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Biology Newsletter 2012

Study Abroad Trip to Peru



From The Chair's Desk



Greetings from the Biology office this Fall 2012
(turning into winter!).

Will there ever be a newsletter in which I can say, "It's been a calm quiet semester - hope it's livelier next spring!" No, it seems like we are always thinking that surely this semester must be the busiest one yet. While that can't possibly be true every year, it just might be true this year.

I can begin with the fact that we are searching for a botanist this year. When we return from Christmas break we look forward to finding someone to fill that open position and bring us back to fully staffed status once again. It is always an infusion of new energy and excitement to discover the right new person for the job at hand. I hope to be able to introduce that person to you next fall.

Managing the scheduling and curriculum are still challenging and important tasks. Our General Education and service courses continue to be in great demand across campus and fill up nearly as fast as we can post them on the schedule. At the same time, our upper level courses are also increasingly in demand as components of interdisciplinary degrees that are being developed across campus. In my mind, these demands are just evidence of how important biology education is to our students, our region, and our nation.

- Over the past several summers our faculty have worked toward providing more of our courses online when appropriate. Of course, deciding when it is appropriate is one big question, as well as working out the teaching strategies that will work best online. These discussions are occurring on all higher education campuses, and I think I speak for everyone in our department when I say that PSU Biology is committed to maintaining the best balance between online (and myriad other new strategies) and on-campus that is possible.

- continued next page

- Dr's. Peak, Triplett, and Harries (and others) resurrected the spring awards event last year. We had a picnic and enjoyed calling to everyone's attention some of the memorable accomplishments of our students during 2011-2012 academic year. We also enjoyed some of the more forgettable (laughable) accomplishments, as well. We look forward this year to making the awards picnic an annual event.
- PSU enrollment continues to increase, and Biology as usual, brings a good number of new students to PSU. Last summer we enrolled 112 new freshman Biology Majors, our second highest freshman enrollment. New majors are always welcome, but they also bring concerns about the lack of additional funding to support enrollment increases. This situation is a persistent double-edged sword that we have grappled with for years now and the current fiscal situation in Kansas is intensifying this concern. However, in this letter I want to stay positive and focus on the fact that we are all very proud of the image and success of our biology students: the students alongside our faculty make us great and encourage new students to want to be a part of this department. So, growth is a good problem to have.
- If you visit us next spring or later, you will find the first floor of Heckert Wells considerably changed. The Chemistry Department is undergoing a facelift of their offices this spring 2013, so you may think you are lost for a few minutes. They are the recipients of newly funded collaboration with the Kansas Polymer Research Center, hence new offices. Just head on up the stairs and you'll find us just about where you left us. We don't have new offices for the most part, but we have rearranged and relocated our various spaces along with changes in personnel over the past few years. Kelly and I are in the same place though. Drop by and we'll help you find what you're looking for.

I've probably gone on long enough now, although I did mention at the outset that this may be the busiest year yet. I've not even scratched the surface with my remarks, so I hope you'll read on to learn what each

faculty member has been up to this past year. I am confident that you'll be amazed at all that has happened in and around PSU Biology. Thanks for your support and encouragement along the way.

Dr. Dixie L. Smith, Chairperson

(dsmith@pittstate.edu)

Student Research

Samantha Young, a K-INBRE Scholar with Dr. Dave Gordon, received a grant award from the Medical, Urban, and Veterinary Entomology (MUVE) section of the Entomological Society of America. This was a national award and Sam was one of only eight recipients. The money is to support her research project.

Ken Gouvion, Biology Masters student applied for and received two outside-funded grants to support his thesis research in wetland microbiology (Committee: Drs. Arruda and Chung from Biology and Dr. Mjares from Chemistry). The grantees were the Kansas Academy of Science and, from a nationally competitive review, the Society of Wetland Scientists.

K-INBRE

Pittsburg State faculty and students are involved in a federally-funded effort to enhance biomedical research and training. The



National Center for Research Resources (NCRR) in the National Institutes of Health (NIH) provides Institutional Development Awards (IDeA) to foster research within states that traditionally have not received significant levels of competitive funding from the NIH. Learn more at:

<http://www.pittstate.edu/department/biomed/>

Biology News Shorts #1

2012 Alumni Meritorious Achievement Award

Among the three PSU alumni to be honored with its Meritorious Achievement Award was John C. Dormois, M.D., a retired cardiologist from Durham, N.C. Dr. Dormois graduated in 1965 with a BS in Biology and in 1969 from the University of Kansas School of Medicine. Read more about Dr. Dormois and the other honorees at <http://bit.ly/JxAATU>.

B.H.

"B.H." provided blood samples for Dr. Virginia Rider's research, but the researcher and donor never met each other until recently. Read about it here: <http://bit.ly/VzbYkg>.

Distinguished Service Award

Don Holsinger, a Pittsburg physician who received a bachelor's degree from PSU in Biology in 1960 was awarded one of the Ralf J. Thomas Distinguished Service Awards at today's Apple Day celebration. Congratulations on the award! See the story at <http://bit.ly/120WPli>.

Holly Hrabik and Zachary Krumsick are PSU's 2012 Outstanding Seniors

Lightning struck twice as the two 2012 PSU Outstanding Seniors were both Biology majors.



PSU Photo

Both students served in many leadership roles on-campus and off-campus. Ms. Hrabik's was president of the Alpha Gamma Delta sorority, president of the Honors College Association and president of the Biology Club, as well as many others. Mr. Krumsick's leadership including service as president of Lambda Sigma Honor Society, president of the Premed Club, and director of the PSU Premed Free Clinic, as well as many others.

Read more at <http://bit.ly/UgW3Ar>.

Undergraduate Research at PSU

Samantha Young is a senior biology major and was recognized at the 10th annual Kansas IDeA Network for Biomedical Research (K-INBRE) Symposium in Kansas City. Last year, her research (Dr. Dave Gordon, research mentor) involved small insects that might be able to transmit a disease in animals. One consequence of the work could be a vaccine, so the research has implications for veterinary medicine and human health. Read more at <http://bit.ly/SAHrOS>.



PSU Photo



Nature Reach is an outreach program of Pittsburg State University's Biology Department and is supported by fees, grants, and donations. Our mission is to help educate residents of the four state region about the natural history of this area, as well as local and global environmental issues. To accomplish this, we provide

outreach programs to surrounding schools and communities, and campus tours of our natural history collections. In addition, we conduct teacher in-service workshops using nationally recognized materials from Project WILD, Project WILD Aquatic, Project Learning Tree, and Project WET, or we can customize a workshop for your group or site. Find out more about Nature Reach at <http://www.pittstate.edu/department/naturereach/>.

2012 Pre-health Trip to Romania

In July 2012, Dr. Mandy Peak and Vicki Webber led the Pitt State pre-health volunteer group to Romania. The thirteen pre-health students were Miles Crowley, Ann Hutchison, Rachel Jerome, Carly Lallemand, Ashlee Miller, Megan Mitchell, Katie Nicholson, Kyle Orr, Austin Price, Courtney Snyder, Taylor Stewart, Ryan Woodruff, and Olivia R.C. Wright.

To prepare for this trip, students attended a required preparation class during the spring semester that covered clinic operations, physical exams, cultural diversity, and Romanian culture and history. We also gathered medical supplies, diagnostic equipment and medications for our clinics.

We traveled on day long excursions to organize health clinics in the following villages: Saes, Hetiur, Archita, Danes, and Laslea. The students assisted American health professionals, including a dermatologist, two physician assistants, a nurse practitioner, and a dentist with routine health and dental exams, well child check-ups, and dental extractions. The team triaged and treated 428 medical patients, 102 dental patients, extracted 154 teeth, and filled 1,402 prescriptions in five days.

This was a fantastic trip; the Pitt State students developed new medical skills and had a cultural experience of a lifetime. We are very proud of these Pitt State pre-health students. Great job! In May 2013, we are heading back to Peru!

– Dr. Mandy Peak



See more pictures from this Study Abroad trip on Page 15.

From Dr. Joe Arruda



Another year down the road and my 15th master's student is about done. Ken Gouvier came here as an undergraduate student interested in environmental regulations and management and just got absolutely fired up about biology and research. His coursework experience in microbiology with Dr. Peter Chung got him

interested in microbiology – particularly environmental microbiology. He's received two competitive outside grants (one in-state, one national) and is in line to have a dandy thesis (*A Comparison of Microbial Communities in the Sediments of Natural and Constructed Wetlands*) that we hope will be publishable.

The past two falls I've taught our nonmajor biology course online - in 2011 to a group of PSU auto technology students from PSU's Kansas City program and this fall just to the campus. These are bright kids (young adults) who mostly have definitive opinions about their world.

Speaking of teaching, I was invited to serve on the University's "E-Learning Academy" Steering Committee, one of 8 faculty serving on the committee. We worked under the leadership of PSU's Center for Teaching, Learning and Technology to develop a campus plan to provide support for enhancing online instruction. We worked all summer and even took an online course in how to be a reviewer and use a nationally standardized rubric for evaluating the quality of online courses. In spring 2013 we will be reviewing our own courses (ouch!) in preparation for beginning to review other PSU online courses.

In research, I'm close to completing a formal list of Kansas land snail and slug species and it is enjoyable to be outdoors (mosquitos and ticks notwithstanding) collecting. The taxonomic work at the bench with the dissecting scope is not always a lot of fun – but needed.

I was invited to participate in two Bio Blitzes this year – one in Topeka for the Topeka Audubon Society and

one at the Overland Park Botanical Garden and Arboretum. Both were fun and we found lots of snails and a few people actually interested in snails.



In the much-less-fun category overall is the inevitable department committee work. I chaired three committees this year – one to update our tenure and promotion policy, one to update part of our annual performance appraisal policy, and our tenure committee.

Lastly, I taught Limnology again this fall with a real gung-ho group of kids. We were lucky enough to arrange a field trip to Grand Lake to their "Ecosystems & Education Center" where we toured their facility and got to experience a sampling trip on the lake. A great time was had by all.

Lastly, I am mentoring a Riverton High School student on a water quality monitoring project in Cherokee County.



Dr. Joe Arruda (jarruda@pittstate.edu)

From Dr. Peter Chung



great year, Donna!

Greetings and Happy Holidays from the Biology Department! Another year has come and gone, so quickly! It has been a busy and productive year. Lab classes continue to keep Donna and I busy in the Prep Lab. It is difficult to imagine how we ever managed to survive on one autoclave and a small still! Thanks for a

Microbiology continues to keep me busy, along with robust enrollments in Pathogenic Microbiology and Immunology. Neal Schmidt and I continue to team teach Immunology lecture; Dr. Mandy Peak graciously offered to teach Immunology Lab this last spring. The students had a great experience! We are pleased with the level of preparation they are receiving in anticipation of graduate school. Thank you Dr. Peak for all your hard work and contributions!

On the research front, we had a fairly decent year. My graduate student Jenny Schnedler completed her Problems in Microbiology and successfully received her Master's in Biology. Thank you, Dr. Keith Woods, for providing us with much needed guidance, experience, and support! She is excited and continues her employment at Crowder Community College in Nevada, MO, teaching General Biology, Anatomy & Physiology and Microbiology.

Dr. Arruda's graduate student Kenny Gouvier and I spent most of the summer in the research lab, learning the ways of the Dark Side (molecular biology techniques). We both learned quite a bit about DGGE, isolating DNA from microbes in soil samples, and that molecular biology is not always a perfect science! Our many thanks go to PSU alum, Dr. Eric Gillock at Fort Hays State for lending us their lab's DGGE unit! Our undergraduate scholars continue to contribute to the lab; Holly and Daniel graduated; Myles, Sara and Kurt will continue their work in the lab. We look forward to attending the KINBRE conference in Manhattan, Kansas, this coming January.

My duties as Faculty Senate President-Elect came to a close July 31st and transitioned into the role of Faculty

Senate President as we welcomed back the faculty in August. In addition to serving our faculty this year, the leadership of Pittsburg State have the added roles of reporting to the Kansas Board of Regents. It has been and continues to be a humbling learning experience, and a tremendous privilege and honor to serve the faculty at Pitt State. I have the opportunity to work with a great team of faculty, both at our institution and at the other Regent institutions in Kansas. Upon reflection, it has been a productive governance year and I look forward in continuing our hard work next semester.

The number of prospective students interested in professional school continue to increase, not only in the traditional pre-health sciences (medical, dental, etc.), but also in medical technology and pre-physical therapy Biology majors. Aside from the many prospective student visits and university wide recruitment events (Junior and Senior Rumbles), we have also been busy with advising and other service opportunities.

The Biology Club successfully planned and held our Science Day in March. Many thanks to the Biology Club and the many Biology faculty who helped judge the Biology Bowl; special thanks to Dr. Cindy Ford for her Wildlife ID and Sounds of Nature events and Dr. Steve Ford for his time and patience in the countless cadaver tours given!



The pre-physical therapy advisors (Dr. Nonnenmacher, Dr. Peak, Dr. Schmidt and myself) held our bi-annual pre-PT emphasis Biology majors orientation in April and October. Thanks Colleagues for your tireless efforts in making sure our majors are on track to

graduate and get into PT school! We plan on having our annual PT Open House on April 11, 2013. Great news for this year: every one of our PT applicants got accepted into PT school!

To wrap up, allow me to share some thoughts:

- 1) Congratulations to all of our pre-PT Biology majors who got accepted (and to all the pre-PT advisors!): Zach, Jessica, Dani, Bradley, Emily, Rachelle;
- 2) Holly (and Jon) and Daniel, I miss your enthusiasm!
- 3) Becky, hope your first few months of Med Tech school at St. Luke's is going well!
- 4) Science Day 2013 (March 7, 2013)
- 5) Pitt State 2013 PT Open House (April 11, 2013)

As always, don't be strangers; stay in contact, keep in touch and stop by and visit if you are in town.

Dr. Peter Chung (pchung@pittstate.edu)

From Dr. James Dawson



This has been a busy year for me. I continue to be a part of the workshops on "Managing Microalgal Cultures" at the UTEX Culture Collection of Algae at the Univ. of Texas in Austin. We have had participants from Iceland, Singapore, India, Korea, and most of the European countries. The Center for Applied Energy research, of

the University of Kentucky, continues to support my research and we are entering the third year of such support.

I currently have 3 active graduate students in my lab and it is, needless to say, busy. My consulting activities continue with various local and international companies.

The Meet the Mentor Day, sponsored by Science Pioneers, in KC, is still an important day for me. There are only 2 of the original mentors from 1986 still in action - Dr. Dennis McCurdy and I are the

holdouts. I am currently mentoring a middle school student, using Duckweed, and a high school student, who will be looking at the lichen flora to the east of the Riverton power plant.

I have not attended any meeting this year but was invited to present a 1/2 hour plenary lecture in Europe, and was also invited to be a session chair at 5 international meetings, one on Medical Mycology!

Dr. David Dawson, '03,'04, has completed a 3 year residency and is now a board certified Internist who is employed by Freeman Health Systems in Joplin.



a small part of the more than 3000 strains of algae maintained at UTEX



a scale up photobioreactor of over 13,000 gallons of algae, currently in use at CAER

Dr. James Dawson (jdawson@pittstate.edu)

The Greenhouse



While my contract didn't explicitly include curation of the greenhouse in 1978, I was clearly expected to take it on at that point. The departmental greenhouse then consisted of the 2 east sections of the university greenhouse located in the current play yard of the Family and Consumer Science Building. It was close to Carney Hall, the now gone Biology/Chemistry Building. That first semester there were only a few plants in the greenhouse but it was very useful for the Plant Physiology course. In the western

most of the sections was a small pool used for growing aquatic plants such as Duckweed, Elodea, and Water Hyacinths. That fall semester I ordered a lot of seeds and began to collect plants suitable for teaching botany lab. At least 4 of those early plants are still in the teaching collection as bonsai.

With the impending loss of Carney Hall, faculty offices had been moved to Bowen Hall before my arrival on campus. Carney Hall was closed to all use over the Thanksgiving weekend of 1978. Labs were hastily built in the basement of Gibson Dining Hall and Willard Hall



for the spring 1979 semester. The greenhouse was still handy but would become less available with the move of the labs to Science Annex. Science Annex was where the Wood Technology of the KTC is now. A small greenhouse was attached to the Botany lab on the south side of the building. The main collection remained on the main campus.



With the dedication of Heckert-Wells in October of 1984, the greenhouse, more than 500 square feet and almost 14 feet tall on the roof, became available. Well, more or less available, since there were no benches. The first few months Dr. Triplett put wading pools in the greenhouse and used it for his studies of fish feeding. Eventually benches were added and the plant collection began to grow. Plants that were unusual, such as carnivorous plants, were added as they became available, along with numerous plants that bloomed during the winter and spring.

Over these years a number of students assisted me in the greenhouse. These assistants included Jim Foresman '87, Cory Ossana '95, and Shannon Ossana '99. More recently I have passed the curation of the greenhouse on to Dr. Harries, as I approach retirement.

— Dr. James Dawson



Dr. Phil Harries (l), Dr. James Dawson (r)

Picnic Pictures from 2012



From Dr. Steve Ford



Greetings.

It has been a warm, dry year, and the Department properties show it. Water levels in most pits and wetlands are down. Senior Amber Woodward is struggling with a marsh project on our farm simply because, well, there just isn't much marsh. She's happy

nonetheless because she got accepted to a Master's program at Arkansas State University next fall where she will probably be working with bobwhite quail.

Recent graduate Scott Amos is enjoying his new position as a land manager at Marion Reservoir.

Option III grad student Megan Duffy is making good progress doing a two-pronged project aimed at making her competitive for a naturalist position. One "prong" is learning taxidermy from local anatomist, commercial biopolymerist, and Biology Department grad Grant Dahmer; the other is nature photography, in which she contracted to document a diversity of plants and animals at Prairie State Park in Missouri. Meg is also active in falconry.

I've enjoyed working with two Brazilian students, Natalia Schneider and Fabio Giacomelli. In addition to taking a couple of classes with me (Fabio is the only student who ever stuffed an armadillo in my mammalogy class. He did a great job!), each is doing a special topics project. Natalia is assessing coyote food habits via scat analysis, and Fabio is making a display collection of the scats of local mammals (ok, ok . . . make up your own jokes about the scats). They've had a good time driving around the country - Grand Canyon, Yellowstone, Florida - and seem to be enjoying their academic efforts at PSU. Fabio was excited to bag a turkey on our farm recently and has been having fun watching the abundant southeast Kansas white-tail deer.

A group of us including Monahan caretaker, Brad Sjorland, and his firefighter friends burned several acres at the Monahan property last spring. Believe me, a controlled burn in the daytime is much more satisfying - if less exciting - than vandal-caused night

fires as occurred the last two times the Monahan burned! The Monahan has been compartmentalized with fire lanes, which will make it considerably easier to burn and mow. We followed up with cutting and herbiciding left-over invasive cedar trees. It looks pretty good!



Lastly, if things go as planned Cindy, Delia, and I will lead a Desert Ecology Trip to Big Bend National Park, Texas, next spring break. Hope you're well.

Dr. Steve Ford (sford@pittstate.edu)

THANKS FOR THE CONTRIBUTIONS

We all thank you – our alumni – for donations made to PSU for use in the Department and its programs. These dollars are important for our operations. In the past year, these funds have helped pay the way for students and faculty to attend conferences. Some dollars are assigned for scholarships. In the past year, the Department awarded 95 students over \$16,525 in scholarship earnings.

From Dr. Cindy Ford



It is time to look back through the year. Have I been associated with the Biology Department for 27 years?? Yes, there have been many changes, but there has always been a constant stream of interesting students.

My latest graduate student, Craig Corpstein, was exemplary in finishing his

Master's Degree last spring. His thorough research, analysis, and writing produced an excellent thesis which won the PSU Best Thesis Award—such a great accomplishment! He compared two prairies near Ft. Scott, KS: one a restored prairie and the other a natural prairie. Craig was pleased to find a rare, endangered plant on the native prairie. He is currently working on a paper to submit to a research journal.

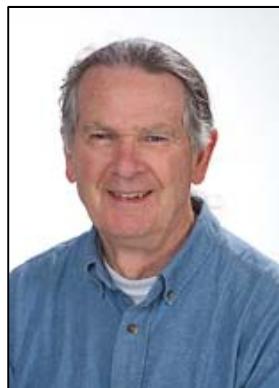
Because some students had inquired through the years as to whether we offer horticulture classes, I tried my hand at teaching a beginning horticulture course. I had an enthusiastic group who finished the class with multiple varieties of heirloom tomato and pepper seedlings to grow over the summer. If theirs grew like mine, I had giant plants that produced many fruits. (I just made salsa this past weekend from the last tomatoes and peppers.)

My Regional Natural History class kept me busy last spring since the class was bursting at the seams. Thanks to Johnna Foster for volunteering to help me with the large class.

Without able teaching assistants in the Environmental Life Science labs, we would not be able to conduct 14 labs per semester. Thanks to Alex, Whitney, Amelia, and Katie for teaching the labs. Thanks, also, to Suzanne Arruda for her dedication and expertise in teaching a couple of lecture sections and labs.

Dr. Cindy Ford (cford@pittstate.edu)

From Dr. Dave Gordon



My primary research interest is the ecology of native bees, but my interest in medical entomology drew me into itch mites a few years ago and now I am working on sand flies. I have been collaborating with Dr. Marcelo Ramalho-Ortigao from K-State to investigate canine visceral leishmaniasis. Samantha Young has taken

over the insect trapping and we just published the first record of two species of sand flies in Kansas. They were not believed to be present here and are potential vectors of a trypanosome that infects some American Fox Hounds in the U.S. but does not appear to have infected wild animals. If the parasite were to infect wild animals and if insects that can transmit the parasites are also present this could pose a health risk to humans. There have been no animal or human infections in SEK so it is not something to worry about, but deserves investigation to be sure what the situation is.

Samantha has been trapping for two years now, has presented two posters, co-authored a publication and has submitted three more posters for conferences next spring. She has been awarded two K-INBRE Student Scholar grants and a national grant from the Medical, Urban and Veterinary Entomology section of the Entomological Society of America. Not a bad record for an undergraduate student. Ali Hroobi is a new graduate student from Saudi Arabia that will also be working on the leishmaniasis project. Zane Dye graduated with his masters and other students have moved on.

I have been documenting the native bees in my yard at home for some time now to develop an in-depth look at the diversity of native bees and the need to protect and promote them as pollinators of gardens, fruit trees and wild flowers. I am combing through many still photos and miles of digital movies.

I am the president of the Kansas Entomological Society this year and the 89th annual meeting will be hosted by Pittsburg State in April 2013. I will be teaching entomology again next fall and look forward

to showing students the amazing creatures that are all around them but they never see.

Dr. Dave Gordon (dgordon@pittstate.edu)

From Dr. Phil Harries



Greetings from Heckert-Wells!

I can't believe it's already newsletter time again. It seems like 2012 has absolutely flown by. Between teaching and research it's been a very busy year. In the classroom I've been teaching Principles of Biology I, Introduction to Research, The Biology of Cancer, and General Biology.

I incorporated a new book into The Biology of Cancer course called The Emperor of All Maladies. It's a bestseller by Siddhartha Mukherjee that presents a historical look at the war on cancer. It is a great read and I would recommend it to anyone interested in learning more about cancer research and treatments. Dr. Chung and I team taught General Biology over the summer. It was a pleasure working with Dr. Chung and I think dividing the load worked out well for everyone involved!

In the lab, graduate student Kaleb Nickell has been working diligently through some technical hurdles in his project. He is trying to disable a specific gene in a bryophyte (the moss *Physcomitrella patens*) that is known to be important for regulating the cell-to-cell spread of various molecules including viruses in vascular plants. We would like to see if this gene is performing a similar role in nonvascular bryophytes. This will hopefully help give us some new information about the evolution of the mechanisms controlling the movement of molecules from cell-to-cell in plants.

I've had three new undergraduate researchers start in the lab this year and with veterans Ryan Woodruff, Kelsey Knisley and Pamella Conley set to graduate in the spring the new folks will have some big shoes to fill! Ryan and Kelsey accompanied me to a national meeting in Washington D.C. this summer. They were

great representatives of PSU and we had a little fun exploring the Nation's capital!



In January I submitted a grant to the National Science Foundation asking for funding for a confocal microscope for the University. A confocal is analogous to a cellular MRI machine. It can image fluorescently labeled molecules in living cells and can take lots of images at different focal planes within a cell. The images can then be used to make a high resolution three dimensional projection that can provide amazing details about the subcellular localization of specific molecules. Unfortunately the grant did not get funded this time around but the reviews were quite favorable so I am hopeful that it might get funded in the near future.

Best wishes to all for a healthy and happy year!

Dr. Phil Harries (pharries@pittstate.edu)

From Dr. Hermann Nonnenmacher



Hello and thank you for staying connected to us.

The past year has been filled with interesting opportunities and challenges. Mead's milkweed research is an example. Our winter and spring temperatures were warm enough that plant growth and reproduction was noticeably more advanced

than has been usual in the past twenty years of research experience in our prairie sites.

Because of our concern about early maturation of Mead's milkweed, we had contacts who spot checked their progress, but monitoring was sporadic. Due to all members of the research team holding faculty positions at their respective universities, we could not get into the field to steadily work until the end of the semester. We were concerned that we would miss the onset of flowering, and our opportunity to perform important experimental work and observations of pollinators would be diminishing rapidly by the day.

In the first week of May, I made assessments of sites in Missouri and Kansas to count Mead's flowering stems, and mark them with flags. The Missouri populations were fewer in flowering stems compared to prior years, and flowers had been open for a few days. The Kansas populations were more strongly represented than those in Missouri and the flowers were nearly ready to open. In 2011, Missouri sites became workable by late May, with Kansas sites workable by early June. In 2012, all sites were ready by late April to early May.

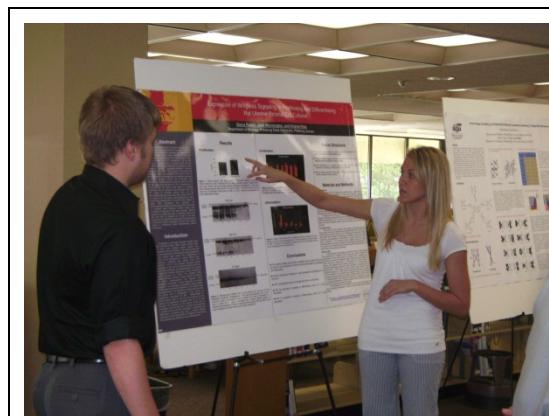
In teaching, some activities really stand out. Dr. Triplett organized and led the Spring Break trip for students to Dauphin Island, Alabama. I went with the group, where we spent our time sampling for, and intensively studying, ichthyology specimens, as well as learning about the island vegetation, paleoanthropology, other wildlife, plant ecology, and the kinds of biological research conducted on the island. Student teams took turns with camp responsibilities and the experiences gained from all aspects of the trip were invaluable on many levels.

I want to take this moment to thank Dr. Stephen Timme for first providing our department with the opportunity to connect with Dauphin Island resources. Dr. Timme is, and will continue to be, with us in our hearts and minds. His high energy in field collecting, and his acute interest in students learning biology will continue to influence those who spent time with him. The tradition of a week-long field trip series should be maintained in our department, and the Dauphin Island component is an important part that I look forward to participating in on behalf of our students.

Dr. Hermann Nonnenmacher
(hnonnenmacher@pittstate.edu)

Pittsburg State University Research Colloquium

This annual event was held April 16-20, 2012 and included 50 graduate and undergraduate students with a total of 35 presentations regarding research being conducted on campus. Prizes were given for first place winners in each category.



Josh Wormington and Sierra Foster, biology, present their findings during the Research Colloquium Poster Session. PSU Photo

Biology students did very well this year and we are proud of all our student researchers – participants and winners.

Graduate Oral Presentation Winners:

- 2nd Place - Katie Heer (Dr. Smith)
- 3rd Place - Whitney Baldridge (Dr. Wu)

Graduate Poster Winners

- 1st Place - Guannan Xiao (Dr. Rider)

Undergraduate Poster Winners

- 1st Place - Sierra Foster & Josh Wormington (Dr. Rider)
- 3rd Place - Carly Twarog & Boya Abudu (Dr. Peak)

2012 DISTINGUISHED RESEARCH THESIS: Floristic Composition of a Restored Tallgrass Prairie Compared to a Native Tallgrass Prairie Remnant in Southeast Kansas by Craig J. Corpstein (Dr. Ford, advisor)

Sperry Home (Paradocs) Property Cleanup

Once the urban, yet biodiverse, paradox where Drs. Ted Sperry and Gladys Galligar built their home, Paradocs continues to be maintained in keeping with their plan. Paradocs boasts many intriguing features within its few acres of landscape, including a large depression which is a remnant of Pittsburg's early attempts to remove coal. This attribute of the property they named Ryldamere, and it forms a natural pool during years of frequent rainfall.

During drier spells, accumulations of branches and leaves were raked out by Dr. Sperry. With deadfall removed regularly, the pool did not become cluttered and fill in over time. In the years after Dr. Sperry passed away, Ryldamere became increasingly unkempt and, with the pool going dry this summer, the time was right for a cleaning out.

Students Diane Thompson, Dee D'Amico, Cori Brown, and Samantha Young pitched in on a Saturday in late September. Mounds of leaves were removed to an on-site mulching area, and many large branches were then set to provide habitat for wildlife when Ryldamere becomes a pool again. Excess branches were distributed either to brush pile habitat, cut for firewood, or removed for off-site mulching.

Student participation in upkeep of Paradocs provided benefits in return, such as learning about the history of the property, identifying many plant species, and looking for animal signs. Although we were all worn out by day's end, there was a lot of good-natured joking and no complaints. This was a dedicated group and they deserve a big Thank You!

- Dr. Hermann Nonnenmacher



Before (l) and after (r) - Dr. Nonnenmacher

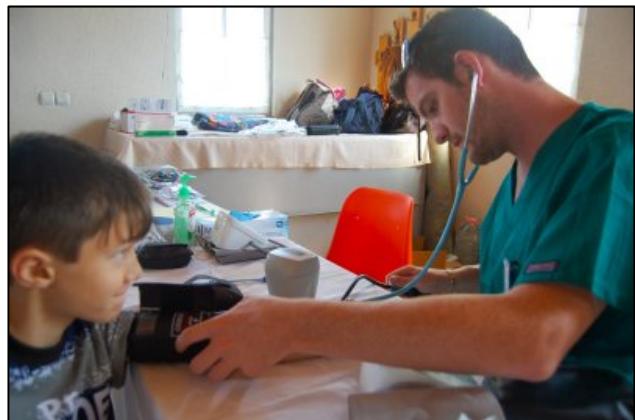


Yes, the [Biology Department is on Facebook](#). You don't have to join Facebook to read the updates. Check in sometime and see what's happening back here in Pittsburg.



PSU Study Abroad Pre- health Trip to Romania (2012)

(photos: Dr. Mandy Peak)



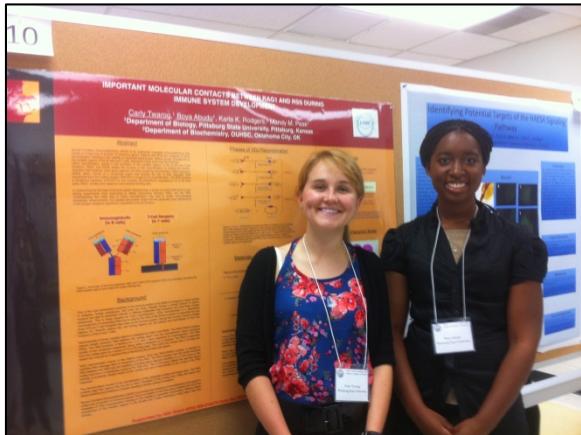
From Dr. Mandy Peak



Hello, Gorilla alumni and friends! 2012 was a very busy and eventful year. In addition to teaching Genetics, Genetic labs, Genetics of Human Disease, Multiculturalism in Medicine-Romania, I developed new experiments for the Immunology lab course and led a study abroad trip to Romania. Also, I judged undergraduate and graduate oral presentations at the Kansas Academy of Science conference at Wichita State University.

In July 2012, I led a study abroad program to Romania with Vicki Webber, Physician's Assistant. Thirteen pre-health students traveled to Transylvania to assist medical professionals with routine health and dental exams. Additional information about this fantastic trip is found in this newsletter. Next year, the Pitt State pre-health study abroad program is heading back to Peru in May 2013.

My hard working research students presented three research posters at conferences this year. Carly Twarog and Boya Abudu presented "Important Molecular Contacts between RAG1 and the RSS during Immune System Development" at the K-INBRE conference in Kansas City. In addition, they presented at the Kansas Academy of Science conference at Wichita State University. They also presented at the PSU undergraduate research symposium. At the PSU symposium, Carly and Boya were awarded third place for their poster presentation. Great job!



Finally, a few shout outs to current and former students. Josh Mayfield and Sarah Wolfe (my former fantastic Genetic Lab assistants) are in their first year of graduate school at the University of Texas-Austin; Amy Pervin is in her first year at Wichita State University PA program; and a number of students are in their first year of medical school at KU, including Joe Meier, Megan Miller, and Daniel Haines (please also read Dr. Rider's column).

A number of our pre-physical therapy students were recently accepted to PT school, including Brad Aubin, Jessica Black, Danni Stevenson, and Zach White. Congrats!! Also, a number of my study abroad students are currently attending or have been accepted to professional schools, including Megan Carlson and Gerald Diskin to KCUMB; Eric Hunn, Zach Krumsick, and Andrea Petersen to KU med; Esther Campbell to UT-Lubbock athletic training program; and Lesli Gilbert, Taylor Stewart, and Megan Mitchell to PSU nursing. We have several students with pending interviews in the Spring; my fingers are crossed for all them.

Happy New Year and best wishes to you and your family!

Dr. Mandy Peak (mpeak@pittstate.edu)

From Dr. Virginia Rider



I send you greetings from the Biology Department. Once again the Department has been filled with hard working, successful students. The students who were accepted to professional schools this year are: Amber Alber, KCUMB; Bilal Alnahass, Chicago (dental medicine); Micha Brown, KU School of Pharmacy; Megan Carlson, KCUMB; Kristen Coyler, KCUMB; Gerald Diskin, KCUMB; Chris Eastman, KCUMB post bac; Stephanie Eckert, KU; Selia Garcia, KU; Daniel Haines, KU; Josh Mayfield, PhD program University of Texas, Austin; Megan Miller, KU; Lyndsay Morgan, K-STATE School of Vet Medicine; Amy Pervin, PA program, Wichita; Alex Talbott,

Megan Carlson, KCUMB; Kristen Coyler, KCUMB; Gerald Diskin, KCUMB; Chris Eastman, KCUMB post bac; Stephanie Eckert, KU; Selia Garcia, KU; Daniel Haines, KU; Josh Mayfield, PhD program University of Texas, Austin; Megan Miller, KU; Lyndsay Morgan, K-STATE School of Vet Medicine; Amy Pervin, PA program, Wichita; Alex Talbott,

UMKC-School of Dentistry; Sarah Wolfe, PhD Program, University of Texas, Austin. Congratulations to all of you! If someone has inadvertently been left off this list, please let me know as we always enjoy hearing about your successes.

Guannan Xiao, a former graduate student in the laboratory, finished her research project involved with the synthesis and turnover of estrogen receptors in human T cells. She defended her thesis in the spring and I presented the results at the annual Meeting of the Endocrine Society in Houston, TX. Guannan's research project was supported by The National Institutes of Health. Alex Talbott, a former graduate student in the laboratory wrapped up his research and graduated in the spring. Alex is attending UMKC School of Dental Medicine. Alex, Sierra Foster, Zach Krumick and Josh Wormington presented their research at the annual Kansas Idea Network for Biomedical Research Excellence (K-INBRE) meeting in Kansas City in January. The K-INBRE consists of research scientists from across the State of Kansas.

Support for the K-INBRE is from an award from the National Institutes of Health in order to improve biomedical research at all universities across the State. Zach, Sierra and Josh are K-INBRE scholars who are funded to work on independent research projects in the laboratory. Zach just received early admission to KU Medical School and he has gone on a mission trip to Kenya until medical school start next summer. Andrea Peterson and Mitch Ayers are also accepted early decision to KU. What a great start!

Interview invitations are just beginning to arrive from medical, dental and other professional schools. Dr. Odgers, a physician in Pittsburg, continues to help our students prepare for a successful interview by conducting mock interviews. The mock interview helps the students hone their skill for the real interview.

Dr. Sandness remains a strong supporter of the Free Clinic which is in transition. The Free Clinic no longer serves the community in the same way that it did in previous years. The Free Clinic Co-directors Sierra and Olivia Wright are redesigning the clinic to keep up with changes and to play more of an educational role in the community. They are also working with Crawford County Health Department to set up a program that will provide opportunities for students to serve the health care community at the County Health Department. The program will be called "Gorilla

Docs" and it is in its initial stages of development. Dr. Garner's program called "Premeds with Promise" is in full swing and provides our students with additional opportunities to gain experience in a medical practice.

The number of students in the freshman level Premedical Orientation classes continues to be strong with between 70 and 80 students every fall semester. I am grateful to all of the health care professionals who participate in this class and help educate our students about options in health care careers.

It is always such a pleasure to hear about our graduates. I can't believe how much you have, and are, accomplishing. Please stop in and see us if you find yourself in the Pittsburg Area. I send you best wishes for continued success and happiness in the pursuit of your passions.

Dr. Virginia Rider (vriders@pittstate.edu)

Undergraduate Research at PSU

PittState's YouTube channel has a video where Dr. Virginia Rider expresses her thoughts about the quality of the Undergraduates at Pittsburg State University. Moreover, you'll also see, in the video, one of our undergraduates - Samantha Young, working in Dr. Dave Gordon's research lab. See and hear it at: <http://bit.ly/SAHPgk>.



Kansas INBRE Network of Biomedical Research Excellence at Pittsburg State University

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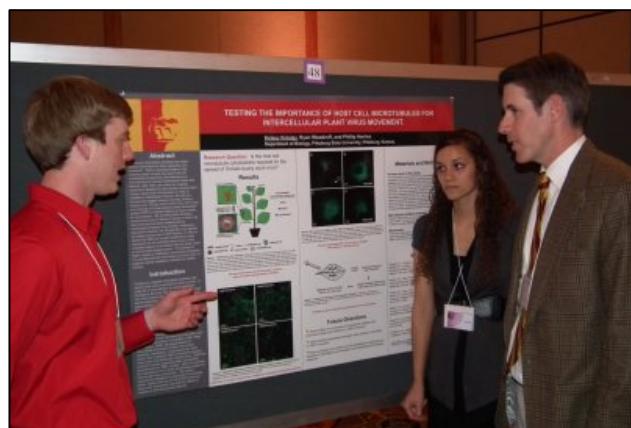
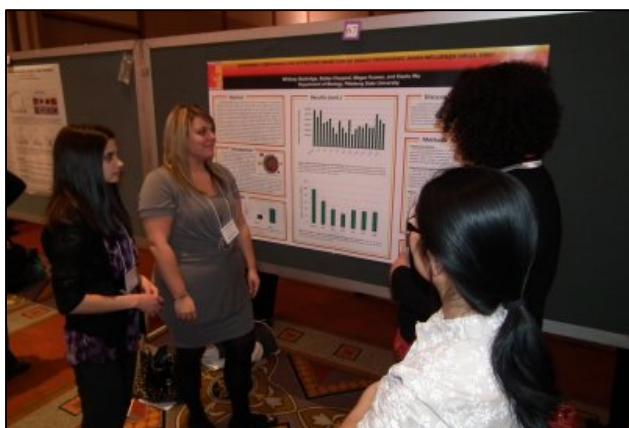
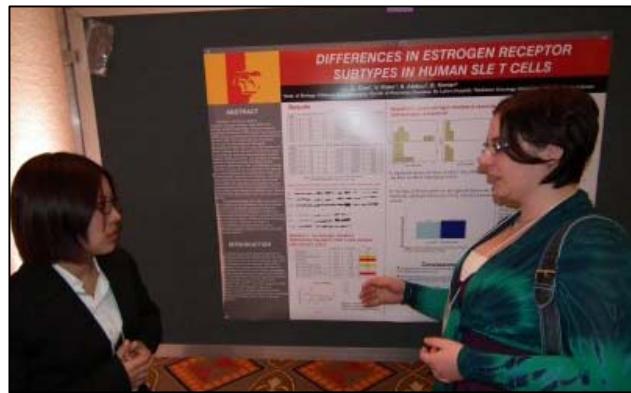
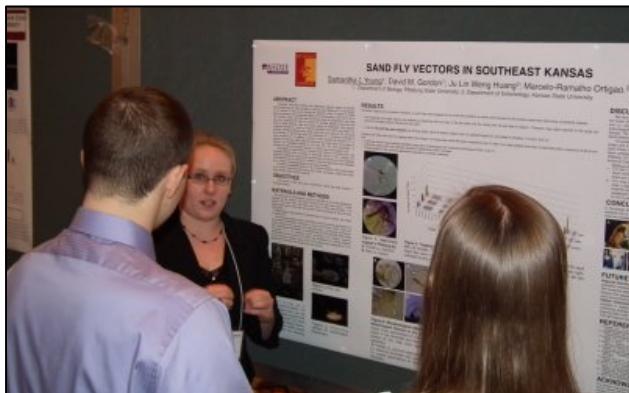
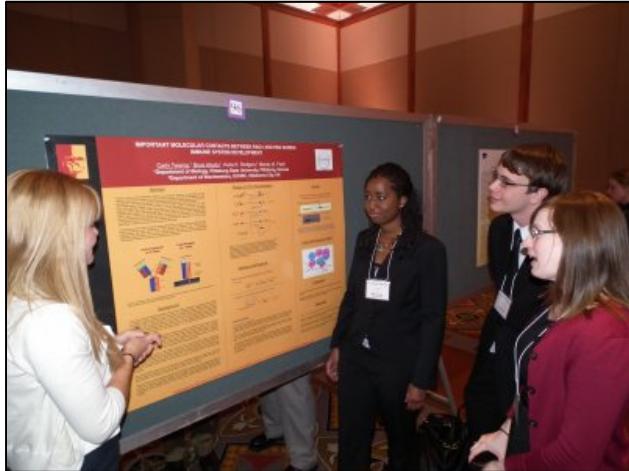
The tenth annual K-INBRE Symposium was held at the Westin Crown Center Hotel in Kansas City, MO from January 14-15, 2012. Attendees included nine faculty (Drs. Peter Chung, David Gordon, Phil Harries, Mandy Peak, James McAfee, Virginia Rider, Xiaolu Wu, Daniel Zurek, and Irene Zegar) accompanied by twenty-six students: Boya Abudu, Whitney Baldridge (graduate student), Erin Blitz, Bailee Claypool, Pamella Conley, Gerald Diskin, Sierra Foster, Autumn Gabehart, Daniel Haines, Holly Hrabik, Kelsey Knisley, Megan Kramer, Joshua Kristalyn, Zachary Krumsick, Joshua Mayfield, Kaleb Nickell, Christopher Nusbaum, Alex Talbott (graduate student), Myles Taylor, Carly Twarog, Sara Verga, Christopher Ward, Ryan Woodruff, Josh Wormington, Guannan Xiao (graduate student), and Samantha Young. Wow the turnout was the best yet!

Whitney Baldridge presented her research to the entire conference in an oral presentation titled “Screening compounds for effective inhibition of highly pathogenic avian influenza virus H5N1.” Whitney’s research was chosen for oral presentation by a committee of K-INBRE scientists based on the quality of her abstract. Samantha Young was presented an award for her poster titled “Sand fly vectors in Southeast Kansas.” Christopher Nusbaum received an award for his poster titled “HNRNP C and HRRALY: Biomarkers for cancer detection”. Alex Talbott was given an award for his poster titled “Regulation of wingless signaling in proliferating and differentiating rat uterine stromal cell cultures”. There were 100 posters presented at the meeting and it was an honor for 3 posters from PittState to be selected as outstanding. Remember, one of the criteria for the poster selection is the importance of the research to human health.

- Dr. Virginia Rider



The Tenth Annual K-INBRE Symposium (2012)



Photos: Dr. Dave Gordon

From Dr. Neal Schmidt



I hope our 2012 Newsletter finds you well and enjoying life! It is amazing that I am now in my eighth year at Pittsburg State. I have been keeping busy with the Anatomy and Physiology lecture and lab courses this semester and I taught a Pathophysiology course again this Fall 2012.

Last Spring, I taught a Pharmacology course and this semester I am teaching a continuation of that course as a Pharmacology II course. Another upper division class that I have been involved with is Immunology lecture. This Spring, I will assist Drs. Chung and Peak with the Immunology course. Hopefully, these upper division courses will provide greater course choices for our majors in the pre-health and biological sciences.

I attended the Human Anatomy and Physiology Society (HAPS) annual meeting last Spring in Tulsa, Oklahoma. While at the conference, I was elected to the safety committee. The HAPS organization has afforded me the opportunity to network with colleagues, learn new approaches to optimize teaching effectiveness, and improve my knowledge base. I continue to assist in the community through the provision of pharmaceutical care and recently began to provide immunizations again. I hope to continue in this capacity in the future. I am extremely pleased with the efforts of my students over the last year. My hope is that my knowledge and clinical experience will serve to enrich the educational experiences of students taking courses here at the University. As always, I am grateful for the opportunities to work with both the students and Biology faculty and appreciate all the support I have received over the past year.

Our children, Ben and Olivia, are keeping us very busy. Olivia is four years old and is involved with gymnastics, dance, and Rainbows youth group. Ben is six years old and now attends George Nettles Elementary School and is also involved in football, soccer, gymnastics, and Rangers youth group.

Dr. Neal Schmidt (nschmidt@pittstate.edu)

From Dr. Dixie L. Smith



While the demands that come across my desk in the Biology Office are just that – demanding a great deal of time this fall, the privilege of working with pre-service teachers and the biology majors in my soils class is very important to me. By spring 2013, we will have nine new biology teachers entering the teaching

profession. Also good news is that there are jobs out there for them – it is always fun to be able to tell them that!

I enjoyed the students in Soil Ecology this fall, too. There were two students wishing to do additional projects, which is rewarding for me and really good for them because a special project or undergraduate research is so important to prospective employers. So that's all good, but what I really want to tell about is my experience last summer.

Last summer I had the privilege of traveling back to Peru to the Explorama Camp with Delia Lister and a group of students. This was my second visit – my first trip to Peru was with Kansas teachers in 1993. Cindy Ford and the late Steve Timme were our leaders that year, and it was my “trip of a lifetime”. It is hard to express the impression that trip made on me. It was my first time out of the United States, and that it was to such an exotic location was enough to take my breath away. I came away with a conviction that now that we live on concrete we have lost the intimate connection with Earth that is still there in the Amazon Basin. I clearly remember sitting on the prow of a thatched-roof boat on our last morning in Peru, watching the sunrise over the Amazon.

At that time, I was pretty sure that I would never return nor have another trip as thrilling. I was wrong. This summer the tables were turned and it was an amazing gift to be one of the leaders helping others to see Amazonia for the first time.

This visit to Peru brought both new sights and insights. I saw my first pink dolphins and hoatzins, and I fished for piranha. I rode in a two man motor-cart and saw

Peruvian Independence Day pageantry. But visiting this second time I was reminded of the saying, “With great privilege comes great responsibility.”

This rainforest ecosystem provides many resources for human use, but there are gaps in resources, too. One gap of note is a lack of clean, safe water. As biologists, the basic need for a safe water supply is right at the foundation of our interests, and it is an area of need for which we have the potential to make a difference. In 1993, I was a tourist and my only goal was to absorb as much of the experience as I could take away. This time, finding myself able to return to that remarkable ecosystem and culture for a second time, I hope that concerned citizen is a more apt description than tourist.

Several of us talked at length about the potential for bringing a safe water system to just one Amazonian community and that this should be the basis of our next trip to Peru. Thanks for listening, and maybe you'll want to join us when we return.

Dr. Dixie L. Smith (dsmith@pittstate.edu)

From Dr. Jim Triplett



The Ichthyology class got a bit out of hand last spring. I kept saying yes and ended up with 24 in the class. We had to move to the POBII lab for class, which was sort of inconvenient to say the least. Thank goodness I had Amber Woodward as a teaching assistant.

Our Spring Break trip to Dauphin Island went very well. Again, it was a big crowd, and I was thankful that Dr. Nonnenmacher joined Amber and me for the trip. The weather and the fish cooperated, and we caught a record number of species. The trawler trip, Estuarium, Fort Gaines and the Marine Fisheries Lab all made for a memorable experience. On the way down to Alabama, we stopped at Bella Vista and a few of us went to visit Dr. Timme. This trip was his initiative when he first arrived at PSU. We were glad we got to visit with him one last time.

The sustainability program has continued to grow, with our numbers reaching 15 majors this semester. Clearly, the program is challenging, as students have to take 15 upper division hours from three different departments with only the general education requirement as a base. A group of us attended the September “Sustaining Kansas: the 2012 Kansas Higher Education Sustainability Conference” held in Manhattan, KS and presented a poster on PSU’s interdisciplinary degree program in Sustainability, Society and Resource Management.



June did not turn out as planned. I did not go to the International Symposium on Society and Natural Resources in Edmonton, Canada, because of the planned Study Abroad trip to Paraguay. The later was canceled due to low enrollment, but it was too late to submit a paper for ISSRM. I worked instead on several other projects, one of which was a look at the media response to the blue-green algae outbreak over the 4th of July weekend in 2010 at Grand Lake. Dr. Mason and I presented that paper in November at the National Communication meeting in Orlando, FL.

Kansas is hosting the 53rd Midwest Fish and Wildlife Conference in Wichita this year (December 2012). Dan Mosier is the overall conference coordinator, so I got tapped to be the Chair of the Theme and Plenary Committee. The theme is “Partnerships: Bridging the Gaps”. Our first speaker is Dr. Steve Williams, Past Secretary of the Kansas Dept. Wildlife and Parks, and the U. S. Fish and Wildlife Service. Following him will be Brad Loveless, Conservation and Environmental Director for Westar Energy. The second day will be opened by the Secretary of the Kansas Department of Wildlife and Parks, Robin Jennison. Our first speaker will be Dr. Tarla Rai Peterson, Professor and Boone and Crockett Chair in the Department of Wildlife Management at Texas A&M, and our second speaker will be Dr. Gregg Walker, Department of Communication at Oregon State University. We are looking forward to a great meeting.

Fall semester was too busy. I taught 5 classes of which 3 had new edition texts. The University adopted a new learning support system, Canvas, and a new email, Zimbra. I am co-chairing the Tobacco Policy Task Force with Rita Girth, Director of the Student Health Center and was recently put on a task force by the City of Pittsburg to look at the trash collections system. I am still active in water issues and recycling efforts at the state, county and local level. I'm not bored.

Best wishes to all of you. It was great to hear from everyone during the year. Keep in touch.

Dr. Jim Triplett (jtriplett@pittstate.edu)

From Dr. Xiaolu Wu



Hello, everyone. In 2012, I have continued to teach four courses including General Microbiology, General Virology, Principles of Biology I and Pathogen-Host Interactions. Additionally, I got the opportunity to teach General Microbiology (lecture and lab) during an eight-week summer session. With students' hard work

and cooperation as well as the wonderful suggestions from my experienced colleagues, my first summer class turned out to be a success.

During the summer, I also attended the 31st Annual Meeting of the American Society for Virology at Madison, Wisconsin as one of the ten national teacher travel grant recipients. I participated in undergraduate teaching workshops and research presentations, and I was inspired by many great ideas to develop a General Virology lab in the future.

The avian influenza virus H5N1 research project in my laboratory has made great progress in 2012. The most exciting news is that the abstract we submitted to the 10th Annual K-INBRE Symposium (Kansas City, MI) was selected as one of the eight oral presentations among over 100 abstracts. Whitney Baldridge did a fantastic job to present our research results and received wonderful feedback. This is a huge recognition in my laboratory as well as a great

encouragement to us. Moreover, four more students have joined the research team which now includes two graduates (Whitney Baldridge and Megan Kramer) and four undergraduates (Bradley Aubin, Trevor Harries, Ryan Weir and Maggie Cook).



In addition, two undergraduates, Brandon Mason majoring in Biology and Brandon McGehee in Nursing, have been regularly participated in weekly lab meetings in Spring 2012. I was very fortunate to recruit a diverse group of wonderful students to this project, and each of them brought unique perspectives and made unique contributions with their different backgrounds, interests and future career plans.

Megan joined my lab pursuing her master's degree in Fall 2012 after working on the project for one year as an undergraduate researcher. Her thesis will focus on screening the inhibitory compounds against the avian influenza virus H5N1. Bradley is the K-INBRE summer scholarship recipient in 2012, and he recently got accepted to the Physical Therapy program at Washington University. This program is ranked in the top two during the past 9 consecutive years in US News and World Report's determination of best graduate schools in physical therapy. Congratulations! Trevor and Ryan are both K-INBRE semester scholarship recipients with pre-dental and pre-med emphases, respectively. Ryan was accepted as the Scholar in Rural Health program at KU School of Medicine in 2011. Maggie majoring in Psychology joined the lab in Fall 2012, and she also plans to apply to medical school in the near future.

I have applied and received the PSU undergraduate research grant, which allows purchase of lab supplies to support these undergraduate student researchers for

the next two years. With their common interests in biology research, I believe that these students will gain unique benefits in a way that best suits their career goals.

I have been actively involved in service activities, including the committees at the department and college levels, Rumble in the Jungle, Junior Jungle day, Pitt CARE, as well as the Friends of Pittsburg Public Library Board. Especially, I am very excited to serve on a search committee with Dr. David Gordon and Dr. Steven Ford to recruit a botanist. This is my first time to be in such a process, and I will try my best to find a great fit for our department.

Furthermore, I have given two presentations to the communities with my areas of expertise. One presentation was entitled “Biology of aging” during the Exhibition Interdisciplinary Lecture Series hosted by the Art Department at PSU. The other was entitled “More about the brain, a cellular, molecular and pathological perspective” to the Great Courses discussion group at Pittsburg Public Library. Both presentations received very positive feedback from the attendees. I felt grateful for these opportunities, also so glad to get the chance to meet the wonderful people across the campus and in the community that I otherwise would not have known.

I have initiated a pre-graduate school orientation and undergraduate research survey in October 2012. I would like to thank Donna Pintar for the technical support and my colleagues for their suggestions to the questionnaire. This survey was designed to find out how the Biology Department might provide more support to the students who are interested in undergraduate research or are considering applying to graduate school. The data analysis is in the progress, and it seems that the survey has revealed new insights. A series of workshops will be initiated soon based on students’ input.

Finally, I would like to thank all the people who have given me support and help in 2012, and I wish you all a happy and joyful 2013.

Dr. Xiaolu Wu (xwu55@yahoo.com)

From Delia Lister, Director of Nature Reach



Things are really moving along at Nature Reach. We were very pleased to receive another \$28,000.00 donation to cover the cost of programs and retain a part time Assistant Naturalist. We provided approximately 135 presentations reaching just over about 4100 students in 17 communities in Southeast Kansas, Northeast Oklahoma and Southwest Missouri.

We also changed the format of our 4th annual summer day camp. The theme this year was “Science through Gardening,” so students came to camp once a week throughout the summer so they measure and watch the garden grow. They were able to share in the harvest and pick up knowledge about insects, herps, mammals, birds, soils, and plants. As usual, these youngsters were eager to learn about the food they eat every day, the environment, wildlife, and the great outdoors.

In July, Dr. Dixie Smith and I lead a group to the Peruvian Rainforest. Graduate student, Amelia Bristow, and undergraduates Patrice Gonzalez, Johnna Foster, and Catherine Jepson, joined PSU Alumni Sarah Chenoweth and Ben Buttler, and community members Sue and Lee Steanson of Neodesha, KS. We were able to see all of the major Amazonia wildlife and plants, visit local villages, and complete a community service project. It was a life changing experience for all of us, and I look forward to being able to take another group summer 2014. If you are interested in joining the trip please do not hesitate to contact me.

Delia Lister (naturereach@pittstate.edu)

Science Through Gardening - Pitt State's Nature Reach Summer Program

PSU's Nature Reach Program and the Sperry-Galligar Audubon Society sponsored a "Science Through Gardening" Summer Camp in 2012 at the Natural History Reserve, part of the Southeast Kansas Biological Station. This year's camp was different – a once a week meeting throughout the growing season. You can read the complete PittState story at <http://bit.ly/UIcuu0> and see the video at <http://bit.ly/VpyqGF>.



PSU Photo



Photos: Delia Lister

Rainforest Ecology Study Abroad in Peru (July 16-29, 2012) led by Delia Lister and Dr. Dixie Smith



Photos: Delia Lister

From Donna Lair in the Prep Room



Well another year is about to end, and what a busy year this was. More students make for an exciting year and I love having the students around. Each year I'm thankful for wonderful students to help in the labs. I will be sorry for the ones that leave.

Looks like next year will be full of new ideas and some changes in the department as we get ready for 2014 work on the building. Seems like there is more unknown than we like, but I am sure all will work out. Our department always works things out and we always accomplish what needs to be done; that's why I love working here.

As the years go by I'm beginning to think about retirement. I want to retire but I don't want to leave PSU, and the department means so much to me. Just can't give it up this year, so you will see me around for 2013.

Donna Lair (dlair@pittstate.edu)

Student Recruitment

Meeting prospective students and their families or friends is a part of what we do. The two main venues for this are individual visits by students and group visits organized as through the "Rumble in the Jungle".

Individual Campus Visits

These are organized through admissions when a contact is made to Kelly Borden, our Department's Administrative Assistant. She matches the students' area of interest with faculty and arranges an appointment.

In 2012, 70 individual students visited in the spring and 106 in the fall – a total of almost 180. We also have a few large group high school visits each year.



Dr. Nonnemacher with prospective student and parent.

Most of the students we visit with are interested in the pre-health areas, but others are interested in cell and molecular biology, field biology and environment, or secondary education.

Rumble in the Jungle

PSU sponsors two organized high school student/parent visitation days called Rumble in the Jungle – on two Saturdays in the fall. Biology faculty always participate.

Several years ago, the reins of organizing and implementing our part of the event was taken by Dr. Peter Chung who, with swagger and the gift of getting things done, gave the Department a more noticeable presence. Now, he is joined by the "junior" faculty (Drs. Peak, Harries, Nonnemacher, and Wu – after all, who wants to see to older creaking and greying faculty). As always, Nature Reach's Delia Lister is there with a bird or snake in hand.



The Biology "table" at Rumble.

Biology News Shorts #2

PittCares Freshmen Pre-enrollment

PittCares freshmen pre-enrollment occurs each June for the incoming freshmen. We meet with them over in the Axe Library computer classroom session where we have space (and computers) to enroll up to about 20 at one time. In 2012, we enrolled our second highest freshmen count with 113. The previous high was 120. In five of the past 15 years we've pre-enrolled over 100 and this is the third year in a row we've been over 100.

Each session (2 per week during June) gets very hectic. Thanks to Dr. Chung and Kelly Borden for working the phones and the special permissions to help get our students in the classes they need (and those great departments that help find room).

No Elevator!



Time to take those stairs! Heckert-Wells Hall elevator junkies were out of luck for the first half of the spring semester as the elevator will be out of service. Gasp! Wheeze!

KRPS

The "Crimson and Gold Connection" feature is a program on PittState's KRPS (Public Radio for the Four States - FM 89.9). There are two interviews of interest to the Biology Department. The first is with our Dr. Jim Dawson about his algae research and the second is with Dr. Gabe Bever (BS in Biology 1996), a Research Associate with the American Museum of Natural History in New York. You can hear them at <http://www.krps.org/crimson.htm>.

Dr. James Dawson: May 9, 2012
[\[http://bit.ly/THvk4y\]](http://bit.ly/THvk4y)

Dr. Gabe Bever: June 27, 2012
[\[http://bit.ly/THvgC7\]](http://bit.ly/THvgC7)

Course Redesign

Nearly 150 Pitt State faculty participated in the "Professional Development Day" before the start of the fall semester to talk about Course Redesign! Redesign is a special PSU initiative and is about making instructional format relevant and interesting in order to enhance student engagement and learning.



Dr. Chung (red shirt) and Dr. Peak (to right).

Several Biology faculty (some of them you'll see in the video) joined in exploring "Course Redesign" and Dr. Arruda presented a session. See the opening of the sessions at the PSU YouTube Channel at <http://bit.ly/TMiIpH>.



Dr. Triplett and Dr. Rider.



Obituaries

Dr. John C. (Chris) Johnson, Jr. November 28, 1924–March 2, 2012



Dr. Chris Johnson was a member of the Department of Biology from 1956 – 1987, retiring as Professor Emeritus of Biology. He had been faculty advisor to the University's chapter of Beta Beta Beta Biological Honor Society, 1960 – 87, National President of the Society from 1977-85, and member of the National Executive Committee, 1965- 2001. He held memberships in Sigma Xi, American Ornithologists' Union, The Nature Conservancy, and the Kansas Academy of Science.

He earned his M.S. in 1952 and his Ph.D. in Zoology in 1957 at the University of Oklahoma. Dr. Johnson studied parasites in birds and had an encyclopedic knowledge of birds.

Dr. Johnson spent his earliest years in Gunnison, CO, and moved with his family to Pennsylvania for elementary and high school. He joined the U.S. Army during World War II, was seriously wounded in the Battle of the Bulge, and was later awarded the Combat Infantryman Badge and the Purple Heart Medals. He was honored to have given the address on behalf of veterans at the dedication in 2004 of the Pittsburg State University Veterans Memorial Amphitheater.

Among Dr. Johnson's most significant professional contributions were his 50 years of service to the Rocky Mountain Biological Laboratory (RMBL) in Crested Butte, CO, a high altitude (9,500 elev.) biological field station founded in 1928 by his father, also a biology professor. During summers, Dr. Johnson held many positions with RMBL, including Director from 1968–1977, a pivotal time for RMBL. He also served on the Board of Trustees, and as the institution's archivist.

A celebration of Dr. Johnson's life was held April 7, 2012 at the Presbyterian Church in Pittsburg. His ashes were to be buried in the family plot in Gunnison, CO.

Dr. Stephen Lee Timme August 27, 1950 – April 10, 2012



Dr. Stephen Timme received his undergraduate and master's degree in biology from Missouri State University, Springfield, MO and a Ph.D. in Botany from Mississippi State University. He was on the faculty at Northern Alabama University before joining the faculty in Biology at PSU in 1989 until his early retirement in 2011.

He served in the United States Army from 1969-1970, serving with the 101st Airborne Division in Vietnam, where he received two purple hearts.

Dr. Timme taught introductory biology major and upper division plant courses. At his retirement, he was the Director and Curator of the Sperry Herbarium. During his time with us, he led several trips to the Peruvian Amazon and to Dauphin Island, Alabama. Steve was a member of several professional societies including the Kansas Native Plant Society and the Missouri Native Plant Society.

Funeral services were held Saturday, April 14, 2012 at the Atkinson Chapel in Harrisonville, MO with cremation following.

Mr. Keith Chadwick

Keith Chadwick died in a Lawrence, KS nursing home on Saturday, October 13, 2012 having just celebrated his 70th birthday. Keith worked as the electronics technician for the three science departments at PSU and he retired in 2007. He graduated from Des Moines Technical High School in the radio and television technology track and then served in the US Army. Keith worked as a TV repairman in Springdale, AR and later with Motorola in Joplin, Missouri as an electronics repairman. Keith was always a great guy to work with.

Biology Faculty (Fall 2012)

Joseph A. Arruda, Professor of Environmental Biology. [Ph.D., Kansas State University]

Specialties: limnology, water quality and biological monitoring and assessment, gastropods

Peter Chung, Associate Professor of Microbiology. [Ph.D., Kansas State University]

Specialties: microbiology, molecular biology (nucleic acid manipulation and protein expression systems in microbes and coccidia), tissue culture

James T. Dawson, Professor of Botany [Ph.D., University of Kentucky]

Specialties: algology, plant physiology, medical mycology

Cynthia S. Ford, Professor of Biology. [Ph.D., Kansas State University]

Specialties: natural history, parasitology, environmental education, biological illustration

Steven D. Ford, Professor of Zoology. [Ph.D., Purdue University]

Specialties: vertebrate zoology, mammalogy, ornithology, ecology, wildlife management, anatomy

David M. Gordon, Associate Professor of Entomology. [Ph.D., University of California at Davis]

Specialties: Ecology of Bees: native bee faunas; medical entomology: phlebotomine sand flies

Phillip Harries, Assistant Professor of Biology. [Ph.D. Washington University]

Specialties: plant viruses, cellular and molecular biology of plants

Hermann Nonnenmacher, Assistant Professor of Biology. [Ph.D., Saint Louis University]

Specialties: plant ecology, entomology

Mandy Peak, Assistant Professor of Biology. [Ph.D., Oklahoma Health Sciences Center]

Specialties: molecular and cellular biology, biochemistry

Virginia Rider, Professor of Zoology. [Ph.D., Arizona State University]

Specialties: gene regulation, reproductive physiology, implantation, mammalian oocyte maturation

Neal Schmidt, Instructor. [Pharm.D, University of Colorado Health Sciences Center]

Specialties: anatomy and physiology

Dixie L. Smith, Associate Professor of Biology, Chairperson. [Ph.D., Kansas State University]

Specialties: soil ecology, grassland ecology, woodland expansion, science education

James R. Triplett, University Professor. [Ph.D., University of Kansas]

Specialties: ichthyology, limnology, fisheries management, aquaculture;

Xiaolu Wu, Assistant Professor of Biology. [Ph.D., University of Illinois at Chicago]

Specialties: cell and molecular biology, virology

Daniel Zurek, Professor of Biology. [Ph.D., University of California - San Diego]

Specialties: cellular and molecular biology, biotechnology, and plant molecular physiology.

Biology Staff (Fall 2012)

Kelly Borden, Administrative Specialist

Donna Lair, Storekeeper

Delia Lister, Director, Nature Reach

Suzanne Arruda, Instructor
