a grant to conduct research to elucidate a crucial time in primate evolution when the ancestors of apes and humans are thought to have first diverged from other primates. Her collaborative project, [Hominoid origins in a unique paleocommunity](#), will bring Natasha and her collaborator [Dr. Isaiah Nengo](#) of Stony Brook's Turkana Basin Institute and the Department of Anthropology at a new fossil primate site in the Turkana Basin.
  - This past spring E&E Assistant Professor **Tara Smiley** was awarded a grant to conduct research linking a coupled landscape and biotic evolution model with observational data from the fossil and geologic records. Her interdisciplinary and collaborative project, [Integrating tectonics, surface processes and paleobiodiversity using numerical and observational approaches](#), will bridge our understanding of the formation of montane biodiversity hotspots over geologic time.
  - **Tara Smiley** and **Natasha Vitek** are collaborating on a [\\$2.7 million NSF Frontier Research in Earth Sciences Program grant](#) to investigate how climate change and geological processes influenced evolution during the Miocene.



- E&E Professor [Heather Lynch](#), in collaboration with IACS Fellow **Christian Che-Castaldo** and Computer Science Professor **Dimitris Samaras**, was awarded a NASA Biodiversity award, "Identifying population tipping points through imagery super-resolution." This award involves students from Ecology, Applied Math & Statistics, and Computer Science and uses Landsat satellite imagery to understand how penguin colony 'health' changes in relationship to shifts in diet, will improve forecasts of penguin population dynamics. With E&E PhD student **Michael Wethington**, Heather also obtained a new NASA SmallSat award to improve automated computer vision models for pack-ice seal monitoring and allow researchers to infer seal species from satellite-based imagery in Antarctica!
- E&E Professor [Liliana Dávalos](#) is one of four PIs committed to building the Global Union of Bat Diversity Networks (GBatNet). As the PI in charge of scientific development, Dávalos coordinates researchers across [more than 14 networks](#) to realize the shared vision of sustainable bat diversity for ecosystem and human health.



- **More faculty highlights:**

- E&E faculty [Josh Rest](#) received the College of Arts and Sciences [Godfrey Excellence in Teaching Award!](#) Congratulations Professor Rest!
- How hard is it to conduct interdisciplinary research? Very, but the payoff is worth it, say E&E faculty **Heather Lynch** and Department of Music Professor **Meg Schedel** pen an [Op-Ed for Inside Higher Ed](#) on the challenges of interdisciplinary research.
- E&E faculty [Jessica Gurevitch](#) and Technology and Society faculty [David Tonjes](#) argued for the Build Back Better plan to include waste and recycling infrastructure in [this opinion piece](#), particularly emphasizing the huge amount of construction debris in the waste stream nationally, and on Long Island.
- We all know about the Red List of endangered species, [but how can we tell conservation is working?](#) E&E faculty [Resit Akcakaya](#) has been leading the IUCN's Species Survival Commission to create the Green Status of species and catalyze action for conservation.
- Should we use technology to slow global warming? Professor **Jessica Gurevitch** co-authored [a perspective paper in PNAS](#) examining the potential impacts of using climate intervention technology to cool the Earth. This paper reflects [Jessica's work](#) as part of the Climate Intervention Working Group with members of a NSF-funded workshop panel on ecological impacts of geoengineering.
- Bats have been implicated in deadly epidemics such as MERS and Marburg, yet scientists including E&E's [Liliana Dávalos](#), are discovering evidence that they may hold a key to a longer and healthier life. [PBS NOVA meets the scientists who are decoding the superpowers of the bat.](#)



To view all E&E publications, [visit the full list](#).

## Highlights of 2021-22 Department Events

- SBU's **Open Nights** program features three E&E faculty this Fall! **Natasha Vitek** presented "The Spice of Life: Variation that drives and preserves biodiversity" on 9/17, **Liliana Davalos** will present "Forests, bats, guerillas: A systems approach for thought and action in the Anthropocene" on 10/15, and **Heather Lynch** will present "Are Antarctica's penguins in peril?" on 11/19. All talks will be delivered on Zoom and start at 7:30 pm Eastern Time. [Register to attend these public talks](#).
- Darwin Day! In 2022, the traditional E&E Darwin Day lecture will be given by **Chris Simon '79, PhD**, professor at the University of Connecticut. [Stay tuned for the date announcement on this page](#).



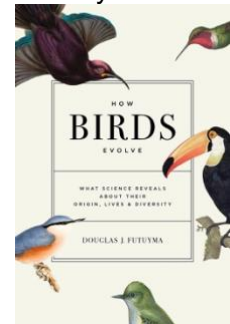
- Following her time first as an Associate Editor (2013-2017) and then as an Editor (2017-2021), **Liliana M. Dávalos** has been promoted to Editor-in-Chief of the [Quarterly Review of Biology](#), a post previously held by E&E Distinguished Professors Daniel Dykhuizen and [George C. Williams](#). With Dr. Davalos's designation as Editor, Professor Emeritus [Daniel E. Dykhuizen](#) will become Editor Emeritus. Submit your best reviews to the QRB and follow the journal [on](#)

[Twitter](#): @QRevBiol

- Last Fall, Professor **Liliana M. Dávalos** and co-editors published the first [book-length revision of the biology of American Leaf-nosed bats](#), a family of mammals that spans the entire dietary diversity of all vertebrates, from vampire bats that feed exclusively on blood, to bats that hunt for frogs, eat figs, or drink nothing but nectar.
- Now emeritus, Distinguished Professor Doug Futuyma has written a nontechnical book directed at birders and other amateur naturalists, "[How Birds Evolve: What Science Reveals About Their Origin, Lives, & Diversity](#)." The book is due October 2021 by Princeton University Press.



- **Martha Nolan** has been the smile and face of E&E since she started working in the Department on 8/11/1994. It would be hard to overstate how much Martha is missed, as she has been so important in the lives of countless students and faculty. Through the years, Martha's smile, warm conversations, and her overflowing chocolate dish sustained the entire Department's morale through many challenges. Martha is now enjoying her retirement and looking forward to new adventures. Happy trails from your friends at E&E!



- On January 1, 2021, Professor Jeffrey Levinton retired from E&E, which he joined in 1976. Professor Levinton served as Department Chair for more than seven years ending in the 1990s, advising a record of [22 PhD students as well as many postdocs](#). While enjoying his retirement, Professor Levinton is still active as a Research Professor. An in-person celebration of Professor Levinton's career is anticipated sometime in Spring 2022.



*Professor Levinton canoeing at South Cove, Hudson River.*

### Alumni News:

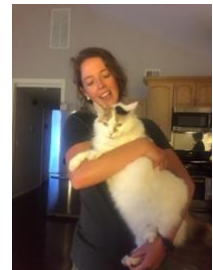
- Congratulations to **Javier Monzón '12, PhD**, recently [awarded tenure at Pepperdine University](#). He credits E&E for his academic and intellectual formation, as well as mentorship and support.

- Congratulations to E&E alumna **Dr. Rebecca Grella, MA, PhD**, of the Brentwood Union Free School District (BUFSD) in collaboration with E&E faculty **Drs. Ross Nehm** and **Dianna Padilla** and the School of Professional Development, on the receipt of a \$1.2 million grant from the New York State Education Department a year for a five-year Professional Development Program for training teachers in new K-12 Science Standards. [This project](#) led by Dr. Rebecca Grella is an amazing opportunity to help close equity gaps in computer science and STEM in the BUFSD.



*Adrienne Davis, Project Mentor,  
Dr. Rebecca Grella, Project Director,  
Steve Abrams, Director Flax Pond Marine Lab,  
Dr. Dianna Padilla*

- Two research universities offered [Gena Sbeglia '17, PhD](#), tenure-track professorships this spring. After a bidding war, she selected San Diego State University as the home of her future Biology Education Research Lab. Until now, she has been a postdoc in [E&E's BER Lab](#) working with Professor Ross Nehm.
- E&E alumna [Laurel Yohe '17, PhD](#), accepted the post of tenure track Assistant Professor in Bioinformatics and Genomics at UNC Charlotte! She has now formed her new lab and holds joint affiliations at both the North Carolina Research Campus and the Department of Bioinformatics.



- We regret to announce the untimely death of **Greg Bole '01, PhD**; many of us have warm memories of his time in the Department. After earning his Ph.D. in evolutionary biology from E&E, Greg went on to become [Associate Professor of Teaching](#) in the Departments of Zoology and Botany at the University of British Columbia. He was an important voice in popularizing evolutionary biology and an outstanding researcher and inspirational teacher. Greg spoke eloquently and publicly about the biology and evolutionary implications of cancer, even as he was living through it, until the end of his life.



*Greg Bole with his portrait as Darwin holding Greg's beloved skink.*

**Thank you for your support!**

Your donations help advance student research!

[Read more about the funded projects here.](#)

We thank longstanding donor **Tamara Slobodkin**, whose continued generosity has helped support many graduate student research projects over the years.



*The Slobodkin tree stands in memory of E&E Professor Lawrence Slobodkin.*



The endangered Hispianiolan hutia, *Plagiodontia aedium*, held by Dominican scientist Gershon Feliz during Anna McPherran's research expedition thanks to the Williams Award.



Urmi Poddar, far from the Pine Barrens of Long Island where she conducts her work thanks to the Slobodkin Award.



Allison Rugila holding a chiton during her field sampling for hard clams for which she applied to the Sokal, Slobodkin, and Student Excellence.



Anna Thonis (center front row) and her research team, all University of Puerto Rico undergraduate biology students, with whom she had an excellent field season thanks to the Sokal Award.

Help support the next generation of scientists working in ecology and evolutionary biology! Please consider making a gift today. If you would like to learn more about supporting our Department and initiatives, please contact [Hodan Hassan](#), Assistant Dean for Advancement, at 631.632.4055.

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

Sincerely,

Resit Akcakaya, Professor and Co-Chair

Jessica Gurevitch, Distinguished Professor and Co-Chair