

There's a lot happening in the Department of Biological Sciences! In this brief newsletter, we highlight recent events. Please follow us on Facebook (SIUE Biological Sciences) to keep up with current events in the department.

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## Department News



**Dr. Rick Essner's lab:** Dr. Essner recently led an international team of researchers from the United States, Brazil, and the United Kingdom in a study of jumping in a group of miniaturized frogs, called pumpkin toadlets. Dr. Essner and colleagues discovered that pumpkin toadlets have become so tiny that the semicircular canals of their inner ears can no longer function to control their postures in mid-air, resulting in uncontrolled, crash landings. Their research recently appeared in the high-impact

journal *Science Advances* where it received a tremendous amount of press. It was reported on by media outlets worldwide, including *The Atlantic*, *Smithsonian Magazine*, NPR, CNN, Deutsche Welle, and the Canadian Broadcasting Corporation. Their article is in the 99% percentile of all research outputs ever tracked by Altmetric for online attention.



**Dr. Britt Peterson's lab:** This summer, graduate student Alexis Acoff spent 5 weeks doing research with collaborators at Texas A&M University studying the potential role of gut bacteria in locust phase change from solitary to gregarious. During her lab swap, Alexis was able to leverage the state-of-the-art locust quarantine facility to rear locusts with and without their gut bacteria and assess any behavioral changes using an aggregation bioassay. Alexis' fellowship, project, and lab swap are funded by the Behavioral Plasticity Research Institute (NSF-BII#20217950).



**Dr. Faith Liebl's lab:** Graduate student Emily Hendricks just finished the Drosophila Neurobiology: Genes Circuits and Behavior course at Cold Spring Harbor Laboratories in New York. Emily was one of only 14 selected to attend from an international pool of applicants. Emily, Ireland Smith (recently graduated), and Fatemeh Barmaleki Lighvan also attended the Drosophila Genetics conference in San Diego from April 6-10. It was their first in person meeting since 2019. Additionally, Dr. Liebl received a renewal for her NIH R15 award "Investigating How Chromatin Remodeling Affects Endocytosis and Synaptic Organization" (\$422,873).

## **Biology Student Awards**

### DR. RICHARD C. KEATING SCHOLARSHIP

Recipient: Blessing Udoh  
Sponsor: Dr. Richard Keating

### DR. SADEGH KHAZAEI SCHOLARSHIP: BEST INTERNATIONAL STUDENT

Recipient: Rahil Khedri  
Sponsors: Family and Friends of the late Dr. Sadegh Khazaeli

### DR. JOHN LEBLANC ACADEMIC EXCELLENCE HONORS DAY AWARD

Recipients: Kilauren McMahon and Stephanie Mullen  
Sponsors: Ms. Buezetta C. LeBlanc and Mr. William Eaton

### THE MICHAEL R. LEVY MEMORIAL AWARD IN MOLECULAR BIOLOGY

Recipients: John Kirchner and Natalie Sutton  
Sponsor: Mrs. Lorraine Levy

### BILL & JEAN LUAN STEAM SCHOLARSHIP

Recipient: Olufunke Mercy Ayegbidun  
Sponsors: Mr. Bill and Mrs. Jean Luan

### MIKKILINENI FAMILY SCHOLARSHIP FOR THE COLLEGE OF ARTS & SCIENCES: UNDERGRADUATE STUDENT

Recipient: Olivia Pille  
Sponsor: Mr. Yujaya D. Mikkilineni

### MARY RAST SENIOR AWARD IN BIOLOGICAL SCIENCES

Recipient: Brooke Prater  
Sponsors: Mr. Bob Cunningham and Family and Friends of the late Ms. Mary Rast

### SENIOR AWARD IN ECOLOGY, EVOLUTION, AND ENVIRONMENT

Recipients: Angelique Ikeda and Owen Kathriner  
Sponsor: Mr. Mike Veith

### SENIOR AWARD IN GENETICS AND CELL BIOLOGY

Recipients: Kaleena Davis, Samantha Gallatin, and Jacob Milbrandt

Sponsors: Mrs. Marla Rhutasel and Mr. Grady Phillips Jr.

### SENIOR AWARD IN INTEGRATIVE BIOLOGY

Recipients: Jack Aydt, Hillary Mann, and My Tran  
Sponsor: Ms. Kathy E. Shaffstall

### SENIOR AWARD IN MEDICAL SCIENCE

Recipients: Georgia Graham, Hendrick Hamilton, Sai Medavaka, Patrick Nilges, Joana Shaholli, Dana Smith, and Alexandria Taylor

Sponsors: Dr. Steven Deem, Mr. Michael Ruzich, and Dr. Barbara McCracken

### SENIOR AWARD IN RESEARCH

Recipients: Zachary Bennett, Kaitlin Goodbrake, Mackenzie Sievers, Ireland Smith, and Laura Sorbel

Sponsors: Mrs. Mary K. Talley, Mr. Eugene Goldsand, and Dr. Kelly Barry

### OLLIE MAE WILLIAMS MERIT AWARD

Recipient: Sheyenne Daugherty  
Sponsor: The late Dr. Gertraude Wittig

### JESSICA UHL MEMORIAL STUDENT SCHOLARSHIP

Recipient: Jordi Sanchez  
Sponsors: Ms. Kimberly Schlau and Family and Friends of the late Ms. Jessica Uhl

### THE DR. ARTHUR C. ZAHALSKY AWARD FOR EXCELLENCE IN MEDICAL TECHNOLOGY

Recipient: Bryn Guthrie  
Sponsors: Professor Emeritus Dr. Dennis Kitz and Mrs. Linda and Col. Thomas Branz

## Incoming/Outgoing Faculty

### Recent New Hires (since previous newsletters):

Dr. Tom Anderson, **Interests:** Population and community ecology, species interactions, aquatic ecology. Ph.D. University of Missouri (2016)

Web: <https://tlandersonresearch.weebly.com/>

E-mail: [thander@siue.edu](mailto:thander@siue.edu)



Dr. Maurina Aranda, **Interests:** Discipline-based education, cellular biology education, and STEM education; K-12 and undergraduate curriculum design. Ph.D. Purdue University (2018)

Web: <https://www.siue.edu/artsandsciences/biologicalsciences/faculty-staff/faculty-pages/aranda.shtml>

E-mail: [maarand@siue.edu](mailto:maarand@siue.edu)



Dr. Carolyn Butts-Wilmsmeyer, **Director of the Center for Predictive Analytics, Interests:** Quantitative genetics and bioinformatics; Biostatistics and predictive modeling; Nutritional improvement of grain crops; Natural resilience in plant production systems. Ph.D. University of Illinois (2016)

Web: <https://www.siue.edu/artsandsciences/biologicalsciences/faculty-staff/faculty-pages/butts-wilmsmeyer.shtml>

E-mail: [cbuttsw@siue.edu](mailto:cbuttsw@siue.edu)



Dr. Brittany Peterson, **Interests:** Microbiomics, microbial ecology, insect-microbe interactions, symbiosis, complex microbial communities. Ph.D. Purdue University (2016)

Web: <https://www.siue.edu/artsandsciences/biologicalsciences/faculty-staff/faculty-pages/peterson.shtml>

E-mail: [bripete@siue.edu](mailto:bripete@siue.edu)



Dr. Emily Petrucci, **Interests:** Neurogenetics, effects of alcohol on neural transcription and behavior. Ph.D. University of Iowa (2015)

Web: <https://siue.edu/~epetruc/>

E-mail: [epetruc@siue.edu](mailto:epetruc@siue.edu)



Dr. Danielle N. Lee, **Interests:** Animal Behavior, Urban Ecology, Mammalogy, Science Outreach. Ph.D. University of Missouri - St. Louis (2010)

Web: <https://www.siue.edu/artsandsciences/biologicalsciences/faculty-staff/faculty-pages/lee.shtml>

E-mail: [danilee@siue.edu](mailto:danilee@siue.edu)



### Recent Departures:

Dr. Elaine Abusharbain—Retired, Lives in rural Madison County.

Dr. David Duvernell—Chair, Department of Biological Sciences, Missouri University of Science and Technology, Rolla, MO Email: [duverneld@mst.edu](mailto:duverneld@mst.edu)

Dr. David Jennings—Professor, Department of Life Sciences, Paradise Valley Community College, Phoenix, AZ Email: [david.jennings@paradisevalley.edu](mailto:david.jennings@paradisevalley.edu)

Dr. Peter Minchin—Retired. Lives in Corpus Christi, TX. Email: [pminchi@siue.edu](mailto:pminchi@siue.edu)

### Promotions:

Dr. Vance McCracken—Stepping away from being Chair of the Department to serve as Interim Associate Dean in CAS (2023).

Dr. Jason Williams—Currently serving as interim Chair of the Department (Spring 2023).

## Incoming/Outgoing Graduate Students

**Recent Graduates:** Since the summer of 2021, there are many new MS graduates from Biological Sciences. In no particular order:

Katie Wiesehan, Amanda Carter, Blake Collier, Jacob Beardslee, Eric Parperides, Mallory Wright, Joe Stumbo, Erica Periandri, Jordan Robinson, Alyssa Weber, Carly Cameron, Vance Jones, Adam Herdman, Andrew Pyszka, Paige Niepoetter, Kayla Jarman, Deanna Deterding, Logan Phillips, Matthew Goessling, Randahl Nickerson, and Dylan Gladson.

**Congratulations to all! We'd be glad to know where you've gone after your degree and how you are doing ([bio\\_grad@siue.edu](mailto:bio_grad@siue.edu)).**

**Numbers in/out of program:** The graduate program in the Fall 2022 semester has 41 enrolled students (not including continuous enrollments in UNIV 500), with eleven newly accepted graduate students in the program, in addition to five students who started in the spring 2022 semester. Eight of our current students are international students and come to us from three continents: Africa (4), Asia (3), and South America (1). In the fall 2022, Biological Sciences graduate students held 26 TAs, 5 RAs, and 1 GA positions to support departmental and University functions.

## Biology Students Study Abroad

Drs. Richard Essner and Peter Minchin led a travel study course to the Northern Rockies of the U.S. and Canada in summer 2022. Eight undergraduate and graduate students had a unique opportunity to learn about the region's remarkable flora, fauna and geological history through visits to Grand Teton, Yellowstone, Glacier, Banff, Yoho, and Kootenay National Parks. Highlights of the trip included a visit to Canada's Burgess Shale, location of the Cambrian Explosion marking the first appearance of most major animal groups, and a visit to western Montana to see "Gus", the world's largest Western Larch! Students also engaged in hands-on field research in the Idaho Panhandle National Forests, known for its rich assemblage of conifers and boreal forest birds and mammals.



Travel study courses such as this present our students with once-in-a-lifetime experiential learning opportunities.



## Darwin Day Lecture 2023



The 2023 Darwin Day speaker will be Beronda Montgomery, Michigan State University Foundation Professor, Adjunct in the department of Biochemistry & Molecular Biology. Dr. Montgomery's research strives to understand how organisms respond to and are impacted by their environment. Specifically, her lab asks questions concerning the effect of external light cues on photosynthetic organisms. The event will be free and open to the public:

*From Seeds of Inspiration to a Harvest of  
Discovery and Impact*

Tuesday, February 14, 2023, 7:30 p.m.  
Meridian Ballroom, Morris University Center

Free tickets available: <https://www.siu.edu/arts-and-issues/purchase-tickets/index.shtml>

## New Green House

Plans for the addition and renovation of the SIUE Greenhouse are moving forward! The current greenhouse is one large space, which makes caring for specimens with different humidity and temperature needs a constant challenge. Addressing this issue, the new addition will include the construction of a 600 sq. ft. "head house" (control room), an additional 1200 sq. ft. of greenhouse space, separate storage and workspaces, and the complete renovation of the existing 1800 sq. ft. facility. After the project is completed, the greenhouse will have 3 separate spaces that will have independent climate control systems loaded with many new features such as motorized window shading, misting/fogging, and insect barriers. This will move us miles from where we are now, allowing the diversity of the main collection to expand, as well as the opportunities for faculty and student research experiences.



## Alumni News



**Global Brew Event:** A Biological Sciences Alumni Happy Hour event was held on August 16, 2022 at Global Brew in Edwardsville. The event was co-sponsored by our department and the SIUE Alumni Association. Several alumni of the Biological Sciences graduate program and a few former faculty members joined current students and faculty for an afternoon of networking and socializing which included drinks and appetizers. Alumni in attendance ranged from recent graduates to those who earned their master's degrees as far back as the 1970s/80s. The department hopes to hold more events of this type in coming years, so make sure the Alumni Association has your current contact information on file to receive your invitation!



**Alumni Spotlight:** Dr. Brad Duthie, University of Stirling, UK ([Dr. Brad Duthie](#)) is a lecturer in Environmental Modelling at the University of Stirling in Scotland. Dr. Duthie attended SIUE as an undergraduate from 2003-2007 where he earned dual degrees in Biological Sciences and Philosophy, graduating *Magna cum laude*. During his time at SIUE, he conducted research in the labs of Drs Marian Smith and Dr. Z.Q. Lin. After graduating from SIUE, he attended Iowa State University where he conducted research on community species interactions. Dr. Duthie earned a Ph.D. in Ecology and Evolutionary Biology from Iowa State in 2013. He

then moved to Scotland where he conducted postdoctoral research at the University of Aberdeen and the University of Stirling. He has been a lecturer in the Department of Biological and Environmental Sciences at the University of Stirling since 2020. Dr. Duthie has had a successful and productive career and is a recognized leader in the areas of evolutionary ecology and ecological modelling. His research appears in prestigious journals such as *American Naturalist*, *Trends in Ecology and Evolution*, and *Proceedings of the Royal Society B*.