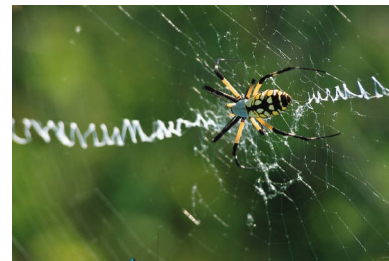


# COBWEBS

Spring 2006 – Volume 10



*A Newsletter for Alumni in Biology and Natural Resources Management*

## ***In Praise of Collaboration***

**Shaily Menon, Biology Department Chair**

Welcome to another edition of Cobwebs with reports from our various student clubs, a note about student presentations at Student Scholarship Day, highlights of faculty awards, projects, presentations, and publications, our mission statement, an update from our greenhouse, and excerpts of haikus from BIO 121 students. This column gives me the opportunity to celebrate highlights of the department's accomplishments and the collaborative spirit of our various endeavors.

Three search committees, chaired by Neil MacDonald, Margaret Dietrich, and Bruce Ostrow, left no stone unturned to fill positions in Natural Resources Management, Botany, and Human Genetics. We welcome three new faculty members who will join us in Fall 2006: Erik Nordman, Terri Weese, and Noor Ghiasvand. The Advisory committee, chaired by Sheila Blackman, had a year-long conversation about the department's mission, vision, values, goals, and learning objectives and put together a Strategic and Assessment Plan which was approved by the department. The Graduate Committee, chaired by Mark Luttenton, steered our M.S. program. We are proud to state that, to date, nine graduate students have defended their theses. The Personnel Committee chaired by Michael Lombardo produced a document for personnel committee procedures, which was approved by the department. The Student Relations Committee conducted a number of important student liaison activities. The Visitor, Affiliate, and Adjunct (VAA) committee, chaired by Patricia Matthews, helped with orientation and performed mentoring and evaluation of our VAA faculty.

Our office staff (Connie Ingham, Beverly Tramper, and Barb Ellis) worked miracles to seamlessly incorporate a number of changes in university financial systems and other policies and procedures. Our lab staff (Diane Laughlin, Akiko Flanders, and Mary Searcy) similarly incorporated changes in university systems and kept our labs flowing smoothly. Rachel Schwallier and Diane Laughlin worked diligently on the greenhouse.

Last, but not least, we are grateful to Mark Luttenton for his excellent stewardship of the department as interim chair last winter. My sabbatical fostered collaborations (old and new) which will benefit me and my students for years to come.

## ***Another successful year for the Biology Club and TriBeta*** **By Sara Smolinski, President**



We started out the year with a group participating in Helping Hands 2005, in which we assisted students living in the dorms in moving all of their stuff in. Then we went on our annual beach cleanup with the Lake Michigan Federation at the Grand Haven State Park.

We held a few social events, including a hayride at Char VanderHoning's and a movie night in late December. Also in December, a few members volunteered at the National Fish and Wildlife Conference in Grand Rapids. We also went on a behind the scenes tour of the John Ball Zoo, and took a weekend camping trip to the Nordhouse Dunes in the Manistee National Park. A great time was had by all!

During the winter semester, we invited Pat Lederle of the Michigan DNR to speak about his work, volunteered at the Science Olympiad competition, and went on our annual Chicago Trip, which had its largest turnout since I have been a member of the club.

The TriBeta Biological Honor Society welcomed three new members this year and had one promotion. Dane Gallagher, Megan Cookingham, and Tim Trichler were inducted early this year, and Stephanie Karczynski was promoted to a regular member. We would also like to congratulate members who graduated this year: Stephanie Karczynski, Dane Gallagher, and Nicole Lorenc!

2005/2006 Officers: Sara Smolinski, President; Bruce Underwood, Vice President; Nicole Lorenc, Secretary; Jessy Houseman, Treasurer; Faculty Advisor: Dr. Terry Trier.

## ***Soil and Water Conservation Society News***

**By Carla Van Erp, President**



This year's Soil and Water Conservation Society (SWCS) officers include Carla Van Erp (President), Stephanie Baker (Vice President), Michelle Lelli (Secretary), and Bill Poelma (Treasurer). Neil MacDonald has continued to be

generous with his time and support as our faculty advisor. SWCS had an exciting and productive academic year.

We kicked off Fall 2005 activities with our Adopt-A-Highway trash cleanup along Lake Michigan Drive. Other activities included, Kelly Goward, District Forester for Ottawa County, spoke with the group regarding issues concerning the emerald ash borer. Kelly stressed the importance of identification and preservation of the remaining ash trees. Therefore, we inventoried Allendale's campus for ash trees to collect seeds from for storage to assist with conservation efforts. The largest project we were involved in was the Midwest Fish and Wildlife Conference, located in Grand Rapids. This provided students with an amazing opportunity to hear professional symposiums and interact with leading experts in the field. Bill Moritz, Chief of the Michigan DNR Wildlife Division was impressed with our volunteer efforts and agreed to join the group in an organized lunch and discussion in Allendale (Thanks to Professor Linda Thomasma for organizing the event!). We also enjoyed an evening of bowling and socializing, as well as assisted a graduate student with fish shocking.

Future plans include our spring highway clean up and a pizza lunch to wrap up our 2005-2006 academic year.

## ***Grand Valley Pre-Vet Club News***

**By Sarah Wolf, President**



The GVSU Pre-Vet Club continues to grow in enthusiastic members and is expanding its involvement in many new activities. Currently all of our members are either preparing to apply or just getting started. For the beginning of the 2005 fall

semester, club members participated in baking and selling dog treats to raise funds for club activities. Later on, a donation drive was held on campus for the Kent County Humane Society to give GVSU students the opportunity to contribute. A local veterinarian and veterinary director for the volunteer organization, Remote Area Medical, Dr. Bruce Langlois was invited to GVSU and gave a presentation and offered volunteer opportunities for interested prospects. The semester ended with another yearly tradition, MSU CVM's annual Vet-a-Visit program in Lansing, MI. This has been one of the most educational trips we have taken. Students are able to learn the steps for getting into vet school and have the chance to ask the MSU faculty and students questions.

This year our activities have not only gotten us involved in the community, but have allowed us to form lasting friendships through teamwork.

We have many activities planned for the new upcoming fall semester. These plans include hosting a table at an evening event here on campus where new students can gain knowledge of the pre-vet club. We will also be involved in a pre-professional day along with other academic organizations, which will include a luncheon and various guest speakers open to all GVSU students. Additionally, donation drives, fundraisers, horseback riding, a behind the scenes tour at the John Ball Park Zoo, and volunteering at the humane society are all on the agenda. The opportunities are endless!

The club advisor is Dr. Terry Trier and the 2005-2006 club officers are: President Sarah Wolf, Vice President Stephanie Trela, Secretary Elizabeth Brandt, and Treasurer Alana Kincaid.



## **BIOLOGY DEPARTMENT**

### ***In the Works***

Our department website will have a brand new look starting in August with a dedicated link for Alumni. Stay tuned! [www.gvsu.edu/biology](http://www.gvsu.edu/biology)

## ***Student Scholarship Day 2005***

**By Bruce Ostrow**

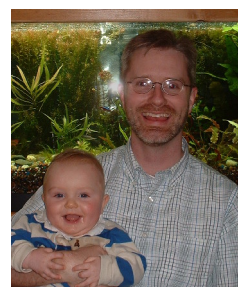
The 10<sup>th</sup> Annual SSD was held on April 13, 2005. Over 240 talks, posters, and exhibitions were held in Padnos Hall and the Henry Hall atrium. Artwork and film were included for the first time as the College of Interdisciplinary Studies took over the management of SSD from Neal Rogness who had initiated SSD in 1996 and held the reins for nine years.

Carol "Griff" Griffin required all 20 students in her NRM 495 class to give a presentation as part of their capstone experience. Those seminars and posters constituted a significant proportion of the SSD presentations and covered a wide range of topics including management practices designed to reduce erosion, a bicycle ban in wilderness areas, and predictions of cougar occurrence in Michigan.

Biology students and faculty involved in SSD 2005 were:

Student	Title	Faculty sponsor(s)
Sarah Barnhard	Photodegradation of dissolved organic matter along a land to lake gradient in West Michigan	Bopi Biddanda
Josh DeGraff and Becky Twing	A statistical consulting experience	Pat Matthews and Soon Hong
Steven Denhof	Protein kinase N expression in <i>Drosophila melanogaster</i>	Bruce Ostrow
Joe DeVol	Effects of exogenous cytokinin application on morphological development of gametophytes of the fern <i>Osmunda regalis</i>	Gary Greer and Margaret Dietrich
Niki Evans	The effect of Lrp5 and Lrp6 deficiency on mouse mammary development	Nancy Shontz
Ebony Grisby	PCR analysis of <i>Drosophila melanogaster</i> protein kinase N genetic region	Bruce Ostrow
Betsey Haak	A fusion of left and right	Bruce Ostrow
Rebecca Kelbel	Identification of plant homologs to the p60 subunit of katanin	Regina McClinton
Carly Kelly	Biological controls of spotted knapweed, St. John's wort, and purple loosestrife	Jim Dunn
Justin Liefer	Plant species richness and nutrient availability across a wetland inundation gradient	Eric Snyder
Fahmy Mamuya	Allelopathy of <i>Chara</i>	Mark Staves
Amy Noble and Ashley Leimback	Pesticide resistance in codling moth ( <i>Laspeyresia pomonella</i> )	Bruce Ostrow
April Rebert	Investigating hormonal controls of development in fern gametophytes	Gary Greer and Margaret Dietrich
Josh Stickney	Diesel fuel-metabolizing bacteria in lake sediments	Rod Morgan
Ryan Vilardi	DNA fingerprinting of native corn varieties	Margaret Dietrich
Jessica Wetherbee	What is genetic counseling	Patricia Matthews
David Wolma and Amy Kulon	<i>Ataxia telangiectasia</i>	Bruce Ostrow

## New Faculty



Dr. Robert Hollister became a tenure track member of the Biology Department in Winter of 2006 after spending the previous year as a visitor in the department. He received his Ph.D. (Plant Biology; Ecology, Evolutionary Biology, and Behavior), M.S. (Botany and Plant Pathology), and B.S. (Lyman Briggs Zoology) from Michigan State University. During his graduate and post-doctoral training he worked in tropical dry forests, Michigan wetlands, and tundra. His research focuses on the response of plant communities to global change.

For his Ph.D. Dr. Hollister examined the response of tundra vegetation to experimental warming in Alaska. This continuing work ties closely with other national and international initiatives examining the impacts of climate change on the Arctic. His polar experience has allowed him to travel the world (even Antarctica). His local research projects include examining vegetation change in local wetlands.

As a hobby Dr. Hollister has housed all kinds of fish, lizards, and other critters. Of course, they live in homes packed with plants so you might have a tough time finding them all. This fall his most exciting project began when his son James arrived (September 25).

## Biology Department Mission

The Biology department integrates meaningful practical experiences with excellent classroom teaching to prepare students to be critical thinkers, engaged citizens, and creative and competent professionals in the biological sciences.

## Highlights of Faculty Activity

**Carl Bajema** received the Baxter Distinguished Contribution to the History of Grand Rapids Award from the Grand Rapids Historical Society and was a consultant for Spike Lee's movie *Malcolm X*.

**Chris Dobson** published a paper on critical thinking in the journal *Focus on Microbiology Education*. He gave several presentations at workshops in Grand Valley and at two national

conferences: the National Science Teachers Association Midwestern Area Convention, Chicago and the National Association of Biology Teachers National Convention, Milwaukee, WI. Two of these were in collaboration with **Stephen Burton** and one was in collaboration with four undergraduate students.

**Jim Dunn, Jodee Hunt, and John Shontz** presented a poster on field-based labs in introductory ecology courses coauthored with **Janel Zeman** (an affiliate faculty member and graduate student in the Biology M.S. program) at the Ecological Society of America Meetings held in Montreal, Quebec, Canada.

**Gary Greer** conducted collaborative research with **Margaret Dietrich** and with several undergraduate students and gave six presentations at regional and national conferences. His research topics included studies on the invasive species Tree of Heaven (*Ailanthus altissima*) and on the morphological development of the fern *Osmunda regalis*.

**Carol “Griff” Griffin** submitted a paper on Michigan’s Natural Rivers Act coauthored by her graduate student, Elaine Isely, who was the first author and with Rick Rediske of Annis Water Resources Institute. She presented a poster on the Wilderness Message of U.S. Land Management Agencies, with four undergraduate student and three graduate student coauthors, at the 8<sup>th</sup> World Wilderness Congress and has a paper in press in the proceedings of the congress. Griff testified at a Public Meeting on a Proposal to designated Wilderness in Rocky Mountain National Park, in Colorado.

**Carol Griffin, Jodee Hunt, and Eric Snyder** presented a poster on field-based exercises in a non-major's ecology course, coauthored with **Deb Simon** (an affiliate faculty member and graduate student in the Biology M.S. program) at the Ecological Society of America Meetings held in Montreal, Quebec, Canada.

**Bob Hollister** published five papers based on his research with various collaborators on Alaskan vegetation responses to experimental warming in Proceedings of the National Academy of Science of the United States of America (PNAS), Climatic Change, Ecology; and Global Change Biology. He also presented a poster at the Ecological Society of America Meetings and a talk at the annual meeting of the International Tundra Experiment Workshop in Miami.

**Jodee Hunt** presented a poster on teaching scientific writing in a major’s introductory ecology course at the Ecological Society of America Meetings held in Montreal, Quebec, Canada. Together with her graduate student Mary Sievert, she presented research on Blue Ribbon trout streams in northern Michigan at the Midwest Fish & Wildlife Conference, Grand Rapids.

**Jorge Lopez** published a paper on spread of parasites in metapopulations in Parasitology and a paper on parasite prevalence and the size of host populations in the Journal of

Parasitology. He gave a presentation on his research at the annual meeting of the Society for the Study of Evolution in Fairbanks, Alaska. He has two undergraduate students doing research with him.

**Mark Luttenton** received the C.R. Evenson Conservation Professional Award from the West Michigan Chapter of Trout Unlimited, for coordinating three major projects on the Rogue River. He has two papers in press in Hydrobiologia and in the Journal of Phycology. Together with his undergraduate and graduate students, he made several five presentations at local, regional and national conferences.

**Neil MacDonald** published a paper in the journal Restoration Ecology and made a presentation at the Michigan Academy meetings at Oakland University. Both the paper and presentation were coauthored with former GVSU NRM undergraduate students (Brian Scull and Scott Abella).

**Patricia Matthews, Alex Nikitin, and Bruce Ostrow** were panelists on a two-hour live town hall forum “Stem Cell Research”, which was broadcast from the Pew campus on WGTV Radio in October, 2005.

**Mel Northup** received Volunteer of the Year award from the Blandford Nature Center and was honored for 500 hours of volunteer service at the Frederick Meijer Gardens and Sculpture Park.

**Karel Rogers** made a presentation coauthored with two undergraduate students at an ichthyology and herpetology meeting in Tampa, Florida. She participated as panelist in the Grand Dialogue Spring Conference in Grand Rapids and will be spending a month in Madagascar again this summer to continue the search for terrestrial vertebrate fossils.

**Eric Snyder** coauthored two papers published in the journal Aquatic Sciences and a book chapter on the Columbia River published in the edited volume The Rivers of North America, Academic Press. He has a paper coauthored by an undergraduate student in press in the GVSU McNair Scholars Journal. Eric and five students doing research with him gave five presentations at the Midwest Fish and Wildlife Conference.



## **Greenhouse Update**

By Rachel Schwallier

The Biology department greenhouse has been undergoing many improvements following suggestions by Tom Dudek from Michigan State University's Horticultural Extension Program. These include regular pH testing and adjustments, soil composition monitoring and adjustments, and pest control.

As you can see in the picture below (*Epiphyllum oxypetalum*), our night-blooming cereus has blossomed! It was quite magnificent and very fragrant. This plant was donated to the greenhouse by a friend of Prof. John Shontz.



Other fun notes from the greenhouse are that the coffee tree has coffee beans on it for the first time (since I have known anyway) and a *Welwitschia mirabilis* has germinated in the greenhouse. It is only two weeks old, but Diane and I are very excited.

## **Haikus from Gary Greer's BIO 121 class**

*[The goal of this exercise was to reinforce student learning of key concepts from a 3 week section of the course.]*

**Tim Norman**

*Evolution is  
A change in phenotypic  
Variation over time*

*Cells are membrane bound  
Self catalyzing actions  
Keep cells alive*

**Cortnee Burkhour**

*Club fungi are  
P. Basidiomycota  
Mushrooms that we eat*

*Ascomycota  
With eight spores in sac  
Truffles and morels*

*Fitness is a must  
Bio students must define  
Or Prof. Greer will cry*

**Brittany Collins**

*Water mold, killer  
The Irish potato famine  
Made people crazy*

**Caleb Davidson**

*Use Parsimony  
The fewest assumptions win  
Watch evolution*

**Patricia Molina**

*Mushroom morbid,  
Survive on the dead,  
Called saprophytes*

*Poor are the sponges,  
Mistaken for a lufa,  
They lack true tissue.*

**Aaron Barnes**

*Analogous wings  
Like that of insect and bird  
Came from convergence*

*A trait reversal  
With wings I once flew skyward  
Earthbound now and sad*

**Dave Harvey**

*Oh sweet ovary  
Your good sugar attracts me  
I will spread your seeds*

*Cladogram help me  
Relatedness I can't see  
Show by use of tree*

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