2020 Ecology and Evolutionary Biology Awards Ceremony
New Endowments and Awards
Beagle Memorial Fund for Research
Supports undergraduate, graduate or faculty research in ecology and evolutionary biology; generously given by former Associate Dean for Research in the College of Arts and Sciences and Head of EEB, Professor Christine R. B. Boake.

Daniel J. and Donna K. Popek Ecology Scholarship Endowment
Supports undergraduate research and scholarship for EEB majors at UTK; generously given by Mr. and Ms. Popek. Mr. Popek graduated from the UTK’s Zoology Department in 1967.
Announcing New EEB Awards

William Byrne Hartz Biodiversity Endowment
Support for graduate students pursuing studies in environmental biology, biodiversity, sustainability, ecology, and conservation. Created in memory of William Byrne Hartz through a generous gift by Florence Hartz Jones. Awardees will be named Tennessee Conservation and Biodiversity Center scholars.

Dr. Clifford Amundsen Ecology Scholarship Endowment
Support for undergraduate research and scholarship through the generosity of Ginny Dant, Kari Amundsen Apter and Margie Amundsen. Dr. Amundsen was a faculty member in the Department of Botany at UTK for 37 years. His research specialty was plant physiological ecology, working primarily in forests of TN, VA, KY, NC and the West.
Announcing New TENN Herbarium Awards for 2021

Lynne and Bob Davis Herbarium Awards
For undergraduate student research focusing on plant natural history, taxonomy, and/or floristics. Lynne and Bob are passionate naturalists and have been volunteers at the UTK herbarium for the past 3 years. They barcoded/imaged over 16,000 liverwort specimens and have databased/georeferenced thousands of UTK specimens collected from around the world.

Ben Hochman Memorial Awards
For Student Research in organismal biology using primarily genetic data. Ben Hochman was a Geneticist in the Department of Zoology at UTK from 1964 to 1988. His research focused on genes of the 4th chromosome of Drosophila. By this endowment, his friends remember him and acknowledge his contributions.
2020 Alumni Outstanding Teacher Award

Susan Riechert
2020
Macebearer

Gary McCracken
2020 American Academy of Arts and Sciences Fellow

2020 Ecological Society of America Mercer Award

Susan Kalisz
2020 Graduate Student Teaching Award

Chloe Lash
2020 Graduate Student of Extraordinary Professional Promise

Kendall Beals
2020 Top Collegiate Scholar

Bryce Wade
2020 Undergraduates of Extraordinary Professional Promise

Olivia Feiten, Morgan Fleming, Helen Law & Jackson Turner
Division of Biology Graduate Awards
2020 Alexander Hollaender Graduate Fellowship Award

Mali Hubert
2020 Teaching Award for Outstanding Instructional Achievement by a Graduate Student

Mali Hubert
TENN Herbarium Awards
2020 Hesler Awards for Herbarium-Based Research Projects

Graduate Student
Rachel Swenie – Matheny Lab
2020 Breedlove, Dennis Awards for Student Botanical Field Experiences

**Graduate Students**
- Alex Aromin – Budke Lab
- Eric Shershen – Budke Lab
- Rachel Swenie – Matheny Lab
- Sophia Turner – Schweitzer Lab

**Undergraduate Students**
- Joanna Huntoon – Kwit Lab
- Nathan Pace – Budke Lab
Outstanding Dissertation Award

Chelsea Miller
Chelsea Miller’s thesis research explored how plants collaborate with ants to have their seeds distributed. In this mutualism, ants are rewarded with specialized structures attached to seeds, called elaiosomes, that attract and provide a nutritional reward to ants. In her dissertation, she discovered how variation in chemistry of these elaiosomes, can have substantial effects on attraction of and dispersal by ants. Chelsea examined how variation in the chemical profile of the elaiosomes differed among species of Trillium, and how this variation was related to the geographic ranges and niche breadth of *Trillium* species. Low dispersal, narrow niche breadth and small geographic ranges can increase species’ risk of extinction and her work informs efforts to conserve native species and their interactions. She did all this research while making substantial contributions in EEB leadership, teaching, and collections management.
Best Progress Towards Dissertation Award

Amanda Hyman
Amanda is in the second year of her PhD and has made outstanding progress towards her dissertation this year. Amanda has won a total of $12,952 of grant and scholarship funding to support her dissertation research spanning 6 separate awards. That was achieved through her organization and determination to see her research impact multiplied. Supported with that funding, Amanda ran two major surveys back in Fall. She ran one in Benin with a team of field assistants involved. She ran another with conservation organizations here in the US. Amanda has then been analyzing and writing up the results of those surveys. Together the two surveys and subsequent analyses will comprise a very substantial component of her dissertation and very impactful papers. Most students would have done one survey, analysis and write-up this year and considered it a success. Amanda had to convince her advisor she could take on both at once – turning around from one survey to jump onto a plane to Benin. But she carried both of and it puts her in a great position for the years ahead. Alongside that progress on her dissertation, Amanda managed to author two papers this year based on other work, one in Methods in Ecology and Evolution and the other in Reviews in Aquaculture (impact factor 7.19) adding to her three prior publications. She worked as a TA and GRA on a different project again. Amanda was also a great contributor to EEB and the campus: she served on the department’s diversity committee; served in the Graduate Student Senate; and co-led a workshop on how to foster inclusive learning environments in STEM fields. Really, Amanda has has an awesome year.
Outstanding Publication by a Graduate Student Award

Amanda Benoit
Predator effects on plant-pollinator interactions, plant reproduction, and floral evolution

A.D. Benoit and S. Kalisz (in press, 2020)
Annual Review of Ecology, Evolution and Systematics

Amanda’s paper reviews how predators that consume pollinators or change pollinator behavior affect plant-pollinator interactions and thus how predators indirectly affect plant reproduction, fitness, mating systems, and trait evolution, and provides an agenda for future research.
Outstanding Teaching by a Graduate Student Award

Jonathan Dickey
Jonathan is a third-year PhD student in the Fordyce Lab. He studies the factors responsible for rhizosphere community assembly and the role of microbial communities in driving plant fitness and phenotypic variation. As a teacher, Jonathan provides a unique perspective on field ecology based on his diverse interests in the natural world, and is especially passionate about inspiring students to pursue their own independent field projects. He spends long hours teaching students statistical methods and techniques for handling data. At the same time, Jonathan creates a supportive environment for students to excel, regardless of their background.
Outstanding Teaching by a Graduate Student Award

Chloe Lash
Chloe’s teaching performance has been outstanding. Her ability to connect with students makes their transition to university life seamless. In her roles as a teaching assistant for the Honors section of the introductory biology lecture (BIOL 158), as well as Biology Literacy (BIOL 150), she has been excellent and approachable. Clear evidence of her strength are seen in her teaching of the Honors section of the introductory biology laboratory (BIOL 167). Her post-course evaluations in BIOL 167 were marvelous; her scores for items pertaining to instructor contribution, creating a positive and helpful atmosphere, creating a positive learning environment, and providing relevant feedback, were close to a perfect (5.0). Comments affiliated with the course were scored just as high by her students. The students’ high regard for Chloe is a reflection of her investment in the construction and follow-through of the course’s activities. Chloe recently said that one of her most rewarding experiences as an instructor in BIOL 167 was when a quiet student came out of their shell during the first field-based lab and mentioned to her how much they enjoyed the course, not just the outdoor aspects, but the challenges therein. Seeing multiple written comments from students articulating how knowledgeable and helpful Chloe was in guiding them towards their learning outcomes is inspirational. She empowers students to put their best effort forward. Chloe has accepted an offer to be an Assistant Professor at University of St. Francis. They are fortunate to have this exceptional and passionate teacher on their faculty.
Tom Hallam Award

Jordan Bush
Jordan is passionate about both biology and mathematics and has parlayed these passions into research on the social behavior of animals, especially her beloved anoles. She won both a NSF predoctoral fellowship and an NIH Program for Excellence and Equity in Research (PEER) Fellowship that largely supported her graduate research, which entailed intensive field and lab work on the social interactions between and introduced and a native anole species. Using network theory, she showed how network structure affects social phenomena such as territoriality, dominance hierarchies, and mating behavior, all while also earning a master's degree in journalism and electronic media. Jordan is the very definition of an Outstanding Graduate Student with interest in Math Ecology, the criterion for the Tom Hallam Award.
Sandy Echternacht Award: Outstanding Graduate Student based on Excellence in Research

Kendall Beals
Kendall’s research is focused on understanding how soil microbiomes influence plant phenotypes under a range of interacting disturbance regimes. This question has important applied and basic implications for how soils and soil communities drive functional plant traits in a changing world. To date, she has presented this work at five conferences, including the Ecological Society of America, Soil Ecology and Research Colloquium at GSMNP and she has written and won over $17,000 in grants to support her work. Kendall has published three papers, including her first lead author publication in ‘Frontiers in Ecology & Evolution’; has one paper in review and has two more that will be submitted for publication this spring (and she has more in the pipeline!). Kendall’s dissertation work will have broad impacts. Congratulations to Kendall for her great science and mentoring and the real change that her efforts will bring in her field of soil ecology.
Beagle Memorial Fund Award for Research

Taylor Woods
Taylor is a 2nd year PhD student who has already completed her 1st dissertation chapter in which she examined diversity-productivity relationship in streams using a causal inferential framework that identifies both proximate and ultimate drivers of productivity. This chapter is in review in the leading macroecology journal Global Ecology and Biogeography. It is a major achievement for her to complete such an important piece of research that advances basic ecological science.

She has made further tremendous progress by producing preliminary drafts/results of two other papers on the ecological drivers of body size distributions in stream fish. She also leads a collaborative Giam lab project involving undergrads, grad students, and a postdoc to examine spatial, taxonomic, and thematic biases in aquatic citizen science monitoring projects. This summer she will be involved in a program run by the Office of Undergraduate Research to mentor high-school students in water quality monitoring and developing research projects.
Outstanding Outreach and Community Service

Amy Luo
Amy is a first-year PhD student in the Derryberry Lab. She is interested in avian genomics and the role of behavioral isolation in speciation. Already, in her first year, she has demonstrated passion and skill for sharing her knowledge and excitement about biology with the public, including through her involvement in the McClung Museum 2019 FossilFest and the 2020 Darwin Day events. Amy's enthusiasm is infectious.
EEB
Undergraduate Awards
EEB Outstanding Undergraduate

Morgan Fleming
In just two years at UT, Morgan made meaningful contributions to research and outreach in EEB. Morgan completed an Honor’s thesis on the metabolic plasticity of pupae of one species of dung beetle. She gave a talk about her work at the Society for Integrative and Comparative Biology, and she has a first-author manuscript in review at *Journal of Insect Physiology*. During her time at UT, Morgan also published a paper on natural history of herpetofauna (Fleming & Pierson 2018, *Herpetological Review*). In addition to her research, Morgan has made significant contributions to outreach. She organizing and ran a dung beetle booth that combined science and art for the annual “Salamander Ball” at the Knoxville Zoo, and she is engaging with a global audience about dung beetles on HappsNews, a live stream news show. Morgan has been so successful as an EEB undergraduate that she received a 2020 Outstanding Professional Promise award from the College of Arts and Sciences and a prestigious 3-year fellowship from the National Science Foundation to pursue her graduate work.
EEB Outstanding Undergraduate

Helen Law
Helen has been a highly active EEB student during her time here at UT. She is passionate about increasing representation in science and served as the undergraduate representative on the EEB diversity committee. She also carried out a research project in the Matheny Lab studying the impact of spore dispersal traits on rates of diversification in fungi. Helen shares her biology knowledge with the public through social media as a Curation Technician at the UTK herbarium. She initiated the hashtag #MushroomsAndArtHistory to feature the ways in which biology and art have intersected across time. Helen is applying to graduate schools to continue her studies of fungal evolution and we look forward to hearing more about her future successes!
EEB Outstanding Undergraduate Research

Bryce Wade
Bryce’s research theme is the conservation biology of amphibians and reptiles. He independently conceived of and completed an occupancy study of small salamanders in habitat fragments in urban Knox county. He discovered that invasive ground cover plants have significant negative effects on salamanders. These results have very important conservation implications and a manuscript will be published soon. Bryce also spent last summer on an NSF-funded REU supervised by Dr. John Maerz at University of Georgia. There, he worked on conservation of gopher frogs, a candidate for the US Endangered Species List. Bryce is currently working on another project of his own conception – testing for the occurrence of rare unisexual mole salamanders in Kentucky. His excellent reputation as a scholar is well deserved, and his motivation to do original research is exceptional among undergraduates.
EEB Undergraduate Award for Professional Promise

Casey Richard
Casey Richards stands out among our undergraduates for his exceptional professional promise. Casey is an EEB major, doing research experience in entomology and plant pathology focused on bioinformatic data analyses. He has presented posters on that work at undergrad research conferences. Casey is a great student to have in classes – He is always engaged and forthcoming with questions and ideas. Casey also works in Armsworth’s research group as their lab manager. In that role, he handles all manner of different tasks including collating and processing data but also managing lab resources and helping manage communication lines to folks in the group, a role in which he is very effective. Casey has an internship with TDEC this summer. Meanwhile he is sharpening his plans for graduate school. Casey demonstrates a degree of forethought about his future plans and how best to get these that few students can match.
EEB Undergraduate Award for Professional Promise

Anna Kaz
Anna is graduating *Summa cum laude* with a major in EEB and a minor in Sustainability, and Chancellor's Honors. Anna joined the Giam Lab in the summer of 2018 to examine the potential for stream microhabitats to buffer fish and other aquatic organisms from climate warming. She gave a talk on the results from her work in the Great Smoky Mountains National Park Science Colloquium in 2019 and a poster presentation in the EUReCA competition in UTK this spring. Anna is the lead author on a manuscript that presents results from this work and hopes to submit this manuscript to the international peer-reviewed journal *River Research and Applications* in the summer. Besides her own project, she is also active in collaborating in other projects in the Giam Lab. She is a co-author of a 2019 paper published in *Nature Ecology and Evolution* that examines the tradeoffs between climate refugia potential and habitat suitability across various dispersal pathways in dendritic stream networks. In the summer of 2019, she also won a prestigious REU position with Amy Rosemond's lab at UGA to further her research experience in stream ecology. Anna is an intelligent and promising researcher. She is interested in pursuing graduate research in conservation policy and will undoubtedly succeed in whatever field (i.e., policy or ecological research) she chooses to pursue.
Dan and Donna Popek
Undergraduate Award

Joanna Huntoon
Joanna excels as an undergraduate researcher in two labs, leads the Naturalist Club, and facilitates collaborations with the US National Phenology Network, Zoo Knoxville, City Nature Challenge, Ijams Nature Center, and the Great Smoky Mountains Institute at Tremont. This is by no means an exhaustive list. She is exceptional and impressive in all she does and is especially noteworthy because of her gumption, her diverse background and knowledge of natural history, political science, rowing, and art (see her illustration, right). Joanna fully deserves this wonderful recognition. Whatever she decides to do going forward will be awesome.
Dr. Clifford Amundsen Ecology Scholarship Endowment

Alexandra Scearce
Last summer Alex began a research project examining the role of plant-plant competition and plant-soil microbial interactions on oak seedling success post-fire. This project was established in response to the Great Smoky Mountains NP management wanting to know the ecological drivers of oak recovery after the Chimney Tops 2 fire. She conducted a 5-month greenhouse experiment to monitor the growth of oak seedlings in response to competition with pine seedlings and fire-induced changes to the soil microbiome. Alex has been involved in all aspects of the project from experimental setup to data collection to analysis to presentations including the Great Smoky Mountains NP Science Colloquium in March and a poster at UTK EUReCA event in April 2020. Alex is continuing this project and preparing a manuscript for publication.
EEB Post Doctoral and Faculty Awards
Outstanding Postdoctoral Research

Mike Harvey
Mike is a brilliant biologist whose work focuses on developing new tools to study diversification processes. He leverages the incredible diversity of birds in the tropics to test the role of population-level processes in generating new species. His work in the Derryberry lab is shifting their focus from reproductive isolation to population demography as a key driver of speciation. In so doing, his work is inspiring new avenues of research as well as enabling work with non-model organisms.

Mike's specific areas of expertise in quantitative biology include population genomics and comparative evolutionary genetics, with tool development at the interface of genomics and computational biology for non-model organisms. He examines the evolutionary processes that create avian biodiversity using comparative analyses of differentiation and speciation as well as modeling associations between population-level processes and macroevolutionary diversification. His extensive publications (29+, 6 since joining UT) at such an early stage in his career bear witness to the productive collaborations he has built across a number of national and international institutions. He actively seeks funding from external sources to support his independent research program on avian diversification in Peru.
Mulholland Post Doctoral Award

Lalasia Bialic-Murphy
Lalasia is an outstanding scientist who combines her skills in mathematical modeling with a keen interest in conservation and environmental effects on native species and communities. She is a creative, bold thinker with the ability to conceptualize and model complex biological systems. She has a deep understanding of ecological, conservation and demographic modeling, and the ability to synthesize across diverse study systems. Her latest research explores the extent to which plant-fungal interaction networks will be compositionally and functionally altered in the Anthropocene, especially as a consequence of novel biotic interactions. She integrates data on individual fitness, physiology, mutualism disruption, and invasion in novel population models (IPM). Her research is rooted in basic science, but has profound implications for the preservation and management of natural resources, biodiversity and ecosystem function.
Outstanding Outreach and Community Service

Kimberly Sheldon
Dr. Sheldon is a shining example of outreach and community service. She has initiated multiple outstanding service projects that are making important contributions to science, inclusion of underrepresented groups and that involve the larger community. She organized and runs a high school program with students from the Eastern Band of Cherokee (EBCI) High School. In 2019 the inaugural program brought seven Cherokee high school students to work alongside researchers from the Sheldon Lab and the EBCI Office of Fisheries and Wildlife Management to learn how to perform wildlife research through the scientific process. Students designed and carried out research projects examining the impact of environmental change on species native to the Quall Boundary and shadowed EBCI biologists on a range of other research projects. This novel program allows EBC students to gain valuable research experience, and career development to help launch careers in STEM fields. In addition, she organized and led two BioBlitz's on “the Hill” of UTK’s campus. These involve identifying all organisms found in the area within a 24 hour time span.
EEB Outstanding Leadership Award

Nina Fefferman
In the few years since joining EEB, Dr. Fefferman has had a dramatic, positive effect on our department and the broader community. She created a dynamic research group that attracts and supports great scholars. Dr. Fefferman crafted courses, including a conversational mathematical modeling course, that help students understand how mathematical models work and why they are used. She continues efforts on campus, nationally and internationally, to bridge math with other fields. Current research topics address compelling questions such as bacteria competing in immunocompromised populations, evolution of senescence, mosquito-borne disease transmission and how to monitor it, and more. The importance of her research has become even more prominent during the COVID-19 pandemic: her expertise is sought by the CDC, Homeland Security, US state governors, the broader public health community, and UTK leadership. She directs the Math Modeling Center, is a Co-Director of UT’s One Health Initiative, and advisor to the Chancellor's Re-Imagining Fall task force. She recently delivered a streaming lecture on disease modeling and COVID-19 to >500 live attendees; the recording is available at https://www.youtube.com/watch?v=Ewuo_2pzNNw
EEB
Staff Awards
EEB Outstanding Administrative Service Award

Marva Anderson
Marva is always there for all of us in EEB: students, staff and faculty. She skillfully manages the entire fiscal machinery of the department, from balancing the core EEB budgets keeping track of hundreds of faculty and student grants and awards annually, as well as directly managing the EEB office staff. She works behind the scenes to smooth out all manner of issues. Marva not only knows everyone's job in the EEB front office and can do all their tasks, she does not hesitate to jump in and make things happen when someone needs help or a staff member is absent. She is professional, positive and keeps the EEB boat afloat, despite many challenges and changes. Marva is exceptionally deserving of the 2020 Outstanding Administrative Service Award. EEB would be lost without her.
EEB Outstanding Research Service Award

Margaret Oliver
Margaret Oliver joined the EEB department as our Herbarium Collections Manager a year and a half ago. During that time she has greatly enhanced the levels of outreach and student opportunities at the herbarium. Margaret started a new social media campaign through the @UTKHerbarium pages where she highlights a #FamilyOfTheWeek to help members of the public learn to identify our native Tennessee plants. Going above and beyond her daily tasks, she has also led a highly popular Saturday workshop on pressing plants in collaboration with the Knoxville Botanical Garden.

Margaret has increased opportunities for students to receive training in herbarium curation through a new internship program. Over the past year and a half she has mentored 10 students who have received EEB credit while being trained at the herbarium. Margaret is an outstanding EEB staff member and we thank her for all energies to enhance the research, outreach, and educational opportunities at the herbarium.
EEB Outstanding Research Service Award

Jennifer Brummett
Jennifer manages EEB’s Etnier Ichthyological Collection (EIC). She is responsible for EIC’s daily operation, including regular maintenance of specimens; managing incoming and outgoing loans; and processing new incoming specimens. Because many specimens deposited and loans are technical transactions with agencies closely allied to UTK including the TVA, TN Dept Wildlife & Conservation, or other universities & museums that require government collection permits, she serves as a key technical liaison. Importantly, her expert skills include curating a publicly available geo-referenced database, enhancing EIC’s research value. Jennifer performs her roles with great professionalism, efficiency and independence. Beyond her regular duties, Jennifer contributes enormously to research, teaching, service, & outreach on campus. She served for 5 years as an Institutional Animal Care & Use Committee member (normally a faculty role). Jennifer works closely with students & faculty who use EIC in research and facilitates many undergrad projects. Dr. Etnier, EEB professor emeritus, praises Jennifer as the “glue” that holds the EIC together. Jennifer provides outstanding technical support, energy, motivation, & unstinting generosity to a wide community of scholars.
2019-2020 EEB Graduate School Students
Congratulations, Graduates!

Doctor of Philosophy Degrees

Jordan Bush
Miranda Chen
Chloe Lash
Diane LeBouille
Chelsea Miller
Megan Patel
Tyler Poppenwimer
Daniela Rivarola
Morgan Roche
Orlando Schwery
Claire Winfrey
Announcing EEB Undergraduate Class of 2019-2020
Congratulations, Graduates!
Bachelor of Science Degrees

Hannah Alloway
Autumn Bailey
Joseph Bone
Victoria Brandt
Matthew Britz
Hannah Browning
Austin Brunette
Sara Chain
Madeline Coffey
Tyler-Christian Daniels
William Ellis
Hannah Evans
Olivia Feiten
Jody Fleming
Madison Gilmore
Kathryn Goodwyn

Ailsa Grant
Kelsey Greiff
Geordan Hall
Kylie Hannahs
Rhea Hester
Brianna Jacobs
Anna Kaz
Helen Law
Cheryl Lawrence
Sean McCook
Samantha Murphy
Han Noh
Dominick Palozzo
Harry Pepper
Evelyn Pieper

Anna Raney
Alexandria Ray
Jacob Ray
Brianna Reynolds
Travis Roberts
Kira Russell
Patrick Sisler
Jordan Steele
Jeffery Stevens
Morgan Tate
Sydnie Toler
Jackson Turner
Brianna Tyre
Bryce Wade
Kelsey Waterson
Hanna Wilbourn
Congratulations to all awardees and graduates!