Volume 2, Issue 1

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Denison University

The Biology Buzz

Where Are Our Biology Majors Now??

Kate Barszczowski '07

Upon finishing her internship with the Indianapolis Zoo, the Little Rock Zoo has hired Kate as a carnivore keeper, beginning in January. Initially, she will swing between their big cat and small carnivore section. Once cheetahs are brought in the next few years, this will be her area.

At the 2008 Botany conference in Vancouver, **Mike Barker '01** received the Margaret Menzel Award from the Genetics Section of the Botanical Society of America, which is given to the outstanding genetics paper presented in the contributed papers sessions of the annual meetings. His talk was titled "Evolutionary genomics of hybridization: detecting ancient hybridization and introgression by the inference of introlgs in plant genomes".

Katie Dean '07 is in first year of medical school at Northwestern.

Michelle Kahlenberg '98: She's completed her MD/PhD at Cleveland Clinic and is moving into a post-doc at the University of Michigan. She and husband, **Mark Skowronski '98** are currently expecting their second child. First child, Adyn, is almost 3.

Michael Duffy '98: "I went on to medical school at Wright State University. I now have my board in Pediatrics, and I am now finishing my 2nd residency in Dermatology."

Laryn Kovalik '08 was accepted into the University of Illinois at Chicago for medical illustration. Lauren chose to defer for a year to volunteer in Phoenix at the refugee resettlement agency.

Currently interning at Sea Life Park, a small interactive marine mammal park on Oahu and living in Waimanalo, **Kacey Centrella '08** shares her experience: this internship is called H.O.T. (Hawaiian Ocean Theatre). "My days normally consist of doing a lot of grunt work (cleaning coolers that were full of fish, scrubbing the animals habitats, recording data on sheets). It is hard work but the more you put into the more you get out of it! I also have 3 days of fish prep. This means that I get up at 5 a.m. to bike to work (since the bus doesn't run that early) to be ready at 6 a.m. to spend 4 hours in a cooler room sorting capelin, herring and squid for all the animals of the park. We keep it lively with some music and a lot of jokes. When all my grunt work is done I do get to help out the trainers with the animals. So far I have given daily physical exams to our dolphins as well as feed them and sea lions. During the exams we just check to make sure nothing is going on with the dolphins, we give them some good rubbing while we

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New Bio Faculty

Caroline Wilson

Visiting Assistant Professor

B.S. in Neuroscience from Allegheny College, 2000

Ph.D. in Neuroscience from U of Arizona, 2006

Teaching Neuro at Denison: Introduction to Neurophysiology, Intro to Neuroscience, Cell and Molecular Biology, Advanced Neuroscience

Research: Caroline came to Denison from the University of Hawaii, Manoa, where she was completing her postdoctoral training with Drs. Dan Hartline and Petra Lenz. While in Hawaii, she studied the development of copepod brains. Copepods are fresh-water or marine crustaceans, and they're important members of the food web due to their small size and high protein content. Despite their tiny size, it turns out that copepods have something in common with vertebrates: at least half of the species of copepods have multi-layered sheaths, or myelin, surrounding their nerve fibers! Yet the myelin seems to form in a completely novel way, unlike what has been observed in vertebrates or even other invertebrates. During her two years as a visiting professor at Denison, Caroline hopes to explore the mechanisms for this novel copepod

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2008-2009 Fall Student Fellows

Meredith Atwood

Entering Denison, I was a Political Science and Environmental Studies major set on becoming an environmental lawyer. But from my first day of Science and the Environment in the ENVS department, I began to realize that I was meant to be outdoors discovering nature. This realization further developed when I studied in Costa Rica the summer after my first year. I could not have been more ecstatic to have classes in the rain forest where I had a notebook in one hand and binoculars in the other. Before I knew it, I was addicted to biology.

I initially began taking biology classes as a supplement to ENVS, but soon the biology classes became central to my education. My growing desire to learn as much as I could about ecology convinced me that I needed to become a major, which which ended up being the easiest decision for me to make. I could no longer imagine sitting in an office when I could be outside getting dirty! I have always loved the outdoors and I finally realized it could be more than a lifetime hobby; it could be my life. A career in biology is one where I will be able to ask questions, spend time outside, and explore our natural world. Nothing could be more exciting to me!

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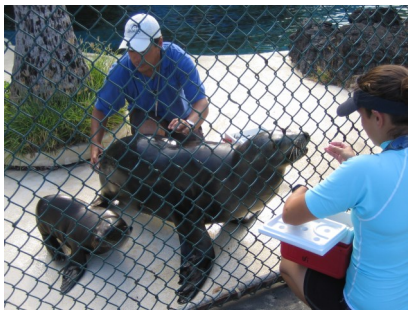
WHERE? *from front cover*

check their dorsal fin, pectoral fins as well as their tail flukes and belly. I love doing this because I really get to interact with the animals in a way I never thought I could. I've also been fortunate/ unfortunate to see some medical procedures on a few of our dolphins. They are doing a lot better,



thank goodness, but seeing how these run is really interesting.

One of our sea lions just had a pup before we came. The mother's name is *Uilani* and we haven't named her pup yet. Hopefully in the next couple weeks we will be able to call her by her name."

Mike Hunter '08 joined the Northwestern University Master of Biotechnology Program (MBP) this fall. This program trains students preparing for careers in the biotechnology and pharmaceutical industries.

Emeritus Professor,

Ken Klatt

"Since I retired in May 2002, I have been involved part time with a research project in Jordan Fantini's lab in the Chemistry Department here at Denison, some of you may have remembered Jordan when his name used to be Bennett. This work is strictly organic chemistry, some thing that I have not done since graduate school, and the work keeps me on my toes.

In December of 2004, my son and his wife became the parents of triplets, and my wife, Barbara and I have been heavily involved in the caring of these three wonderful kids. I hope that all of you are having successful lives -- my best wishes for all of you."

FACULTY NEWSBRIEFS

2007-2008 Department Photo

Tom Schultz

in the October issue of *Animal Behaviour*, Schultz, with alums **Chris Anderson '02** and **Laurel Symes '06** published "The conspicuousness of colour cues in male pond damselflies depends on ambient light and visual system." In September, he gave a seminar on "Reflections on sexual signals in pond damselflies" and a public talk, "Crouching tiger beetles, not so hidden dragonflies: how insects use iridescent colors," at the University of Missouri. Last spring, he presented "Iridescent and UV Wing Signals in a Tropical Helicopter Damselfly" at the interdisciplinary conference "Iridescence: More than Meets the Eye" at Arizona State University.

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Jeff Thompson

"Histone H3 K79 methylation states, regulated by histone H4 acetylation, play distinct roles in response to DNA damage caused by UV radiation in *Saccharomyces cerecisiae*" was the title of the poster presented at the FASEB Summer Research Conference on Yeast Chromosome Structure, Replication and Segregation, Carefree, Arizona, June 2008. It was co-authored with DU students **Natasha Strande '08**, **Margery Evans '07**, **Ariel Lee '08**, **Ashley Albrecht '07** and **Andrew Keller '06**.

Kristina Mead

was recently granted tenure and is the recipient of the 2008 Marine Biology Laboratory (MBL) Grass Foundation Sabbatical Fellowship, which began in August and continues through the end of the year.

The fellowship allows Mead to study variations in *Paleomonetes vulgaris* (grass shrimp) noses, the regeneration of their antennules, and to write a literature review of animal navigation using the extensive resources of the MBL library. The Grass Foundation is a small, not-for-profit, private foundation chartered to support research and education in neuroscience.

The hallmark program of The Grass Foundation is the Grass Fellowship Program at the Marine Biological Laboratory in Woods Hole, Mass. This program provides a first opportunity for neuroscientists to conduct independent research for scientific discovery on their own at the MBL each summer. While sharing the Grass Laboratory, Fellows function as an intellectual and social group within the MBL community.

FELLOWS *from front cover*

I have finally found a passion where my curiosity is expected and I can quench my desire to learn because there is always something new to consider and explore. It is a gift to have found my love for biology and to feel like I am finally where I am meant to be.

Biology helps us understand the system that we are a part of, which is critical in order to protect our planet and all of the organisms living here. I have been fortunate enough to research some of these ecological questions with regards to amphibians through research with Dr. Homan. This experience has assured me that research in conservation and wildlife biology is in my future. She, like many other Biology faculty, challenges me to come up with new questions, push my boundaries, explore, and discover. I am very thankful to her and the entire department for their support both inside and outside of the classroom. I feel lucky to be a part of the major and I know that this is just the beginning of my learning and questioning.

Chris Dibble

Frogs. I love frogs. And turtles. And salamanders, lizards and snakes. And bears and birds and bongos. And octopi, okapi and orangutans. And, well, just about everything else living under the sun. Or water. Or dirt. Even plants have some redeeming characteristics... though I'm still trying to figure out what they are. There has never been a part of me that did not want to work with animals. The amount of complexity in the natural world is astounding, and the fact that we're all built from the same stuff is even more so. I want to devote my life to understanding how this, we, everything came to be; of all the "C" descriptions, curious is my favorite.

That sense of questioning, that quest for knowledge really began at Denison. It started when, sitting in Dr. Smith's laboratory freshman year, I asked myself "Why on earth am I sifting through this lizard's stomach looking for partially digested insects?" At first I didn't get it, but after seven hundred or so repetitions, I began to formulate an answer; it beats working at Sears. The real difference between this department and others is the ability to interact with faculty and be treated as legitimate, capable individuals. You're not just a string of D-numbers begging for a better grade. Take advantage of that; do research, ask faculty about their work (most people love to talk about it!) Chances are, if you have a question about anything living, someone in the department can help you find the answer.

Cecilia Murch

I caught the "horse fever" when I was

seven. I was the little girl who galloped around the backyard and preferred my riding boots over any sciences. Although I eventually grew out of the galloping-around-the-yard phase, I never got tired of the questions involved in investigating the behavior and functioning of animals. Over time, I realized that my practical experience with animals could gain even more depth with an understanding of scientific mechanisms at the molecular, organismal, and ecological level.

My biology education at Denison has greatly enhanced my ability to conceptualize and apply the workings of nature. Research experiences have afforded me the opportunity to explore molecular science and to strengthen my critical thinking skills. Courses taken have broadened my interests and exposed me to the many aspects of science that are inextricably connected to the well-being of animals, people, and the environment that we share. From mutating sea urchin DNA to identifying plant microbes, I have found my experiences in biological inquiry to be challenging and rewarding, and certainly fascinating! I am excited to apply the knowledge I have acquired at Denison to the veterinary profession, and to infuse my work with the passion I hold for research and integrated fields of biology.

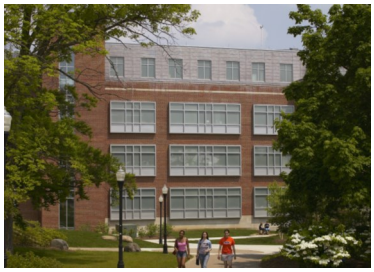
New Bio Faculty *from front cover*

myelin development and study how it varies from other kinds of myelin. Since there are no oceans near Granville, this summer she plans to continue this work in Maine with the assistance of some Denison students.

Interested in sensory physiology, especially how your nose works, she uses moths as they are important model organisms because they have a terrific sense of smell, their brains are accessible, and olfactory processing pathways are highly conserved.

In her free time, Caroline enjoys being outside especially while hiking, playing Frisbee golf, or mountain/road biking. She also is trying to become a knitter, with little success. She is very excited to be a part of the Denison community, and is looking forward to the next few years here.

We're on the Web!
http://**www.denison.edu/academics/departments/biology/**



Faculty Searches: *Women's Studies and Biology* have teamed together! Teaching responsibilities for this tenure-track position will include introductory courses in both areas—either "Introduction to the Science of Biology" or "Non-Majors Biology" and "Issues in Feminism"— as well as upper-level courses in both areas. Dr. Kristina Mead will serve as chair for the Department of Women's Studies following her sabbatical.

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Two 2-yr Temporary Faculty Positions are also active postings. Find out more on these positions by going to our website!

Talbot Talk

The department would like to send out thanks to those alumni and friends who have given gifts to the department.

Most recently, **John, William and Sue Boggs**, **Judith Schick Dilworth '71**, **Dr. Holly Menninger '00** & **Peter Oakley '80**.

Thank you all for your contributions and continued support in response to the news of the passing of **Emeritus Professor, Bob Haubrich**.

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DUBR — Denison University Biological Reserve News

"West Winds Blow!!" Earlier in the fall, the entire state of Ohio was hit with 50-70 mile per hour winds, the remnant of Hurricane Ike. The Denison Campus was not overlooked. The 350-acre BioReserve had hundreds of trees downed over trails. Bio Reserve Manager, **Whitney Stocker**, has been single-handedly clearing away the fallen trees. As of this writing, two thirds have been cleared.

In other DUBR news, the old red barn has been painted and there is a newly paved driveway and parking lot. The old grey barn was removed with help from the Amish community, much of the wood to be recycled.

Last summer an Invasive Plant Removal Project was initiated. Each summer a student is now hired to remove invasive plants from the reserve. Large numbers of multifloral rose, honeysuckle and garlic mustard will be removed every summer.

A deer population survey was done last spring and the results showed that the BioReserve is not adding to the increased deer numbers in the Village of Granville, contrary to popular belief.

New dog walking rules were put into effect; dogs must now be leashed at all times while on the reserve. This will lessen the impact that dogs have on wildlife and research and be safer for BioReserve users and their dogs.

The boardwalk on Woodcock Trail was replaced with recycled plastic lumber. Not only is the new boardwalk environmentally friendly, it will last much longer than wood.

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