

Greetings from the Head

This past year saw considerable change at the University and in our Department. We have new administrative leadership at all levels. Aside from the media frenzy marking the turnover in the president's office, the College of Arts and Sciences transitioned into a new era with the arrival of **Dr. Paula Lutz** as our new dean. She replaces **Dr. Oliver Walter**, who retired from his position after over twenty years at the helm. Dr. Lutz already has instituted practical and creative administrative solutions for the largest and most diverse college at UW. Notably, **Dr. Greg Brown** stepped down as Botany's head in August, to join Dr. Lutz' team as associate dean. Greg brings his no-nonsense leadership to the dean's office and continues to be an advocate for Botany. I joined the Department to fill the head's position after spending the last ten years on the other side of campus, in the College of Agriculture and Natural Resources. Botany is a true calling for me, as I received both my B.A. and Ph.D. degrees in Botany (The University of Texas at Austin and Washington State University). I always relished the idea of joining UW's botany department.

The Department is moving in new and exciting directions. Although we are saddened that **Dr. Elise Pendall** is leaving for a new position at the University of Western Sydney, and **Dr. Bill Reiners** retired this spring, we hope to fill their positions soon. New faculty hires in Paleo-

botany and Evolutionary Biology have added strength to our department, helping us maintain our edge as one of the top academic programs on campus. Our student enrollment is up at all levels, and our faculty-led research programs continue to attract attention from our regional stakeholders and research colleagues around the globe.

We also welcomed two new staff members. **Ms. Joslyn White** joined our front office staff in December, and **Ms. Kassy Skeen** is now the Williams Conservatory Manager. Kassy took the position held for so long by **William "Botany Bill" Higgins**. He started in that role when our live plant collection was in an old greenhouse over by the Geology Building, some 35 years ago. Some of the plants he brought with him surely thought they had died and gone to heaven, and they thrived under his care.

I invite you to visit us in-person when you get the chance. You will detect a buzz of activity and excitement around the Aven Nelson Building. If you can't make it to Laramie, please keep up with our activities and see what's blooming at our Blog (uwbotany.blogspot.com), Facebook, and Google+ (UWBotany) sites. Thanks so much for your continued support. I hope to see you soon.

- Dave Williams, Professor and Head

Mushroom diorama



To the trained eye, dried mushroom herbarium specimens contain the information needed to identify and describe the species. However, there is little to excite the average person. The answer: a combination of art and mycology called a

mushroom diorama – mushrooms preserved or recreated and set in a realistic looking habitat. These are similar to what you would find in a natural history museum. **Dr. Steve Miller** creates dioramas from carefully preserved mushroom specimens in combination with sculpting and painting to make the display as realistic as possible. He uses his artwork to interest people in mycology and as a teaching aid for his Mushrooms of the Rocky Mountains course that is taught in the summer. Several dioramas are on display on the second floor of the Aven Nelson Building.



Renovations to the Williams Conservatory



Southeast corner of the Williams Conservatory atrium

The Conservatory staff is in the process of improving overall functionality of the growing space and will soon offer new outreach capabilities for the general public.

The improvements include the complete replacement of the environmental control system, safety upgrades to the electrical system, and the replacement of the grow light system on the research benches.

The changes allow the staff to control the environment more consistently and reliably, even from locations away from the conservatory. Comparable improvements to the cooling system are underway.

The Conservatory staff is also redesigning the outdoor beds in the amphitheater area outside the Conservatory, to display Wyoming native species as well as a bed of rare, fruits and vegetables. Both beds will be installed this summer. The atrium has also been rearranged.

You are invited to visit the Conservatory for a tour, to eat lunch, or to sit and relax. Seating is available both indoors and outdoors.

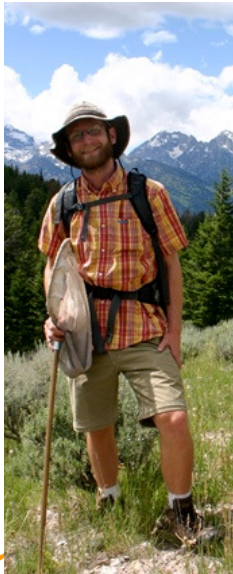
The Conservatory is open **Monday through Thursday from 10 to 4**, and on **Friday from 10 to 3**.



New high efficiency, low profile LED grow lights that have replaced the bulky high intensity lamps.



Highlights from 2013-14



Zach Gompert (UW Ph.D. 2012, Program in Ecology, photo to the left) and **Tom Parchman** (Postdoctoral associate 2008-2013) recently accepted assistant professorships at universities in the western U.S. Zach was hired as an evolutionary biologist at Utah State University and Tom was hired as a genome biologist at the University of Nevada-Reno. Both were very successful in their research while in **Alex Buerkle's** lab in Botany, where they developed their research expertise in



computational biology and evolutionary genetics.

Adam Grasmick, Botany major, was selected for the 2013 McNair Scholar award. His research focused on leaf anatomy and morphology of *Tillandsia complanata*, a widespread epiphytic species from the *Bromeliaceae*. Very little is known about leaf structure differences in bromeliads in relation to light exposure, and his research is one of the first studies to address this question. He conducted this research under **Dr. Greg Brown's** guidance.



Christopher Deaderick, majoring in Biology and Environment and Natural Resources (ENR), was selected for a 2013 McNair Scholar award. His research focused on examining the magnitude and timing of growth release of subcanopy trees following MPB-induced overstory mortality, with the objective of estimating the differences in growth release among cohorts (vertical tree canopy layers) and among tree species. He conducted this research under **Dr. Dan Tinker's** guidance.



Greg Brown gives a tour of the Rocky Mountain Herbarium to the advisory board of the College of Arts and Sciences. The herbarium now has about 1.2 million specimens.



UW Botany Professor **William Reiners** received the Eminent Ecologist Award, the highest honor from the Ecological Society of America that recognizes a senior ecologist who has a sustained record of ecological contributions of extraordinary merit.



Alex Buerkle won the A&S Extraordinary Merit in Research Award and **Brianna Wright** won the A&S Extraordinary Merit in Teaching Award for 2014.



Jan O'Dell, Senior Office Associate, won the 2014 A&S Student Council Award for *Outstanding Student Service*, and **BJ Mitchell**, Senior Office Assistant, won the 2014 *Going the Extra Mile Award* from the UW Disability Support Services.

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DEPARTMENT OF BOTANY



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Old timer's perspective — Dennis Knight, Professor Emeritus

A benefit of staying in one place for nearly 50 years is the opportunity to watch the changes as they occur. The day I arrived in 1966, I parked my car where the Classroom Building is now located. The Botany Department was on the top two floors of the Aven Nelson Building. Nearly a quarter of the 2nd floor was used for botany books and journals—a branch of the university library. It was open from 8 to 5 weekdays. To check out a book, you left a note with the botany secretary.

We held our botany seminars in the northeast room of the 3rd floor, the room with the Solheim Mycological Herbarium. I had to convince the department head that I needed my own typewriter (faculty were hired to think and teach, not type), and I had to ask permission if I wanted to make a long-distance phone call. One of my best lab exercises used aerial photos of the nearby mountains, nothing like all the satellite images available now. My biggest purchase during the first two years was a digital calculator that could do square roots. It cost \$700. At that time there were five of us on the faculty and if we had research grants, they totaled a few thousand dollars.

Now there are a dozen faculty and they obtain millions of dollars of competitive federal grants to support their research. Their job descriptions are different, but they continue to be heavily involved with teaching. All have undergraduate and graduate students working in their well-equipped labs. In the late 1960s I was proud to have a fancy calculator; now there are computers everywhere. The Rocky Mountain Herbarium has quadrupled in size and you can access distribution maps of all the specimens online. We have the Louis and Terua Williams Conservatory attached to our building, instead of our original, leaky greenhouse two blocks away. Some of our students and faculty have offices and labs in the new Berry Biodiversity Conservation Center, and some of our faculty have joint appointments with other departments and the Haub School of Environment and Natural Resources. More students go to the library to study than to check out books; essentially all of the journal articles are available on-line. In addition to books in their backpacks, they carry laptops. They even access the journals on their smart phones! Computers have changed from monsters that required large rooms and punch cards to hand-held devices today that store

files in “the cloud” and are much smaller than my 1960s calculator. Calling anyone anywhere in the world on your computer is no big deal, as long as there is no language barrier.

After less than 50 years, the Classroom Building has just been renovated, as have numerous other buildings all over campus that didn't even exist when I arrived. It makes me feel older than I like to think I am. Could I be renovated also? And there is talk, serious talk this time, about building a new home for our department. Aven Nelson, who arrived in Laramie about 80 years before I did, would be even more impressed with all these changes than I am.

