

# BIOLOGICAL SCIENCES NEWSLETTER



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#### HIGHLIGHTS FOR SPRING 2015

- Stephen Fuller to retire at the end of the spring 2015 semester.
- Biology students can now apply for two new scholarships.
- Biology students awarded \$8,795 in research funding this spring.
- Planning continues for Jepson Science Center's addition/renovation.

## PROFESSOR FULLER TO RETIRE THIS SPRING

"The end of an era" is a well worn phrase, but this, my friends, is the *end of an era*! **Dr. Steve Fuller** will retire at the end of the 2014-15 academic year after 43 years as a faculty member. Fuller joined the Mary Washington faculty in 1972 after earning his Ph.D. from the University of New Hampshire. An expert on phytoplankton and the ecology of estuaries, Fuller covered the department's full range of plant biology courses. In addition, he established Tropical Ecology, the department's first course with an international field trip component. Since 1991, he has been wowing students with spring break trips to destinations such as Puerto Rico, Costa Rica, Belize, and Saint Johns. His first trip was to Puerto Rico, and it included more faculty travelers than students! They drove 550

miles around the island in a minivan. "Needless to say, it has changed a lot," said Fuller. (See pg. 2 for summary of 2015 trip.)

On top of his teaching contributions, Fuller has also held several significant leadership positions throughout his career. He served as department chair from 1976 to 1988, beginning his duties just four years into his career, and completed a two-year term as the university's President of the Faculty Senate. Additionally, he was president of the Atlantic Estuarine Research Society and still maintains a position on its Governing Board. Fuller has also been active in the Virginia Academy of Science (VAS), serving as the Botany Section Chairperson, as well as its Secretary and Section Editor. He has sponsored many stu-



Steve Fuller (right) with guide, Chris Matta Bonilla, in Costa Rica in March 2015.

dent research projects, which have resulted in student-delivered presentations at the VAS Annual Meetings and the university's Research and Creativity Day.

Steve and his wife, Anne Gray, will retire to Kilmarnock, Virginia, where they plan to enjoy sailing on the Chesapeake Bay and spending time with grandchildren. The department wishes Steve well and thanks him for his years of teaching excellence and service.

## BIOLOGY STUDENTS GAIN TWO NEW SCHOLARSHIPS

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This spring, biology students can now apply for two new scholarships: the Irene Piscopo Rodgers Fellowship II and the Debra Stanley Leap Scholarship in Biology. The **Piscopo Rodgers Fellowship** is designed to encourage participation in undergraduate research. Students signed up for research as part of either an on-campus or off-campus program are eligible to apply, and the award must be partially used to purchase supplies. For its first year, the department will split the fellowship amount between two stu-

dents planning to engage in summer research.

Any full time student who has declared a biology major is eligible for the **Leap Scholarship**, although students pursuing honors in biology will be given priority. These scholarships add to the department's existing Culbertson, Biology, and Valade Scholarships. Information about them all can be found on the department's Awards and Scholarships web page.

We extend our sincere thanks to the Piscopo Rodgers and Leap families for providing this support for biology students!

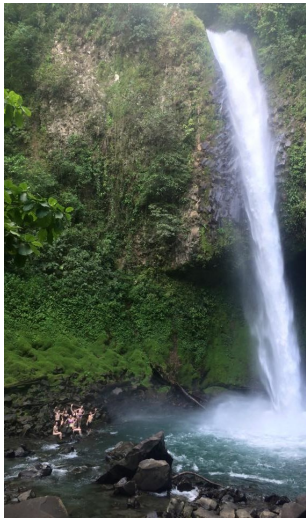


Irene Piscopo-Rodgers '59 helping a student with Jepson's Transmission Electron Microscope (TEM). The TEM was donated to the university by Piscopo-Rodgers.

## BIOLOGY STUDENTS VISIT COSTA RICA!



Rain forest hike by Katie Meyer



La Fortuna Waterfall by Kati Meyer.

Eighteen students enjoyed a spring break trip to Costa Rica led by **Dr. Steve Fuller** as part of their Tropical Ecology course. On their trip, they experienced the Central American country's diverse tropical ecosystems. In Monteverde, they visited Selvatura National Park and toured its butterfly and hummingbird gardens. Additionally, they were able to view the Monteverde Cloud Forest's canopy at eye level from one of the reserve's suspension bridges. At La Selva Biological Station, students were able to see three-toed sloths, howler monkeys, and a variety of colorful tropical birds. Along the coast, they toured mangroves inhabited by saltwater crocodiles and wading birds.

Other spectacular sights were La Fortuna Waterfall and the summit of Arenal Volcano. La Fortuna plunges nearly 75 meters into an inviting swimming hole. The class had opportunities to simply have some fun,

including some impromptu zip lining at Selvatura.

Local guide, Chris Matta Bonilla, provided details about Costa Rica's cultural and natural history, reinforced concepts covered in the course as he led tours of different tropical ecosystems, and located flora and fauna for the class to view.

"The UMW Tropical Ecology trip to Costa Rica was an unforgettable experience because of the breathtaking beauty at every site we visited and the people who I became close with on the trip. It's one thing to read and learn about the different tropical forests, but a PowerPoint lecture doesn't compare to actually experiencing it first hand," said student Sarah Anderson.

This trip was Fuller's last as a UMW faculty member. The department will continue to offer Tropical Ecology after he retires, with future trips to Panama, Guatemala, Costa Rica, and possibly other destinations in Central America and the Caribbean.



Buttery aviary by Kati Meyer.



Ready to zip line!

## GOOD NEWS FOR 2015 GRADUATES!



Claire Harrington, Washington Scholar, has been offered admission to five medical schools.

- **Alex Bond** was admitted to Jefferson College of Health Sciences' Accelerated BSN Program.
- **Claire Harrington** received offers from five different medical schools: Georgetown School of Medicine, Virginia Tech's Carilion School of Medicine, Frank H. Netter School of Medicine, Eastern Virginia Medical School, and Uniformed Services University of Health Sciences.
- **Claire Haeuptle** was admitted to Rutgers University's Doctor of Physical Therapy Program.
- **Emma Jarman** was admitted to Shenandoah University's Physician's Assistant Program.
- **Anna Kania** will join Emory University's Genetics and Molecular Biology Department in pursuit of a Ph.D.
- **Isabelle Malouf** was accepted by Teach for America and will teach high school science for two years in South Carolina.
- **Junaid Shahid** will complete a 10-week summer internship at the University of Florida sponsored by the National Institute of Diabetes and Digestive and Kidney Disease STEP-UP Program.
- **Sadie Spauls** was admitted to Virginia Commonwealth University's Accelerated Nursing Program.
- **Anna White** was accepted by Ross University's School of Veterinary Medicine.



## HOME SCHOOLED STUDENTS VISIT BIOLOGY LABORATORIES



*“And they all smiled when they said ‘Science’!”*

In mid-February, the Department of Biological Sciences hosted home school students from a local science study cooperative. **Dr. Alan Griffith**, from the Department coordinated the visit with Ms. Nadia Villanueva the science co-op leader. Ms. Villanueva and her students have visited Jepson Hall several times over the last few years. This year seven students, ranging in age from 5 to 14, toured Jepson, worked with microscopes, and presented results of their plant themed experiments.

The Department is proud to team with area groups to share resources and improve learning in the sciences. Based on their smiles, we think these budding young scientists were happy with their visit too. -Alan Griffith



Professor Griffith (third from left in back) with Ms. Villanueva and home schooled students.

## STUDENT PROJECT AIDS TREE FREDERICKSBURG

Biology students **Beth Hardbower** and **Rachel Feola** have traded their lab coats for high-viz jackets this semester. They are helping to develop the first-ever digital map of trees newly planted by local nonprofit organization, Tree Fredericksburg (TF). TF was founded by city residents Anne and Karl Little to revitalize Fredericksburg's urban forest. They wanted to do something about tree losses from storms, aging, and disease. Since TF's inception, the Littles and their corps of volunteers, which has included dozens of UMW students, have planted nearly 4,000 trees around the city's parks and residential neighborhoods! In

addition to planting the trees, TF monitors them for two years. The Littles also provide education on how to select species for different locations and to plant and care for trees once they're in the ground.

Along with recording each tree's GPS coordinates, Hardbower and Feola are measuring its height and diameter and noting wounds, signs of stress, and disease. Their collaborator in the GIS Certificate program, Olivia Eaton, is working to create the digital map. In addition to TF, the map will be shared with Plants Map, an information-sharing web site for gardening and forestry enthusiasts. Beth says that she is enjoying working with and learn-

ing about the GPS technology required by the project. Rachel has appreciated the chance to interact with neighborhood residents. “Everyone has been really friendly and interested in the project.”

Finally, Feola and Hardbower will use their experience to create a protocol for future students to use when they continue the project. They will also share it with other universities and organizations to help manage their tree planting operations.



Rachel Feola (left) and Beth Hardbower practice measuring a tree with Carl Little of Tree Fredericksburg and Dr. Alan Griffith

## Faculty Notes

- **Deborah O'Dell** and **Andrew Dolby** published a paper titled “A comparison of techniques measuring stress in birds” in the *Virginia Journal of Science*. Several students who participated in the project were co-authors.
- **Abbie Tomba** presented a poster titled “Molecular identification of digenetic trematodes in the Rappahannock River using cytochrome C oxidase (COI) at the Association of Southeastern Biologists Conference in Chattanooga, TN. Several students who participated in the project were co-authors.
- **Deborah Zies'** poster “Teaching Molecular Biology as a Research Intensive Course” was accepted for presentation at the Gordon Conference on Undergraduate Biology Education Research at Bates College, Lewiston ME to be held in July.

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### **SPECIAL THANKS TO OUR RECENT PROGRAM DONORS:**

- Ms. Gina D'Eramo, Worchester, MA
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- Irene Piscopo Rodgers, NY.
- Lisbeth Prins, Aldie, VA
- Mr. 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 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 Andrew Dolby, Chair, Department of Biological Sciences, at [adolby@umw.edu](mailto:adolby@umw.edu) or 540-654-1420



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## **UPDATE FROM JOELIYN TRAN, CLASS OF 2013**

I work for Metabiot, a biotechnology company, working to predict, detect, and prevent deadly pandemics.

I support the Vice President of Strategic Development, Dr. Michael Glass, as the Strategic Development Analyst. We work to fund global research projects and preventive programs. In addition, I assist with systems design to streamline our proposal process.

In applying for the job, my biology background gave me a competitive advantage, because I would be working with scientist's and researchers to write technical proposals.

And so far, I love my job because I get to apply the analytical skills I gained from majoring in biology.

I loved UMW's small classroom sizes, and as a result, I was able to interact and build relationships with great professors!



Joeliyn Tran, Class of 2013.

*"I love my job because I get to  
apply the analytical skills I gained  
from being a biology major."*

*-Joeliyn Tran*