



Stony Brook University

College of Arts and Sciences

Department of Ecology and Evolution

Newsletter, Spring 2022

Dear Alumni and Friends,

Hello from the Department of Ecology and Evolution! We hope this finds you and yours well. We're happy to share some of the latest news and accomplishments from our department, our students and faculty.

–Liliana M. Dávalos & John True, compilers

We have been teaching courses in-person this entire academic year, and very recently the requirement for wearing masks in class has been lifted. We just completed a rewarding Department retreat, the first one in-person in two years, with some participants joining us virtually; newly admitted students to our graduate program were warmly welcomed at the meeting.

We are in the process of recruiting a new faculty member in Plant Community Ecology, facilitated by a special New York State Empire Innovation Program focused on coastal resilience. And, both students and faculty members have been awarded new grants and celebrated many accomplishments recently, so enjoy the following highlights we're happy to share from these last few months at Ecology and Evolution!

– Jessica Gurevitch and Resit Akcakaya, co-chairs

Spring 2022 outlook – students:

- Four Ecology and Evolution high school mentees were semifinalists for the [2022 Regeneron Science Talent Search Scholar](#) competition!
 - Roberto and Ricardo Lopez, two Brentwood High School students from the [Padilla Lab](#), working with researcher Dr. Rebecca Grella '12, PhD were semifinalists in the competition. These identical twins developed independent research projects looking at the ecology of saltmarshes. Roberto was selected as a finalist in the competition and

traveled to Washington, DC in March for the finals competition.

- Jonathan Chung worked on Microbial Associations Constrain Coral Adaptations to Heat Stress, mentored by Professor Thacker.
- Harshita Sehgal worked on Understanding the Evolutionary Development of Radio-Resistance in the Brassicaceae Family, mentored by Nicolette Sipperly from the Dávalos lab.



Left to right: Ricardo López, Dr. Rebecca Grella '12, PhD, and Roberto López.

Jonathan Chung

Harshita Sehgal

- Congratulations to Daryl Yang for receiving the [Mow Shiah Lin Scholarship](#) from the Asian Pacific American Association at Brookhaven National Laboratory! He is one of four very deserving recipients.
- Ecology and Evolution PhD student Daryl Yang and faculty member Shawn Serbin helped co-author the 2021 NOAA Arctic Report Card essay focused on "[Tundra Greenness](#)," in collaboration with scientists from 14 other research institutions. The Arctic Report Card is an annual report composed of a series of peer-reviewed essays that provide information on the current state of the Arctic environmental system relative to historical records.
- William Thomas, PhD student at the Dávalos lab, received one of only 11 global [Rosemary Grant Advanced Awards](#) from the Society for the Study of Evolution and one of only eight global [Evolutionary, Ecological, and Conservation Genomics](#) of American Genetic Association. These awards will allow Bill to continue studying the population genetics of Dehnel's phenomenon, a wintering adaptation that enables small mammals such as the Eurasian shrew to endure harsh conditions by shrinking their brain and other organs as environmental temperatures plummet.
- Recent graduate Alex Borowicz '21, PhD and current E&E grad students Michael Wethington and Clare Flynn recently completed a major [expedition to the Weddell Sea](#) region of Antarctica with

support from Greenpeace. Covered by dozens of major news outlets, including BBC, Reuters, *Al Jazeera*, *Vanity Fair*, *National Geographic*, and *ABC News*, the expedition focused on surveying a suite of remote Adélie penguin colonies in a region being considered for protection under a proposed Marine Protected Area. The trio also discovered the southernmost gentoo penguin colony on the eastern side of the Antarctic Peninsula, a hallmark of the changing climate.

- This spring, our annual retreat was back in person and featured both full-length and lightning talks. We proudly presented multiple research awards! Congratulations to the organizers, speakers, award winners and participants!
- Congratulations to our most recent graduates: Samantha Vee in the masters program, and Dr. Mihir Umarani in the PhD program. You both make us proud!



Left to right: Dr. Shawn Serbin and Daryl Yang.



William Thomas



Left to right: Clare Flynn, Michael Wethington, and Alex Borowicz '21, PhD



Left to right: Sixto Taveras, Nicolette Sipperly, Ashley Morris, Imogene Welles, and Anna Thonis.

Spring 2022 faculty recognition:

- New faculty projects funded!
 - Professor Padilla is lead PI on a Convergence Accelerator grant from NSF, [“Reconfiguring Urban Shorelines for Resilience: Convergence Research Meshing Ecology, Engineering and Architecture.”](#) This transdisciplinary project is part of the track for funding for the Networked Blue Economy. Padilla and her collaborators are working to develop better designs for urban bulkheads that provide better biological services, better protection from storm surge and sea level rise, and better connections between people and the shore in urban areas.
 - Professor Padilla and two collaborators from the NOAA Shellfish Lab in Milford, CT, Shannon Meseck (Lead PI) and Katherine McFarland, were awarded a 3-year NOAA OAP grant to examine the responses to scallops to climate change. The project, “Wild scallop population resilience: Using multigenerational studies to



estimate robustness and adaptive potential to rapidly changing ocean acidification” will involve rearing bay scallops under different conditions (temperature and ocean acidification) across three generations to determine their potential for adaptation to climate change variables.

- Professor Dávalos will join a team of paleontologists from Johns Hopkins University, the American Museum of Natural History, Grand Valley State University, and Universidad de los Andes in the search for Miocene bat fossils at La Venta, Colombia. Field work is expected to continue for the next two years.
- Faculty accolades and awards:
 - Last Fall, Ross Nehm was an Invited Speaker at the [Roundtable on Systemic Change in Undergraduate STEM Education](#) Working Meeting on Life Sciences Education of the National Academies of Science.
 - Dianna Padilla has been elected President Elect of the American Microscopical Society, the society that publishes the journal *Invertebrate Biology*. After serving for one year as President Elect, she will serve two years as President of the Society.
 - Liliana M. Dávalos was recognized for her position as Editor-in-Chief at [The Quarterly Review of Biology](#) during SBU's Artists, Authors, and Editors Reception, held on 12 November 2021. The Quarterly Review of Biology is showcased in the Melville Library.
 - Heather Lynch is one of six international researchers awarded the [2022 Pew fellowship in marine conservation](#) by The Pew Charitable Trusts!
- Media spotlight on E&E faculty!
 - Heather Lynch's research was featured on the cover of [National Geographic Kids](#) last December! Her work in Antarctica is inspiring the youngest generation of explorers around the world!
 -
 - Late last year, global nature news site Mongabay published [an in-depth profile of Professor Dávalos](#). Covering almost 30 years of adventures in biology and beyond, the Q&A focuses on her pioneering research at the intersection between forests and policy.
 - To view all recent E&E publications, visit the [full list](#).

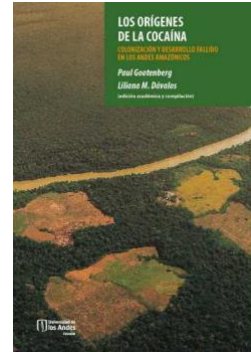


Highlights of Department Events for 2022

- SBU's Open Nights program features E&E faculty! On Friday, April 15, Professor Tara Smiley will present "Mountains and Mammals: What the fossil record can tell us about

building montane biodiversity hotspots." All talks will be delivered on Zoom and start at 7:30 pm ET. [Register to attend these public talks.](#)

- Late last Fall, Professor Liliانا M. Dávalos and co-editor Paul Gootenberg, Department of History, published the Spanish-language translation of their [book on the history and geography of coca](#) for illegal cocaine markets. This new translation is accessible to researchers and policymakers in Latin America and the world.



Alumni news!

- **Planting the Seeds:** Determined to inspire students, **Rebecca Grella '12, PhD** is a leader in hands-on science education. Her unique combination of research and education on the Long Island marshes is highlighted in this [Stony Brook Magazine piece!](#)

Your generous support helps advance student research! [Read more about the funded projects here.](#)



A Williams fund grant helped Yijie Tian to investigate a 6th to 8th century cemetery in Northern Italy, finding individuals were organized based on biological relatedness. Although the two kindred groups looked similar in their burial patterns and grave goods, they differ a great deal in genetic background and spatial organization, thus showing the value of genomics for understanding culture.



A Slobodkin fund grant supported Kenneth Davidson to analyze seasonal dynamics of photosynthetic capacity and water use efficiency of four common deciduous tree species. He found that while water use efficiency is indeed seasonally dynamic, the seasonal behavior of this trait is highly species specific.

We hope you will join us again on [Stony Brook's fourth annual Giving Day](#) on Wednesday, April 27, 2022. Support outstanding research in Ecology and Evolution by becoming a champion! Although champions pledge a threshold amount, their pledge only becomes active after our campaign hits a donation target. Every contribution helps our students discover answers to the most pressing questions of our day. By enabling their work in the lab and the field, from the Antarctic to the Pine Barrens, E&E students are working diligently to make new discoveries and help build a better future. Don't miss your chance to help support the next generation of scientists and their amazing research!

Help support the next generation of scientists working in ecology and evolutionary biology! Take a look at all of our Department's [giving opportunities](#) and consider supporting our students and initiatives by making a gift today. You may also speak with [Hodan Hassan](#), Assistant Dean for

Development, at 631.632.4055, to learn how you can contribute to the excellence of our Department.

We look forward to hearing from you 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](#).

Warm regards,

Resit Akcakaya, Professor and Co-Chair
Jessica Gurevitch, Distinguished Professor and Co-Chair