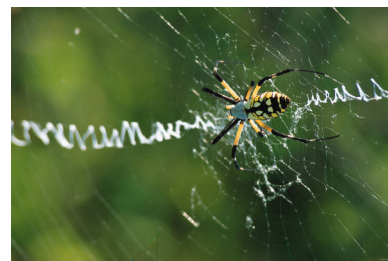

COBWEBS



Summer 2007 – Volume 11

A Newsletter for GVSU Alumni in Biology and Natural Resources Management

Arrivals and Departures

Shaily Menon, Biology Department Chair



*"Would you tell me, please, which way I ought to go from here?"
"That depends a good deal on where you want to get to," said the Cat.
"I don't much care where-" said Alice.
"Then it doesn't matter which way you go," said the Cat.
"-so long as I get SOMEWHERE," Alice added as an explanation.
"Oh, you're sure to do that," said the Cat, "if you only walk long enough."
--- Lewis Carroll*

Welcome to another edition of Cobwebs! We bring you the latest news from the Biology department including reports from our student clubs, Alumni-in-residence program, student presentations at Student Scholarship Day, introductions to new faculty, and faculty awards.

Here are some of the highlights from this year:

As Erik Nordman, Terri Weese and Noor Ghiasvand, the three faculty members who joined us last year, settled into their first year in the department, the hard work of our faculty and search committees, chaired by Neil MacDonald and Michael Lombardo produced amazing results; we are delighted to announce that four new faculty members will join us in Fall 2007 - Todd Aschenbach, Mike Henshaw, Paul Keenlance, and Anita Stone. We welcome them in our midst.

This has also been a year of departures. The faculty members who have left the department are Jorge Lopez, Karel Rogers, and Linda Thomasma. Carl Bajema will be with us through fall 2007. Our two visiting faculty, Rebecca Uzarski and Sister Damien Marie have also left for positions in other universities in Michigan and Texas, respectively. They will all be sorely missed and we wish them the very best in their new endeavors.

We celebrate a variety of awards that our students and faculty received this year, including the 2006 Outstanding Chapter Award to SWCS, the CLAS Lifetime Service Award to Nancy Shontz, and the Outstanding Educator Award to Mark Luttenton. In these pages, you will see glimpses of the exciting work our faculty and students are doing in a variety of fields including evolutionary biology, plant development, Arctic research, insect diversity, inquiry science, restoration ecology, and phylogeny and biogeography.

Each year, in October, we have the opportunity to bring back an alumnus to share his or her experiences with us and our students. This year Scott Abella returned as our alumnus-in-residence. He gave a seminar on his research, met with students, and spoke in several of our classes. Such interactions are invaluable for our students who are inspired and motivated by the stories and accomplishments of our alumni. We look forward to seeing more of you return in this capacity in future years and encourage you to send us updates on your various professional activities and accomplishments.

We'd love to hear from you if you'd like to spend time with us volunteering at various events or if you have job or internship opportunities at your workplace that would benefit our students. If you're just in the area, we'd love to see you and have you visit us. Do give us a call or send us an email!

Alumnus-In-Residence Fall 2006

Dr. Scott Abella was the department's Alumnus-In-Residence during the Fall semester. Dr. Abella is currently an Assistant Research Professor, Vegetation Ecology, at the Public Lands Institute and School of Life Science, University of Nevada, Las Vegas (<http://faculty.unlv.edu/abellas2/>). He graduated from GVSU with a NRM degree in 2000. As part of his visit to GVSU, he gave a public seminar entitled "Lessons Learned: Reflections from the Field of a 2000 NRM Alumnus", had lunch with students, and was a guest speaker in a few courses.



Many Varied Activities for the Biology Club and TriBeta

The Biology Club participated in a variety of activities this year. We held "movie nights" and watched "The Cane Toads," a somewhat dark and humorous documentary movie about the invasive cane toad in Australia. We also watched "Snow Walker", a beautifully filmed movie that told the story of a bush pilot who crashed in the arctic wilderness and was saved by a young Inuit girl who used her native skills to survive in the harsh environment. We joined with the Prevet Club and went "rock climbing" at the Rec Center. During Christmas break, we traveled to Chicago for a behind-the-scenes tour of the Field Museum.



We had several guest speakers this year, including Pat Lederle from Michigan's DNR, who talked about the current status of the wolf in Michigan and its delisting as an endangered species. Also, speakers from Blandford Nature Center brought in a variety of birds of prey for show-and-tell and discussed their natural history and the rehabilitation efforts at Blandford.

We volunteered to help build wood duck boxes at Grand Valley, participated as volunteers at Science Olympiad, and did our annual spring bus trip to Chicago where members visited the Field Museum, the Aquarium, the Museum of Science and Industry, the Art Institute, and generally took in the sights and sounds of the big city. Our annual October hayride at Char VanderHoning's farm got rained out but is still on the agenda for next year. Former biology club president Sara Smolinski graduated this year with Tri-beta honors and is on her way to medical school. We wish her success! We look forward to the coming school year and are currently planning many new and exciting activities.

2007/2008 Officers: Emily Nichols, President; Allison Hoving, Vice President; Bethany Peshek, Secretary; Faculty Advisor, Terry Trier.

Soil and Water Conservation Society News

By Neil MacDonald, Advisor

GVSU Student Chapter of SWCS named 2006 Outstanding Chapter!



During the fall, 2006 Semester, officers included William Poelma (President), Jake Ross (Vice President), Eric Kretschmer (Treasurer), and Kate Cabay (Secretary). Early fall activities included the M-45 Highway clean-up, a combined canoe trip and stream clean-up project on the Thornapple River, and a social evening of bowling. Our fall activities culminated in a field trip to the Midewin National Tallgrass Prairie near Joliet, Illinois, where we assisted the Forest Service with native seed collections.

During the winter, 2007 Semester, there was a "changing of the guard" because of graduations, and Eric Kretschmer became President, Zach VanderBush served as Vice President, Lindsey Goss was Treasurer, and

Kate Cabay completed the year as Secretary. In February, we assisted the Land Conservancy of West Michigan with autumn olive removal at the Wege Nature Preserve, learning how to remove non-native shrubs and having a pleasant outing at the same time.

In April, we helped pack white pine seedlings for the Ottawa Conservation District and finished our yearly activities with the M-45 highway clean-up. Based upon our consistent record of meaningful community service and educational activities, the GVSU Student Chapter of SWCS was named recipient of the 2006 Outstanding Chapter Award by the National society. Zach Vanderbush will be traveling to the 2007 SWCS Annual Conference in Tampa, Florida to accept the award on our behalf. Congratulations and thanks to all members and supporters of the GVSU Student Chapter of SWCS on this well-deserved honor.

Grand Valley Pre-Vet Club News

By Sarah Wolf, President



The Pre-veterinary Club had a very busy year and was actively involved in a wide variety of events. Along with other pre-professional student groups, we hosted Pre-Professional Day, an all-day event with a series of workshops and speakers available to help students become more aware of their chosen field of study and prepare them for success. Also, in conjunction with other pre-professional groups, we sponsored a dessert banquet to honor GVSU professors who contribute their time and effort to helping pre-professional students. Fundraising events included a Humane Society Donation Drive, bake sale, and pop can drive. Many volunteer hours were logged at the Humane Society and once again, we took the annual MSU Vet-A-Visit tour. We also set up a booth at Campus Life Night. Club meetings were busy this year and always had a large turn out. Networking for job, scholarship, and volunteer opportunities were our top priority. As the club continues to grow, the coming year promises to be even busier and we look forward to the challenge!

Officers: President: Sarah Wolf, Vice President: Stephanie Trela, Secretary: Jennifer VanHamlin, Treasurer: Sam DeNio

Five Students Earn Biology Related Academic Scholarships from GVSU

Thanks to the generous contributions to three biology endowment funds, five students will receive financial support for the 2007/2008 academic year. Corey Kapolka and Megan Mutchler received a scholarship from the **John Salski Memorial Fund**, Michelle Dam and Ashley Port received a scholarship from the **Howard and Rose Stein Endowed Biology Scholarship**. These two scholarships are awarded on the basis of academic merit. Edward Johns received a scholarship from the **Professor Paul A. Huizenga Education Scholarship**, which is awarded on the basis of academic merit and financial need.

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.

Student Scholarship Day 2007



The 12th Annual SSD was held on April 11, 2007. The day showcases faculty-mentored student work, shared through many venues, including (but not limited to) oral presentations, discussion and panel sessions, fine arts exhibits and performances, and poster presentations. Over 300 presentations were given by students. Our own Dr. Shaily Menon was the keynote speaker and gave a stimulating presentation entitled "Curiosity and Creativity: A Kaleidoscope of Ideas".

Erik Nordman required all 15 students in the 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.

Biology students and faculty involved in SSD 2007 were:

Student	Title	Faculty sponsor(s)
Eric Strickler	The River Connection: Contribution of Carbon and nutrients by West Michigan rivers to Lake Michigan	Bopi Biddanda
Amanda Massau	Golf Course Management and Amphibians: Impacts of wetland habitat management on the occurrence of green and leopard frog populations.	Stephen Burton
Jason DeBoer	Habitat Restoration on Sickie Creek, a 1st Order Tributary of the Big Manistee River	Eric Snyder
Harley Rohloff	A Statistical Consulting Experience: Determining the Effects of Class Size, Major, and General Education Course Groups on GPA.	Neal Rogness, Carol Griffin
Chad Meece	The Carbon Mystery: Photochemical and biological fate of carbon in a temperate watershed	Bopi Biddanda
Sarah Jaquith	Prevention and Preparedness for Potential Avian Influenza Pandemic	Terry Trier
Dustin Mier	Investigation of Ailanthus altissima Extracts on Microbial Species	Rod Morgan
Amanda Bliemeister	Analysis of Spc98 homologues in the plant family Brassicaceae	Regina McClinton
Kristofor Nault	Changes in substrate composition (and fish assemblage) following road-stream crossing improvements on Pine Creek, Manistee County, MI	Eric Snyder
David Hunter	Determining the Environmental Factors at Several Golf Courses and Their Effects on the Leopard Frog Populations: A Student Statistical Consulting Experience	Neal Rogness, Stephen Burton
Ilea Swinehart	Mechanisms Underlying Hormone-Induced Changes in the Moss Physcomitrella patens: A Genetic Approach	Margaret Dietrich
Jordan Devries	Phyco fuels; a low impact alternative to petroleum	Mark Luttenton, Karel Rogers, Eric Snyder
Betsy Shafer	Diets of Round Gobies in Lake and Wetland Habitats	Carl Ruetz
Matthew Breen	Relocation of PIT-tagged mottled sculpins: evaluating diel and seasonal recapture probabilities in a small Michigan stream	Carl Ruetz
Sarah McCormick	A Statistical Consulting Experience: Studying the Effectiveness of the Structured Learning Assistance Program	Neal Rogness, Rod Morgan
Cassandra Boadway	Effects of Ailanthus altissima root extract on root nodulation using Glycine max	Gary Greer, Dolli Lutes
Kristin Nelson	Zebra Mussel Distribution in Great Lakes Coastal Ecosystems: Are Wetlands Resistant to Invasion?	Carl Ruetz
Jeremy Newton	Venom Composition as an Indicator of Behavioral and Lifestyle Choices	Karel Rogers
Angelique Berens	Cancer Research	Rod Morgan
Patrick Collier	Pancreatic Islet Cell Transplantation as a Treatment for Type I Diabetes Mellitus	Patricia Matthews
Meredith Harleton	Effects of the Biological Pesticide, Bacillus thuringiensis israelensis, on Frog Larvae Development	Janet Vigna

New Faculty



Dr. Erik Nordman joined the Biology Department in August 2006 as an Assistant Professor of Natural Resources Management. He earned his Ph.D. in Forest and Natural Resources Management (Forest and Natural Resources Policy) from the State University of New York College of Environmental Science and Forestry at Syracuse (SUNY ESF). Dr. Nordman also earned his M.S. in Forest and Natural Resources Management (Forest Ecosystem Science) from SUNY ESF and a B.S. in Biology from the SUNY College at Geneseo.

Dr. Nordman has a wide range of research interests related to sustainability, environmental economics, and policy. His doctoral dissertation took him back to his native Long Island, New York, to investigate the environmental and locational attributes of undeveloped properties protected in an open space preservation program. He hopes to continue to his work in applying GIS to ecosystem service valuation and open space preservation here in West Michigan.

When not teaching classes in the NRM program, Dr. Nordman enjoys gardening and running in road and cross country races. He has completed several marathons, including a personal record (2:49) at the 2005 Mohawk Hudson River Marathon. Dr. Nordman now resides in Spring Lake with his wife, Jennifer, and daughter, Linnea.



Dr. Terri Weese is a plant systematist who joined the Biology department in August 2006 after spending two years on a post-doctoral research fellowship at the University of Utah. Dr. Weese earned her Ph. D. from Brigham Young University in 2004, and M. S. from North Carolina State University in 2000. Subsequent to completing her undergraduate degree at Grove City College, she worked as a 7th grade public school teacher in North Carolina for two years.

Professor Weese's research interests mainly center on plant evolution and domestication. During her post-doctoral research, she became interested in using DNA sequence data to infer the evolution, domestication, and migration patterns of eggplant out of Africa and into Asia. Other research interests include evolution and taxonomy within the *Phlox* family, floristic studies of local plant communities, and a recently initiated project to document the bacterial fauna of Michigan cherry wines.

Outside of the Biology department, Dr. Weese hopes to pursue other interests that include reading, cooking, and travel. She has been at least partially successful, and has recently returned from a holiday in Australia.

Highlights of Faculty Activity

The department had two faculty win significant awards from the university.



Professor Mark Luttenton, Ph.D., received the Outstanding Educator Award for 2006 given by the Grand Valley State University Alumni Association.



Professor Nancy Shontz, Ph.D., received the College of Liberal Arts and Sciences lifetime service award. Photo courtesy of M. Johnstone from the College of Liberal Arts and Sciences.

Carl Bajema gave a presentation on "Michigan's Legendary Logging Railroad Era: 1843-1964" at the Society of American Foresters Convention, Pittsburgh PA.

Shiela Blackman and **Mark Staves** presented a poster entitled *The integrin-binding peptide, RGD, causes cell death in intact suspension culture cells, but not protoplasts, of Daucus carota* at the American Society of Plant Biologists annual meeting

Stephen Burton published a paper entitled *Research partnerships: student, teacher and mentor* In the journal Michigan in Space and gave a presentation at the National Science Teachers Association meeting in Albuquerque, New Mexico.

Margaret Dietrich was a co-author with a student on a poster that was presented at the Annual Conference of the Society of Developmental Biology, Ann Arbor, Michigan. The poster was entitled *Mechanisms Underlying Hormone-Induced Changes in Plant Development – A Genetic Approach*.

Chris Dobson published a paper entitled *The biodiversity box: Inquiry science at the elementary level* in the MSTJ Journal another paper entitled *Becoming a science educator* in the journal Focus on Microbiology Education. He gave several presentations at local and regional meetings.

Jim Dunn published a paper, with two students, entitled *Diversity of Cicadellidae (Hemiptera) and Cercopidae (Hemiptera) on sand prairies of Newaygo Co., Michigan*. In the journal Great Lakes Entomologist. He was an author on two presentations at the Society for Conservation Biology annual meeting in San Jose, Ca. They were entitled *Dispersal behavior of the Karner blue butterfly* and *Evaluation of the population densities of the Karner blue butterfly by Distance*.

Gary Greer had a student present research at the Michigan Academy of Science, Arts and Letters entitled *Stimulated Growth of Azotobacter vinelandii by Root Extracts of Ailanthus altissima* and another student presented research at the McNair Scholars Conference in Pittsburgh PA entitled *Effect of Aqueous Root Extracts of Ailanthus altissima on Growth and Nodulation in Glycine max*.

Carol "Griff" Griffin gave a presentation entitled *Public Opinion of Proposed Wilderness in the Sleeping Bear Dunes National Lakeshore Area. Rethinking Protected Areas in a Changing World*, at the George Wright Society Annual Conference and had a student give a presentation entitled *Perceptions of North Country National Scenic Trail Visitors on the Huron-Manistee National Forest. Rethinking Protected Areas in a Changing World*, at the George Wright Society Annual Conference. She was a co-author on a paper entitled *Alternative Models for the Conservation of Koalas in Fragmented Rural-urban Landscapes: A Case Study from Ballarat, Victoria, Australia*, Published in Australian Ecology.

Bob Hollister was a co-author on two publications; one entitled *Soil thaw and temperature response to air warming varies by plant community: Results from an open-top chamber experiment in northern Alaska*, was published in the journal Arctic, Antarctic and Alpine Research and the other, entitled *Plant Community Responses to Experimental Warming Across the Tundra Biome* was published in the Proceedings of the National Academy of Science (PNAS). Dr. Hollister also received a National Science Foundation grant entitled the *Study of arctic ecosystem change in the IPY using the International Tundra Experiment*, the grant will fund research for three years.

Jodee Hunt was a co-author on a poster presentation entitled *Do male largemouth bass distinguish between brood predators and benign intruders? A test with models* at the Ecological & Evolutionary Ethology of Fishes (biannual international meeting) in Aliso Viejo, CA; and gave an oral presentation entitled *Parental investment in largemouth bass: effects of parental size & brood maturity* at the same meeting. She was also a co-author of a oral presentation entitled *Effects of manure & mulch soil amendments on plant biodiversity and density in urban riparian restoration* at the Michigan Space Grant Consortium Conference in Ann Arbor, MI.

Jann Joseph presented a paper entitled *Lessons Learned from four Years of University-School Collaborations in Science Education* at the National Science Teachers Association, Anaheim CA. She is co-director of an National Science Foundation (S-STEM) grant entitled *Support for Dynamic Students in Math, Science, Engineering and Computing* and co-director of a Michigan Department of Education's Improving Teacher Quality, Professional Development Program, Title II A grant entitled *A Sustainable Collaboration to Improve Content, Assessment, Reflection and Efficacy of Science Teachers*.

Michael Lombardo was a co-author on two presentations given at the North American Ornithological Conference in Veracruz, Mexico. One was entitled *A pan-American view of the influences of ecology and phylogeny on clutch size and the clutch size-laydate regression in Tachycineta swallows* and the other, with co-author **Patrick Thorpe**, was entitled *Captivity affects sperm production in House Sparrows (Passer domesticus)*

Mark Luttenton was a co-author on publications including an article entitled *Response of a lentic periphyton community to nutrient enrichment at low N:P ratios*, published in the Journal of Phycology and on an article entitled *The relationships among disturbance, substratum size, and periphyton community structure*, published in the journal Hydrobiologia. He was also the co-author on three presentations given at local and national science meetings including a presentation given at the North American Benthological Society in Anchorage, Alaska entitled *Changes in benthic macroinvertebrates in an impounded Michigan river following the introduction of zebra mussels and a large flow event*.

Neil MacDonald was a co-author on a publication entitled *Mid-spring burning reduces spotted knapweed and increases native grasses during an experimental grassland establishment in Michigan* in Restoration Ecology. He was also a co-author on a presentation entitled *Landfill cap soil and vegetation responses to municipal solid waste leachate applications* at the American Society of Agronomy-Crop Science Society of America-Soil Science Society of America Annual Meetings in Indianapolis, IN and another presentation entitled *Mid-spring burning reduces spotted knapweed and increases native grasses on a degraded, knapweed-infested site* at the Michigan Academy of Science, Arts, and Letters Annual Meeting in Auburn Hills, MI.

Regina McClinton had a student give a presentation on their research involving the identification of homologs to the subunits of katanin, a centrosomal protein at the Michigan Academy of Science, Arts, and Letters Annual Meeting.

Shaily Menon is a co-P.I. on an NSF-ADVANCE PAID Grant entitled *A GVSU-UM partnership for advancing women in science and engineering*.

Rod Morgan was a co-author on a poster presentation entitled *The enrichment and identification of diesel fuel-utilizing bacteria from lake sediments* at the General Meeting of The American Society for Microbiology, Orlando, FL.

Alex Nikitin was the co-author on five publications including an article entitled *Genetic identification of hatchery stocks of brown trout (*Salmo trutta*) using mitochondrial DNA polymorphism*, in the North American Journal of Fisheries Management and an article entitled *The Carpathian trail of pre-historic*

agricultural expansion in Europe: A survey of the genetic evidence. In: Trypillian Culture: Exploration, Findings, World Context. He was also the co-author of two presentations given at a national and international meeting.

Bruce Ostrow published a paper entitled *Bald eagle kills crow mobbing a hawk* in The Wilson Journal of Ornithology.

Karel Rogers was the President of the Board, West Michigan Environmental Action Council.

Heather Rueth gave a presentation entitled *Comparison of nutrient pools between a northern hardwood forest and red pine plantation in northern-lower Michigan*. at the Ecological Society of America Annual Meeting, Memphis TN. She was also a co-author on three papers published in the journals Biogeochemistry and Oecologia and in the book Global Change and Mountain Regions

Eric Snyder presented or was a co-author on 12 presentations at regional and national meetings including a presentation entitled *Measuring functional responses to stream restoration using in situ metabolism* at the Annual Meeting of the North American Benthological Society in Anchorage Alaska and a presentation entitled *Ecosystem response to stream sediment abatement measures in three Michigan streams* at the National Tribal Wildlife Conference in Bar Harbor, Maine. He also received another Tribal Wildlife Grant from the Little River Band of Ottawa Indians to study the watershed of the Manistee River.

Terri Weese was a co-author on two scientific publications. One entitled *Phylogeny and biogeography of the Canarian Solanum vespertilio and S. lidii (Solanaceae)* was published in Anales del Jardín Botánico de Madrid and the other, entitled *A three-gene study of phylogenetic relationships in Solanum* was published in Systematic Botany. She also gave a presentation entitled *Eggplant evolution: a phylogenetic analysis of the Solanum incanum / melongena species complex* at the International Solanaceae Conference, Madison, WI.