

# BIO-NEWS

## Department of Biology Newsletter

University of Colorado at Denver and Health Sciences Center

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### WHAT'S UP DOC????

- ✚ **Gerry Audesirk**, Chair. Gerry took over the position of Department Chair after Diana Tomback stepped down this fall and will continue as our "fearless leader" until he retires this summer.
- ✚ **Terry Audesirk**. Terry will also be retiring from the department but her departure is scheduled for the end of the spring. After 23 plus years of teaching, the Department will truly miss Gerry and Terry and we wish them a very happy retirement! Hope they stop by to see us once in a while! (PLEASE!)
- ✚ **Leo Bruederle**, Associate Chair tells us that as of August 30, 2005, Biology majors have been able to audit their degree progress on *S.M.A.R.T*. The combined audit addresses the Biology major requirements as well as the Downtown Denver Core. While any Biology major can complete an audit by using the "what if" program and selecting a catalog, the audit is based upon the degree requirements published in the 2005-06 Catalog. The audit is currently most useful for new freshmen and new transfer students (Fall 2005). Leo stresses that this audit is intended to supplement advising, rather than replace it – students should meet with the Biology advisors (Leo and Kim Regier) and/or college advisors to discuss degree progress, particularly if an audit raises questions or concerns.
- ✚ **Greg Cronin** received his tenure in the spring of 2005 and was promoted to Associate Professor in the department. Greg has been enjoying his sabbatical leave as a Senior Postdoctoral Fellow at the Smithsonian Marine Station in Fort Pierce, FL. Contrary to some of the pictures he's sent us, he actually **has** been working hard!



Greg has been testing an allocation model of chemical defenses that he published in 2001. Seaweeds are the model organisms of this research and his "lab" is located at the St. Lucie Nuclear Power Plant where cooling

water for the reactors is pumped from offshore, providing a constant supply of high quality seawater.

This year Greg gave a paper at the Ecological Society of America/International Congress of Ecology meeting in Montreal and was invited to give seminars at the University of North Carolina at Chapel Hill, the SMS-FP, and Georgia Tech. He is (with co-authors) revising a manuscript that was provisionally accepted by Aquatic Botany.

Returning to marine research has brought Greg in touch with new and old friends. His academic grandparents, Mark and Diane Littler, are Smithsonian scientists that know a wealth of information on seaweeds. The first guest on his boat was Mark Hay, Greg's dissertation advisor, and his second guest was Brian Neff, (USGS) Greg's first graduate

student. Unfortunately, Brian didn't get a chance to meet the Littlers, who were in D.C.

Greg opted to make his residence in Florida on a sailboat and he tells us, "Living on a sailboat in hurricane alley is not for the faint of heart": Katrina caused Greg's boat to rock when it hit Florida, 100 miles to the south, before she became the massive storm that devastated Louisiana and Mississippi. Greg didn't stick around for Wilma, but sailed to St. Augustine to get out of her path. Still, he extends an invitation to those who are qualified to weigh seaweeds, or willing to be trained (and maybe we should add...not "faint of heart") to be his guests in Florida. He also HIGHLY RECOMMENDS sabbatical leave and is already formulating plans for his next one in 2013!!

- ✚ **Mike Greene** had a publication in the journal, *Nature*: Frederickson, M.E., M.J. Greene and D.M. Gordon. 2005. **Ants bedevil devil's gardens.** *Nature*, 437:496-496, and he traveled to the University of Massachusetts Amherst, UNC and CSU to give three seminars. Mike also helped assure the department's "Egg Drop" victory with a successful entry to the contest and, lest we forget his nuptials this summer...CONGRATS Mike & Beth!

- ✚ **Lisa Johansen** will soon lose her status as the "newbie" in the department with the addition of our new assistant professor. Lisa has immersed herself in the past year; teaching courses, obtaining grants, organizing the Spring Biology Seminars, the Biotechnology Certificate program and providing the office with an occasional stress relief when her daughters come to visit us.



Lisa was invited to give her presentation "Arabidopsis RdRps: Why so Many?" at the CSU PlantSupergroup meeting in December. She submitted two NSF grants in January - one as an RUI grant under the Genes and Genome Systems Cluster and the other as part of the Arabidopsis 2010 initiative.

Lisa has reviewed two textbooks for Pearson/Benjamin Cummings and reviewed an article for the journal FEBS Letters. She has attended two local bioscience meetings and is working hard to network with the biotech industry in Denver.

Lisa also reports that the Biotechnology Certificate program is up and running with approximately 15 students working toward the certificate, and two who will have completed all the requirements by the end of the 2006 Spring Semester.

- ✚ **Cheri Jones** began her 5<sup>th</sup> year as Associate Editor of Conservation and Management for the *Southwestern Naturalist*, recently mailing the **124th** manuscript out for peer review. She was also invited to serve as an expert reviewer of the Cimarron and Comanche National Grasslands Land and Resource Management Plan being drafted by the USFS.

As with Lisa, Cheri's "newbie" status will also be going by the wayside and soon they will be "seasoned faculty".

✚ **Kim Regier** survived her first semester of being one of the Department's two Biology Majors student advisors with flying colors. She took on the responsibilities of advising at the beginning of the fall semester along with **Leo Bruederle**. Kim and Leo have been doing the student advising along with teaching their regular courses. No small feat, considering the many feet that walked into their offices!

✚ **Timberley Roane** has been wearing out the keys on her computer keyboard with a series of papers accepted by the *Journal of Industrial Microbiology and Biotechnology* - Jimenez-Esquilin\*, A. and T.M. Roane. **Isolation of antifungal producing rhizosphere actinomycetes from the Sagebrush (*Artemisa tridentato*); 32:378, *Applied Microbiology and Biotechnology* – Benoit, M.R., Li, A., Stoieck, L.S., Lam. K.S., Winther\*, C.L., Roane, T.M., and Klaus, D.M **Microbial antibiotic production aboard the International Space Station; *Biodegradation* (in press) - Kassab\* D.M., and T.M. Roane. Differential responses of a mine tailings *Pseudomonas* isolate to cadmium and lead exposures, and last but not least, *Journal of Insect Science* 5:29 – Williams III, L., Coscarón, M.C., Dellapé, P.M., and T.M. Roane. *Pachycoris stallii* Uhler (Heteroptera; Scutelleridae)-description of immature stages, effect of maternal care on nymphs and notes on life history. (\* denotes student researchers)****

Timberley also had a proposal funded by the Agricultural Research Service USDA to study the role insect gut microorganisms play in facilitating insecticide resistance. She recently presented the "**Characterization of intestinal microbial flora of *Lygus lineolaris***" at the Ecology and Management of Lygus Plant Bugs conference in Ottawa, Canada in January, 2005. Timberley traveled with her graduate student, **Lisa Snelling** to the American Society for Microbiology conference where she presented "**Microbial removal of mercury from treated museum materials**".

Now if all this wasn't enough, Timberley also applied for her tenure this fall and is planning out her upcoming sabbatical. AND...when she wasn't publishing, presenting, teaching, or researching...Timberley designed and constructed one of the successful entries (the "Wad") that helped the department win the annual "Egg Drop" contest in October sponsored by the Associated Engineering Students, bringing Biology our third consecutive win!!

Did I mention that Timberley has pretty much retired the baseball helmet she was required to wear (during activities of highly probable "nose to object" contact) while her nose was healing from an untimely encounter this fall with a wayward bovine?? Although she regrets that her "supermodel" dreams may be dashed she's grateful just to be able to sneeze again. GESUNDHEIT!!



✚ **James Salmen**. Aside from helping to keep our labs functional (the office too...thank you James!), James designed the tie breaking entry in the "Egg Drop" contest. He meticulously constructed a 60' "rope" from the 2 allotted pieces of paper, fixed them with tiny "staples" made from the 3 allotted paperclips and **lowered** the fragile cargo to the ground! Everyone in attendance was amazed, amused, and impressed. This year the contest even got local news coverage and a clip was aired on Fox 31 evening news! Thanks James, and CONGRATS!!



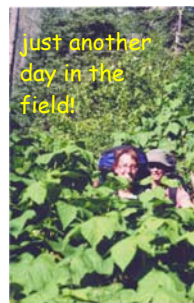
✚ **Brad Stith** was invited as the plenary speaker for the fall faculty symposium at Southern Connecticut State University on August 23, 2005 where he discussed the nature of undergraduate research, recent data demonstrating how it benefits the undergraduate (raising thinking skills, etc), and aids in accomplishing research with little resources. You can access Brad's presentation on his website at: [carbon.cudenver.edu/~bstith](http://carbon.cudenver.edu/~bstith).



Brad is also collaborating with Kinexus (a company whose methods define changes in some 300 proteins during induction of meiotic cell division in *Xenopus* frogs) and with Ken-Ichi Sato in Japan where

they are looking at the regulatory path for fertilization. In his work with Ken-Ichi Sato, they believe that sperm activate an enzyme called Phospholipase D, which leads to production of phosphatidic acid which in turn activates Src (a tyrosine kinase) which in turn activates phospholipase C which leads directly to fertilization events. **Jason Stafford**, Brad's graduate student, presented their results at the December meeting of American Society for Cell Biology.

✚ **Diana Tomback**. Since Diana stepped down as chair of the department, the beginning of the 2005 fall semester, she has been even busier with her teaching, research and



publications. In December she had a publication shared with Cheri Jones (yup, our very own Dr. Jones), Life on the edge for limber pine: Seed dispersal within a peripheral population. *Ecoscience* 12:519-529. Tomback, D.F., A.W. Schoettle, K.R. Chevalier, and C.A. Jones. 2005.

Diana is also on three external graduate committees; Master's committee in the Department of Forest, Rangeland, and Watershed Stewardship, CSU; doctoral committee in the College of Forestry, University of Montana and external reader for doctoral dissertation with the Department of Forestry, University of British Columbia.

She was an invited speaker at three meetings this fall; the Treeline Workshop, Sept. 12-16 in Glacier National Park funded by the USGS, Pacific Coast Whitebark Pine Workshop, Oct. 4-6 in Crater Lake National Park, and the Bark Beetle Workshop, Nov. 15-18 at Snowbird, funded by the Ecology Center, Utah State University.

On top of all this she also received a SUMP's award of \$2,600 from the Center for Faculty Development.

## HEALTH CAREERS ADVISING

**Charlie Ferguson and Kent Nofsinger** went through what had to be a record breaking fall semester of advising. From the first day of class to several days into the winter break students were seeking out their advice and help with their biology courses and health career questions. **Charlie and Kent** also composed and assembled over 100 "committee letter packets" for student candidates seeking admission to medical schools, which often entailed several packets to different schools per candidate.

✚ **Charlie Ferguson** reminded the department more and more of an athlete training for a marathon this last year. In his duties as Associate Dean of CLAS, Health Career Advisor and Faculty, Charlie could be found in constant motion between his office in the Dean's office, CLAS Advising and here in Biology. I wonder if a "Razor Scooter" was on Charlie's Christmas list?

- ✚ **Kent Nofsinger** is on the committee to select awardees of the Excellence in Teaching awards during the 05 Summer Semester. Kent himself was a recipient of this award for the 2003-04 academic year. We also saw Kent appear in the 06 Winter issue of the "Latitude Newsletter"!!



- ✚ Another addition the department is excited about is our new teaching lab which made its debut this Spring Semester.
- ✚ The Department would also like to announce our new "ADVISING" webpage which can be accessed through our website at [www.cudenver.edu/Academics/Colleges/CLAS/Biology/default.htm](http://www.cudenver.edu/Academics/Colleges/CLAS/Biology/default.htm). We're particularly excited about this addition to our website and hope it will help current and potential students access various types of information about the department and a vast array of academic questions.
- ✚ The 2006 Biology Spring Seminars started on January 20, 2006. A complete list of the scheduled seminars, their times and topics, is also available on our website at: [www.cudenver.edu/Academics/Colleges/CLAS/Biology/default.htm](http://www.cudenver.edu/Academics/Colleges/CLAS/Biology/default.htm)

**THIS JUST IN!!**

**BRAGGING RIGHTS! (a.k.a. Student Successes)**



**CONGRATULATIONS** go out to **Jason Stafford** for being selected the **CLAS Outstanding MS Student** for the Fall 2005 Commencement! Jason was selected for this honor by the CLAS Dean's Advisory Committee for his impressive work as a teaching assistant and his research work with **Dr. Stith**.

**Congratulations to Charlie and Kim! Charlie won the 2006 UCDHSC CLAS Teaching Excellence Award and Kim won the 2006 UCDHSC CLAS Teaching Excellence Award for Honorarium and Non-Tenure-Track Faculty. The awards will be presented at the Dean's Reception on April 28<sup>th</sup>.**

**Lisa Snelling, in Timberley Roane's lab**, is back in the news. Lisa recently gave an invited presentation on "A microbial method of mercury removal from museum materials" at the National Park Service Intercontinental Region Tribal Consultation Meeting in Santa Fe, NM, in July 2005.



**Cory Zoetewey** received a **UROP** grant to work in **Lisa Johansen's** lab. He is studying the virus defense response in Arabidopsis mutants. He will be presenting his research at Research and Creative Activities Day on April 14, 2006.



(Cory, you don't have any relatives with the last name of Bates do you???)

**Maria Stearns** (MSES, 2004; advised by **Greg Cronin**) had her thesis research published: Stearns, M., J.A. Tindall, G. Cronin, M.J. Friedel, and E. Berquist. 1005. Effects of Coal-Bed Methane Discharge Waters on the Vegetation and Soil Ecosystem in Powder River Basin, Wyoming Journal of Water, Air, and Soil Pollution, volume 168, pp. 33-57.

Though they're not exactly "students" but, note worthy just the same, three boys that **Greg Cronin** coached in hockey here in CO made **Team USA** this year!

**CHECK THIS OUT:**

- ✚ We are pleased to announce the addition of **Tod Duncan, Instructor** and **Michele Engel, Assistant Professor** to our faculty. Tod began teaching Medical Microbiology & Virology the beginning of the 2006 Spring Semester and in the Fall Semester, Michele will be teaching Molecular and General Genetics. Welcome Aboard Tod and Michele!

HE, HE..... 



**DOUGH!!**