

# **College of Arts and Sciences**

Department of Ecology and Evolution

Fall 2023 Newsletter

Dear Alumni and Friends,

#### Greetings from the **Department of Ecology** and Evolution!

I hope that this newsletter finds you and yours well. I'm happy to share some of the latest news and accomplishments for the Department, our students, and faculty.

Thanks to the Department's communications committee, John True, Pascal Title, and Tamara Gregorian for preparing this newsletter! Enjoy the read, and please drop us a line to let us know how you are doing. Share your stories with us at ecoevo\_office@stonybrook.edu.



And, stay connected and learn more about the exciting work our students and faculty are doing by following us on **X (formerly Twitter)** and **Facebook**.

With best wishes,

H. Resit Akcakaya Professor and Chair Department of Ecology and Evolution



# Alumni Spotlight:

#### Gena Sbeglia Ecology and Evolution PhD, Postdoc

In her first year as an assistant professor of biology at San Diego State University,

**Dr. Gena Sbeglia** received a \$500,000 grant from the National Science Foundation. The project builds upon research findings from E&E's \$1.05M HHMI Inclusive Excellence award that continues to work to improve learning outcomes and student success in multiple departmental courses.

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# **Faculty Spotlights**

#### Doug Futuyma

Doug Futuyma, distinguished professor emeritus, continues as an editor of PNAS, lead editor of the Annual Review of Ecology, Evolution, and Systematics, and a visiting committee member for the Smithsonian Tropical Research Institute in Panama. He served as vice-president of the Linnaean Society of New York, the country's oldest (1878) society of amateur naturalists. Doug expanded his acquaintance with biodiversity by traveling to the Lesser Antilles and Angola this year.



### **Heather Lynch**

Congratulations to Professor Heather Lynch, named the inaugural director of the recentlyannounced Collaborative for the Earth at Stony Brook University. Lynch, who is also the first Endowed Chair for Ecology and Evolution at SBU's Institute for Advanced Computational Science (IACS), uses quantitative ecology to address pressing issues and questions related to wildlife in Antarctica in the face of climate change and human activity.

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#### Undergraduate Student Spotlight

Congratulations to Loy Hashimoto, Katherine Walton, and Iveliz Hernandez, who presented at the Undergraduate Research Symposium.

#### Loy Hashimoto

Loy Hashimoto, candidate for the Human Evolutionary Biology BS with Honors, was selected as a 2022 recipient of the SUNY Chancellor's Award for Student Excellence. Loy worked in Dr. Vitek's lab this past summer as part of the inaugural cohort of SUNY SOAR for summer research undergrads. Her research project was about the impact of nutrition on tooth enamel and dentine in laboratory rats.



# Katherine Walton

Katherine Walton, a senior at UC Berkeley, worked with Dr. Katherine Gallagher, an NSF postdoctoral fellow in the Lynch Lab, on her research on simulated krill distributions around penguin colonies on the West Antarctic Peninsula, Katherine's work was presented at the Summer 2023 Research Experience for Undergraduates (REU) Symposium (hosted by Dr. Heather Lynch and Dr. Gallagher, through the Institute for Advanced Computational Sciences Data + Computation = Discovery! REU program) with other DCD participants and REU students from across the university. Katherine is continuing her work with Dr. Gallagher this academic vear for her Senior Thesis and will be examining the effects of climate change on simulated krill distributions.



## Iveliz Hernandez

Iveliz Hernandez presented at the Undergraduate Research Symposium following her summer research project with PhD student Imogene Welles and Dr. Tara Smiley. She was selected as a Velay Research Fellow this past summer. You can learn more about Iveliz's Velay fellowship research project here.



Undergraduate Curriculum Spotlight Study Abroad Opportunities

Stony Brook students, particularly Anthropology and Human Evolutionary Biology majors and minors, continue to have study abroad opportunities.

Currently, they offer programs in the **Turkana Basin** in Kenya and the

Centre Val Bio in Madagascar. SBU students can experience Anthropological fieldwork in various settings on different continents.

# Graduate Student Spotlight

Congratulations to our recent awardees:

### **Rachael Herman**

Congratulations to Rachael Herman (advisor: Dr. Heather Lynch) who has been awarded an NSF Office of Polar Programs Postdoctoral Research Fellowship for a two-year project, "Epigenetic Potential as a Driver of Local Adaptation in Gentoo Penguins (Pygoscelis Papua) along the Western Antarctic Penguins." The award is worth more than \$300k, and we will be able to keep her here in E&E for a little longer. Well done, Rachael!



#### **Caitlin Blackwell**

Caitlin was awarded finalist status by the Department of State's prestigious Fulbright U.S. Student Program. She will work with the Norwegian Institute for Nature Research, establishing an Antarctic petrel genomics reference collection by developing a bioinformatics protocol. No prior population genomics work exists for these birds, so software and methods must be gathered and refined to assemble and analyze the samples, enabling Caitlin to explore the genomic history and structure of petrels nesting in Dronning Maud Land.

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#### Anna Thonis

Congratulations to Anna Thonis (advisor: Dr. Resit Akcakaya), winner of the 2023 E&E Excellence Award, who recently traveled to San Juan for her research. While there, she worked on tagging lizards and was assisted by a group of undergraduate students from Louisiana State University who came to learn about fieldwork.



## **Nicolas Anderson**

Congratulations to Nicolas Anderson (advisor: Dr. Dianna Padilla), winner of the 2023 E&E Excellence Award. He used the award to take a five-week larval biology course at Friday Harbor Laboratories, where he learned about early life stage development and the effects of environmental factors.

Nicolas completed two projects with his classmates, developing new methods for studying early life stages. This experience has given him new tools and perspectives in larval biology.



#### Sixto Taveras Lopez

Congratulations to Sixto Tavares Lopez (advisor: Dr. Dianna Padilla), winner of the Slobodkin Award, which he used to attend a larval biology course at Friday Harbor Laboratories. He found the course valuable because it gave him the opportunity to work with students from around the world on research projects and interact with professors and researchers.

# Faculty Spotlight

#### Pascal Title

Pascal Title is an evolutionary macroecologist who studies global diversity patterns. His research integrates geographic distributions, phylogenies, and trait data to understand the processes that have generated these patterns. Pascal is

particularly interested in using data from natural history museums and observational databases to investigate how species ecology, evolutionary history, and assembly processes have contributed to these patterns across continents and the globe.

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### Dr. Liliana Davalos

Congratulations to Professor Liliana Dávalos, who received the inaugural Fulbright Amazonia award. She is one of 16 scholars selected worldwide to conduct research in the Amazon region. and her research will significantly contribute to understanding the Amazon region and its challenges.

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Dr. Tara Smiley was awarded a Turkana Basin Institute Research Fund Award for the project, "Ecological change across a major climate transition: using small mammals to illuminate the history of Miocene primate evolution in Turkana Basin, East Africa." This grant will support fieldwork in Turkana Basin, Kenya, to uncover new small mammal fossils.

Dr. Anita Mary George, a Fulbright-Nehru Academic and Professional Excellence fellow who worked this past year with Dr. BobThacker, was featured in IndiaBioscience's 10 Women, 10 Questions feature.

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### Notable Research

### Gábor Balázsi

Cancer cells are notorious for their ability to invade and spread throughout the body. But a new study may have found a way to control this process. Dr. Balázsi, associate professor for E&E, was one of the researchers who developed a method for manipulating protein levels in cancer cells. This method could help scientists understand how cancer works and develop new treatments.

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## **Dr. Liliana Davalos**

An international scientific project that compares the genomes of 240 living species of mammals has identified transposable elements (TEs) — genes that can change their position within a genome, creating or reversing mutations and thus altering a cell's genetic identity - as a crucial area of study to help uncover the evolutionary process of mammals and to better understand biodiversity. Liliana Dávalos collaborates in the project's analyses of TEs. Two new papers, one published in the current issue of Science and the other in Molecular Biology and Evolution, highlight the findings.

In addition, an article by Davalos highlights the environmental impact of coca production and forced eradication policies.





# Summer 2023 Conferences

PhD candidates **Urmi Poddar** and **Anna Thonis** attended the Ecological Society of America (ESA) Annual Meeting this past August in Portland, Oregon, and got the chance to join a conference-organized trip to Mt. Rainier National Park in Washington. While at the conference, Anna led a symposium on species distribution modeling, and Urmi presented some of her dissertation research on invasive plant species.



# EVO 2023 Conference

Members of E&E, past and present, including **Pascal Title**, **William Thomas**, **Jose Moscoso Nunez**, **Anita George**, and **Alexis Brown**, met up in Albuquerque for the Evolution Tri-Society conference. It was an excellent opportunity to network with colleagues from around the world, learn about cutting-edge research, and debate ideas. Albuquerque is a fun and culturally rich city! Photos by Ash Ponders.



Rachael Herman



William Thomas



Janet Vu



h Davidson

# Congratulations, Grads!

Congratulations to our E&E students defending this Fall. We wish you all the best in your future endeavors.

- Rachael Herman
- William Thomas
- Janet Vu
- Kenneth Davidson
- Dedi Yang



Dedi Yang

Congratulations to our most recent graduates in the Master's Program! You make us proud!

- Rachael Sclafani
- Emily Jefferson
- Sydney Grosskopf
- Matthew Sirotkin

# Support the next generation of scientists in ecology and evolutionary biology!

Our Department is home to some of the brightest minds in the field, and we are committed to training the next generation of leaders. Your support can help us provide our students with the resources they need to succeed and to fund innovative research projects that are making a difference in the world.

#### A few ways you can give:

 Make a gift to the Ecology and Evolution Department Fund. This fund supports departmental needs, including student scholarships, fellowships, and research grants.

 Sponsor a student. This is a great way to mentor a future scientist and directly impact their work.

 Support a specific research project. If you are passionate about a particular area of research, you can make a gift to support a specific project led by one of our faculty members.

To learn more about our giving opportunities, please visit our website or contact Amanda Sabanos, AVP of Advancement, Schools and Colleges, at 631-316-0371.

Thank you for your support!

