



Spring 2018 Volume 6, Issue 2



HIGHLIGHTS FOR SPRING 2018

- Dr. Joella Killian to retire.
- Student admitted to elite Master's Degree program in neuroscience.
- Giving Day nets donations for student research and international field trip participation.

Inside this issue:

Student admitted to Neurasmus program in neurosciences.	2
Good news for graduates	2
Biology students participate in international field trips	3
Faculty member wins Waple Professorship	3
News from Alum, Adam Stergis	4



where great minds get to work

PROFESSOR JOELLA KILLIAN TO RETIRE THIS SPRING

If it has six legs and rules the world, entomologist **Dr. Joella Killian** has it covered! Since her arrival in 1984, she has captivated students with her expert instruction and infectious enthusiasm for the ants, beetles, and bees that, although often overlooked, are truly in nature's driver's seat! The other so-called "spineless" animals that nonetheless help make the world turn, from mollusks to monogeneans, have also received their due attention in her invertebrate and parasitology courses. After a distinguished 34-year career, Killian will retire at the end of the spring semester. Outstanding teaching has always been at the top of her agenda, and she was recognized for it with the university's Grellet C. Simpson Award for Teaching Excellence in 2013.

Her educational footprint extends far beyond the UMW campus, however, and is not confined to animals with exoskeletons. She regularly leads birding and wildflower walks for Friends of the Rappahannock and has even held workshops on edible plants. Countless elementary school students have been treated to her "bug" programs. A true naturalist, she never gets tired of sharing her knowledge with others.

Killian has also had a prolific research career, authoring or co-authoring dozens of research papers, technical reports, and conference presentations. Her entomology research was part of a collaborative relationship with scientists at Virginia Tech, but she also engaged in citizen science as local coordinator for the Audubon Society's Christmas Bird Count.

Her service to the university and department has been extensive and diverse, but according to Killian, serving on the Faculty Sabbaticals,



Joella Killian on Charles Darwin's famous "Sand Walk" at his home, Down House, in the U.K. . Darwin's revolutionary ideas were born on his daily strolls around this very path, and Dr. Killian lived her dream of walking in his footsteps

Fellowships, and Faculty Awards Committee has been her favorite. "I genuinely enjoy reading about all the interesting research being conducted by my colleagues across campus!"

But, whether in the classroom or field, connecting with students and inspiring appreciation for biological diversity has been her greatest joy. Former student, Sarah Hagan, said it best: "I feel blessed to be able to call her my mentor and friend. I hope whoever has the task of filling her white sneakers has the compassion, sense of humor, enthusiasm, and love of teaching that Joella Killian leaves as a legacy. She is a truly remarkable woman."

We wish Dr. Killian all the best for an enjoyable and fulfilling retirement!

UMW GIVING DAY YIELDS DONATIONS FOR BIOLOGY STUDENT PROGRAMS

On March 20, the university held its second annual Mary Wash Giving Day. This year, donors had the option to give specifically to an academic department of their choice. Departments were invited to drum up support for their programs and encourage donors to take advantage of the many matching gifts and fundraising challenges available only on that day. With contributions from 18 individual donors, \$1,220 was raised to support biology student research projects, travel to scientific conferences, and participation in the department's international field trips. Among Giving Day donors were UMW biology alumni, and even more remarkably, some current biology students!



MARY WASH
GIVING DAY

Sincerest thanks to all who either donated, or helped promote Giving Day! You have made a true difference for future biology students!

SARAH ROCHE, CLASS OF 2018, ACCEPTED INTO PRESTIGIOUS NEURASMUS GRADUATE PROGRAM IN NEUROSCIENCE

Sarah Roche is one step closer to achieving her academic and professional dreams by earning an exclusive seat in the Neurasmus Program, a comprehensive program in neuroscience run by a consortium of European Universities. Out of this year's pool of more than 400 applicants from around the world, only 24 were admitted. She will pursue a Master of Science in neuroscience and will begin her studies in the fall at the University of Bordeaux in France.

Sarah Roche in her own words: "As a Neurasmus scholar, I will begin my two year master's program in France at the University of Bordeaux. Students chosen to take part in this program are able to select a track of study that interests them most, ranging from neuroimaging technology to neurogenetics. The track each student selects and the topic of their thesis determines where they take up residence in their third and fourth semesters, although each participant is required to study in at least three of the participating universities. Having been selected to take part in the neuropharmacology program, I will most likely be spending my second year in Berlin and Amsterdam as I work on my the-

sis. Although my undergraduate research and coursework has focused heavily on molecular biology, I developed an interest in neuropharmacology very recently as part of my neuroscience minor in a class I took in the fall of 2017. I quickly became intrigued by properties of addiction, the reward and anti-reward system and the effect of alcohol on learning and memory. I hope to center my master's thesis on these topics, using my research on drug abuse to better understand addiction in general, as well as the physiological processes contributing to neurotypical memory acquisition.

Being selected as a Neurasmus scholar is a unique and exciting opportunity that will allow me to work with bright, young scientists from across the globe. I am thrilled that I will be continuing my scientific education and that I will be able to contribute my efforts towards helping those who suffer from addiction. As someone who is passionate about scientific research, I would happily study neuropharmacology anywhere. To have the opportunity to follow my passion and travel the world while I study is an unimaginable gift and I



Sarah Roche in the Galapagos Islands, Spring Break 2018.

feel extremely grateful as a recipient of this scholarship. Having been a lifelong resident of Virginia, the thought of moving across the planet to participate in this rigorous program is daunting. However, I know that my four years at Mary Washington have prepared me very well for this endeavor, and I am thrilled to take the next steps in my academic career." - Sarah Roche

Congratulations, Sarah, and we wish you best of luck in Bordeaux!

MORE GOOD NEWS FOR CLASS OF 2018!

- **Jenna Eggborn** was admitted to Virginia Tech's Public Health Program, where she will pursue a Master of Science in Public Health.
- **Taylor Hennage** was hired as a Laboratory Specialist Senior by the Virginia Department of Health's Division of Shellfish Sanitation.
- **Katherine Lambert** was accepted into University of New England School of Dental Medicine and will enter their Doctor of Medicine in Dentistry program.
- **Laura Mangano** was admitted to John's Hopkins University's School of Nursing and will begin a Master's of Science in Nursing in the fall.
- **Kimberly McFarland** was accepted into Stony Brook University's School of Medicine where she will pursue an M.D.
- **Alexandra Piercy** was admitted to University of Delaware's School of Physical Therapy. She will enter their Doctor of Physical Therapy program in the fall.
- **Corrie Presland-Byrne** was hired as Head of Student Education and Wildlife Care by the Clinic for the Rehabilitation of Wildlife in Sanibel Island, Florida.
- **Haley Sharp** was accepted by Virginia Commonwealth University's School of Pharmacy.

STUDENTS VISIT BOTH THE GALAPAGOS ISLANDS AND PANAMA OVER SPRING BREAK



UMW travelers at the rim of Sierra Negra's caldera on Isabela Island.

"Visiting the Galapagos was a reminder of what's meaningful to me and what makes me feel alive. Experiences like hiking through the highlands engulfed by unique plant life; gazing across a vast caldera; being nearly face-to-face with Darwin's finches, marine iguanas, giant tortoises, blue-footed boobies, and sea turtles; and standing where great pioneers have made ground-breaking discoveries that changed what we know about evolution and ecology emphasized that my place is in nature and I must keep sight of that."

- Ariel Peldunas, Class of 2018



Blue-footed Boobies, Lobos Island.

For the first time, the department ran two courses with international spring break trips in the same year! **Drs. Abbie Tomba** and **Dianne Baker** led students to the Galapagos Islands as part of a course on evolution and the storied Pacific archipelago's natural history. Students visited Galapagos National Park, giant tortoise reserves and research centers, and climbed to the rim of Sierra Negra on Isabela Island, the world's second largest active volcanic caldera. They also enjoyed dramatic, close-up encounters with wildlife, both in and out of the water, including Galapagos sea lions, blue-footed boobies, green sea turtles, white-tipped reef sharks, and marine iguanas. As in previous years, travel scholarships were again provided by Sally Brennan Hurt ('93). Thank you, Sally!

Drs. Alan Griffith and **Andrew Dolby** led Tropical Ecology students to Panama. The class visited five different national parks containing a variety of habitat types including tropical rainforest, cloud forest, dry thorn forest, and wetlands. They snorkeled in both the Caribbean and Pacific and compared coral reef structure and marine biodiversity in both oceans. In the evenings, the students were treated to a bat ecology program at the Smithsonian Tropical Research Institute, which included a bat netting demonstration, and a presentation on local hummingbirds. They also spent a day in an Embará village in Chagras National Park, learning about the indigenous tribe's culture and relationship with the tropical rainforest.



Celeste Wilson wading in the Chagras River's crystal waters.



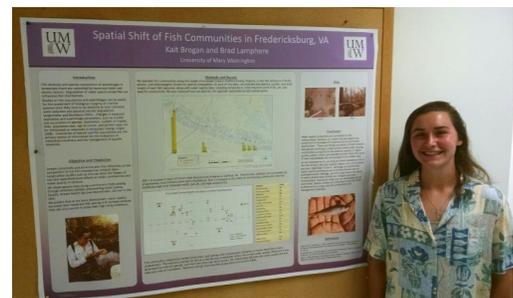
Cloud forest caterpillar, Altas de Campana National Park.



Tropical ecology students emerge from the Pacific, Isla Iguana National Park.

FACULTY NOTES

- **Dr. Dianne Baker** was awarded a two-year Waple Professorship by the Provost's Office. Waple Professorships are highly competitive and provide support the winning applicants' research or creative activity in the form of course releases and funding for research expenses. With her award, Dr. Baker plans to continue her research on the neurophysiology of reproductive development in fish (medaka) which she began as a Fulbright Scholar at the Norwegian School of Life Sciences in 2015.
- **Dr. Brad Lamphere** co-authored research posters with three students, Kait Brogan, Peter Grap, and Alyssa Zanzucchi presented at the Association of Southern Biologists Annual Meeting in Myrtle Beach, SC in March. Brogan is a biology major, and Grap and Zanzucchi are environmental science majors.



Kait Brogan with her research poster that she presented at the Association of Southern Biologists Annual Meeting in Myrtle Beach, SC.

**Department of Biological Sciences
Jepson Science Center
University of Mary Washington
1301 College Avenue
Fredericksburg, Virginia 22401**

Phone: 540-654-1182

Fax: 540-654-1081

URL: <http://cas.umw.edu/biology>

SPECIAL THANKS TO OUR RECENT PROGRAM DONORS:

- Sally Hurt, Midlothian, VA
- Irene Piscopo Rodgers, Huntington, NY
- Rappahannock Chapter of the Virginia Master Naturalists
- Claire Rimnac, Shaker Heights, OH
- Larry Valade, Fredericksburg, VA

The mission of the biology program at the University of Mary Washington is to provide a strong undergraduate education in the fundamental principles of biology and train students in the research methods and techniques used by biologists. The program is designed to prepare undergraduates for future careers in life sciences research, biotechnology, teaching and related professions, conservation, medicine, dentistry, and other allied health fields.

For further information about the biology program, please contact Lynn Lewis, Chair, Department of Biological Sciences, at llewis@umw.edu or 540-654-1415.



Subscribe to future newsletters online by visiting cas.umw.edu/biology and clicking on “NEWSLETTER”

Questions about this newsletter? Contact content creator and editor: Andrew Dolby at adolby@umw.edu

UPDATE FROM ADAM STERGIS, CLASS OF 2015

I am working as a museum technician at the Smithsonian Institution’s Department of Invertebrate Zoology, and I truly have my experiences at UMW to thank for landing this position. After graduating in 2015, I immediately went on to work at the Smithsonian Institution as a contractor for two years before being brought on as full-time staff this past fall. The guidance provided by Dr. Dianne Baker and Michael Stebar was invaluable in exposing me to laboratory practices and techniques that I use nearly every day at the workplace. Specifically, the proper methods of caring for and storing valuable research specimens proved very useful.

As a museum technician, I correspond with scientists all over the world at many different universities and laboratories to send out and receive various invertebrate specimens. I also process newly collected specimens as well as backlogged specimens that were collected as early as the mid-1800’s.

The Smithsonian Institution has one of the largest collections of invertebrates in the world, so we technicians are constantly learning from experts about jellyfish, crabs, squids, octopus, worms, and all sorts of different animals.

My time at UMW opened my eyes to the possibilities of working in biology. Whether it be the research team with Dr. Baker, or the specimen maintenance with Mr. Stebar, my experiences here showed me how versatile and exciting this field really is. I am excited to see where my career at the Smithsonian Institution takes me, and I have UMW for thank for providing me with a strong foundation for a career in science.

“My time at UMW opened my eyes to the possibilities of working in biology.”



Adam Stergis, Class of 2015, working with jellyfish specimens as part of his collections management responsibilities.