

Our Alumni

Orphaned Squirrel Rescue & Rehabilitation



Stephanie Bystrak (BS '01) rescues & rehabilitates orphaned squirrels. This cute little fella is her 30th rescue! Stephanie is the Receptionist Manager at Healing Hands Animal Hospital in Salisbury.

Anna Brennan (BS '21) started pursuing her Ph.D. in Biological Chemistry at Johns Hopkins University School of Medicine this fall. Good luck Anna!

Hannah Ennerfelt (BS '16) defended her PhD at the University of Virginia on September 20, 2022. Her dissertation defense, "Microglial signaling in neurodegenerative disease" showcased the beautiful work Hannah has been working on in the realms of Alzheimer's disease & Multiple Sclerosis. Hannah will be heading to Stanford University next to start her post-doctoral training. We are so proud of you Hannah!

Jack Lennox (BS '21) completed his Master's degree in Global Health Policy at the University of Edinburgh. Amazing job Jack!

Madison MacDougall (BS '22) first authored a review, SARS-CoV-2 & multiple sclerosis: Potential for disease exacerbation in the journal *Frontiers in Immunology*.

Sheridan Sargent (BS '20, MS '22) received the 2022 Robert Gunn Award (American Physiological Society, Cell & Molecular Section) for her work on hyperglycemia & skeletal development at the 2022 ASBMB conference.

Melanie Staszewski (BS '22) Received a Fulbright Research Fellowship to Poland for the 22-23 academic year. Have fun Mel!

Gabi Voithofer (BS '20) returned from her yearlong Fulbright Research Fellowship to Poland this summer, took a short break, & started working towards her MD/PhD at the University of Maryland School of Medicine. Good luck Gabi!

Our Undergraduate Students

Tri-Beta Biology Honors Society 2022 Inductees

Sarah Allen
Brianna Esker
Rebecca Helensky
McKenzie Jamison
Connor Morningred
Virginia Murray
Naomi Perry
Meghan Reed
Aerin Rost-Nasshan
Sophia Lundeen

Beta Beta Beta



Posters on the Hill



Madison MacDougall presented a poster at the 26th annual Posters on the Hill: The Effects of Lavendustin-A on Peripheral Nerve Degeneration in Hyperglycemic Zebrafish.

Our Graduate Students

Spring 2022: The Defense Rests – The Verdict, Graduation!



Stephanie Miller successfully defended her Masters' thesis: *Investigations into the regulation of short-chain fatty acid assimilation & ethanolamine metabolism in bacteria.*

Michael Carter & Les Erickson, thesis advisors

After graduation, I transitioned into a lecturer position where I am currently teaching labs for both Biology 211 (Microbiology) & Biology 201 (Introduction to Biology: Molecular & Cellular Biology). During the summer, I taught Biology 101 labs & worked to revise the labs for Biology 201. I am additionally continuing the research that I started during my years as a graduate student.



Sheridan Sargent beautifully defended her Master's degree work this past May. Her thesis titled, *Using zebrafish to investigate the onset & recovery from common complications of hyperglycemia*, described the impressive work that began in her undergraduate time, & carried over into her graduate work in the Clark lab. This huge body of work has already resulted in numerous presentations, awards, one paper in revision, & two more in prep for submission. This month she starts her Ph.D. at the University of Washington, Seattle. We can't wait to see what you accomplish next Sheridan!

Jessica Clark, thesis advisor



Jessica Strange successfully defended her Masters' thesis: *Analyzing the effects of mercury on acetylcholinesterase in vitro*.

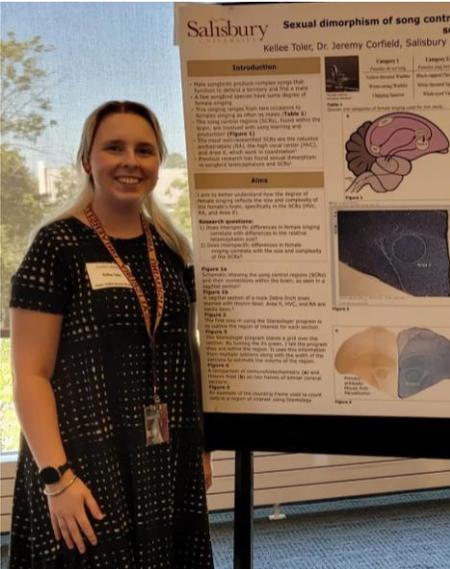
Jennifer Nyland, thesis advisor

Since then, in addition to getting married, Jesci has started a PhD program at Oregon State University! As part of her doctorate in Environmental Health Sciences, she will be teaching Environmental Toxicology. Jesci & family are loving life in the Pacific Northwest, including lots of hikes & biking & time spent outdoors.

New Graduate Students



My name is **Jeremy Green**; I am originally from Wooster, Ohio. I am a new graduate student in the Department of Biological, having just recently graduated from SU with a BS degree. I'm also a TA for the Biology 101 labs & do thesis research alongside Dr. Hogue on wildlife conservation/ecology. I love outdoor activities like fishing, kayaking, & visiting national parks.



Kellee Toler received her BS in wildlife ecology & conservation plus a BA in psychology from the University of Delaware. After taking a few psychology & neuroscience classes in Pepperdine University's online program, she came to Salisbury to pursue her MS in Applied Biology, where she can combine her interests in ecology & neuroscience. Kellee & her faculty advisor Dr. Jeremy Corfield study the neurosensory ecology of birds, specifically neural tradeoff in waterfowl & sexual dimorphism in songbirds. Kellee spends her spare time cuddling her dog, Boba, setting up lavish habitats for her collection of reptiles, & flicking through one of her many unfinished books. She hopes to one day be a research professor that inspires students & incites change in the way we view animal behavior, neuroscience, & ecology.

Continuing Graduate Students

MS student, **Olivia Hamilton**, presented a paper at the Animal Behavior Society Conference in San Jose, Costa Rica (July 20-23, 2022): Hamilton OR, James L, Hunter K & Taylor R. 2022. If memory serves: Do multimodal signals affect the working memory of female túngara frogs?

Our Faculty

Dr. Noah Bressman



On July 30th, Dr. Noah Bressman's lab at Salisbury University hosted the first ever Nanticoke River Invasive Fishing Tournament, funded by a Maryland Department of Natural Resources Grant. This event encouraged anglers of all skill levels from around the area to fish the Nanticoke River & its tributaries, targeting invasive Blue Catfish & Northern Snakehead. These two species are not native to the region & were introduced to the Eastern Shore about 20 years ago. Since then, they have been disrupting the balance of the local ecosystem & having negative impacts on native species. How bad are their impacts & which species is worse? Well, we do not know the full extent of their effects yet, but the Bressman lab is working hard to get to the bottom of it. Bressman has multiple student-led projects on investigating the biology & impacts Blue Catfish & Northern Snakehead are having on the area, including MS student Zach Crum's project on the feeding ecology of these invasive species, undergraduate Kendall Weingard's project on determining the age & growth of catfish in the Nanticoke, undergraduate Maria Kaschak's project on catfish reproduction, & undergraduate Francis Lopez-Chilel's project on the properties of snakehead slime. However, all of these projects require getting a lot of fish. The idea for this tournament came about when Bressman & MS student Zach Crum were fishing for these species & were only able to get so many fish at a time. But if they were to have 300 teams all go out fishing at once for various prizes & donate the fish to the lab, they could get a lot more fish in one day while educating the public about invasive species & encouraging them to act as predators by keeping their populations under control, limiting their negative effects. That's exactly what happened! Overall, 651 Blue Catfish & 6 Northern Snakeheads were caught & removed from the Nanticoke River, which were used to support the various projects above, along with some other projects in collaboration with the Maryland Department of Natural Resources & the United States Geological Survey. After the Bressman lab removed the stomachs & other tissues to analyze, they returned the rest of the fish back to the anglers & encouraged them to try these delicious fish because the best way to get rid of tasty invasive species is to try eat 'em all to death!

Nanticoke River Invasive Fishing Tournament – Winning Fish



Anglers with the winning catfish (37.58 lbs)



The winning snakehead (6.62 lbs)

Dr. Jessica Clark



Jessica Clark received an institutional grant for \$20,000 from the Maryland Open Source Textbook (M.O.S.T.) initiative at USM's William E. Kirwan Center for Academic Innovation to help support the expansion of open pedagogy, resources, & practices.

She was also interviewed by the Chronicle of Higher Education (published 12 August 2022): More Colleges Are Adding Diversity to Tenure Standards. But the Debate's Not Settled.

Dr. Angela Freeman

I am happy to report that I received a grant from the NSF for Building Research Capacity in Biology (BRC-BIO) for \$480,000 over 3 years. The purpose of the grant is to improve research capabilities for new/early career faculty at PUIs, SLACs, & other non-R1 institutions.

The grant supports the study of the 'Neuroendocrinology of flying squirrel social behavior'. My super team of undergrads & I will be live trapping flying squirrels, moving them to aviaries out at the Nanticoke River Center, & seeing how oxytocin impacts their co-nesting & cuddling behavior. Over the 3 years we aim to determine how oxytocin is involved in the behavior, where it is released in the brain during co-nesting, & determine how brain sensitivity to the hormone changes across seasons.

I am extremely grateful & EXCITED to have such a boost in the first few years & the undergraduates involved with the work are going to benefit (and have a lot of fun!) For more information, there is a poster on the Freeman board that was presented at the summer research showcase about our start of the project.



Joanna Diaz-Ocana (Biology, '23) & Katie Ekholm (Biology, '24) building aviaries in summer 2022

Mary Gunther, MS

Over the summer Mary Gunther worked with student Lydia Bradshaw on a project at the Salisbury Zoo. Lydia was looking at how visitors & animals influenced each other's behavior. The work was presented via poster at the Summer Research Showcase & made into a video for SU's website. Here is the link to the video:

<https://vimeo.com/user92305960/review/731055599/3e7e798c4c>

Mary Gunther once again attended the Association of Zoos & Aquariums Annual Conference this year. Attendance was complicated by the conference being moved three weeks earlier than usual occurring during the first week of classes. It was possible to attend about half the conference as it was held in Baltimore so Mary drove back & forth several times & participated as much as possible! She even got a speaker for the Biology Seminar Series out of it! Added bonus – she visited her old exhibit at the Aquarium & held a 30-day old puffin chick! There are five birds – two puffins, a razorbill, & two guillemots that Mary brought back from Iceland as chicks in 1993!



Mary's Annual Summer Sojourn! Once again Mary Gunther headed off to Maine to volunteer at Audubon's Hog Island Camp. On the way she visited the Philadelphia Zoo, Mystic Aquarium & Roger Williams Zoo in Providence Rhode Island. Here are a few of her favorite pictures.

Baltimore Zoo



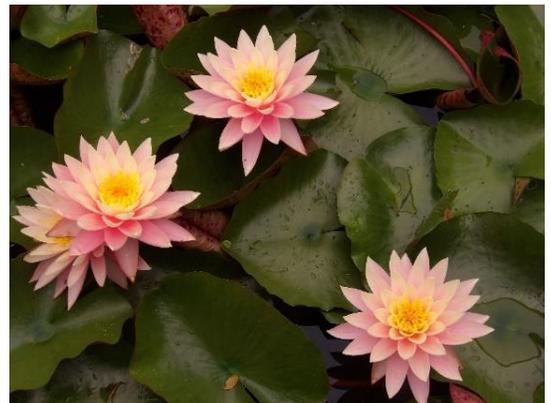
Philadelphia
Zoo



Roger
Williams
Zoo



Mystic
Aquarium



Maine



Dr. Jennifer Nyland

Dr. Jennifer Nyland, along with co-principal investigators Drs. Michele Schlehofer (Psychology) & Tim Stock (Philosophy), won a competitive grant from the National Endowment for the Humanities (NEH), almost \$150,000 awarded in late spring 2022. The funding support three years of initiatives & will help to bring aspects of ethical practice into all disciplines across campus, but importantly into STEM classrooms. Schlehofer, Stock, & Nyland are co-directors of the Re-Envisioning Ethics Access & Community Humanities (REACH) program which has developed methods to connect community partners with SU, & to return campus conversations around ethical issues to the community. As part of the REACH initiative, the co-directors developed & offered a free workshop “Adherence to Ethical Norms & Accountability: a Collaborative Workshop” in May 2022. You can read more about REACH & their work at <https://www.salisbury.edu/academic-offices/liberal-arts/philosophy/reach.aspx>.

Celebrating Dr. Ann Barse’s Retirement



From right: Ann Barse & her husband Joe, Ryan Taylor & Kim Hunter.

Celebrating Dr. Mark Frana's Retirement



From right: Ellen Lawler (Professor Emeritus), Elizabeth Emmert, Les Erickson, Sandy Ramses & Mark Frana.

Publications

Congratulations to **Noah Bressman** who received the 2021 award for “Best Paper by a Young Scholar in Ichthyology” in Ichthyology & Herpetology for:

Bressman NR. 2022. Terrestrial capabilities of invasive fishes & their management implications. *Integrative & Comparative Biology*, icac023, <https://doi.org/10.1093/icb/icac023>

Zhang L, Wang L, Chen J, Zhang J, He Y, Lu Y, Cai J, **Chen X**, Wen X, Xu Z & Wang C. 2022. Toxicity, horizontal transfer, & physiological & behavioral effects of cyclozaprid against *Solenopsis invicta* (Hymenoptera: Formicidae). *Pest Management Science* 78: 2228-2239. <https://doi.org/10.1002/ps.6847>

James L, Baier AL, Page RA, Clements P, **Hunter KL, Taylor RC**, & MJ Ryan. 2022. Cross-modal facilitation of auditory discrimination in a frog. *Biology Letters* 18: 20220098. <https://doi.org/10.1098/rsbl.2022.0098>

Coss DA, Ryan MJ, Page RA, **Hunter KL, & Taylor RC**. 2022. Can you hear / see me? Multisensory integration of signals does not always facilitate mate choice. *Behavioral Ecology*. Arac061, <https://doi.org/10.1093/beheco/arac061>

Lawler, EM & Rubin SA. 2021. Descriptions of Maryland Birds by Colonial Naturalist Henry Callister. Maryland Birdlife 70(2):2-22.

Morningred C, Grubb B, **Price DL** & Selfridge JA. In Press. Assessing habitat & management through surveys of King's Hairstreak (*Satyrium kingi*) in a Maryland Coastal Plain Forest. Journal of the Lepidopterists Society. Accepted August 2022.

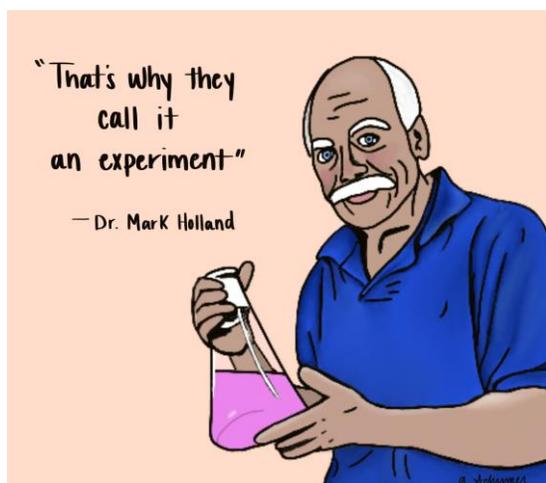
Freeman S, K. **Quillin K** & L. Allison L et al. 2020. Biological Science 7e, Pearson. Digital Update was released this summer.

Presentations

Dr. Kim Quillin presented two posters at the Society for the Advancement of Biology Education Research (SABER) conference in Minneapolis, MN, July 7-10:

1. Belonging 2.0: A Framework for the Synthesis & Translation of Inclusive Strategies in Introductory Biology
2. Pilot of Specifications Grading in Introductory Biology

Dr. Quillin also attended an NSF-funded Deep Teaching Residency at the Howard Hughes Medical Institute in Washington D.C., July 27-31, 2022.



Please support the **Mark Holland Memorial Scholarship**. This scholarship not only benefits a rising junior from the Biology department, but also celebrates the memory of Mark Holland's incredible impact on Salisbury University & its students. Scan this QR code to make a gift now.

Alumni Connection



SU BIOLOGY ALUMNI

Stay Connected !

We want to hear from you! Please let us know where you are living & what you are doing! We would love to hear from you. In the future we plan to have an Alumni Connection section in our newsletter.

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Your Editor



Send any contributions to **Dr. Chris Briand**
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