

Biology Newsletter 2011

Pre-health student service
trip to Peru (summer 2011)
led by Dr. Mandy Peak



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From The Chair's Desk

It is hard for me to believe that I am writing to greet everyone from the “big office” this fall (if you remember my tiny office, you know that I mean that literally). I moved into the Chair position last summer. Up to six months prior to last July, serving as department chair was not even on my radar but sometimes things just work out in unexpected ways. Although there are others that would have been able to do this job just as well or better than I, it seems that this is my opportunity to be of service to the department. I am doing my best to keep the behind the scenes nuts and bolts and gears of the operation working smoothly so that our faculty can continue to provide biology students with an excellent educational experience.

Faculty/Staff Updates

Let's see....where do I start: Good news. We were able to hire Dr. Hermann Nonnenmacher beginning this school year as a tenure-earning faculty member. Many of you know that Hermann has worked for us as a full-time temporary in the past. Hermann is a pollination biologist by training, and while he will be covering a number of different types of courses for us, he has also begun research on the pollinators of Meade's Milkweed and other tallgrass prairie forbs. We are happy to have him with us.

As we gained Hermann this year, Dr. Steve Timme retired from the department and became Emeritus Director of the Sperry Herbarium. We still see him most Mondays when he comes in to work up plant specimens for the collection. There is some news from Dr. Timme elsewhere in the newsletter.

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Continued - From The Chair's Desk

Dr. Triplett is on sabbatical this fall so, once again, we had to hire extra hands to cover our overflowing laboratory classes. Subsequently, Suzanne Arruda is back with us for the academic year. She is teaching General Biology and Environmental Life Science (ELS). We also applied for and were granted an additional graduate teaching stipend from continuing studies for this academic year only. With that funding, we hired another graduate student and were able to add a Principles of Biology Lab and three ELS labs that we otherwise would not have been able to offer. Many people told me that staffing and scheduling were some of the most challenging parts of the chair's job, and they certainly were right.

Our Retired Faculty

While I am on the subject of faculty and staff, I wanted to mention several names that many of you will remember. Certainly there are other retired faculty that we think of frequently, but not everyone could be reached at this time.

- Hugh and Judy Campbell are living in the area and they keep busy with landscaping, Sweet Adelines, and taking tickets at home games. Of course, he also comes to our events and grills for us and therefore remains irreplaceable.
- From Dr. Riches: "Harv and Judy Riches are busy with their 34 grandchildren and their 4 greats. We spend one week a month serving in the Oklahoma City LDS Temple. We have an apartment there and love the work. Following the Joplin Tornado, Harv spent 2 days a week for 6 weeks working in the Command Center for LDS Services sharpening and repairing chain saws during the recovery period. We had a great garden despite the hot dry summer. We wish all of you a very Merry Christmas and a Happy New Year."

A Busy Department

There have been a great many things happening in the department and everyone is busy all the time. We've done some excellent planning and I hope to be able to report next fall that we have taken action on some of those plans. I have been pretty pre-occupied with trying not to drop any of the "balls" that the chair is supposed to keep in the air during my first year in this position, so I won't presume to know everything that everyone has done. A short list of department events includes:

- Two Outstanding Biology Alumni honored by PSU at Homecoming: Brett Potts and Gina Pinamonti
- Two Rumble in the Jungle recruitment events
- Biology Club Chili Cook-off
- A GIS/GPS workshop by Seiler, hosted by us
- A Kansas Earth and Space Science Teachers (KESTA) Fall Field Trip, hosted by us
- Physical Therapy Open House
- K-INBRE Administrators' tour of the department with lunch on campus

Those are just a few of the special events that come to mind. As you read the essays from department faculty, they will probably provide a more complete list from each of their areas. At any rate, I think you'll see that the more things change, the more they stay the same. We still get to work with great people. We still have more students than we have resources and hours in the day. We still have a dedicated, hard-working faculty and staff addressing the needs of the students, university, and community on a daily basis. Most of all, we still have students that come to us with the desire to make the most of their lives, and that look to us for guidance, training, and content to help them make it happen. It is a privilege to be here.

When Dr. Dixie L. Smith became the 8th Chair of the Biology Department in June 2011 she became the first female Chair of Biology. If you want to know who the others were and more about the Department "of old" read about our history at <http://www.pittstate.edu/department/biology/history/>.

From Dr. Joe Arruda



The Kansas Land Snail Project continues with more new surveys, new snails from “contributors” across the state, and creation of a checklist of

Kansas land snails (<http://bit.ly/vdAknc>). The list includes over 60 species. Individual species have been collected from 85 counties, with the greatest diversity in the wooded eastern third of the state. The most specious regions are the southeast and along the Kansas River corridor, but with more data other “centers” of diversity will likely emerge and reveal geographic differences in biodiversity. The most common species (numbers of counties it was found in) is a 5 mm snail called *Pupoides albilabris*, the White-lip Dagger.

Sarah Wolfe, senior biology major, conducted a land snail research project in my lab (“The Growth of a Land Snail Exposed to Different Substrates from a Partially Reclaimed Abandoned Mined Land”) and won the award for the best undergraduate poster at PSU’s 2011 Research Colloquium. Sarah spent the summer on an NSF REU program and is applying to graduate school – all in the bench biology area – a loss to field biology, but a gain to the bench folks.



Over the summer, I had the opportunity to look at land snails from an archeological dig in southeast Kansas. The site was dated at just over 2,000 years ago. The fauna didn’t appear

to be qualitatively any different than that found in southeast Kansas now. The Flamed Tiger Snail, *Anguispira alternata* (see above), was the dominant snail in the group – comprising just over 75% of the individuals.

In other news, I have new graduate student, Ken Gouvion, who is interested in whether wetlands can be

categorized or classified based on microbial function. Ken started Fall 2011 and is well underway.

Thanks to the student fee fund, we have acquired some new field supplies including a plankton trap, plankton nets, and a Hach water quality spectrophotometer.

I’ve been teaching the Field Ecology course this fall and we’ve been to streams, lakes, grasslands, and woodlands – all in the name of using some common field census techniques.



The most different experience was doing a line transect at Robb Prairie on November 16 in the middle of brief snowfall that covered the vegetation and us.



With Dr. Timme’s retirement, I now have a new co-teacher in Principles of Biology II, Dr. Jim Dawson, with whom I taught Principles of Biology I for several years after we developed the course. I do miss my friend and colleague.

Dr. Joe Arruda (jarruda@pittstate.edu)

From Dr. Peter Chung



Greetings and Happy Holidays from the Biology Department! Once again, I marvel at how fast the year has gone by. It has been a busy year; classes have kept many of us occupied this semester. As always, throngs of students have

passed through General Microbiology; some have passed; others have taken detours. The upper division microbiology and immunology classes continue to be of service to our majors going into professional schools.

Undergraduate research has been slow but steady. Our lab currently has 5 undergraduate students working on a variety of projects, ranging from cancer research to classical and applied microbiology. Our three K-INBRE scholars will be presenting some of their work at the January regional K-INBRE conference up in Kansas City. The other students in the lab are looking at presenting their work at the regional ASM meeting in Warrensburg, Missouri, coming up this March. I am proud of all of my young researchers.

In the service and advising arena, it has also been a busy year. The number of students interested in Biology continues to be at an all-time high; there are many bright young minds who will soon be fellow Gorillas. Although recruiting efforts take up much time, it is sometimes well worth the effort! We have seen the numbers of physical therapy emphasis Biology majors and Medical Technology majors increase these last few years and hope they continue to climb.

Some quick news: this year, we held a Biology, majors-only physical therapy emphasis meeting separate from our annual Physical Therapy Open House. We co-hosted the 2011 Physical Therapy Open House with Exercise Science from the Department of Health, Human Performance and Recreation. We had great participation, from both regional physical therapy schools and students, in both events.



Dr. Chung meeting with 2011 Outstanding alum Dr. Gina Pinamonti

Wrapping up: Congratulations to our majors who made it to professional schools, both last year and this year already: KU PT, Shannon, Amanda and Zac and Molly (just got accepted!); Arizona PT, Katie; UMKC School of Dentistry, Alissa; Cleveland Chiropractic, Tyler. And greetings and salutations to our recent grads who are in professional school: KU Med kids, John-Michael and Kylie; OU Med, Elise and Shelly; MU Med, Venessa; UMSLU Optometry, Carrie; Rocky Mountain Vista COM, Erica; UMKC Dentistry, Nathan and Scott; and finally, Clint at Virginia Tech COM. We all greatly miss you and I wish the best in your professional studies!

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



As many of you know I acted as interim chair for the department for three years. In June I returned to the ranks of the faculty.

During my last year as Chair, Tyler Shouse, 2010 graduate, and I completed a grant from the University of Kentucky's Center for Applied Energy, CAER. We surveyed more than 120 strains of freshwater algae for growth under specific conditions. I was able to present the results of this

research at the 1st International Conference on Algal Biomass, Biofuels & Bioproducts in July. Later I was able to visit their pilot plant in Lexington. More research for CAER is underway at the moment.

Some of you may remember my son David, '04 and '05 grad. David survived the great Joplin Tornado and will be finishing his last year of Residence at Freeman Hospital in Joplin.

This has been a banner year for the workshops at The University of Texas, at Austin, Algae Culture Center. We had initially wondered if anyone would be interested in learning the basics of algal culture. We had initially not planned to have more than 6 this year, but we just finished the seventh, for a total of more than 25 over the past 3 years! There is certainly continued interest in growing algae for fuels and other products.

Dr. James Dawson (jdawson@pittstate.edu)

From Dr. Steve Ford



Greetings!

Hope you're hanging tough in these tough financial times. Things are busy here as usual. The field-oriented faculty finally were able to get two new field emphases in

place to replace some of the old emphases, among them the pre-fisheries and wildlife option. The classes available and required are pretty similar to the old emphasis, but some of the bench biology requirements were dropped to allow room for field classes. There is somewhat more flexibility in the new curricula as well.

There's been a bit of a policy change at the Monahan field site near Cherokee. For many years the caretakers there have been graduate students who of course are only on site for two years or so. Beginning last spring Mr. Brad Sjordland moved into the trailer after making some rather extensive repairs and retrofits. Brad is employed at Ace Forms in Pittsburg, and shoes horses. He grew up in the area, knows lots of folks, and is

quite "handy" at various skills needed to keep the place in good shape. We hope he'll be around for some time so as to lend some badly needed continuity to that position.

Alan Ross continues to look after "Paradocs" - Drs. Ted Sperry and Gladys Galligar's unique home and grounds on College Street. It continues to be used as a visiting scholar and friends of the University residence, and retains the charm that Ted and Gladys nurtured. There's new upholstery, drapes, some plumbing, etc., and plans are afoot to stabilize "Swayback," which you may recall is the old shack that "lies way back" (get it!?) on the property. Some minor grounds work is also planned, with a priority of naturalness that we hope Ted and Gladys would approve.



The Sperry Home (Fall 2011)

Cindy and I were prepared to take students to Big Bend National Park in south Texas last spring break, but as the time drew near gas prices continued to grow, and finally shut us down. It was the first time in some 25 years that the Biology Department spring break field trip had to be cancelled.

My former anatomy student, Dr. Mike Zafuta, repaired a torn rotator cuff muscle for me a few months ago (I checked his grade on the upper limb test beforehand - he did ok, so I let him go ahead and cut on me). Yet another former anatomy student, Jennifer Gilmore, did my physical therapy - I'm not so sure she didn't twist my arm a little more than necessary, but I survived. Thanks to them both!

Dr. Steve Ford (sford@pittstate.edu)

From Dr. Cindy Ford



Another year has flown. This semester was particularly busy in designing a new class for me - Principles of Ecology. I really enjoyed teaching the new class and working with biology majors.

Eric Row finished his Master's Degree last May with top presentation honors at the PSU Graduate Colloquium. He investigated life cycles of fleas infected with a bacterium, *Wolbachia* sp. Eric landed a new teaching position with Neosho Community College where he has been the most recent biology instructor in the new satellite program in Ottawa, KS.

Craig Corpstein is my current graduate student. He is making great progress on his research of two prairies near Ft. Scott, KS and has even found a federally endangered plant (Mead's milkweed). He is planning to graduate in May 2012.



Craig Corpstein at his Fort Scott National Historic Site sampling area

Steve and I are staying busy managing our "wildlife" farm and fending off beavers in our aquatic areas. We like our trees too ...

Dr. Cindy Ford (cford@pittstate.edu)

From Dr. Phil Harries



Greetings from Heckert-Wells! I am starting my third year here at PSU (this doesn't seem possible) and I continue to teach the Principles of Biology I and Biology of Cancer, courses that I have been working on since my arrival. Since

Dr. Zurek was gone for the 2010-2011 school year, I also taught Cell Biology and Advanced Cell and Molecular Biology in his absence and these courses were both a lot of fun. This fall semester I am covering Introduction to Research, a course for new graduate students, while Dr. Triplett is on sabbatical. Teaching new courses has definitely kept me on my toes!

My lab is carrying out research trying to understand how plant viruses move from cell-to-cell within a host plant. Although research always seems to move slower than one would like, things are definitely moving along with four undergraduates and 2 graduate students working in the lab. One of the graduate students, Kaleb Nickell, just started this fall after finishing an undergrad degree in Biology at Pitt several years ago. He will study a few specific host proteins that may be involved with controlling cell-to-cell movement of molecules (including invading viruses) between plant cells.

This past summer, I traveled to The Samuel Roberts Noble Foundation in Oklahoma with graduate student Brendan Coulter to carry out microscopy and particle bombardment experiments. Particle bombardment utilizes a "gene gun" which lets you actually shoot microscopic particles coated with DNA (genes) into living cells! Over the summer I also presented a poster at the American Society of Virology annual meeting in Minneapolis and I was invited to speak at the Mid-Atlantic Plant Molecular Biology Society meeting in Maryland. I was able to combine the Maryland trip with a visit to my parents who live just up the road from the conference site.



I started serving as the advisor for the PSU rock climbing club last fall and have really enjoyed doing a lot of climbing over the past year. Our group has taken quite a few weekend trips to Arkansas including a long trip over spring break to Sam's Throne near Jasper, AR (see picture above). I never thought I would get involved with rock climbing when I moved to Kansas but as I have found, PSU is full of surprises!

Dr. Phil Harries (pharries@pittstate.edu)

Some of the climbing group at Sam's Throne. Biologists include Graham Johnson (green shirt, far left), Myself (back), and Eric Hunn (Grey shirt, far right).

Dr. Virginia Rider – 2011 Outstanding Faculty Award Winner

Congratulations to Dr. Rider for being one of the three recipients of the 2011 Outstanding Faculty Award, presented at the 2011 Apple Day Celebration. Each recipient noted how they were inspired by teachers in their own college careers and that they're working hard to do the same for generations of new students. Read the story at <http://bit.ly/sPv8sd>.

More Biology in the News

Science Day 2011 – Biology Bowl and More (PSU video)

See the story (video with Biology Club President Holly Hrabek and Dr. Peter Chung) at <http://bit.ly/s78tXo>.



Nature Reach – Iguana Assistant

A Pittsburg Morning Sun “Patrick’s People” story on Nature Reach’s new “assistant”. Read the story at <http://bit.ly/sJ0yTu>.



Nature Reach – Program Description (PSU video)

The Nature Reach Program including the 2011 Summer Camp. See the story with video at <http://bit.ly/tslgLG>.



Snapshots from the Year

Several Biology faculty and students attended the 143rd Annual Meeting of the Kansas Academy of Science held at Baker University in April 2011.



Biology faculty attended Spring 2011 graduation. – a good time was had by all, even after we were moved from the gym floor (not enough room) up into the aeries.



Dr. Harries, Gordon, Wu, Arruda, Nonnenmacher, Smith, and Peak, except for Dr. Chung who was a Marshall, leading one of the lines of graduating students and Dr. Triplett who was a stage marshal.

The annual PSU Faculty Steak Fry was recently held. Our Dr. Jim Triplett is the coordinator of the event and retired faculty member Dr. Hugh Campbell is the grill master. PSU did a nice video including an interview with Dr. Campbell (<http://bit.ly/v7gHV3>).



The PSU Biology contingent at the 9th Annual K-INBRE **Research Conference** in January 2011 was over 20-strong!



Yes, the Biology Department is on Facebook (<http://on.fb.me/uKsu9S>). You don't have to join Facebook to read the updates. Check in sometime and see what's happening back here in Pittsburg.

From Dr. Hermann Nonnenmacher



Hello, everyone.

My name is Hermann Nonnenmacher, and I am the department's newest assistant professor.

My interest areas include native plants, such as their taxonomy, conservation, and reproductive biology, especially forbs in tallgrass prairie remnants.

Working with the Bernhardt-Meier lab at Saint Louis University this past summer took me to prairies in Missouri and Kansas to investigate reproduction in Mead's Milkweed, an endangered species listed Federally and watched closely by several agencies and native plant conservation groups. This is a project which will keep me busy for a few more years.

Along with the study of the plants comes many opportunities to observe and collect the insects which use them and may, or may not, provide a benefit in return for whatever reward was taken. Insects can be assessed for their relative contribution to effect a plant population's reproductive success, but the sources of vectored pollen and the recipients' reactions must also be documented.

During the academic year to come, I look forward to the challenges of teaching and advising, research and service. This semester has been full of opportunities to recruit, organize field outings, and survey property for native plant species. To be here provides me close access to many biologically interesting wildlife areas, and students are sure to be involved in helping to collect and process specimens, generate data, and present their contributions to others.

Please contact me if you have questions about wildflowers in your area or wonder what kind of insect just visited.

Dr. Hermann Nonnenmacher
(hnonnenm@pittstate.edu)

From Dr. Mandy Peak

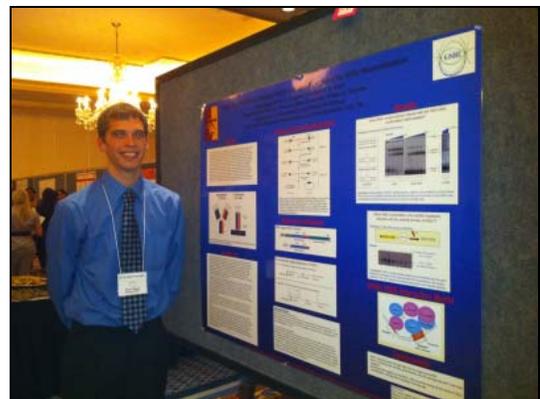


The 2010-2011 school year was fantastic! In addition to teaching Genetics, Genetic labs, Senior Seminar, Multiculturalism in Medicine-Romania, I developed a new upper level course entitled "Genetics of Human Disease" and currently

developing Immunology lab for Spring 2012. This summer, I updated the Genetics Lab Manual with new experiments utilizing funds from my PSU Teaching Enhancement Grant.

My research lab presented two research posters and attended three research conferences in 2011. Brett Siegle presented "Molecular Interactions between RAG1 and the RSS required for V(D)J Recombination" at the K-INBRE conference in Kansas City. Brett graduated from Pitt State in May and is in his first year of medical school at KU.

My bright research students, Carly Twarog and Boya Abudu attended the Kansas Academy of Science conference at Baker University and will present a poster at the K-INBRE conference in January 2012. Carly and I also applied for a small Sigma Xi research grant.



Brett Siegle at K-INBRE



Boya Abudu and Carly Twarog in the lab

I presented “Important Molecular Interactions during V(D)J Recombination” at the Human Genetics & Genomics Conference in July at Newport, Rhode Island.

The Biology department had a busy service year. We represented the Biology department in Rumble in the Jungle, Junior Jungle Day, Pre-Physical Therapy Day and the Biology Bowl. In addition, I judged talks at the Kansas Academy of Science Conference at Baker University and posters at the South Joplin Middle School Science Fair.

In May 2011, I led a study abroad program to Peru with Vicki Webber, Physicians Assistant at the PSU Student Health Center (see separate story with pictures). Fifteen pre-health students traveled to small villages in the Peru’s Sacred Valley to assist medical professionals with routine health and dental exams in. Additional information about this fantastic trip is found in this newsletter. Next year, the Pitt State pre-health study abroad program is heading to Romania in July 2012.

Dr. Mandy Peak (mpeak@pittstate.edu)

From Dr. Virginia Rider



Greetings to all friends of the Biology Department. Once again the Biology Department has been filled with hard working, successful students.

The students who were accepted to professional schools this year are: Brandon Carlisle, postbac program, KU Med; Jordan Conner, Cleveland College of Chiropractic Medicine; Emily Derfelt, KU Med; Eric Hunn, KU Med; Elizabeth Kester, KU School of Pharmacy; Jennifer McCracken, University of Colorado School of Pharmacy; Joseph Meier, KU Med; Haley Ruther, LSU-Shreveport, PhD program; Brett Siegle, KU Med; and Ryan Sorrel, postbac program, KU Med. 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.

Julie Ward, a former graduate student in the laboratory, successfully defended her Master’s thesis this past spring and has entered a PhD program at OU. Julie’s thesis work will be presented at the annual American Society for Cell Biology meeting in Denver, CO this December.

Guannan Xiao, a current graduate student in the laboratory, finished her research project involved with the synthesis of estrogen receptors in human T cells. She plans to defend her thesis in the spring. Guannan’s results will be presented at the annual Meeting of the Endocrine Society in Houston, TX during the summer of 2012. Julie and Guannan’s research projects were supported by The National Institutes of Health.

Alex Talbott, a current graduate student in the laboratory is wrapping up his research and

interviewing for admission to dental schools. Alex expects to present his research at the annual Kansas Idea Network for Biomedical Research Excellence (K-INBRE) meeting to be held this January in Kansas City.

The K-INBRE is comprised of research scientists from across the State of Kansas. Support for the K-INBRE is from the National Institutes of Health, and the goal is to foster and improve biomedical research at all universities across the State. Zach Krumsick and Sierra Foster are K-INBRE scholars who are funded to conduct research on independent projects in my laboratory. Together, Zach and Sierra have help to unravel some key steps in the hormonal control of signal transduction in target cells. Both students have worked hard on their projects and plan to present their results at the annual K-INBRE meeting in Jan. 2012.



Julie Ward was one of the 2011 K-INBRE Symposium Platform Presentation Award Winners and Poster Winners. She was the only graduate student to win in both areas. Her poster was titled: "The Differential Regulation of Calreticulin by 17Beta-Estradiol in Systemic Lupus Erythematosus T Cells." (Julie Ward, left and Dr. Rider, right)

Interview invitations are just beginning to arrive from a variety of 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 and her colleagues remain

strong supporters of our students at the Free Clinic. 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 Pre-health Orientation classes continues to be strong with between 70 and 80 students every fall semester. I am grateful to the many health care professionals who participate in this class and help educate our students about options in health care careers. This fall we enjoyed a record number of former students who returned at various points in their professional careers. These include Eric Thomson, Neil Bryan, Afrita Davis, Jennifer Smith, Mike Fenech, Mindi Garner and Paul Niegsch who came by to talk with the incoming freshmen about careers in health care-- once a gorilla, always a gorilla!

Please stop in and see me if you find yourself in the Pittsburg Area. It is always a pleasure to see former students and catch up on your news. I send you my best wishes for continued success and happiness in the pursuit of your passion.

Dr. Virginia Rider (vrider@pittstate.edu)

From Dr. Neal Schmidt



I hope our 2011 newsletter finds you well and enjoying life! It is amazing that I am now in my seventh year at Pittsburg State and so far so good here on campus.

I have been keeping busy with the Anatomy and Physiology lecture and lab courses this semester and I am teaching an upper division Pathophysiology course for the second time this Fall. Another upper division class that I have been involved with is Immunology lecture.

This Spring, I will assist Drs. Chung and Peak as Immunology lab will be added back into the curriculum. Hopefully, this will provide another course choice for our majors in the pre-health and biological sciences.

I attended the Human Anatomy and Physiology Society (HAPS) annual meeting last Spring in Victoria, British Columbia. While at the conference, I was made part of the editorial staff of the HAPS newsletter. The HAPS organization has afforded me the opportunity to network with colleagues, learn new approaches to optimize teaching effectiveness, and improve my knowledge base.

My wife, Tammy, and I continue to assist with the Pittsburg Free Clinic through the provision of pharmaceutical services and medications. We hope to continue in this capacity in the future.

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

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.

Dr. Neal Schmidt (nschmidt@pittstate.edu)

From Dr. Dixie L. Smith

Because I assumed the duties of the department chair last summer, my teaching duties changed somewhat this fall. For the first time in ten years I did not teach General Biology and that was quite a change. I keep seeing and learning about health-related topics and/or events and think, “Oh, I need to be sure and tell the students about that.” Then I remember that I don’t have the General Biology students to talk to about non-ecology topics this fall. It’s sort of disorienting. So yes, I miss that group and I will look forward to teaching Gen Bio in the future when the opportunity arises.



I am still working with the biology teacher education program, in which we have 35 students enrolled this fall. That number is up slightly over the past several years; however, the actual number graduating this past year was quite low. Perhaps the small number of students wanting to teach right now is not too surprising in view of so much discouraging press regarding the field of teaching in general. I have had advisees tell me that their parents were trying to talk them out of teaching because they don’t think the job prospects are good. However, job prospects for science teachers continue to be good outside of the Kansas City area (where there were so many lay-offs last year). In other parts of Kansas and Missouri there are a great number of retirements and jobs are open. I am optimistic that this tide will surely turn – we have some potentially terrific teachers in the line-up over the next several years.

I am determined to follow Dr. Triplett’s and Dr. Dawson’s examples and not let the chair position entirely block out of my scholarly interests. I attended an excellent Grassland Ecology Conference at Kansas State in September. There are new conclusions coming to light about the importance of species diversity following many years of study. I was excited to hear Dave Tillman from Minnesota speak of research that asserts that if one wants to increase plant productivity of an area, maintaining around seventeen species growing in close proximity to each other will be as effective as increasing water or soil nutrient availability. Now, you may think I am easily excited, but this comes after a great many ambiguous research studies that cast doubt on whether diversity is really as important as we think it is. So, it was big news. There were other excellent talks. Several talks on African grasslands noted decreases in plant productivity with the loss of herbivores – amazing insights that were entirely new to me. Having the chance to hear

researchers of that caliber is such a privilege, and reminds me of why I got into this professor business in the first place. My own set of soil invertebrates is waiting for some attention over Christmas break!

Finally, I want to mention my latest commitment. I have joined a committee of about 60 Kansas educators that will be working to review the new national science standards over the next year. We just this week (early December 2011) received a partial list of standards for initial review. I was in Topeka with the committee and it was very rewarding to hear the enthusiasm and flow of ideas between educators at all levels from around the state. Kansas is one of 20 states that are leading the effort to develop the new list of standards based on the Next Generation Science Framework which is available for viewing online as of last summer.

We all know that Kansas and Science Standards are sometimes a volatile mixture, but the “heat” tends to be more with the issue of state adoption than at the national level. For now, our group is to provide input for “the Kansas response” to the national standards as new iterations appear from the writing teams. I already know that I am going to learn more from this group of colleagues than I can teach them, but I have learned that in groups like this, questions and observations are what are needed to spark discussion and thought. I can do that, and it will be interesting. The first public drafts will appear sometime next spring.

Dr. Dixie Smith (dsmith@pittstate.edu)

From Dr. Stephen L. Timme (Emeritus Professor of Botany)



This past spring semester was my last semester teaching in the Department of Biology at Pittsburg State. In May, I retired mostly due to health reasons. Over the 20 plus years I taught in the Biology Department at Pitt State, I have, for the most part, enjoyed the students and seeing them mature into professionals. Most of the biology majors directed their studies toward the medical field while many of the

others chose the animal or environmental side as their interests. Few focused on the botanical aspect of biology. But there are a number who did and those like Hermann Nonnenmacher, Alan Ross, Dorothy Speck, Lorrie Parrish, Melissa Baier, and Micah and Heather Nash stand out as excellent students of field and laboratory botany. I enjoyed working with them and others as they progressed through a range of botany courses offered. To them and other students I thank for keeping my teaching and research interests fresh and challenging. I will continue to serve as Director of the T. M. Sperry Herbarium for at least a few more years. The department has allowed me to set up a temporary “office” and research area in the herbarium.

I was temporarily side-tracked from collecting plants for the spring and summer of this year (2011) due to surgery in early May. But by late August I was collecting roadside plants and have progressed to collecting from a few prairies and woodlands. I am now busy identifying, cataloging and mounting plants that I have collected over the years. This will keep me busy for some time. I have 22,484 taxa recorded in my field notes. Most of these will be added to the T. M. Sperry Herbarium and duplicates sent to the Missouri Botanical Garden (St. Louis), Ozark Regional Herbarium (Missouri State), and the R. L. McGregor Herbarium (KU).

I still have two graduate students to finish. Martha Baskett hopefully will finish by the Spring of 2012 and Amelia Bristow should be finished by spring of 2013. Martha is conducting a bryophyte comparing the bryophyte flora of different rock outcrops in Montgomery County while Amelia is conducting a plant survey at Elk City State Park.

I thank the Department of Biology for supporting the herbarium and the many contributors to the herbarium, especially Dr. W. W. Holland of Erie, Kansas. Without the support and plant contributions, the herbarium would not represent an important collection that focuses on Southeast Kansas.

Dr. Stephen L. Timme (botanydoctor@hotmail.com)

From Dr. Jim Triplett



Spring 2011 was herpetology time again, and the diversity available in our region did not disappoint the students, who worked diligently to develop some pretty good collection lists. We made our weekend trip to the Ouachita Mountains as usual, and ended up having to retreat to

a motel for our second night there, which is becoming usual. We had planned to camp at Albert Pike, but it was still in ruins from the flood two years prior that washed away the campers and killed several people. Heavy rains and thunderstorms invoked the “discretion is the better part of valor” notion and we retreated to a motel in Mena.



a “typical” Dr. Triplett field trip

This past year has been devoted to the Sustainability effort by PSU. Three Departments; Biology, Communication and Social Sciences came together and developed a new degree program at PSU. The Bachelor’s of Integrated Studies with an emphasis in Sustainability, Society and Resource Management (BIS SSRM) cleared the Department, College and University committees, was approved by the Regents and became the first academic program in Kansas that focuses on sustainability. It was part of the University official offering for the first time this fall semester. Several students that are in their junior or senior year have added the major as part of the University’s new Dual Degree program. This combination allows them to get a Bachelor’s in their specialty area (Urban Planning, Communication) and for 30 more hours get a second Bachelor’s. By adding the BIS SSRM, students gain the interdisciplinary credentials to work across

professional lines, which is increasingly important these days in natural resource management.

In June, I packed up three students, Krystal Davis (Biology at the time), Daniel Kilby (Communication) and Julie Adkins (Social Sciences), and took them to the International Symposium on Society and Resource Management (ISSRM) at the University of Wisconsin, Madison. (Side note: a good way to lose students to the University of Wisconsin is to take them there in the summer, where the student union sits on the shores of Lake Mendota. I almost returned to Pittsburg alone.) I gave a paper at the conference session on managing watersheds across boundaries titled: “Four States, Two EPA Regions, Eight Tribes and a Superfund Site: Does This Watershed Stand a Chance?”. Krystal and Julie added the BIS SSRM as a second degree.



the aforementioned Lake Mendota and Student Union

This fall I was granted a sabbatical to visit other institutions with sustainability programs to see how they are structured, administered and funded. I also visited faculty colleagues in the environmental communication field who refer to themselves as “pracademics”, as they not only teach and do research in the discipline, but apply their work in facilitating natural resource management. I wanted to see how they approach the area of natural resource conflict management in the classroom to help me develop the course for spring 2012. My travels took me to the University of Northern Michigan at Marquette, MI, where visited with Dr. Jim Cantrell, Communication Department Chair; University of Minnesota, Joel Halvorson; Utah State University, Dr. Steven Daniels

(where I also got to visit Ron Keggeries, his wife and new baby); Oregon State University, Dr. Gregg Walker and Dr. Tarla Rae Petersen in New Orleans at NCA.

For June 2012, I am offering a four-week, study abroad/ service learning course in Paraguay. Students will have an opportunity to work with NGO's, government and university students on projects that address real issues of concern, such as urban storm water management.



Dr. Triplett with a family in the Chaco that works with the isolated natives and markets their wares (also Dr. Shirley Drew).

The cost of the Study Abroad trip is \$3,200 and includes flights, transportation, in home stays and side tours to areas of interest in Paraguay. This project is the result of my visit in the spring of 2010, which I reported in the newsletter last year and will hopefully become an integral part of the BIS SSRM degree.

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. 2011 is a busy and rewarding year. My passion for teaching and inspiring students has been continuously growing in my 4th year at PSU. Furthermore, I devoted great effort to work with four

wonderful students in my research lab and made substantial progress. In addition, I was actively involved in department, university and community service activities, which help me appreciate and value life from different perspectives.

I taught Principles of Biology I, General Microbiology and General Virology this year. Many students I met in the classroom were truly inspirational. Some students I taught when I first came to PSU recently got accepted into professional schools. I was thrilled with their great news, and I felt that we grow together in the past three years. Someday I will be able to say proudly: "I know those people who excel in their profession, and they were my students!" Just like the way the senior faculty always do. Helping students succeed is my way to make a difference in this world, and that is the driving force to keep me devoting to my job on a daily basis with every detailed effort.

I would like to share several good news happened in my lab this year. My very first undergraduate research student, Haley Ruther got accepted into Louisiana State University and has started her PhD program. With the two-year research experience in the lab, Haley not only found her passion for research but also has grown into a promising researcher and independent thinker. This is one of the happiest things that could happen to me as a mentor.

Secondly, Whitney Baldrige, who has been working in the lab since 2010 as an undergraduate student, graduated in May and continued to work on the avian influenza virus project in my lab as the master degree student. Avian influenza virus H5N1 has become a threat to public health with a mortality rate of over 60%. Whitney's thesis will focus on screening compound library for the inhibitors against viral infection. To date, we have found that six compounds

demonstrated decreased viral infectivity based on the preliminary data. In the future, we will continue the larger scale screening and investigate the specificity and mechanism for these anti-H5N1 compounds as candidates for antiviral treatments. Moreover, Whitney won second place in the undergraduate oral presentation competition at the 2011 PSU Research Colloquium.

Thirdly, two more undergraduate students, Bailee Claypool and Megan Kramer joined the lab in 2011. Bailee is a junior Pre-Med biology major and considering applying to M.D.-Ph.D. program to combine her passion for both medicine and research. Megan is a senior Biology major and plans to apply to graduate school. They spent the summer in my lab learning how to culture human cell lines independently, and they even generated some viruses for the project. They told me that they really enjoyed this experience which helped them have a clearer vision on what research project is about and picture themselves devote to the research in the future.

My lab presented our research poster at the 9th Annual K-INBRE Symposium in January and the 143rd Kansas Academy of Science Annual Meeting in April. Moreover, we were honored to have the opportunity to give a tour of my lab to the K-INBRE outreach visitors. The well-organized and detailed lab notebooks of my students left a good impression to the visitors about the systematic research training at PSU.

I am actively involved in student recruitment activities in 2011 such as Ramble in the jungle and meeting with perspective students during their visit. Thanks to Dr. Rider's invitation, I was delighted to join two mock interviews for the Pre-Med students. I was amazed by their determination, enthusiasm in the medical field, and excellent communication skills.

Moreover, I served as the advisor for the Pre-Med club during Dr. Zurek's temporary leave of absence. I attended the routine club meetings and their community service activities. They demonstrated great passion and leadership skills. Finally, I helped with the huge book sale of the Pittsburg Public Library in September as the new Board member of Friends of the Pittsburg Public Library. This is my first time to serve on the board in the community, and I am excited to contribute and learn.



From left: Whitney Baldrige, Bailee Claypool, Dr Wu

Finally, I would like to thank all the colleagues who gave me tremendous support and help in 2011.

- Dr. Xiaolu Wu (xwu55@yahoo.com)

From Dr. Dan Zurek



Hello again! It's been a while since I've posted anything in the newsletter.

As some of you know I took a year's leave when my lovely and talented spouse, former Outstanding Senior Woman Emily Walters, and I found out we were expecting a little girl. Strangely enough, Emily didn't want to start MD/PhD school in Rochester pregnant and half a continent away from her other half.

All went well, and now we are six: Avery Alexandria Zurek was born last November, and is almost 1 year old today. Sadly for me the current job situation is a bit bleak, so I am back at PSU with my little ones, shining the bright sunshine of science on another year of eager upturned faces. Or something like that...



It's been quite a year for some of our recent graduates. Liz Kester, now Liz Siegle, is pursuing her degree in pharmacy at KU while her husband and PSU grad Brett is working on his MD degree through that fine institution of higher learning. Eric Hunn and Katie Merando are there as well, while from graduation a few years back Chad Stewart (now married to PSU grad Abby Maxwell) is in his third, and Adam Merando is a Resident in Internal Medicine. Stephanie Graham, Alissa Becknell, Scott Stringer, and Nathan Woodward (who with his wife Sarah have just welcomed another little life into the world, Brody Hunter, congratulations!) are excelling in dental school at UMKC, although some of them have made a few comments comparing the quality of instruction at PSU to what they are currently receiving, in PSU's favor. Another PSU Biology/UMKC grad, Stephanie (Wagner) Kethcart is now practicing dentistry in Arizona: look up Stephanie K Dentistry on Facebook. She is specializing in dental implants, a topic I remember discussing in class with her many years ago. Brandon Mendez is also doing great in dental school in Nebraska with his wife Scarlett (who is expecting again, congratulations!) and their son Kurt. Emma Hayes is in her second year in the MS in science program at UMKC and is almost graduated, while Tingwei Guo took her MS from my lab at PSU and is now at the University of Delaware pursuing a PhD, as is former advisee Haley Ruther, in Shreveport. They'll be busy for a few years, it is an impressive challenge to take on. Tammy McEwen finished her PhD in Biology at MU-Columbia, and is now faculty at Southwestern College. Brittany Streiff is almost through with her Doctor of Veterinary Medicine degree at Manhattan (where Jessica Rupp is now studying plant pathology for her Piled Higher and Deeper), and is helping with her family's alpaca herd out to the west of us. Sean Price received the prestigious Mosier Scholarship in

pharmacy at OUHSC: congratulations Sean, it was well deserved. Carrie Hinman Gilstrap is practicing Rheumatology in Tulsa, and now has two little ones: she's busy! Destony Larimore, who graduated a few years ago from biology, has taken a different turn and has this year become an RN. Ashley Davis just graduated with her degree in Genetic Counseling from OUHSC and is working there now. I admit I was a little nervous introducing her to my kids; given how well she knows me and the training she now has she might have been able to give a name to some of my quirks. Rhonda Egidy is up at Stowers in KC: hopefully I can arrange for tours of some of these institutions for my students in the near future. Greg Peterson is now Greg Peterson, PhD, working for KDHE, and soon to be a proud papa as well: I enjoyed catching up with him this past fall when he visited. Other Biology grads now practicing medicine in the area are Dr. Mark Brown, graduated from medical school in Kirksville, and Dr. Matt Grounds, both of whom are now practicing in Joplin. I've had all of the above in my classes and would have no hesitation in seeing or taking any of my family to them for medical care. They are the best, and while I hope I never need their help, it's a big comfort knowing they are close.

Several of you have participated in research projects over the years, and I'm happy to say those have been successful beyond my dreams. The antibiotic project with the soybean compounds was really moved forward by the efforts of many people, in particular Nathan, Tammy, and Tingwei. It appears to be highly effective against a wide variety of pathogenic gram negatives, some of which currently have few treatment options. The next experiments are to show it is harmless to mammalian cells. There was also activity of purified product against some known plant pathogens, including Charcoal Rot, so that's another area I am exploring via a collaborative effort with MU-Columbia, and new MS student Jana Gannaway in my lab. The other main direction of research, plant molecular responses to hormonal signals, is being pursued by KINBRE scholar Autumn Gabehart, and we are fishing for the gene knockout clones Emma and I were able to confirm we made but couldn't isolate prior to her graduation because the PCR machine died. Once we have them, Autumn will do some plant transformation and see what it is these auxin responsive genes actually do.

Oh, and in my free time, I hope to lead more study abroad trips to Peru. Since Emily started the first one four years ago the program has become a major part of the education of many of our health field oriented students, and continues to reap substantial rewards for them personally and professionally.

That's all for now: have some children to go chase, a test to write, then there's this grant ... I am sure I have forgotten to mention many people and I apologize. If you send me an email to let me know what you are up to, I am much more likely to put your name into print here, hint hint. Hope this finds all of you all well and happy!

Dr. Dan Zurek (dnadanno@yahoo.com)

The PSU 2011 Graduate Awards Banquet took place on April 27, 2011 and both graduate and undergraduate 2011 Research Colloquium winners were recognized. Biology students were among the top students. At the undergraduate level, **Whitney Baldrige** (Research Mentor: Dr. Wu) won for best undergraduate oral presentation and **Sarah Wolfe** (Research Mentor: Dr. Arruda) won for best undergraduate poster. At the graduate level, **Eric Row** (Research Mentor: Dr. C. Ford) won for best graduate oral presentation and **Brendan Coulter** won for best graduate poster. One of the "Distinguished Thesis" winners was **Julie Ward** (Research Mentor: Dr. Rider). Other Biology graduate winners included **Zane Dye** (Research Mentor: Dr. Gordon) and **Alex Talbott** (Research Mentor: Dr. Rider).

Kansas IDeA Network of Biomedical Research Excellence at Pittsburg State University



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:

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

More Biology in the News

Dr. Jim Triplett – Sustainability Degree

This is a video story on PSU's new Integrated Studies Degree in Sustainability. Read the story with video at <http://bit.ly/swa7Y4> (and see the guest appearance by some of Dr. Arruda's land snails).





Natural History Programs



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/departement/naturereach/>.

Some Alumni News

I am now teaching Bio A.P at a Shadow Ridge High School, about 1.8 miles from my house, which looks up at the Sheeps Range Mountains. They are 8500 feet tall and are beautiful with snow on them.

I was the September Elk of the Month for September and I turn 40 this month on September the 25th. Seems like only yesterday I was walking into Dr. Dawson's Botany class a very scared Freshman. Meeting Kye Kiger and Ronald More was one of the best things I did that first day of class.

I am successful in my job and career. I have a bulletin board in my room, at school, and I call it my college wall. It is decorated with Pittsburg state stuff and I would love to get all that I can, if the university would like to send me some.

Vincent Cory Ossana

I am now the Manager at Lisboa Springs Fish Hatchery (New Mexico Department of Game and Fish). Lynsey and I have lived here in NM for almost 6 years and really enjoy where we are. We are about 30 minutes out of Santa Fe and 1.5 hours from Albuquerque (the airport).

Scott Bernard

Ian Robertson, field biology graduate, is currently the habitat restoration manager for Intermountain Aquatics in Driggs, Idaho. The company specializes in wetland construction / restoration, upland habitat construction, and revegetation. After graduating from PSU, Ian worked for the Missouri Department of Natural Resources and the Kansas Department of Wildlife, Parks, and Recreation.

From Delia Lister, Director of Nature Reach



Once again, Nature Reach has had a fabulous year! In May we were quite lucky enough to receive a very generous donation of \$28,000.00 to not only cover the cost of programs for the 2011-2012 school year, but also

to cover the cost of hiring a part time assistant Naturalist for one year. Meagan Duffee, a senior in biology has been hired to fill this role, and has been an incredible help.

In addition, the same donor, who wishes to remain anonymous, provided funding to purchase a vehicle that is completely dedicated to the Nature Reach program. As many of you probably remember the biology department vehicles have never been “top of the line,” and having a vehicle that is suited for our specific needs is a much needed and greatly appreciated addition to Nature Reach.



Word is spreading that Nature Reach has been able to offer free programs to area schools so my program schedule is getting busier and busier, but I am happy to provide much needed natural history/environmental education to many in SEK area and beyond.

This summer we hosted our 3rd annual Nature Reach & Sperry Galligar Audubon Society Day Camp for kids. Our focus was on 3rd grade this year, and once again, they were great group of kids who were eager to learn about anything and everything that had to do with nature. Each day we focused on a different theme from looking at life in the soil to how to identify scat.

Thanks again to all my volunteers from Sperry-Galligar Audubon. We will be sticking with 3rd grade again next summer so be sure to check the Nature Reach website for the official Summer 2012 camp dates.



Thanks to a Faculty Internationalization Grant through PSU, I was also able to travel to Peru for two weeks over the summer. The purpose of the trip was to create a new study abroad option for students wishing to visit the Amazon Rainforest. For 10 days, my travel buddies, Lee and Sue Steanson of Neodesha, KS and I toured some of the most diverse areas of the Peruvian Rainforest.

We went fishing for piranha, visited a new animal sanctuary, toured local villages, spent lots of time on the canopy walkway, were able to record over 100 new birds to our life lists, and much more. I am incredibly excited to return to Peru and cannot wait to share such a wonderful experience with students.



If you know of student who might be interested, or you are interested in this trip yourself, please feel free to contact me. Dr. Dixie Smith will join me in leading the 2012 trip July 16-29. The cost of the trip will be around \$3800 which includes airfare from Kansas, lodging, guide services, and food while in Peru.

Delia Lister (naturereach@pittstate.edu)

SPACE – Our Limiting Factor

The University has completed its Campus Master Plan, but there are still many holes to be filled.

For the Biology Department, our biggest hole is space. As enrollments increase and as demand for research and service activities – beyond pure instruction - have also increased, we were lucky to receive two new positions over the past several years.

But, with new people comes need for office, research, and teaching lab space. The former Department library room was first converted into one faculty office and now it holds two.



Somewhere in the old library are offices for Dr. Zurek and Dr. Harries.

The former Department conference room has been sacrificed for a tiny conference space with a small table (for the inevitable make-up tests in the office) and one new faculty office.



The one-fourth conference room.

In addition, the animal room was lost and converted to research space as was the old “pathogenic” teaching lab. Our newest faculty member still does not have personal research space and is hanging out in one corner of the Sperry Herbarium.



Former animal room, now research lab.

There are limits to how much we can “divide and conquer” and for now we hope that when the Master Plan moves into an operational phase, we will have some room to expand into. We’ve had our eyes on Hartmann Hall, just next door, for space vacated (or to be vacated) by the Physical Plant; but many other departments on campus have been lusting over Hartmann as well.

Time will tell.

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 74 students over \$22,000 in scholarship earnings.

From Donna Lair in the Prep Room

This has been an exciting year for the prep room. We have been blessed with a great group of students, the largest groups in several years. I love to see them develop through the year, as they gain more confidence.

We have received several new pieces of equipment this year that make our work easier to do, and with a larger workload, I don't know how we would have made it without this equipment.

The largest was a new water purification system. We can now supply all of the ultrapure water we need. We also have three autoclaves in the prep room. We seem to keep all three going most of the day. There is even a third large carboy for holding reserve distilled water.



three autoclaves, new water treatment system



new water purification (ultrapure) water system

Media use in labs has also increased greatly this year as has usage of glassware. It is great that the Department is growing and that the prep room now can keep up.

Donna Lair (dlair@pittstate.edu)



OBITUARY



Long-time Biology Secretary Lorine M. Blessant, 83, of Pittsburg, KS died Sunday May 1, 2011 in Pittsburg, KS following a long illness.

Mrs. Blessant was born September 17, 1927 in Ringo, KS and was a lifelong resident of the area. She worked as a Secretary for Carnie Smith, the PSU Athletic Director, and later the Biology Department for over 20 years retiring in 1989. She loved to work with the students and was known as "Mrs. B".

The complete obituary, from which this information was extracted was published in the Pittsburg Morning Sun: <http://bit.ly/sSLu2j>.

Study Abroad in 2012

There are three study abroad opportunities coming up in 2012.

Dr. Mandy Peak will lead a pre-health service trip to Romania July 5-17, 2012. This will be a change of pace from Belize and Peru, giving students a new experience.



scene from 2011 Peru Service Trip

The second trip is “Rainforest Ecology and Culture in Peru” (July 16-29, 2012). Nature Reach Director Delia Lister will lead the trip into the Peruvian rainforest where students will study tropical ecology. The Peruvian Amazon has some of the highest levels of biodiversity of any place on the globe. Students will learn about plants, wildlife, and local culture. Students will eat locally grown foods from the rainforest and will be housed in buildings made from sustainably grown materials. Dr. Dixie Smith will also travel with the group.



Delia Lister with friend in Peruvian Amazon

The third trip is called “Study Abroad/Service Learning in Paraguay” and will run June 1 – June 26 (includes pre-trip meeting and travel). Dr. Jim Triplett will lead the trip. The group will spend 4 weeks in Paraguay, learning the culture and language as they stay with host families, visit sites of interest, study cultural and historical lessons and work with Foundations, NGO’s and governments to address real social, economic, and environmental issues that impact sustainability. The cost is \$3,200. For more information contact Dr. Triplett at jttriplet@pittstate.edu.

Learn more about Study Abroad at Pittsburg State (http://www.pittstate.edu/office/study_abroad/home/).



2011 Pre-Health Student Service Trip to Peru

In May 2011, Mandy Peak and Vicki Webber led the Pitt State pre-health volunteer group to Peru. The fifteen pre-health students were Drue Barton, Sean Brady, Chris Eastman, Jace Erwin, Kristen Espinosa, Laura Glenn, Savannah Gough, Danielle Hall, Kyla Henderson, Katie Nicholson, Austin Osborn, Andrea Petersen, Carly Twarog, Courtney Tyrell, and Josh Wormington.



To prepare for this trip, students attended a required preparation class during the spring semester that covered clinic operations, physical exams, cultural diversity, Peruvian history and basic medical Spanish. We also gathered medical supplies, diagnostic equipment and medications for our clinics, as well as requested items for a local Peruvian orphanage.



We traveled on daylong excursions to set up health clinics in the following villages: Chacan,

Ccolccabamba, Ccacawara and Cataniray. The students assisted American health professionals (medical doctors, physician assistants and nurses) and a Peruvian dentist with routine health and dental exams, including pelvic exams, well child check-ups and dental extractions; we also educated the village children on proper dental hygiene. The team triaged and treated 784 medical patients, 119 dental patients, extracted 109 teeth and filled 3,149 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!

Dr. Mandy Peak

(ed. note: see more images on Facebook <http://on.fb.me/uKsu9S>)

From the Biology Club

This semester started out for Biology Club with a Welcome-Back Picnic for prospective students and current members, as well as members of the Pre-Med Club. We participated in the SWIPE event, a campus-wide packaging event for the Horn of Africa. Chemistry Club sponsored the first "Pie A Professor" event held in the lobby of Heckert-Wells, and Biology Club members helped during this event. This fall semester, we have focused on getting ready for the next Science Day on March 8, 2012. The Biology Club is in charge of all aspects of this event for the spring, so we are trying to get a head start. We are also looking forward to a trip this spring; last year we traveled to Tulsa, Oklahoma for the Bodies Exhibit. It has been a great semester so far, and we are looking forward to the spring!

A Good Year for Biology Alumni

Our Department is so very lucky to have so many excellent students that turn into outstanding alumni. 2011 was a year when some of our alumni were honored for their accomplishments.

In spring 2011, **Dr. Roy Jensen** was the Apple Day Convocation Speaker. In his remarks, Dr. Jensen talked about why it is sometimes "better to be lucky than to be good." Read the entire story with a video clip at <http://bit.ly/sn516v>.

In addition, **Dr. Kathleen Sandness** received the PSU Alumni Association Distinguished Service Award during the Apple Day Convocation. Read the entire story with video clip at <http://bit.ly/rQgXYH>. Dr. Kathleen Sandness was looking for a way to give back to the University when she found something that

benefited not only students, but area physicians and community members, as well. Read the entire story about the Free Clinic at <http://bit.ly/uOpPR2>.

Lastly, **Dr. Gina Pinamonti** and **Brett Potts** were recipients of the 2011 Outstanding Alumni Awards during Homecoming 2011. They spent Oct. 14 speaking with students and getting reacquainted with the campus. Read the entire story with a video clip at <http://bit.ly/spXikP>.

These alumni well represent those Pittstate Biology alumni recognized on previous years and those still not formally recognized, but doing so many good things for their professions, their communities, and the University



Dr. Roy Jensen



Dr. Kathleen Sandness



Dr. Gina Pinamonti



Brett Potts



Yes, the Biology Department is on Facebook (<http://on.fb.me/uKsu9S>). You don't have to join Facebook to read the updates. Check in sometime and see what's happening back here in Pittsburg.

Web Links to News and Stories Involving Biology Faculty, Students, and Alumni

Alumni and Students

Megan Duffee – Falconer

A senior in pre-fisheries and wildlife biology, Megan is an assistant for PSU's Nature Reach program and a certified falconer. Read the story at <http://bit.ly/vvcpLV>. Megan also hit the Joplin Globe with a story on rehabbing a hawk trapped by rubble in the Joplin tornado (<http://bit.ly/owkNON>).

Dr. Roy Jensen - Apple Day Convocation Speaker

In his remarks at PSU's 2011 Apple Day Convocation, Dr. Jensen talked about why it is sometimes "better to be lucky than to be good." Read the entire story with a video clip at <http://bit.ly/sn516v>.

Dr. Gina Pinamonti and Brett Potts - 2011 Outstanding Alumni Awards

This year's Outstanding Alumni Award recipients spent Oct. 14 speaking with students and getting reacquainted with the campus. Read the entire story with a video clip at <http://bit.ly/spXikP>.

Tiffany Biggs Richard - 2012 KS Teacher of the Year

Read how a 1995 PSU graduate who started out premed came to realize she really loved working with students. Read the entire story at <http://bit.ly/tFACLw>.

Dr. Kathleen Sandness – Distinguished Service Award and PSU Free Clinic

Dr. Sandness was one of the two alums honored with its Distinguished Service Award, presented by the PSU Alumni Association, during the 2011 Apple Day Convocation. Read the entire story with video clip at <http://bit.ly/rQgXYH>.

Dr. Kathleen Sandness was looking for a way to give back when she found something that benefited not only

students, but area physicians and community members, as well. Read the entire story at <http://bit.ly/uOpPR2>.

Biology Faculty and Programs

Dr. Peter Chung – Pittsburg Morning Sun Educator Q&A

This interview was a part of the Morning Sun's continuing "Educator Q&A" feature. Read the story at <http://bit.ly/rkkdyU>.

Dr. Virginia Rider – 2011 Outstanding Faculty Award

Dr. Rider was one of the three recipients of the 2011 Outstanding Faculty Award. They each say they were inspired by teachers in their own college careers and they're working hard to do the same for generations of new students. Read the story <http://bit.ly/sPv8sd>.

Dr. Jim Triplett – Sustainability Degree

This is a video story on PSU's new Integrated Studies Degree in Sustainability. Read the story with video at <http://bit.ly/swa7Y4> (and see the guest appearance by some of Dr. Arruda's land snails).

Science Day 2011 – Biology Bowl and More (PSU video)

See the story (video with Biology Club President Holly Hrabek and Dr. Peter Chung) at <http://bit.ly/s78tXo>.

Nature Reach – Iguana Assistant

A Pittsburg Morning Sun "Patrick's People" story on Nature Reach's new "assistant". Read the story at <http://bit.ly/sJOyTu>.

Nature Reach – Program Description (PSU video)

A PSU video on the Nature Reach Program including the 2011 Summer Camp. See the story with video at <http://bit.ly/tslgLG>.

Biology Faculty (Fall 2011)

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

Specialties: limnology, water quality and biological monitoring and assessment, land snails

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, Chairperson. [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 Gordon, Associate Professor of Biology. [Ph.D., University of California at Davis]

Specialties: entomology, ecology

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. [D. Pharmacy, University of Colorado Health Sciences Center]

Specialties: anatomy and physiology

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

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

Stephen L. Timme, Emeritus Professor of Botany and Director, T. M. Sperry Herbarium. [Ph.D.,

Mississippi State University] Specialties: bryology, biosystematics, tropical biology

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 2011)

Kelly Borden, Administrative Specialist

Donna Lair, Storekeeper

Delia Lister, Director, Nature Reach