



LORAS COLLEGE BIOLOGY NEWSLETTER

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Homecoming Chili Feed 2011

The Biology and Chemistry Programs will be holding their annual Homecoming Chili Feed on Saturday, Sept. 24 from 11 am to 1 pm before the football game on the lawn at the south end of the Science Building.

Many kinds of chili made by the faculty and staff will be available for alumni and their families to enjoy. We will have drinks, chips, and other food available along with all eating utensils.

Stop by and say hi!



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Welcome to Dr. Dan Wenny!

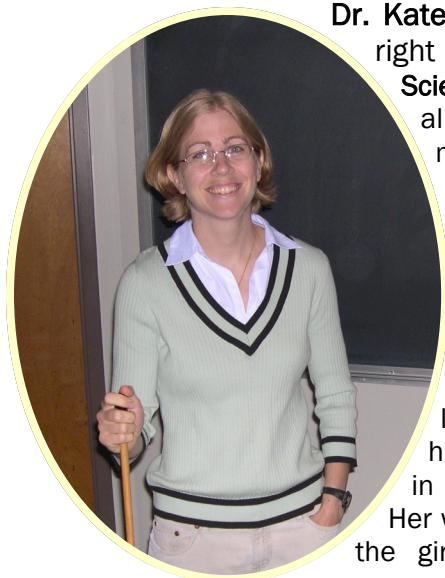
Dan joined us as adjunct instructor in Biology in 2009. Dr. Wenny has been teaching Bio 115 and 116 labs as well as **Experimental Design** labs. He taught Bio 259, **Issues in Environmental Biology** in Spring 2011 when Dr. Sinha was away on maternity leave. Dan is an active ornithology researcher and has a USGS bird banding permit, too.

Dr. Wenny:

- completed his B.A. in Biology from Earlham College, Richmond, IN in 1986. His undergraduate course work included programs to Kenya and Costa Rica.
- earned his M.A. in Biology from the University of Missouri, Columbia, MO in 1989. His thesis was entitled *Population density and area requirements of three forest interior warblers.*
- earned his Ph.D. in Zoology from the University of Florida in Gainesville in 1998. Dan's doctoral thesis was entitled *Seed dispersal and post-dispersal seed fate of four tree species in a neotropical cloud forest.*

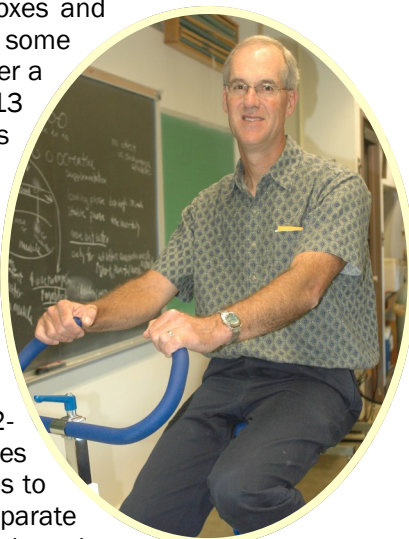


Faculty updates



Dr. Kate Cooper is beginning her fourth year here at Loras. She jumped right into the J-term experience, and taught an '**Intensive Research in the Sciences**' class over J-term 2011 – 12 students were doing research full-time all month, the place was hopping! Kate is enjoying using amazing new microscopy equipment for cool videos and pictures of cells and zebrafish embryos! Now... if we just had a building to put it in that didn't 'rain' inside sometimes! She successfully applied for and received a McElroy grant with a student this summer to investigate the role of a PCH family protein in zebrafish cell migration! An avid runner, Kate did lots of running the past year – all of it barefoot or almost barefoot (five finger shoes). Running the way we evolved to run = wonderful! She's also been inducted into the MOI faculty group this fall and is enjoying 'mothering' lots of little first-year Duhawks! Speaking of mothering ... Kate and her husband are expecting their third child in early December! The bets are on in her classes as to gender and exact arrival date/time ... Her whole family is looking forward to another year of Loras sporting events – the girls have their Duhawk shirts and yellow 'poms' all ready to go!

Dr. Tom Davis keeps busy teaching physiology for majors (good ol' **Vert Phys**) and human anatomy with cadavers. His classes are full and new student lab ideas in physiology lab keep him hopping! He may have done his last turtle egg research. The summer of 2011 was crazy weather around here resulting in far fewer eggs being laid than normal and not very good survival after he had them in sand in the lab. He did put together data from the previous 3 summers and submitted it for publication with lots of statistical help from Dr. Shealer. However, it was not accepted so he is moving on to more bird and egg related field work research. Tom built 14 bluebird nest boxes this past winter and put them up on a roadside for several miles on my route into school. He monitored them every week and after two nestings by most pairs in some of the houses, he had raised 52 baby bluebirds! Tom is hoping for some students to get involved in monitoring these nest boxes and doing some nest temperature and parent banding. He also hopes to do some manipulative nest and egg work with house sparrows next summer who took over a series of nest boxes near Bergfeld Pond this summer. Tom will be taking 13 students back to Costa Rica again for a 2 week J term course. He took a class there for the first time in Jan 2009. This time in addition to the cloud forest at Monte Verde, the rain forest at La Selva and the dry tropical forest at Palo Verde, the group will stay for a full day at Arenal volcano to see its effects on the plants and animals on a day to day basis. Dr. Shealer and Tom took 10 students to South Texas in January 2010 on a Bird Conservation course to many of the famous avian reserves and refuges they have there. They had a great trip, learned a lot about the environmental issues of south Texas and saw over 190 species of birds too! We hope to do another J term bird trip to southern California eventually. Tom will be applying for sabbatical for the 2012-13 academic year...finally! He hopes to rewrite and rethink his two majors courses and do more research/background study on bluebird nesting biology. He hopes to spend a month or two at Iowa State working with several colleagues on two separate projects – one on measurement of soil microclimate around turtle eggs nests and another one working in an exercise physiology lab seeing what the latest measurement techniques are for human testing. Maybe he can be a guinea pig for a few tests! Otherwise, Tom and his wife are an empty nest for the first time and enjoying it immensely! The same ½ gallon of milk sits there because he is the only one using it! Yesss! Their son Drew is in his 4th year at Iowa State in Environmental Science and he's still on the football team (#70). Their youngest daughter Lisa is in her first month of college at ISU too in Graphic Design. Their middle daughter Laura is at St. Ambrose in pre physical therapy and doing well. Tom and his wife Barb offered a Sierra Club lode trip in Red Lodge, MT this past summer. Hiked four different canyons, went to a different restaurant each night and really enjoyed the cool mountain air for a week. Tom continues to lead llama backpack trips for the Sierra Club into the Wind River Range of western Wyoming each summer too!



Faculty updates, *continued*:

Dr. Fred Schnee has been kept busy with writing for publication. This past year he worked with two Loras students, Cara Marie Voelliger and Kelsey Yerkes and completed "The Effects of Cadmium Exposure on the Mating Behavior of *Drosophila melanogaster*", published in Iowa Academy of Science. Waverly, Iowa.

He also collaborated with colleague Dr. Janine Idziak in completing "Cluster Courses as a Model for Teaching Bioethics in Science." This article was published in Society for Ethics Across the Curriculum (12th Annual International Meeting). Union College, Schenectady, NY.

Proof that Fred does occasionally leave campus, he and his wife travelled to Jamaica this summer for a relative's wedding!



Dr. Dave Shealer keeps chasing black terns in Wisconsin but is finding fewer and fewer of them with each passing year. For the past three years, he has coordinated a statewide survey program for the Wisconsin DNR, the results of which seem to indicate a drastic 70% decline in the population over the past 30 years! Intensive research he and his students have conducted over the past 13 summers have provided insights into the causes of the decline and will serve as an important basis for developing recovery efforts. Dave and two undergraduate students were invited to present papers at an international Black Tern symposium last March. More recently, he has decided to surround the Loras prairie with mist nets in an effort to document the numbers and species of songbirds that use this little patch of weeds during the southward migration. He continues to teach Bio 116, **Experimental Design**, and an advanced general education course, **Conservation Biology**. As his four kids continue to advance through adolescence toward their teenage years, his hair is becoming increasingly gray. But, as we learn in Biostats, correlation does not necessarily imply causation!

Dr. Aditi Sinha's research focuses on invasive plants. She has been examining the effects of invasive plants such as garlic mustard on biodiversity of native flora in response to various management approaches at the Mines of Spain. Two students have been involved in helping her with this project which is in its second year of data collection. In addition, they are examining density dependent effects of garlic mustard on fungal communities and its allelopathic effects on economically important morels. Aditi and one of her students received a McElroy grant to support their research on morels this summer. In the next year, Dr. Sinha will be incorporating GIS in her research and developing a course on *Applications of GIS*. During J-term 2011 Aditi offered the course **Plants and Human Health** (Bio 235). Aditi and her husband welcomed a daughter, Preesha, in February who is now 7 months. Sitanshu, their two-and-a-half-year-old son is an avid gardener and a naturalist in the making! This past summer they enjoyed visiting family in New Orleans and Ohio.



Loras Biology graduates still getting in!

We continue to have high placement in various health science and graduate programs. Since 2009, we have placed 3 graduates into Dental school, 2 into Optometry, 3 into Physician Assistant training, 3 into Chiropractic, 5 into Physical Therapy, 1 into Podiatry, 2 into Pharmacy, 4 into Veterinary school and 3 into Medical school. Recently we have had more people be accepted into Ph.D. and Masters research graduate school programs as well. Many students are taking advantage of NSF - Research Experiences for Undergraduates (REU) at the University of Iowa and Marquette University.

Program needs

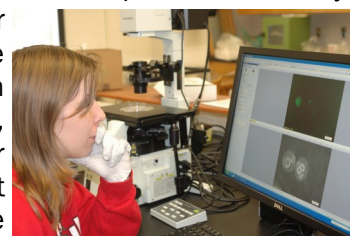
We encourage continued support from our Biology Alumni! Since budgets are tight here, we specifically urge you to label your gift to a specific project or piece of equipment for the Biology Program. If you are considering future donations, it is suggested that you specify that their use is restricted for one of the purposes listed below, or that you contact us about other possibilities. If you do not restrict their use and indicate that they are to be used by the Biology program in general, the Biology program is not allowed to choose how they will be used.

We currently are in need of few pieces of vital equipment that are used continuously by students and faculty in research and in teaching:

- a new autoclave
- a new PCR thermocycler
- some funding to pay for GIS software licenses

New equipment

Two equipment grants, one from the Roy J. Carver Charitable Trust and the other from the US Dept. of Education, were funded during 2010-2011. Biology received GIS hardware and software along with a workstation and laser printer to support this state-of-the-art equipment. Dr. Sinha will be developing and offering a new GIS Techniques course within the next year. Two 5ft by 5 ft by 5 ft **environmental chambers** were purchased also. They have the ability to control light, humidity, temperature and other factors and will be especially useful in comparative experiments on plant growth, egg incubation, and other student/faculty research projects. A new exercise bike ergometer sits in the physiology lab and has been useful in many self designed lab experiments already. Fifteen new Eppendorf pipettors are now available for use in the DNA lab. We also purchased 24 new Olympus dissecting scopes for the Intro Biology labs as well as genetics and plant biology courses. To further aid in lab instruction an instructor's dissecting scope was purchased that has a camera, video attachment and a monitor so that the whole class can see a specimen under observation. Dr. Cooper has a new **inverted fluorescent microscope** in her lab that is being used to study cell migration during development in zebrafish embryos. We also added a nice, quiet, non-leaking, reliable, crushed ice machine too!



Campus Updates

A renovated and added-to Science Building continues to be on the top of the list for the next major construction project on campus. An architect presented drawings of a possible science building addition and renovation to the science faculty in March 2011. This was to give President Collins some pictures to show possible donors. The money to build this addition has yet to be raised. A newly renovated student cafeteria was unveiled in the Campus Center last weekend. A much more open, airy, comfortable place to dine was designed and new paint and glass make it look quite attractive. Rumors are that the Cox Street area on the west side of the Athletic and Wellness Center will soon be upgraded into a pedestrian mall-like area with new paving, benches, trees and gathering spaces. More on that to come.

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Also, some of you may have been involved in helping Dr. Davis plant the Science Hall prairie 7-8 years ago out near the old seismograph station north east of the science Hall. The plants are doing quite well lately with several species of *Sylphium* reaching almost 9 feet tall. The species diversity is quite high too with over 27 species counted on a recent survey. Dr. Sinha and her plant biology class have been sampling plant diversity in this prairie every fall. We were able to burn the whole area in spring of 2010 which helped spark even more luxuriant growth. Dr. Livingston planted another section of prairie two years ago and that patch is flourishing too.



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Last fall, Dr. Shealer and his students set up a few mist nets in the prairie and were surprised by the number and diversity of birds that were using this little 50 x 90 m patch of “weeds” during the fall migration. Surprise species included winter wren, northern waterthrush, swamp sparrow, and ruby-crowned kinglet. By far, the most abundant avian occupant of the prairie is the American goldfinch; Shealer and his crew have netted and banded over 90 of them so far this year. Studies such as this serve to highlight the importance of prairie habitat restoration, no matter how small the scale.



Alumni feedback to Biology program review

We encourage feedback and input from our alumni. We are in the process of developing a Biology Alumni Board of Visitors that would meet every other year with students and faculty in biology to review the curriculum, equipment and needs of the program offered in the hope that some outside influences would help keep the program fresh and addressing the needs of future students. If you have any interest in being a member of this Board please contact Dr. Davis. Always feel free to contact any one of us about questions or suggestions or input. Our telephone numbers and email addresses are listed on the front page of this newsletter.

Professors emeriti updates

Drs. Cawley, Kapler and Bamrick still pop into the Science hall every once in a while to say hello!

- **Dr. Cawley** remains the most active recently. He published a CD titled "Know the River" which uses GIS software and aerial photography to describe how and why several channels in the Mississippi River have changed over the last 150 years. He has also written a proposal that will start a research award for one undergraduate student who does a research project in the Tri-State area. He continues to wrestle with computer applications and still can't figure out why everyone should use a MAC not a PC!
- **Dr. Kapler** stays busy trying to avoid the urban sprawl that has surrounded his Asbury home by spending lots of time outdoors at his forest retreat south of Dubuque. He relays stories of big buck deer, lots of turkeys and selected harvest of some of his prized hardwood trees there.
- **Dr. Bamrick** is doing well. He and his wife Eunice travel back and forth to see grandchildren in Minnesota and Chicago. They also took a trip to Europe recently.

Thank you to all the alumni who have donated some money to Loras or to the Biology Program specifically. We look forward to using your money to improve our college experience for our students. Many of them have been quite successful. Take a minute to go to our Alumni News section of our webpage and see what many of them have been up to. We get constant feedback each year from our graduated students about how they have been well prepared, many times better prepared than other students in their classes from similar sized and larger schools.

Always stop in and say hi if you are in Dubuque!