

# BIO-FEEDBACK

## DEPARTMENT OF BIOLOGY

June 2006 Newsletter • Volume 6



### FROM THE CHAIR

**Karen Klyczek**

Greetings! I hope you enjoy reading about the activities that our faculty and students have been engaged in this year. UW-River Falls, particularly new Chancellor Don Betz, is interested in enhancing and expanding international opportunities for students, and the Biology Department has been very involved in these efforts. As detailed in this newsletter, Biology faculty traveled to China and Bolivia to establish academic connections, and students in Biology 100 collaborated with students at the University of Zimbabwe as part of the Case It! project. The department's undergraduate research program also continues to thrive. Biology students presented their research at the National Conference for Undergraduate Research in Asheville, NC, the UW-System Undergraduate Research Symposium at UW-Stout, and Posters in the Rotunda in Madison. One

student was selected by the Council on Undergraduate Research to present her poster at the capitol in Washington, DC; her experiences are described inside.

A big change in the department is that Clarke Garry has announced his retirement effective May 31, 2006, after 30 years of teaching, research, and service. Many of you know Dr. Garry as the pre-medical advisor and instructor for Zoology and Human Physiology. But his research interests have always focused on studying insects in their natural environments, from the Kinnickinnic River to the Arctic Circle. Many students have gained valuable experience working alongside Dr. Garry. To honor his retirement, the Biology Department has established the Clarke Garry scholarship. One scholarship will be award each year to a biology major who has expressed an interest in a career in field biology. Many of you may want to contribute to this scholarship fund, in recognition of the impact Dr. Garry's teaching career had on your lives; see inside for details. We wish him well as he heads north with his sled dogs anticipating further outdoor adventures.

## CLARKE GARRY RETIRES

**By Clarke Garry**

I can still remember, as if it were yesterday, sitting in a musty, run-down lecture hall as a first semester freshman listening to Dr. Farmer, my general zoology professor, extol the virtues of a life of parasitism. And there was Dr. Wingo, who would later become my Master's advisor, waxing eloquently on creatures that had the perfect number of legs (six, by the way) in my sophomore entomology class. To me, these educators were role models of the highest degree and I wanted to follow in their footsteps.

Fast forward to 1976 where fond memories remain of one very green Ph.D. interviewing for a position in the Department of Biology at UW-RF. Luck was to come my way and the job was mine. From one of the



*Dr. Garry mushing out of Scott Ballantyne's cabin, Middle McKenzie Lake area. Photo by S. Ballantyne*

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## GARRY RETIRES continued

most dedicated educators I have ever known, Dr. John Bjerke, I received advice on how to write my first syllabus and prepare for what would be a successful, albeit challenging, first semester of teaching. From all those varied personalities I came to work alongside, to the present biology faculty with many of the same shared goals, this would be a trip to remember.

As a child of Midwestern descent, I remain predictably humble regarding my teaching abilities. There is something to be said for doing a task repeatedly and desperately wanting to do it better each time. There is always great hope that one has been successful reaching undergraduate students at the appropriate level in a challenging and organized way. For this effort, I was awarded the College of Arts and Sciences Outstanding Faculty Member of the Year first in 1993 and then again in 2004.

There is no question that my enthusiasm for teaching was consistently supported by my own exploration and experiences as a learner in a research context. I was fortunate to interact with Drs. Don Schwert and Allan Ashworth at North Dakota State University for over 10 years. With these colleagues, I studied Midwestern Ice Age fossil sites and made paleoenvironmental interpretations based on insect fragments. I traveled with Don and Allan across the boreal forest and subarctic of Canada and Alaska in search of paleoenvironmentally-significant modern beetles. What could be more fun than camping in snow north of the Arctic Circle in Alaska during the first week of July or searching on all fours for ground beetles in a cold rain on the tundra at Churchill, Manitoba while looking over one's shoulder for that stray polar bear? Much of this work was supported by Don and Allan's funding, but I was to be successful in obtaining my own research grant from the National Geographic Society, Research Division, for survey trips to Hudson Bay in 1988 and 1989. Many readers familiar with my affinity for northern landscapes can understand how these studies fit in well with my personal interests.

My most recent research endeavor and definitely in the highlight category is an exploration of insect and crustacean life of the Kinnickinnic River which I carried out over the past ten years. The Kinni is a model system for

demonstrating the value of good management and progressive regulations in an area where the human population is growing at a very high rate. When I started, few records existed on the invertebrate life in this river. What began as an entomology class project eventually grew into my own million-piece puzzle. The most recent phase of this project occupied just under 400 in-stream hours and resulted in examination of 25,990 individual specimens. The work has to date established a database which includes: 1) a comprehensive summary of macroinvertebrate species present in the river, 2) a seasonal presence-absence record of aquatic species at 17 sites along the 23-mile length of the river, 3) justification for distinguishing an "upper" and "lower" Kinni, but in a location that is different from local tradition and, 4) discovery of the non-native and potentially harmful rusty crayfish.

Kinnickinnic research lead to writing about technical issues for an educated public reader, an effort not a lot different from undergraduate teaching. For several years I've contributed a regular entomology column to *Midwest Fly Fishing* magazine and hope to continue that into the future. During this last year, I received the benefits of the Kettelkamp-Lieneman Professorship and this has supported digital photographic documentation of many species determined in the Kinni faunal analysis. A visit to the sled dog kennel of Drs. Anne and Todd Capistrant in a recent year lead me to acquisition of my own dog (working pet?) team and the attraction of spending more time with these incredible animals. So I am hopeful that my future holds much in the way of writing, insect photography, and sled dogs.

Finally, I realize that readers have memories of the teachers, courses, and classmates they had while in Biology at UW-RF. I, too, will carry away many recollections of our department from the past 30 years. I think I can honestly say that it would be difficult to assemble a more vibrant collection of dedicated individuals into a department. I thank each and every one of them for their consideration, friendship, and humor. I thank, too, my constant supporters, my wife Sue and my daughter Dana, both of whom excused me all too often from family time to pursue my interests and goals.

## Announcing the Clarke Garry Scholarship

In honor of Dr. Clarke Garry's 30-year career in the UW-RF Biology Department.  
To be awarded each year to a biology major pursuing a career in field biology.

To contribute to this scholarship fund, send a check payable to the UW-RF Foundation to:  
the UW-RF Office of University Advancement, 310 South Hall, 410 South Third St., River Falls, WI 54022  
Include "Clarke Garry scholarship" in the memo line.



## Case It! Update

by **Mark Bergland**

Case It! is a National Science Foundation-sponsored project to promote collaborative case-based learning in biology education worldwide, using molecular biology computer simulations and Internet conferencing. Biology staff currently involved with the project includes Mark Bergland and Karen Klyczek. Mary Lundeborg of the College of Education, now chair of the Teacher Education department at Michigan State University, is also involved with the project.

Our current NSF grant has enabled us to expand the project to cases based on infectious disease, including HIV, SARS, West Nile, human and bird influenza, and Ebola. Last spring our students collaborated with students at the University of Zimbabwe as they analyzed and discussed cases based on HIV. Despite some logistical difficulties, students in Wisconsin and Zimbabwe were able to better understand problems faced by people half a world away. Here are some quotes from the African students:

*“Case It gave me an opportunity to simulate HIV tests and play the role of a medical practitioner and counselor by giving advice to people affected by HIV. It was also interesting to network with international students via conferencing. Indeed, the world is a global village.”* -- Edlyn Munyaradzi

*“Case It is a very useful project for all schools if adopted in Zimbabwe. It will help many in understanding HIV and AIDS in general. ... To me it was an eye opener. Since Zimbabwe is hard hit by HIV it is important to have this project ... since it affects the students' lives at large. The videos shown are touching. These can help students feel it.”* -- Fenton Ruparanganda



*Students view posters and discuss the cases using an integrated conferencing system, accessed via the Case It Launch Pad.*



*Future UAC-CP Science Teachers in a laboratory class about *C. elegans* genetics discussing how much fun worm biology is to learn.*

## Teaching *C. elegans* Labs in Bolivia

by **E. Katherine Miller**

During Spring Break 2006, Dr. Teri Crotti (Teacher Education, COEPS), Mrs. Pat Hanson (SCTA, CAS), and I visited the Unidad Academica Campensina – Carmen Pampa (UAC-CP). The mission of our trip was to investigate the possibility of establishing international programs with this University northeast of La Paz, Bolivia. While we were there, Dr. Crotti and myself had the opportunity to teach some of the students and Mrs. Hanson gave a power point presentation on “How to Give Effective Presentations” to UAC-CP’s faculty and staff.

I taught two laboratory classes using *C. elegans* as a model system, using supplies and worm cultures assembled by UW-RF laboratory manager Jodie Deshler. The UAC-CP students were enthusiastic and eager to learn about *C. elegans* genetics and to get direct hands-on experience in the lab with a living organism. It was an amazing experience to teach these students who were so positive and eager to learn.

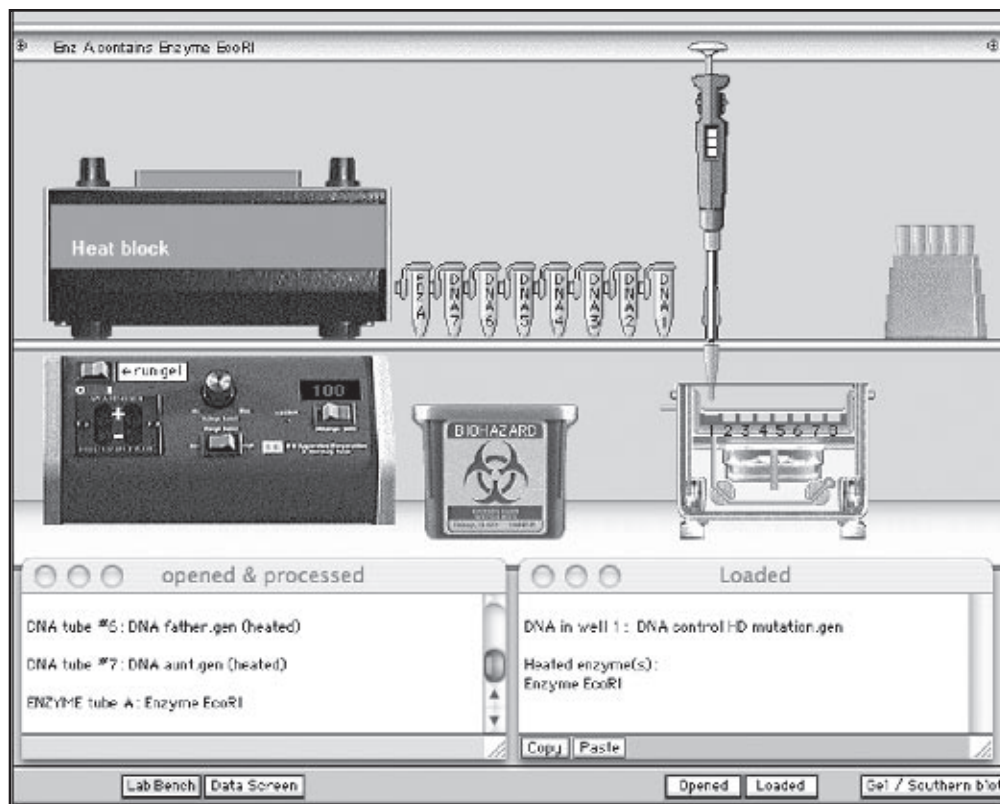
Our trip was a big success, on April 19, 2006 Sister Damen Nolan, the president of UACP-CP signed a Memorandum Of Understanding (MOU) with Chancellor Don Betz. This MOU formalized the relationship between UW-RF and UAC-CP for future academic and cultural exchanges. In the future, Biology students can look forward to international experiences and internships in Bolivia at UAC-CP.





## CASE IT! *continued*

This spring our students compared genetic and infectious diseases, to see which type of case is most interesting and informative. Next year we will submit another grant proposal to NSF to extend the project to bioinformatics, an exciting area of current research in biology. Stay tuned for another update! For more information go to: <http://caseit.uwrf.edu>



*The Lab Bench can be used to set up and run a DNA gel.*

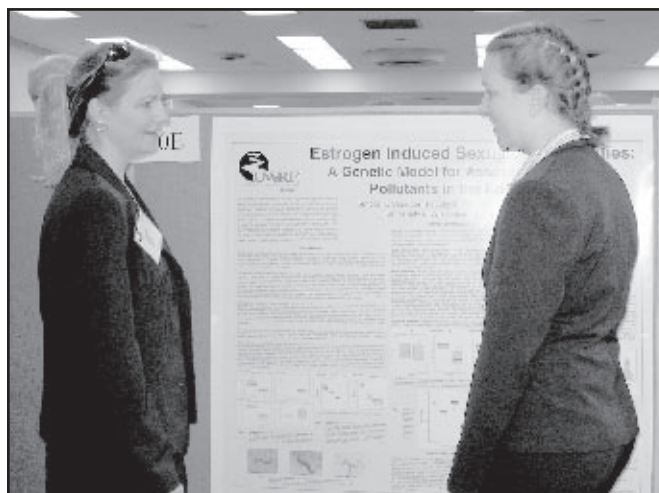
## 2006 Posters on the Hill, Washington D.C. (April 24-26, 2006)

by **Jodie Deshler, Lab Manager**

Posters on the Hill is an annual event sponsored by the Council on Undergraduate Research (CUR). This event highlights 60 undergraduate students from across the United States conducting research at their respective institutions. CUR's mission is to support and promote high-quality undergraduate student-faculty collaborative research and scholarship at primarily undergraduate colleges and universities like UW-River Falls. These students are given a chance to present their work to a national audience including representatives from major companies, like Dupont Chemical, officers from the National Science Foundation (NSF), American Chemical Society (ACS) and National Institutes of Health (NIH), as well as U. S. Senators and U. S. Representatives. The session coincided with the annual presentation of the ACS Public Service Awards for those who made outstanding contributions to

the development of public policy in support of chemistry and the sciences. The students were also required to make appointments with the offices of their State's Representatives and Senators.

Kendra Scudder, a senior biology major, was the only Wisconsin student chosen to present at the conference. Dr. E. Katherine Miller and I accompanied her as her men-



*Kendra in action presenting her Poster entitled "Estrogen Induced Sexual Abnormalities: A Genetic Model for Assessing Estrogenic Pollutants in the Environment."*



tors. Our first adventure in DC was a walk around the National Mall followed by a meeting with a staff member at Rep. Tammy Baldwin's Office. That afternoon, CUR had organized a tour of the National Institutes of Health (NIH). Dr. Miller's Ph.D. mentor, Marcelle Morrison-Bogorad, is now at the National Institute on Aging (NIA). Marcelle arranged a meeting with the Director, Dr. Richard Hodes. Dr. Hodes and Dr. Morrison-Bogorad explained how funding works at the NIH and provided valuable talking points for our future meetings with Congress people.

We toured the Capitol building and the House Gallery led by an intern from Tammy Baldwin's office. We were able to see the Old Supreme Court Room, The Rotunda, National Statuary Hall, and the House Gallery. Our tour was followed by a very productive meeting with a staffer from Senator Russ Feingold's office.

The poster session and ACS awards reception were the highlight of our trip. Representative Ron Kind was



*Jodie, Kendra, Dr. Hoades, Dr. Morrison-Bogorad and Dr. Miller at the National Institute of Aging.*

presented with an award. In his speech, he recognized Kendra and Dr. Miller and our work. He was able to speak with us about what is currently being decided in the House of Representatives.

The last day of our trip was a series of meetings beginning with breakfast at Senator Herb Kohl's office, a brief meeting with Senator Feingold, and finally a meeting with Representative Ron Kind. At these meetings, Kendra made an eloquent argument in support of undergraduate science education and research. Representative Kind thought she should testify in front of the House Appropriations Committee. We aren't sure if he was serious or not!

We ended our trip with a walk through the National Gallery of Art. A Cezanne exhibit was featured as well as the phenomenal collection of artwork housed there. The entire trip was a fabulous experience for all of us. Kendra, Dr. Miller and I made valuable professional contacts as well as personal connections with our State's Members of Congress. We did exactly what we had set out to accomplish and had fun in the process.



*Wisconsin Representative Ron Kind, Kendra Scudder, Dr. Miller, & Jodie Deshler after the American Chemical Society presentation.*



*Dr. Miller, Wisconsin Senator Russ Feingold, Kendra and Jodie after a meeting with the Senator in his office.*



*Jodie, Kendra, Senator Herb Kohl and Dr. Miller after a meeting with Senator Kohl in his office.*





## Identifying Student Opportunities in China

by **Brad Mogen**

In August, 2005, I was fortunate to participate in a two-week visit to the Tibetan region of China with an objective to identify internship and research opportunities for UW-River Falls students. I, along with four other faculty members were hosted by Wong How Man, a UW-RF alumnus, National Geographic Explorer, and President/Founder of CERS, the China Exploration & Research Society ([www.cers.org.hk/](http://www.cers.org.hk/)). How Man became internationally known for his efforts in exploring and documenting the source of the famous Yangtze River. In addition to his wonderful photographs that have been published in several journals, including National Geographic, his explorer group has produced several commercial documentaries that have been aired on the National Geographic and Discovery Channels. Most recently, How Man was featured on the front page of the March 10, 2006 edition of the Wall Street Journal, where they focused on his efforts to conserve



*The recently completed CERS Zhongdian Center sits nestled at the end of a beautiful valley.*

the gene pool of native Tibetan Mastiffs—large, loud, blocky dogs with huge heads and pugnacious personalities.

After a brief stopover in Beijing, we flew to Kunming and then onto Zhongdian (which has now been officially renamed Shangri-La), which is in China's Yunnan province and where CERS has recently completed construction of their beautiful educational headquarters. After spending a couple of days in Zhongdian, we were loaded into a small bus and Land Rovers and went on a several hundred mile whirlwind tour of the various projects that CERS is sponsoring to get an idea of how we can fit UW-River Falls students into their program. A primary objective of CERS is to preserve native Tibetan culture and wildlife in the face of unstoppable tourism and change. Sites we visited where students can become involved included the Yunnan Snub-nosed Golden Monkey/Lisu Hill Tribe site, the Black-necked crane site, a Tibetan Monastery and Nunnary site, the Sacred Mountain Clinic and Tea House site, the Tibetan Mastiff breeding program site as well as the yac cheese cottage industry site which was initiated by Renee May from our own UW-RF Food Science Department.



*Brad Mogen, Wong How Man and Qiju Qilin (the CERS expert on Tibetan culture and manager of the CERS headquarters) briefly stopped to inspect the remote stone living quarters, conveniently located next to a pristine mountain lake, used by a family of highland yak herders during the summer months.*



*One of the Tibetan Mastiffs selected for the CERS breeding program greets all visitors to the CERS Zhongdian Center with playful aggressiveness.*



*The River Falls visitors standing in front of the CERS Center. Back row, left to right: Brad Mogen (Biology), Tracy O'Connell (Marketing Communications), Mary Greene, Pat Hanson (Speech Communications and Theatre Arts) and Brent Greene (Director of International Programs). Front row, left to right: Barry Sin (How Man's office manager), Lynn Jermal (Art), Wong How Man, and Kelly Cain (Plant and Earth Sciences).*

**GREG HUNTER**

(1984) is an emergency medicine physician in Appleton, WI. He is married to Lynn and they have 4 children Cole (11), Chase (6), Callie (4) and Evan (1). Greg enjoys fishing, boating and is an instrument-rated commercial pilot. [lynn.a.hunter@worldnet.att.net](mailto:lynn.a.hunter@worldnet.att.net)

**BILLI JO LAEHN JOHNSON**

(1996) resides in Burnsville, MN and is currently working for the U.S. Food and Drug Administration doing medical device and human tissue establishment inspections. She has a daughter, Ella Ryley.

**GREG ANDERSON**

(1997) resides in Hammond, WI and is working as an environmental chemist for Pace Analytical, serving on site for 3M. He has been accepted into the Ph.D. program in counseling psychology. He is married to UW-RF alumnus Rachel Habermann and they are treatment foster parents and raising their adopted 14 year old son. [hmeedm@iwon.com](mailto:hmeedm@iwon.com)

**JOSHUA SMITH**

(1998) graduated in 2002 with his Ph.D. in Pharmacology from the University of Minnesota. Since then he has been doing post-doctoral research at the University of Virginia in the Biochemistry and Molecular Genetics Department. He married biology alum Jenelle Veerkamp and they have two daughters, Ezri and Kira. Joshua is currently researching the involvement of a novel ubiquitin ligase that plays an important role in nucleotide excision repair and its links to cancer. Joshua and his family live in Charlottesville, VA. [Js5cx@virginia.edu](mailto:Js5cx@virginia.edu)

**SARA MCBROOM MCNALLAN**

(1999) resides in Elgin, MN and is a laboratory technologist in the Endocrine Lab at the Mayo Clinic. She married John McNallan in 2003 and they had their daughter Grace on July 24, 2005. [mcnallan.sara@mayo.edu](mailto:mcnallan.sara@mayo.edu)

**LAWRENCE MARQUETTE**

(2002) is currently teaching chemistry, physics and biology at Annandale High School in Annandale, MN. [lpmarquette@yahoo.com](mailto:lpmarquette@yahoo.com)

**KATHERINE WORMER**

(2003) is working at Wilson Environmental Labs, where they are conducting research for the Environmental Protection Agency. The research includes collecting and classifying macro invertebrates from surrounding rivers. She resides in Superior, WI. [katherinewormer@hotmail.com](mailto:katherinewormer@hotmail.com)

**BRYAN DZENKOWSKI**

(2003) is currently employed as a lab tech at a nuclear pharmacy in S.W. Florida. He has completed an internship at the Mote Marine Lab and looking forward to working with the professors of Florida Gulf Coast University as a volunteer. He lives in Cape Coral, FL. [bryandzenkowski@yahoo.com](mailto:bryandzenkowski@yahoo.com)

**EMILY A. DAVIS**

(2004) completed Vanderbilt University Nurse Practitioner School in 1998 with a specialty in Acute Care. She is currently working at Duke University in the Department of Neurosurgery, specializing in implantable pain therapies. She is married and has a son. [Davis163@mc.duke.edu](mailto:Davis163@mc.duke.edu)

**MARIAN CHRISTEN**

(2004) spent the winter working for Gore Range Natural Science School as a winter naturalist. She will be working for America's Adventures this summer leading back country trips. She resides in Vail, CO. [marianchristen@hotmail.com](mailto:marianchristen@hotmail.com)

**KELLY HENDRICKSON CAWCUTT**

(2004) is currently a medical student at the University of Minnesota and will graduate in 2008. [Hend0379@umn.edu](mailto:Hend0379@umn.edu)

\*\*\* Please let us know what you've been up to. In the next newsletter we will share as much alumni information as you give us permission to do so. You can call us, email us, mail us, or just fill out the form on the web: [www.uwrf.edu/biology/alumniform.html](http://www.uwrf.edu/biology/alumniform.html)



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**BIOLOGY ALUMNI INFORMATION**

Visit our departmental home page: <http://www.uwrf.edu/biology/welcome.html>

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Years attended UWRF: \_\_\_\_\_

May we share this information with your fellow biology alumni? Yes No

Employment or other news: \_\_\_\_\_

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