August 2021 • Volume 11, Issue 1

Bioluminesence

What's glowing in the Biology Department

Inside the Issue:	
CETL Mini Grants	2
Distinguished Teacher Award	2
Biology Depart- ment Student Awards	4
Promotions	5
New Seminar Course	6
Adjunct Spotlight	7
Biology Courses	8

ExEd Spotlight

MONMOUTH UNIVERSITY

August 2021 • Volume 11, Issue 1

Biology Faculty Secure Significant External Funding

Despite the pandemic, Biology faculty have been busy conducting research and mentoring students on projects. Several faculty members have recently secured external funding for their work, which is a major achievement for Monmouth University, as grant funding is extremely competitive. Drs. Jason Adolf and Keith Dunton will be working on a project funded for six years for \$1.3 million by the wind energy company Ørsted to conduct eDNA fisheries monitoring before, during, and after construction of a wind farm off of the New Jersey coast. The windmills will allow clean energy to be generated, and Dr. Dunton and Dr. Adolf will help Ørsted to monitor the impact of the wind farm on fish – this is vital both to understand how both the environment and the fisheries industry may be impacted. Water samples will be collected to identify environmental DNA (eDNA) which is released by organisms

and can be used to quantify the number and diversity of fishes in an area. Dr. Adolf commented, "This project will open excellent opportunities for our students in use of cutting edge eDNA for marine science, and will strengthen Monmouth University's capacity to teach and perform this emerging technology." Additionally, Dr. Dunton will be working on a separately funded project to tag various fish species and then deploying acoustic receivers to monitor their movements through a cable landing or the Ørsted South Fork wind farm. Research opportunities will be available for students to help with the collection of samples as well as the sequence data analysis for these projects. In addition to working with Ørsted, other collaborators on these projects include Rutgers, Cornell, and Stony Brook Universities, so this will allow Monmouth students to interact with the broader scientific community.



Students Bryce McCall and Kerry McFeeters deploying a trawl to collect fish aboard the R/V Heidi Lynn Sculthorpe

(continued on page 3)

Simko Award Presented to Dr. James Mack



The Biology Department is honored to announce that the 2020 Eugene Simko Faculty Leadership Award was presented to Dr. James Mack. The Monmouth University Faculty Council established this award to honor the late Gene Simko, former Faculty Council Chair and Associate Professor in the Department of Management and Decision Sciences, and to recognize individuals who best capture Professor Simko's substantial, diverse and enduring

impact on Monmouth University. Dr. Mack joined Monmouth University in 1968 and, after an absence of five years (1969-1974) for doctoral studies, resumed serving as the faculty 1974-present. He has had held many leadership positions on campus. He was the co-founder of the both the MEWS program (1988) and the Pre-Professional Health Advisory Committee (PPHAC, 1974), and served as MEWS Director for 21 years, and as the Director of the PPHAC for 38 years. (Continued on page 4)

CETL Mini-Grants Awarded to Biology Department Faculty





Dr. Kubera directing the next steps for the experiment in the MCB lab

The Biology Department is happy to have three projects receive funding from the Center for Excellence in Teaching and Learning (CETL) minigrant program immediately prior to the Covid-19 pandemic. A total of seven projects were funded throughout the University, so we were very wellrepresented!

Dr. Kate Kubera:

Dr. Kubera obtained funding to attend the Society for the Advancement of

Biology Education Research 2019 National Meeting in Minneapolis, MN. Dr. Kubera used her funding to advance her work on a course-based undergraduate research project for the BY 375L course.

Dr. Kathryn Lionetti:

Dr. Lionetti received funding to acquire necessary research materials in order to study the impact of a "flipped" classroom teaching approach on the mastery and teaching skills of ISEE major students in the BY 113 course.

Dr. Ellen Doss- Pepe and Dr. Ivan Gepner: Dr. Doss-Pepe and Dr. Gepner received funding to acquire needed laboratory materials to conduct a research experience that crossed both the BY 375L Molecular Cell Biology lab and BY 425 Developmental Biology courses, allowing the two classes to conduct a series of integrated experiments looking at the mechanism of RNAi in *C. elegans*.

2020 Distinguished Teacher: Dr. Pedram Daneshgar



The Biology Department is proud to announce that the 2020 Distinguished Teacher Award was presented to Dr. Pedram Daneshgar. Testimonials from his students spoke of his overwhelming desire for their success in the classroom, his passion for the subject matter, and their excellent preparation for "life after Monmouth". Dr. Daneshgar joined Monmouth University in 2010, after completing his Ph.D. from the University of Florida in Forest Resources and Conservation and a postdoctoral position at the University of Iowa. While at Monmouth, he has established a research program with undergraduates, making advances in studying multiple aspects of the role of plants in the environ-

ment, including the impacts of invasive species, the role of mangroves in carbon sequestration, and the ecology of cranberry bogs. If he is not in his office, he is out in the field, typically surrounded by students. In the classroom, he has taught courses ranging from introductory biology to upper-level courses integrating research experiences in the classroom, including botany, ecology, global sustainability, and senior seminar. He has been innovative in the design of new courses, including a course teamtaught with Dr. Bastian on the design of biological experiments, which incorporates research data and statistics, as well as two different first-year seminar courses and a course on biodi-

versity for elementary education majors. No matter the level or the topic, he brings the same passion and commitment to excellence to each lecture. 2019 graduate Taylor Donovan commented, "I've learned so much more from you than how to be a good and smart student and for that I'm thankful. You've prepared me well for life after college and I can't wait to share with you all that I do!" There is no better joy for a teacher than to have such a lasting impact on students. Congratulations, Dr. Daneshgar!

Page 2

Biology Faculty Secure Significant External Funding (continued)...

eDNA is also being collected for a second project for Dr. Adolf, Dr. Megan Phifer-Rixey, and Dr. Dunton funded by the Achelis and Bodman Foundation to conduct biological monitoring for the lower-Hudson-Raritan estuary. This has allowed students to apply their research skills on a project that is of interest to the community. Dr. Phifer-Rixey indicated, "We are especially interested in translating eDNA research in our local waterways into learning opportunities for the community."

Dr. Adolf is also working with the Urban Coast Institute to extend and further develop the Coastal Lakes Observing Network (CLONet), through a project funded by the Plangere Foundation which was initiated in 2019. Coastal lakes, important ecosystems for a variety of wildlife, have become degraded over time for a variety of reasons, including pollution and man-made modifications due to urban development. The CLONet project is a mechanism to involve citizen scientists with the Urban Coast Institute, and Biology faculty and students to monitor the health of local lakes and collect the data online. This program builds upon the long history of Monmouth University engaging with local communities to better understand and manage the many water quality issues associated with Monmouth County coastal lakes. CLONet is a participatory citizen science program made up of citizen volunteers, NJ DEP, and Monmouth University faculty and staff. To date, CLONet has engaged >65 citizen

volunteer samplers in 8 lakes and 31 different stations for a total of >620 samples taken. Monmouth University students are integral to this effort, with several employed each semester / summer to keep the program going. This includes 2020 MEBP graduate Erin Conlon who was recently hired to serve as UCI's Community Science Coordinator managing this project. Dr. Adolf also secured a separately funded project through the NJ DEP and EPA that will allow students and staff working on CLONet to employ cutting edge molecular biological techniques to measure harmful algal bloom (HAB) and toxin abundance. This is part of a larger state HAB project with the aim of better understanding HABs and how to monitor them in our state's lakes.

Dr. Dunton is also working on a project funded by the U.S. Navy to capture and tag endangered Atlantic sturgeon at the U.S. Naval Weapons Station Earle. This will allow the Navy to understand the habitat use of the area by the Atlantic sturgeon. Dr. Dunton also has a grant for almost \$140,000 from the New Jersey Sea Grant organization to utilize acoustic telemetry and pop-off satellite tags to evaluate the behavior and survival of sharks captured in the recreational landbased shark fishery. For this project, Dr. Dunton catches and tags sharks off the coast of Cape May, NJ with the assistance of Monmouth students. His work aims to educate stakeholders and provide the data needed to manage federally-protected fish populations. In his own words, Dr. Dunton states:

"My research focuses on the management and conservation of critically endangered and protected fish population that are regularly found in New Jersey but cross interstate boundaries. The fish that we conduct research on, sharks and sturgeon, are globally declining because they are large (can be >10ft.), long

lived (sturgeon can live

Cameron Gaines cleaning micropipettors for eDNA work

over 100 years old!), and late maturing (female sturgeon reproduce after 20 years old) so they are affected to a variety of factors that lead to their decline like habitat degradation and bycatch. My lab and students have focused on using technology (electronic acoustic tags like EZ-Pass) that allows us to track movements and survival of these animals for 10 years as they move along the coast giving us insight on the migratory patterns and spatial and temporal habitats. This information is then used by management agencies to help minimize negative human interactions with these animals. Over the last couple of years, my students and I have tagged 45 endangered Atlantic sturgeon, and over 100 prohibited sharks (4 species) which we will track over the next ten years."





2021 Biology Department Awards

Research Achievement Award: Subah Soni Amanda Zappacosta

TriBeta Chi Eta Excellence Award: Nicholas R. Pillarella Jesse R. Bragger Skyler B. Post

Outstanding Biology Transfer Award: Flobater I. Gawargi Biology Service Award Bryce McCall

Academic Achievement Awards:

Marine and Environmental Biology and Policy: Karly Nolan

Biology: Abagail Lorenzo

Molecular Cell Physiology: Danielle J. DeGrande Subah Soni Amanda R. Zappacosta

Simko Award presented to Dr. James Mack (continued)...

He has served as Vice Chair of Faculty Council (1976-77) and Chair (1977-1984), and has been an integral member of the School of Science School Personnel Committee (SPC) as well as the University Qualifications Committee (UQC). He also served as the Biology Department Chair (1981-1984). As a Monmouth University Alumnus and member of the Faculty Council, he served as its representative to the MU Alumni Board (1985-2016), where he chaired the Committee to reestablish the MU Athletics Hall of Fame in 2007 after 23 years of inactivity. He is a past recipient of the Distinguished Teaching Award (2004), the Warncke Award (1999), the Virgil F. Payne Award –Monmouth County Section of the ACS (1981), and the recipient of The Senate and General Assembly of NJ Joint Resolution - recognizing his Distinguished Teaching Career (2014). He received the Monmouth University Student Choice Awards in 1988, 1990 and 1998 and the Alumni Association Service Award 1998. He also received the Faculty Merit Award in 1987, 1988, 1989 and 1992. Dr. Mack also served as the secretary to the NJ Academy of Science 1991-1994. He was appointed by NJ Governor Thomas Keane to the NJ Clean Water Council 1983-1990. Currently, Dr. Mack contributes to the Biology Department by teaching and serving as the Course Coordinator for Anatomy and Physiology I & II. Additionally, he conducts research on the antimicrobial effects of essential oils in collaboration with undergraduate student researchers, which has led to multiple publications. His students have presented their work at regional and national conferences including the national meeting for the Council for Undergraduate Research.

Promotions

Emeritus Professor: Dr. Ivan Gepner

After 48 years of service to Monmouth University, Dr. Ivan Gepner has retired! Dr. Gepner arrived at Monmouth in 1973, and has witnessed many changes, including the introduction of computers to the campus and the "College" becoming a "University". In addition to serving as the Department Chair (twice), Dr. Gepner was the Associate Dean for the School of Arts and Sciences from 1994 -1997. Dr. Gepner was instrumental in driving changes to technology on campus, serving as the director of the first microcomputer laboratory on campus, and helping to launch the minor in Information Technology. Long before the Covid-

19 pandemic forced on-line teaching, Dr. Gepner explored the use of technology in the classroom and integrated computer applications into his biology courses. He has taught numerous courses over the years, including BY 110 Introduction to Cellular and Molecular Biology, Genetics (BY 216 and 423), Developmental Biology (BY 425) and courses in Information Technology. As Department Chair, he led the Department through changes to introduce modern molecular biology and biochemistry. The genetics courses he taught in the early 80's are very different from the courses delivered this past year - in both content and mode of delivery! Dr. Gepner has educated, inspired, and touched the lives of countless students throughout his tenure. He will be missed!



Associate Professor: Dr. Keith Dunton

Dr. Keith Dunton was recently awarded tenure! He arrived at Monmouth University in 2015, after first completing a Ph.D. in Marine and Atmospheric Science from Stony Brook University and a postdoctoral fellowship at Delaware State University. He teaches students primarily in the Marine and Environmental Biology and Policy program, with courses in zoology, ichthyology, biodiversity and evolution, and field research. Dr. Dunton has an active research program involving undergraduate students, and has secured multiple grants (some very large), covered earlier in this newsletter, to support his work. His research is primarily on the use of technology to track the behavior of fish that have conservation needs, namely Atlantic sturgeon and sharks. Around campus, Dr. Dunton serves on the Institutional Animal Care and Use Committee (IACUC) the SoS Planning Committee for General Education. He contributed to "Estuary Days" for the Rumson School District, which involved helping middle school students collect data in Fall 2019. We look forward to his many years of service to come!

(Continued on Page 6)



Promotions (continued)...



Senior Lecturer: Dr. Ellen Doss-Pepe

Dr. Ellen Doss-Pepe has been among the first lecturers to be promoted to Senior Lecturer. Dr. Pepe began at Monmouth in Fall 2006 after earning her Ph.D. in Biology, with a concentration in biochemistry and biophysics, from Rensselaer Polytechnic Institute and completing postdoctoral training at UMDNJ. She teaches senior seminar, biochemistry, and the molecular and cellular biology laboratories, and teaches/coordinates the BY 110 Introduction to Cellular and Molecular Biology course. She teaches two of the writing intensive courses for the Department, and has served on the University Writing Committee. She has been innovative in the classroom, revising the molecular and cellular (MCB) and biochemistry laboratories to incorporate research-based projects. Additionally, she worked with Dr. Gepner to create a crosscourse research experience for students in the MCB lab and Developmental Biology, examining the use of siRNA to regulate gene expression in *C. elegans*. Her courses are taught with a combination of rigor, passion, and motivational spirit. Additionally, Dr. Pepe has served on the University Disciplinary Committee, and is the Internship Coordinator for the Department.

Biology Department Introduces New Seminar Course for Incoming Majors

A new course, BY 119 Introductory Biology Major Seminar, was introduced in the Department in Fall 2020. This course is a one-credit pass/fail course that serves as an introduction to the Biology Department, as well as to all of the resources available for student success at Monmouth University. The Department quickly mobilized to design and offer this course once the former FY 101 course, which was a threecredit course covering content information in the major as well as transition topics, was no longer required as a General Education requirement. Since the pandemic disrupted a lot of normal University life, it was timely that we had the opportunity to connect with our first-year students in a more formal setting, though some BY 119 sections were on-line, some where hybrid, and some were mostly in-person. The course covered study skills and research opportunities in the Department, University resources (including tutoring, SI, the Writing Center, and the Counseling Center), and career preparation. Multiple faculty members were involved in teaching the eight different sections of the course (Drs. Daneshgar, Dunphy, Lionetti, Lobo, Medley, Sterrett, and Weisburg). Current advanced biology students served as Peer Learning Assistants (PLAs) in each section, and gave the incoming students their perspective on college life and success. Congratulations, also, to PLA Farah Hamid who was a finalist for the Student Employee of the Year for her work with this course and her contributions to the Biology Department.



Farah Hamid giving some tips to BY 119 students

<u>Fall 2020 Peer Learning</u> <u>Assistants:</u> Martha Acosta Farah Hamid Erin Oscar Ashley Pastore Alyssa Torres

Adjunct Spotlight: Dr. Wenting Zhu



Dr. Wenting Zhu

"Being able to make a difference in someone's future is extremely rewarding." Dr. Wenting Zhu started at Monmouth University in Fall 2015 (prior to the construction of the new Edison Science building). She has taught the BY 110 laboratories, and has occasionally taught the BY 425 Developmental Biology laboratory as well. Dr. Zhu completed her undergraduate degree from Tsinghua University (China) and her Ph.D. from the University of Pennsylvania. During her years in training, she taught undergraduate lectures and laboratories, and she also served on the graduate student advisory committee, where she helped students transition from college to graduate school. She also completed postdoctoral training at Princeton University in the Department of Chemical and Biological Engineering, with research focused on the role of signaling pathways in mammary gland branching morphogenesis - a project that integrated the fields of cell biology, developmental biology and engineering. Dr. Zhu has numerous publications in the field of tissue engineering and cardiac development.

Why did you decide to pursue teaching?

Teaching is a fulfilling profession. Being able to make a difference in someone's future is extremely rewarding. It's very rewarding to see that the students are really excited about certain aspects of biology that maybe some of us take for granted because we have studied it for so long. It's gratifying to see students who really find an interest in the subject that they are learning about.

What is your favorite lab at Monmouth & why?

My favorite lab at Monmouth is BY110 lab. This is an introductory biology lab that covers many fundamental aspects of cell and molecular biology. During the lab, students get a hands-on experience of the subject being taught during the lecture. My best lab moment is when my students saw the green glowing *E. coli* bacteria colonies on the culture plates. After I explained the structure of the pGLO plasmid, we always had a good discussion on whether the bacteria colonies would be glowing under different culture conditions. The students were very excited to see their bacteria glowing.

Anything you would like to share?

I have two little kids and they are very proud that their mom is a teacher!

Biology Summer Scholars 2021

Students in the Summer Scholars program live on campus as a living-learning community while working on research projects with the guidance of their faculty mentors. The Summer Scholars experience also includes weekly meetings with Dr. Adolf, the faculty coordinator of this program, where students and mentors will be able to reflect as a group on progress, successes, and difficulties as well as develop professional skills related to research. Student research outcomes will be presented at next year's Student Scholarship Week as well as at the conclusion of the program in July.

Rebecca Berzins (Biology, mentor Dr. Sean Sterrett) Victoria Demarco (Chemistry, mentor Dr. Martin Hicks) Mia Najd (Biology, mentor Dr. Geoffrey Fouad) Erin Oscar (Biology, mentor Dr. Megan Phifer-Rixey) Ashley Pastore (Biology, mentor Dr. Pedram Daneshgar), Emily Vasquez (Biology, UCI Summer Scholar, mentor Dr. Pedram Daneshgar).

In-Person, On-Line, Hybrid: Biology Courses in Action in 2020 – 2021



BY 410 Molecular Biology in Fall 2021 – socially distant and students on Zoom

The Biology Department has risen to the challenge of the pandemic. First, we suddenly moved all instruction on-line for the second half of the Spring 2020 semester when the pandemic unfolded. For Fall 2020 and Spring 2021, most of our course offerings (approximately 90%) were hybrid or in-person, and approximately 10% of our classes were totally on -line. We were able to adapt all of our courses to an appropriate mode of instruction, which took an incredible amount of work for faculty due to redesigning lectures, revising assignments and altering schedules, on top of learning new technology to deliver classes. As a discipline, Biology is a laboratory research -based field, which presented unique challenges. We learned a lot about teaching on-line, and the benefits of technology, which will undoubtedly make a lasting impact on our teaching. Students also had to learn to navigate features of eCampus that they may have seldomly used before classes became on-line, and had to relearn how to manage time with on-line synchronous and asynchronous coursework, without the instant feedback and discussion that would naturally occur in an in-person classroom. We also made a significant investment in an on-line lab simulation service, Labster, so that students could carry out additional experiments virtually. Though they were not physically holding the glassware, they could virtually perform the experiments and gain an understanding of the theory

behind the techniques and the experimental design, which is vital to understand as biologists.

Many of our laboratory course are capped at 15, but we could only fit 8 socially distanced in the lab. For this reason, we have a lot of lab sections that are hybrid - half of the students came in at a time for an in-person experience for key experiments, and the others did work at home. Then, the groups switched the following week. One microbiology laboratory, taught by Dr. Pesce, even made use of a large outdoor tent outside of Edison for their class meetings. The labs definitely required twice as much planning and coordination for the faculty who teach the labs, and patience and organization on the part of students.

We also had some laboratories that were offered in a totally on-line format. Dr. Kubera ran a section of BY 375L (Laboratory in Cellular and Molecular Biology) completely on -line - the students picked up prepared boxes of equipment (including pipettors, electrophoresis equipment and other supplies) and worked from home. Dr. Lionetti was also able to offer a completely on-line microbiology course, which required the students to pick up their own microscope to use, along with a box of supplies. Students were able to get the hands-on experience with the microscopes throughout the semester, with Dr. Lionetti assisting them via Zoom – showing the students what they should be seeing under each power before advancing to a higher magnification. The students submitted pictures via eCampus and received immediate feedback. One advantage of this format was that because they were working independently, students became very proficient at using the microscopes without relying on the SI leaders or other classmates for help, which sometimes happens too much when the class meets in person. Additional labs included on-line simulations from a variety of sources (Labster, McGraw-Hill, and others), and an interactive experience with The SCOPE program at the University of Toledo to use a scanning electron microscope remotely. Dr. Lionetti was able to give a presentation on teaching microscopy in a virtual environment at the American Society for Microbiology Conference for Undergraduate Educators (ASM CUE) this summer. Though it was a challenge, there were some benefits, as she commented, "A big plus was [the students'] being able to show others what they saw under the scope. They enjoyed that and enjoyed staining their own samples from food products and soil."

The success of this past year can be credited throughout the Department. Our faculty and staff worked tirelessly to offer a quality experience, and our students have been extremely patient and willing to work with us under non-ideal conditions to make learning biology happen.



Experiential Education Spotlight: Samantha Ragenklint



Anticipated graduation date?

Spring 2022

Where did you complete your ExEd experience (site & city)?

Haddon Oral Surgeons PA, Marlton, NJ

How did you choose to do this experience?

I chose to do this experience because I was applying for dental school that coming spring. I wanted to learn more about dentistry as well as develop a stronger passion and understanding for all the field has to offer.

What new insights did you gain from completing ExEd?

I gained a huge understanding for dentistry but specifically oral surgery. I learned how to analyze Xrays, observed countless procedures, reviewed protocols and gained hands-on experience from my ExEd. Aside from following a list of objectives written prior to the semester, I gained insight on the daily tasks in the practice as well as what it means to be a leader in this career. Dr. Garin, the oral surgeon I was following, detailed each surgery and step he took throughout my entire 10 week experience. I am so grateful to leave with such a firm understanding and immeasurable passion that would not have been quite as strong without this experience.

What was the most memorable part of your experience?

The most memorable part was observing surgeries and being able to assist on a few of them too! I feel so prepared to start my journey in dental school after this experience.

Do you have any advice for students beginning to plan for ExEd?

My advice for students planning for an ExEd is to make sure you select an ExEd that interests you and means something for your future. This is such a great opportunity to really immerse yourself in your passions all while fulfilling your educational requirements!

FLY HAWKS!



Biology Faculty Publications and Student Achievements 2020-2021 <u>Student Achievements</u>

<u>2020</u>

- Dean's Award for Excellence in Undergraduate Research: **Emily Tumbaco** and **Lorena Mancino**, for their project "Statistical analysis of diet and location impact on house mouse growth" (Research mentors: Drs. **Megan Phifer-Rixey**, Richard Bastian and David Darmon)
- Council for Undergraduate Research (CUR) recognized the work of **Anadi Saini** and **Amanda Zappacosta** "Inhilating effects of select essential oils on the growth of multidrug resistent *Acinetobacter baumannii and klebsiella pneumonia*" (Research mentor: **Dr. James Mack**)

<u>2021</u>

- Dean's Award for Excellence in Undergraduate Research: **Grace Haemmerle**, for her project "Altered cholesterol levels in alcohol-adapted lipid rafts from adolescent brain membranes" (Research mentor: **Dr. Dennis Rhoads**)
- Jane Freed Honor's Thesis Award Finalists: Jesse Bragger (Research mentor: Dr. Megan Phifer-Rixey and Subah Soni (Research mentor: Dr. Dottie Lobo)
- Diversity Innovation Grant: Genetics, Genomics, and Racism. Monmouth University, Office of the Provost and the Intercultural Center: **Cameron Gaines** (with Drs. Jennifer McGovern and **Megan Phifer-Rixey**)
- ICFNJ Research Grant **Subah Soni**. Effects of kumquat oil on the proliferative capacity and viability of HT-1080 fibrosarcoma cells. (Research mentor: **Dr. Dotty Lobo**)

Publications

MU Faculty and *Students

- Dunton, K.J., K. Sparta*, C.M. Martinez, M.G. Frisk, O.N. Shipley. 2021. First observation of movement rates and repeated migration in a Western Atlantic torpedo ray (*Tetronarce occidentalis*, Storer, 1843) in the northwest Atlantic Ocean. In press.
- Ferris KG, Chavez AS, Suzuki TA, Beckman EJ, **Phifer-Rixey M**, Bi K, Nachman MW. 2021. The genomics of rapid climatic adaptation and parallel evolution in North American house mice. PLoS Genet. 17(4): e1009495.
- Fleming, J., C. Sutherland, **S.C. Sterrett**, E.H.C. Grant. *In press* 2021. Comparability of spatial capture-recapture estimates among study designs: a case study with artificial cover objects. Ecological Applications
- Fleming, J., C. Sutherland, **S.C. Sterrett**, E.H.C. Grant. 2020. Improving the utility of indicator species with latent ecological variables. Oikos, 129(12):1753-1762.
- Ingram, T. R., S. M. Sammons, A. J. Kaeser, R. Katz, and S.C. Sterrett. 2019. Spatial ecology of Shoal Bass in Ichawaynochaway Creek, Georgia. Pages 193-211 in M.J. Siepker and J. W. Quinn, editors. Managing Centrarchid Fisheries in Rivers and Streams. American Fisheries Society, Bethesda, Maryland.
- Levasseur, P., S.C. Sterrett and C. Sutherland. 2019. Visual head counts: a promising method for efficient monitoring of diamondback terrapins. Special Issue "Advances in the Biology and Conservation of Turtles", Diversity, 11(7):1-15.

Page 10

- Mack, K.L., **Phifer-Rixey, M**., Harr, B., and M.W. Nachman. 2019. Gene expression networks across multiple tissues are associated with rates of molecular evolution in wild house mice. Genes 10(3), 225.
- **Phifer-Rixey, M.,** Harr, B., and J. Hey. 2020. Further resolution of the house mouse (*Mus musculus*) phylogeny by integration over isolation-with-migration histories. BMC Evol Biol. 20:120.
- Rulifson, R.A., C.W. Bangley, J.L. Cudney, A. Dell'Apa, K.J. Dunton, M.G. Frisk, M.S. Loeffler, M.T. Balazik, C. Hager, T. Savoy, H.M. Brundage, and W.C. Post. 2020. Seasonal Presence of Atlantic Sturgeon and Sharks at Cape Hatteras, a Large Continental Shelf Constriction to Coastal Migration. Marine and Coastal Fisheries 12:308–321
- Sterrett, S.C., T. Dubreuil, M. O'Donnell, A. Brand, E.H.C. Grant. In press 2021. The effects of electromagnetic fields on Plethodon cinereus and the implications for PIT studies of movement. Journal of Herpetology
- Sterrett, S.C., Kirk, T.J., Smith, L.L. 2020. Evidence of a dietary shift in female Barbour's map turtle (*Graptemys barbouri*) to exploit an exotic mollusk. Chelonian Conservation and Biology; Special Issue on the Biology of *Graptemys*. 19(2):298-301.
- Sterrett, S.C., R.A. Katz, W, Fields and E.H.C. Grant. 2019. Proactive conservation management for amphibians. Special Issue "Amphibians Conservation in the Anthropocene: Challenges and Opportunities", Biological Conservation, 236:404-410.
- **Sterrett, S.C.,** R.A. Katz, W, Fields and E.H.C. Grant. 2019. The contribution of road-based citizen science to the conservation of pond-breeding amphibians. Journal of Applied Ecology, 56(4):988-995.
- Stoeckle, M.Y., **Adolf, J.**, Charlop-Powers, Z., **Dunton, K.J.**, Hinks, G. and VanMorter, S.M., 2020. Trawl and eDNA assessment of marine fish diversity, seasonality, and relative abundance in coastal New Jersey, USA. ICES Journal of Marine Science.
- Suzuki, TA, Martins, FM, **Phifer-Rixey, M**., Nachman, MW. 2020. The gut microbiota and Bergmann's rule in wild house mice. *Molecular Ecology* 29: 2300–2311.
- Suzuki, T.A., **Phifer-Rixey, M.**, Mack, K.L., Sheehan, M.J., Lin, T., Bi, K., and M.W. Nachman. 2019. Host genetic determinants of the gut microbiome of wild mice. Molecular Ecology. 28: 3197–3207.

Contact us

Monmouth University Biology Department 400 Cedar Avenue West Long Branch, NJ 07764 Phone: 732-571-3429 Fax: 732-263-5213 Website: www.monmouth.edu/biology

Check us out on the Web!

www.facebook.com/MonmouthUniversity/

www.twitter.com/monmouthu

www.youtube.com/monmouthuniversity

www.flickr.com/monmouthu