KATHERINE (LUCI) COLEMAN WINS PRESTIGIOUS COLGATE W. DARDEN JR. AWARD AT MAY 2016 GRADUATION CEREMONY

For the second straight year, a biology major won the university’s highest academic distinction. Katherine (Luci) Coleman was presented with the Colgate W. Darden, Jr. award at the May 2016 graduation ceremony in recognition of her perfect 4.0 grade point average. Luci earned majors in both biology and environmental geology, a minor in environmental sustainability, and a Global Information Systems certificate. In addition to her independent research, she traveled to the Galapagos Islands and South Africa in faculty-led study abroad programs. During her final UMW year and subsequent summer, not only did she single-handedly raise $5,000 to supply Tanzanian school children with sustainable solar lamps, she traveled to Tanzania to personally deliver them. According to Alan Griffith, “I was impressed with Luci from the first day we met. I do not think we taught Luci, as much as pointed out ideas that she grabbed and applied in all kinds of interesting ways.” Luci is currently on a Fulbright Scholarship in South Africa. Under the mentorship of University of the Western Cape’s Dr. Richard Knight, she is studying conservation planning theory and its application to sensitive ecosystems in the Western Cape region of South Africa, which contains many threatened and endangered species.

TWO STUDENTS WIN 2016 WILLIAM A. CASTLE AWARD

Every spring, the faculty chooses a recipient for the department’s William A. Castle Award. This award recognizes the graduating class’s outstanding senior. Some years, more than one student is so thoroughly deserving that the faculty chooses two. 2016 was one of those years! Kristina Krumpos and Luci Coleman (see Darden Award story above) both won the Castle Award. Kristina finished with a nearly perfect grade point average and took on many leadership roles during her time as a biology major. She was president of both the Pre-med Club and Chi Beta Phi. She additionally completed a sophisticated independent research project under the mentorship of Dr. Steve Gallik. Her research posters earned recognition for their excellence by the Summer Science Institute and Virginia Academy of Science. In addition, she was one of two students who earned Honors in Biology in the spring. “She was an enthusiastic student of the life sciences who enjoyed the daily challenges brought on by her Honors research project at UMW. As a natural problem-solver, she will be extremely successful as a physician and scientist,” said Dr. Gallik, who is also the Director of UMW’s Predmedical/Predental Program.
BIOLOGY STUDENTS WIN SCHOLARSHIPS!

The department was thrilled to offer nearly $25,000 in scholarships to eight different students for the 2016-17 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.

Congratulations to the following!

- **Jeong Yun (Julie) Choi** and **Emily Ferguson**: Irene Piscopo Rodgers ’59 and James D. Rodgers Student Research Fellowship II
- **Juliette Guillox**: Debra Stanley Leap ’72 Scholarship in Biology
- **Grace Henry**: Biology Scholarship
- **Laura Mangano**: John Cope ’83 Memorial Scholarship
- **Kimberly McFarland**: Biology Scholarship
- **Katherine (Kit) Qualls**: Rebecca Culberson Stuart Memorial Scholarship
- **Amber Reinecke**: Paula O’Gorman Rimnac ’47 Scholarship

For the 2016-17 academic year only, the Thyra V. Valade Conservation Leadership Scholarship will be split among five different students (TBD) to support their participation in Tropical Ecology’s spring break trip to Panama.

THE DEPARTMENT WELCOMES NEW FACULTY MEMBER

The department is pleased to introduce new Assistant Professor, **Dr. Brad Lamphere**! Dr. Lamphere earned his Ph.D. from the University of North Carolina-Chapel Hill and served as a postdoctoral research associate at North Carolina State University. An expert on the ecology and evolution of freshwater fishes, he has published in such journals as *Ecology*, *Ecology of Freshwater Fish*, and *Molecular Ecology*. Dr. Lamphere’s research focuses on how introduced species influence the evolution and ecology of native aquatic life, and he plans to initiate a local project to learn more about the Northern Snakehead, an invasive fish from Asia. This project promises to generate exciting research opportunities for students who are interested in ecology and love to spend time on the water! Dr. Lamphere comes to UMW with a wealth of teaching experience from both Washington and Lee University and the College of William and Mary. For the biology program, he will teach a variety of courses including BIOL 322-Animal Ecology, BIOL 425-Vertebrate Zoology, and BIOL 426-Biology of Fishes. During his free time, Dr. Lamphere has been enjoying living near the Rappahannock River and exploring the city’s recreational trails. Welcome, Brad!
DEPARTMENT ADOPTS NEW STUDENT LEARNING OUTCOMES

The biology program continues its evolution! On the heels of implementing new biology major requirements, the department has codified new student learning outcomes to go with them. With support from a University Center for Teaching Excellence and Innovation (CTEI) grant, several faculty formed the Vision and Change Working Group. The working group’s name was adopted from a recent report on the state of life sciences education in the United States sponsored by the American Association for the Advancement of Science (AAAS). This report includes recommendations for biology educators to increase student engagement in the classroom, promote science literacy, provide authentic research experiences for students, and help them form interdisciplinary connections. The working group carefully mapped the curriculum and concluded that the Vision and Change recommendations fit nicely with the revised biology major program implemented in 2014. The department will further embed the new learning outcomes into the curriculum and develop a plan to assess its effectiveness. In addition, the working group created a website where faculty can share their teaching ideas and classroom-ready activities for students. Dr. Deborah Zies, author of the CTEI grant and organizer of the working group, put it best: “Our current biology curriculum already meets many of the national recommendations for undergraduate biology education, but the department’s decision to adopt Vision and Change recommendations as the biology major’s learning outcomes gives us a clear path for future assessment and solidifies our position at the forefront of biology education.” In addition, several group members plan to attend biology education conferences in the upcoming year and present pedagogy data. Members of the working group are: Michael Stebar, Abbie Tomba, Parrish Waters, April Wynn, and Deborah Zies.

STUDENTS RECOGNIZED FOR SCIENTIFIC PRESENTATIONS

Seven biology students participated in the 2016 Summer Science Institute and its end-of-session July symposium. TJ Muratore (below) (Dr. Alan Griffith, mentor) won second prize for his oral presentation, “The effect of elevation on the distribution of a rare wetland plant. Grace Henry (Dr. Davis Oldham, Dept. of Chemistry, mentor) won second prize in the poster competition for her poster, “Synthesis of aKasA enzyme inhibitor for Mycobacterium tuberculosis”

Kristina Krumpos (Dr. Steve Gallik, mentor) and Hannah Belski (right) (Dr. Parrish Waters, mentor) were recognized for their outstanding presentations at the Annual Meeting of the Virginia Academy of Science held at UMW in May. Kristina won best oral presentation by an undergraduate for her talk titled, “Dominance behavior in the tube test and its relationship to home cage behavior in mice. Kristina earned an honorable mention in the undergraduate poster category for her poster, “Genetically engineering a plasmid expression vector for nuclear localization studies, part 1: engineering a 3GFP_3NLS plasmid."

FACULTY NOTES

- Brad Lamphere co-authored a publication titled, “A comparison of population estimates from visual surveys and mark-recapture” in the journal Transactions of the American Fisheries Society.
- Deborah O’Dell and April Wynn will present a poster in November, “Transforming the biology major through course based research at the 2016 Transforming Undergraduate STEM Education: Implications for 21st-Century Society meeting in Boston, MA. The poster is co-authored by Andrew Dolby, Alan Griffith, Lynn Lewis, and Deborah Zies.
- Michael Stebar was honored by UMW’s Chi Beta Phi Chapter with their annual Faculty Award.
- Parrish Waters co-authored a poster titled, “The behavioral and physiological effects of subordination in male mice” at the SYN-APSE Annual Meeting, Clinton, SC. The poster was presented by Hannah Belski.
- April Wynn co-presented a poster titled, “A meta-study of common plant biology misconceptions beyond photosynthesis and respiration” at the American Society of Plant Biologists Annual Meeting in Austin, TX.
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 Andrew Dolby, Chair, Department of Biological Sciences, at adolby@umw.edu or 540-654-1420.

SPECIAL THANKS TO OUR RECENT UMW FOUNDATION AND SCHOLARSHIP DONORS:

- Gina D’EraMo
- Mary Washington Elderstudy
- Roberta Newton
- Kelsey Pickering
- Irene Piscopo Rodgers
- Larry G. Valade

UPDATE FROM JESSIE SINE, CLASS OF 2011!

I started at UMW in Fall 2007 knowing that I wanted to major in biology, but I had never even considered a future in research until I was introduced to Dr. Baker. I was fortunate to participate in Summer Science Institute, which led to my honors thesis project. As graduation approached, my mentors recommended to me a National Institutes of Health post bac research program. I started at the National Cancer Institute in a nanobiology laboratory shortly after my graduation in 2011, where I developed cancer drugs using nanoparticles. Although I knew nothing about nanoparticles when I started, my classes and research at UMW had more than prepared me to take charge of my own research projects. My lab supervisor was impressed with the writing and presentation abilities I gained at UMW. I had amazing opportunities as a post-bac, including presenting at international conferences and publishing several papers in science and medical journals. I fell in love with nursing while shadowing doctors at the NIH clinic, and I enrolled in an accelerated BSN program at Seton Hall University. My strong research background helped me to think critically in my clinicals, and I graduated with high esteem in 2014. I now work as an RN on a surgical floor at my community hospital, where I am gaining valuable experience before going back to school to obtain a PhD in nursing. My goal is to help lead clinical trials of cancer drugs in the hospital setting. Despite leaving the lab to go to the bedside, I know my passion lies in research. Without my professors, I would never have pursued a research project or known to apply to a post-bac program. At UMW, I was able to develop real relationships with my professors. My mentors Dr. Baker and Dr. Zies devoted countless hours to helping me perfect thesis papers, posters, presentations, resumes, and cover letters, even after I graduated. My experience at UMW prepared me to excel and allow me to smoothly transition from the lab bench to the bedside of a hospital. I’m proud of my education and time at UMW!