

BIOLOGICAL SCIENCES NEWSLETTER



Fall 2018 Volume 7, Issue 1

Look for "UMW Biology" on
Facebook and Instagram



HIGHLIGHTS FOR Fall 2018

- Dr. April Wynn awarded National Science Foundation grant.
- Department welcomes new faculty member
- Jepson addition/renovation project makes progress

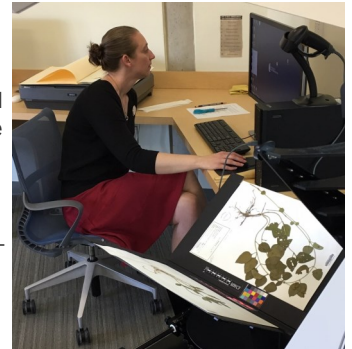
Inside this issue:

2018-19 scholarship recipients	2
Jepson Science Center expansion project	3
Faculty notes	3
Update from Class of 2014 Alumna, Nikki Maticic	4

APRIL WYNN AWARDED NATIONAL SCIENCE FOUNDATION (NSF) COLLABORATIVE GRANT

As the MWCF Herbarium Curator, **Dr. April Wynn** was awarded a NSF grant for a collaborative project entitled "Digitization PEN: Filling in knowledge gaps with key herbaria for understanding vascular plant diversity in the Atlantic coastal plain." This collaborative grant was submitted along with The College of William and Mary and Old Dominion University herbaria to add 115,000 digitized and georeferenced plant specimens to the Southeast Regional Network of Expertise and Collections (SERNEC). SERNEC is a consortium of over 200 herbarium in the southeastern United States that provides over 4.5 million images and more than

150 years of botanical data online for open access. This grant awards UMW with \$19,811 to finish the digitization, metadata transcription and specimen geo-referencing of the vascular plant collection. In collaboration with Dr. Wynn, students currently conduct various research projects and exhibits on specimens in the collection and work to repair, image, geo-reference and enter specimen metadata in SERNEC. In the near future the entire digital collection will be available as a Digital Archive on the UMW Eagle Scholar site – so look for it there in the spring!



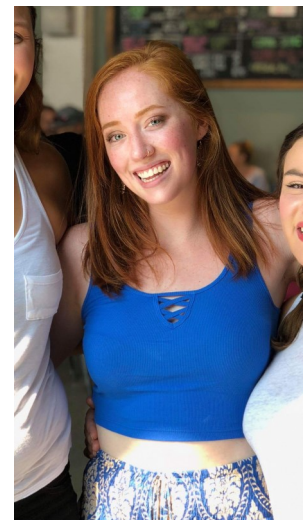
Dr. Wynn digitizes herbarium specimens in the Hurley Convergence Center's Digital Archiving Lab.

TWO STUDENTS WIN 2018 WILLIAM A. CASTLE AWARD

One Castle Award was not enough for the Class of 2018. Therefore, the department recognized two outstanding students with this award last May: **Sarah Roche** and **Ariel Peldunas**. In addition to graduating *Summa Cum Laude*, both students were highly engaged leaders in the UMW community. Along with her B.S. in biology, Sarah graduated with minors in both chemistry and neuroscience. She was a recipient of the 2017-18 Biology Scholarship and member of Chi Beta Phi and Phi Beta Kappa. She also frequently volunteered to represent the department at admissions events. Sarah is now a M.S. student in the prestigious Neurasmus Program in neurosci-

ence, run by a consortium of European universities. Only 6% of applicants worldwide are accepted into this program.

Ariel Peldunas graduated with both a BLS degree in biology and a minor in neuroscience. Prior to matriculating at UMW, she served in the U.S. Marine Corps as a K-9 specialist. She is an expert dog trainer and has trained explosives and cadaver detecting dogs for both the Marine Corps and civilian contractors. "What a great experience to have such an expert in my animal behavior course. I had to always be on my toes with Ariel in the room," said Dr. Andrew Dolby. The department wishes both recipients best of luck in their post-UMW endeavors.



Sarah Roche, one of two Castle Award winners in 2018.

2018 STUDENT SCHOLARSHIP WINNERS

The department distributed nearly \$16,000 in scholarships to six different students for the 2018-19 academic year! Most scholarships defray tuition and fees, while the Piscopo Rodgers Fellowship II provides funding for research equipment and supplies. Students apply for Biological Sciences sponsored scholarships through the university's Online Scholarship Manager, maintained by the Office of Financial Aid. Students majoring in either biology or environmental science are eligible for the Thyra V. Valade Conservation Leadership Scholarship.

Congratulations to the following!

- **Mariam Tekle:** Irene Piscopo Rodgers '59 and James D. Rodgers Student Research Fellowship II (top right)
- **Erica Liss and Richard Cendrowski:** Biology Scholarship (middle right)
- **Fernando Cabezas:** Debra Stanley Leap '72 Scholarship in Biology (bottom right)
- **Meredith Lebel:** Rebecca Culberson Stuart Memorial Scholarship (not pictured)
- **Mary Hoffman** (left) and **Anna Ruuskanen:** Thyra V. Valade Conservation Leadership Scholarship (below)



WELCOME DR. JOSEPHINE ANTWI!

The department is pleased to welcome its newest faculty member, Dr. Josephine Antwi! Originally from Ghana, Dr. Antwi earned her B.S. in Natural Resources Management from Kwame Nkrumah University of Science and Technology. She then pursued her graduate education in the United States, earning her M.S. in Biological Sciences at Southeastern Louisiana University and Ph.D. in entomology at Texas A&M University. In addition, Dr. Antwi comes to UMW with extensive post-doctoral research experience. While plunging into her teaching, which includes courses in entomology, invertebrate zoology, and ecology, Dr. Antwi is looking forward to involving students in research. Her research program comprises two lines: one examines ecological and evolutionary relationships between agricultural pest insects and endosymbiotic bacteria, and the other focuses on insect diversity and conservation. According to Antwi, participation in a butterfly conservation project in her youth, which involved long, early morning bike rides into the rainforest to track her subjects, inspired her to immerse herself in insect biology and protection. We look forward to working with you, Dr. Antwi!



JEPSON RENOVATION AND EXPANSION PROJECT PROGRESSES!

Work on Jepson Science Center's renovation and addition project began in earnest during the summer of 2018. Most of the third and fourth floor renovations were completed before classes began in the fall. Biology now has new molecular biology teaching and research labs, a new ecology research lab, an expanded and upgraded aquatic animal vivarium, and tissue culture lab equipped with certified laminar flow hoods. The molecular biology research lab contains multiple lab benches and a shared preparation area, allowing several teams of students and faculty to work together at once (the way science was meant to be!). Additionally, ecology research no longer competes with classes over use of Room 203. Ecologists can process field samples without clashing with ornithology or invertebrate zoology classes! Over winter break, work on the plant physiology research suite adjoining the greenhouse will kick in as work on the addition continues. The last phase will rev up in May of 2019, with the creation of a human physiology teaching lab and upgrades of the anatomy teaching lab and general biology prep space. UMW's natural sciences departments will at last have some elbow room! Look for further updates in future newsletters!



Interior windows of the common molecular biology research lab. This space occupies most of "Old Jepson's" third floor center.



New ecology research lab on the third floor of Jepson. This space was previously occupied by the Department of Chemistry's NMR lab.



The new wing takes shape where the Jepson faculty/staff parking lot was.

FACULTY NOTES

- **Josephine Antwi** had a paper titled, "Molecular and morphological identifications reveal species composition of *Lygus* (Hemiptera: Miridae) bugs in potato fields in the Lower Columbia Basin of the United States" accepted by the *Journal of Economic Entomology*.
- **Deborah O'Dell** was invited to discuss her research on the relationship between cell phones and cancer on the public radio show *With Good Reason*.
- **Michael Stebar** and **April Wynn** presented a poster titled, "Multi-Week inquiry-based laboratory modules improve introductory biology student understanding of core concepts and the scientific method" at the 2018 Society for the Advancement of Biology Education Research annual conference held in Minneapolis in July. Their poster was co-authored by **Dianne Baker** and **Deborah Zies**.

**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 UMW FOUNDATION AND SCHOLARSHIP DONORS:

- Gina D'Eramo, Putnam, CT
- Sally Brannan Hurt, Midlothian, VA.
- George C. Rimnac, Jr. and Sandi Rimnac, Long Grove, IL
- Larry G. 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 basic research methods and techniques used by biologists. The program is designed to prepare undergraduates for future careers in basic life sciences research, teaching and related professions, 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 the editor: Andrew Dolby at adolby@umw.edu

NIKKI MATICIC, CLASS OF 2014, LIVING HER DREAM!

I work as an Animal Keeper at the Smithsonian's National Zoological Park in Washington DC. I started volunteering within the Primate Unit for several months before being fortunate enough to be hired as a keeper within our Quarantine Department. Currently, I work in our Lion/Tiger, Andean Bear, and Kids' Farm Unit, in which I am the Line Keeper for the Kids' Farm. As keepers, we spend each day caring for our animals in terms of feeding, cleaning, and providing enrichment and training. Every day is different and our field is always changing with the influx of new methodologies and animal information. It is an incredible field that allows us to educate others about conservation while also allowing us to work with researchers on things like endocrine and behavioral studies. We also work with other zoological facilities around the world to contribute to conserving species and educating others about this field.

I absolutely loved my time at UMW - from the wonderful friendships to the exciting courses and inspiring professors. The UMW Biology Department

provided me with the necessary skills and guidance while also increasing my passion for Biology. The skills I learned, such as how to create an ethogram in Dr. Dolby's Animal Behavior class, learning anatomy in Dr. O'Dell's Anatomy of Chordates class, and knowledge about the physiology of birds in Dr. Dolby's Ornithology class (we have chickens at the Kids' Farm!) are some of which I use often in my career. I am also fortunate to be able to use the Spanish language skills I learned while at UMW to speak with visitors and travel abroad to educate about zoo keeping! A big thank you to my advisor, Dr. Grana, for guiding and supporting me over the years and thank you to all of the professors in the UMW Biology Department for providing with the necessary skills for entering the science career field!



Nikki Maticic in a training session with Mortimer, the goat, at the National Zoological Park in Washington, D.C.

"...I absolutely loved my time at UMW—from the wonderful friendships to the exciting courses and inspiring professors."

-Nikki Maticic