

BIOLOGY BUZZ e-news



Notes From the Chair

From a biological perspective, spring was slow to arrive in central Ohio this year, much to the dismay of faculty and students hoping to study local animals and plants.

From an academic perspective however, the spring semester moved along at a very rapid pace. The department taught 17 courses, there were 12 students conducting senior research and 6 of these completed Senior Research with Recognition, and we held 56 interviews with senior biology majors as part of our department's assessment of its curriculum. The spring semester also produced announcements of tenure being granted for Dr. Andy McCall and of promotion to full professor being granted for Dr. Geoff Smith.

One particularly exciting feature of the spring semester is the opportunity for some of our senior research students to travel to regional science conferences to present their research. This April a contingent of 9 seniors* traveled with me, Dr. Rebecca Homan, and Dr. Andy McCall to the Butler Undergraduate Research Conference held in Indianapolis. We left Thursday after labs and drove to Indy, stopping for dinner, a great time for students and professors to get to know each other better. On Friday morning and into the afternoon, our students gave oral presentations and poster presentations at the conference, along with 500 students from over 30 Midwestern colleges and universities. Our students represented the biology department very well, explaining their research with clarity and poise. Their excellent performance made me proud of the Denison Biology Department. Additionally, Senior Nicole Coggins and Dr. Chris Weingart attended the Ohio branch conference of the American Society for Microbiology, where Nicole's research presentation earned the N. Paul Hudson Award for Research Excellence!

As we transition into the summer (yes spring finally arrived!!), the biology department will be busy with faculty and students working on research projects in the labs and in the field. We hope you have a productive and enjoyable summer.

**Seniors - Nicole Lee, Evan Pugh, Leeann Kuehn, Annie Harmon, Nina Bartling, Liz Tristano, Robert Stenger, Becca Jost, and Bethany Klett.*

FEATURED SPRING '13 FELLOWS

Bethany Klett

The earliest I remember "doing science" in school was in third grade: we used dead bumble bees attached to toothpicks to pollinate the daisies growing on the windowsill in the classroom. At first the bees seemed a little gross, but then I realized how cool it was to learn about nature and how the living world works. My next big science adventure was my sixth grade science fair project. I wanted to see how age and gender affect short-term memory, so I administered memory tests to 60 men and women, young and old. In high school, I remember dissecting all sorts of animals and going to a local park to test the nutrient levels in the water and soil. The most interesting lab was when we got to mash up strawberries and extract their DNA. All of these experiences sparked my interest in biology and learning more about how living things survive and thrive in their environments.

The outstanding classes, faculty, and research opportunities in the biology department have simultaneously challenged me and increased my passion for biology. Since arriving at Denison, I have learned so much more about biology than I ever imagined possible. I especially enjoy learning about cells and how changes in their DNA and proteins can lead to human diseases. The more I learn about biology, the more I want to share it with others, which I have done by being a departmental tutor and laboratory teaching assistant. I know that I have received excellent biology training at Denison and I look forward to applying these skills and expanding my knowledge as I pursue a career in medicine.



See more updates and links at the end of this Newsletter!



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Spring '13 Fellows:

Bethany Klett '13, Leeann Kuehn '13 & Kelsey Lecerf '13

Fall '12 Fellows:

Roxanne Banker '13, Justina Bartling '13, Annie Harmon '13, Katherine Ireland '13, Robert Stenger '13

Leeann Kuehn

Ever since I could remember, Biology has always been an important part of my life. As a kid, I spent the vast majority of my time playing outside - climbing trees, going on family hikes, helping my mom garden, and honing my macro photography skills on flowers and plants. As I've gotten older, I realized that my love of nature is a defining part of who I am.



Taking Biology classes at Denison, particularly classes centered on ecology and conservation, has opened my eyes to the complex nature of the world around me. While studying abroad in Chile, I quickly became known for my botany-related outbursts. I couldn't believe how different *everything* was, seeing obscure (and totally awesome) things I had learned about in class but never imagined seeing in real life. I was able to walk through a South American temperate rainforest and identify the major flora that we wandered through, explaining why these trees and plants we were seeing were so unique and important to all of my rabidly interested fellow hikers.

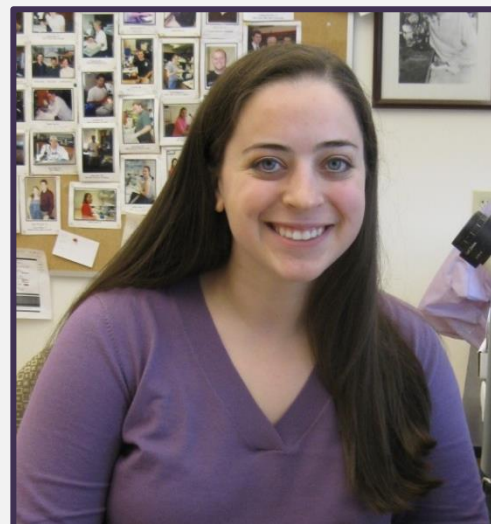
Biology has taken me many places - from South America to internships in hospitals and clinics - and has changed the way I think about the world around me. I hope to continue with what I've learned in my Denison studies in the future, potentially working in for an environmental organization in South America and graduate school for environmental public policy.

Kelsey Lecerf

My love of science and biology began through my involvement in several science fair projects during high school. My basement served as my first research lab, and my parents soon learned to accept the crowded tables filled with my various projects. So when I entered Denison as a freshman, I knew that I wanted to continue learning about the wonders of biology, and I was excited at the prospect of taking so many new and interesting classes.

In addition, I never imagined how many opportunities would be available to me at Denison as a biology major. As a DUBS officer, I am able to share my fascination with biology with my classmates through collaborative events and activities. Being a tutor and a teaching assistant for the department has been an honor and a pleasure because it allows me to help my peers and pass on some of my own knowledge. I have also been fortunate enough to be involved in summer and senior research projects. I never would have guessed that I'd be doing genetics research with *Drosophila* or performing biochemical analyses to search for protein interactions - and these are just a few of the many great opportunities that I have had during my four years at Denison!

The skills and knowledge that I have gained as a biology major will be of great value to me as I continue my education in medical school next year. I will always be grateful to the Biology Department for providing me with a great education and amazing opportunities to grow as a student and as a leader.





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WHAT OUR ALUMS ARE UP TO! SOME COMMENTS GENERATED FROM OUR FALL NEWSLETTER

After my time with the South Oakland Shelter as an AmeriCorps service member, I am now in my first year of medical school at Wayne State University School of Medicine and having a surprisingly good time. While school work and exams have been stressful and time-consuming, I've still had time to do and see plenty of exciting things. From spending time learning the art of medicine in clinics to volunteering at local community support organizations, I've gotten to see a lot more of Detroit while reminding myself that there is something worthwhile at the end of hours in front of a screen.

Something surprising I've discovered while in school is an interest in emergency medicine. Wayne State's training for emergency medicine is fantastic and I'm finding that it is really in line with my personality and lifestyle. Part of the training we're getting is with ultrasound (I get to see what's going on inside my body!), frequently used procedures (physical & neurological exams, suturing, intubation, splinting, etc.), and emergency room shadowing (which, in the city of Detroit, means seeing quite a bit). Of course, I still have interests in surgery, internal medicine, and a few other fields I haven't had first-hand experience in yet.

One thing I am really looking forward to in the spring is a World Health Student Organization medical relief trip to a small village in Peru called Ollantaytambo with about 20 other medical students & physicians. There, we get a hands-on learning experience, even more practice with what we have learned so far, and we get to see village life in Peru!

~ **Chuan-Xing Ho '10**

Thank you for the most interesting Biology News Letters (*Biology Buzz*). We find them most interesting and informative---even though they are not in my field of research. It is great news to see that the Leon C. and Grace Smith Greene endowed funds are still in use!

We both graduated from Denison University in 1950. Dr. Geoff Smith should check out the Iguanas in Sarasota, Florida--we have lots of them! --Grace and I visit Denison about every 5 years --2015 is our next date to visit!--that will be my 90th Birthday.) If our memories are correct, Dr. Smith took us on a tour of the Biology Department in 2010. As a side note, Grace and I were responsible for bringing the Pre-Med.-Society to Denison and we were the first President and Vice President.~ **Dr. and Mrs. Leon C. Greene '50**

Sarah Eichner '10 ~ I graduated from Xavier University in 2012 with a Masters of Science in Nursing (MSN), and am currently working as a RN on a surgical oncology unit at The James Cancer hospital in Columbus. Most recently accepted into The Ohio State University's Doctor of Nursing Practice (DNP) program.

Stephen Murphy '09 has started a PhD program in ecology at Ohio State.

This summer went really well! I got to do a good mix of clinical work and lab work and really liked the mixture. I've been meaning to email you and let you know how much the lab experiences I had at Denison helped. I was shocked at how much more prepared to work in a lab I was in comparison to other medical students! The three other students in my lab were from OSU, U of Michigan, and a student from Ireland. The girl from Michigan didn't even know how to use a pipette and only had one chemistry class and one biology class with any lab work at all in her time at Michigan. Doing statistics and writing lab reports was also a struggle for the other students. I felt completely prepared for everything this summer, so Denison is definitely doing a good job in that respect!!

~**Lindsey Korbel '11**, currently a second-year med student at OSU

As I begin the third year (?!) of my PhD, I have a new found appreciation for what wonderful mentors you were to me.

I had two undergraduates doing independent research projects under me this past summer. Now they are putting together posters for conferences and starting to work on writing their manuscripts. To give them guidance, I've been drawing inspiration from the materials you both provided to me as an undergrad. I am realizing how clearly and effectively you communicated your expectations and how patient and attentive you were in your advising. I am definitely thinking of my undergrad experiences and hoping that I can someday give my students the same sort of experiences you both gave to me!

- **Samantha Rumschlag '10**, Graduate Assistant, Department of Zoology, Miami University



Not sure if this constitutes "news," but I recently finished 2 years of pharmacy residency and am now clinical assistant professor at the University of Illinois at Chicago College of Pharmacy. I work at the affiliated Drug Information Group, where I am involved in medical writing projects and answering drug-related questions from inpatient hospitals across the U.S. I teach pharmacy students how to evaluate clinical trials, and how to apply this information to evidence-based medicine. It's a perfect marriage of my writing skills I gained while at Denison and my love for medicine. It's great work - I hope more Denison graduates pursue clinical pharmacy!

- **Lara Ellinger '05**



Stephanie Tower '12 was recently awarded an Army scholarship and is now a 2nd Lieutenant in the Army Health Corps.

I'm currently working as a postgraduate research assistant at Uppsala University in the lab of Dr. Lena Claesson-Welsh. I'm working on a project characterizing the in vivo expression of a signaling molecule involved in vascular permeability. The project is going quite well, and we will start drafting a paper for publication after Christmas. I was only supposed to be at Uppsala for a year, but I'm now applying to start my master's studies here in molecular medicine so that I can continue with my work.

I really hope that I can come back to Denison at some point to share some of the work I've been doing. Ayana had mentioned that she wanted me to come speak to her classes about my work after I'm finished here, but now that I'm planning on staying I don't know when I'll be back in the states after the winter holidays. I really love it here, and my Denison biology education really prepared me for being in a big university lab setting. Much of my work is self-directed, and it's so rewarding to apply a lot of the topics I learned in my upper level courses in a research setting. I was supposed to go to a meeting in Norway this past week, but the snow storm from hell came through Stockholm that day, so we unfortunately had to do a Skype meeting instead. Next week, this year's Nobel laureates will speak at Uppsala, which is a great opportunity.

So far, it's been an unforgettable experience and I'm Swedified in many ways. I haven't forgotten my biology roots at Denison, and I really hope that I can come back at some point to share my experiences. The world of research is so vast, and I encourage all young scientists to consider studying abroad! ~ Skål, **Kelly Folkers '12**

Vera Staley '12 will be starting med school at University of Colorado.

Sarah Perrine '09 will be finishing medical school in a little over 5 weeks, Match Day was Friday and she was matched into pediatrics at Akron Children's Hospital in Ohio..

Evan Zuzik '09 finished his master's last year and while he is continuing to work at the Cleveland Zoo, he also is contemplating some different career changes. Additionally Evan has been teaching at a community college. In his Earth and Env. Science class he makes his students do assignments that are very similar to the 5 sentence paper summaries he did in Vertebrate Zoology. Evan reports that he thinks being able to understand and concisely explain academic writing is one of the most valuable skills he developed at Denison.

I retired from the practice of child, adolescent, and family psychiatry in July 2011, while my wife Patti and I still enjoy good health, and at a point where our three adult children are all married, working, and have their own children. I enjoyed my work right up to and including the final day, but Patti (Wisconsin, '68) and I wanted to have a different

experience for the third phase of our lives. Although there had been times when living on a sailboat seemed appealing, we chose to move to a village in the Northeast Kingdom of Vermont. We live in the town of Craftsbury, total population of 1,136, divided amongst five different villages. We live in the village of Craftsbury Common, which has no shopping whatsoever, but does have a Common, a picturesque New England church (with a wonderful congregation and pastor), a college, a public library, and one of the best cross-country skiing areas at which we've ever skied. It's also one of the world's best sculling centers in the summer.

Our first project is building an extremely energy-efficient home on thirty acres of forested land we purchased outside the village. We "inherited" our own forester in the process. He's my age, and one of the most well-read people I've ever known. Two winters ago, he re-read all of Thoreau. Last winter, he decided to study Moby Dick so that he might actually understand it - I can relate. Ross is typical of many of the people up here - interesting, intelligent, relatively quiet, but extremely warm, and overflowing with integrity and good values. To the west, we have a view of the Lowell Mountain Range. We are close to Little Hosmer Pond to the south that we might be able to view from our 2nd floor. At the northeast corner of our land is a vernal pool, an entity about which I just learned, but I think Bob Haubrich and Bob Alrutz would approve.

For those into home-building, the one we are building is an "envelope home," also known as a "house within a house." In other words, there are two homes, one within the other, both made of solid wood for energy storage, and the space between for air circulation to heat and cool. The wood is made of southern yellow pine. That particular wood has a resin that is incredibly efficient at storing and releasing heat. Our home faces solar south, and the slope of the roof, where the solar panels are, is calculated with respect to our latitude - approximately 45 degrees North - altitude of 1,229 feet. We will not be "off the grid," but we will be pretty self-sufficient. We hope to spend time volunteering, becoming part of this community, as well as cross-country skiing, canoeing, hiking, camping, and perhaps learning to scull. We hope this will eventually be Grandma and Grandpa Kramer's Summer Camp. Old friends and new are welcome as well!

A Retirement from Child and Adolescent Psychiatry *(click link to see more)*

Doug Kramer, '67, Craftsbury Common, VT

Jane Zelenkov '12 writes, "I'm in Gresham, Oregon, a smaller town just east of Portland, serving as a Jesuit volunteer for a service year and living with 6 other Jesuit volunteers in an intentional community house. Arriving in August was perfect and through September I found the temperate sunny and 70 degrees to be just lovely. Sure enough, November hits and the traditional Pacific Northwest weather settled in: gray, dreary and rainy. Can't say Ohio didn't help me prep a little before the northwest rain, but it only helped a little. But the rain is just something "Portlanders" get used to. I geared up and bike to work every day to The Wallace Medical Concern, a community clinic providing urgent and primary care to people without insurance. My role as a referral coordinator is helping patients navigate the healthcare system to see medical specialists in the area. Most times they are able to see specialists at a very low cost or even free. It's proved to be very hard work in many ways, a transition to a 40-hour

week was one hurdle and the next was coming in to a job without any background to healthcare at all. Turns out, a crash course into healthcare was just what I needed because I've decided to pursue a medical career as a physician assistant or a nurse practitioner. I imagine I'd like to work for a community clinic one day, such as Wallace, because it opens more doors to be able to speak Spanish. I had to brush up on some medical terms and found myself having conversations in Spanish about the human body and its functions that I never really thought I'd have before. Needless to say my biology and Spanish background couldn't have prepared me better for what I jumped into the year after graduating."

Feel free to contact us with more updates throughout the year!

biology@denison.edu

Follow the links to more DU Biology news!!

- [Distinguished Leader Awards](#)

(Read about Tori Couch '13)

- **Departmental Awards:**
[Research](#), [Academic](#), [Service](#), [Margaret Ann Watkin](#)

- [Andy McCall received tenure!](#)

We truly enjoy and appreciate your comments and updates. If you would prefer to not receive the Biology Buzz any longer please send an email to biology@denison.edu

