



PETROGLYPHS

NEWSLETTER

Second Issue
April 2011

Eastern Connecticut State University
Environmental Earth Science Department, <http://www.easternct.edu/environmental-earth-science/>

Message from the Chair

Drew Hyatt

Hello everyone and welcome to our second newsletter! It has been an eventful year, and we hope that you will find the following updates interesting as well as providing an opportunity to reflect on your time spent at Eastern. The pages within describe new student/faculty research activities, recent field trips and conference reports, personnel changes, and some important passings.

Leading off with the big news, our geographic information systems specialist, Dr. Roy Wilson, has announced his retirement after 22 years teaching at Eastern. Many of you have taken classes with Roy, but perhaps you do not know that it was his grantsmanship that secured funding to establish GIS at Eastern in the early 1990's. This was groundbreaking at the time as few, if any, geoscience programs had GIS courses, let alone a 3-course sequence. The importance of GIS has only grown with time, as GIS quickly became popular empowering students to go on to graduate school and/or industry. Roy of course has also guided the department for more than a decade as chair or assistant chair. This time period included several new hires (including yours truly), transition to the science building, co-chairing accreditation teams, as well as navigating a revised liberal arts mission for the institution. Roy's service as chair together with his efforts in GIS have contributed greatly to the EES program and we will certainly miss him, but wish him well in his move to Pittsburgh.

While many positive stories are contained within this newsletter, we also note with great sadness the passing of EES alumni and faculty. Eulogies for Dr. Mary Rogers, the original founder of the program, and remembrance on the untimely passing of Mr. Douglas Zimmerman (*class of 1980*) are given inside.

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Send us your Update

**"Educating the
Environmental
Geoscientists
of Tomorrow"**



Thanks for your hard work at Eastern!!!

Due to contractual limitations, Drs. Alessandro Zanazzi and Alla Smirnova will be leaving Eastern at the end of the current academic year. They have each worked very hard covering a number of critical courses in the major, contributing to student research, and a variety of workshops. As well, both have been excellent colleagues contributing to ongoing discussions on curriculum development and other matters in the department. We wish them well in their new pursuits and thank them for their contributions to the EES program.

Message from the Chair (continued)

Eastern continues to improve as an institution. For example, in fall 2010 we cracked the top 100 in World News Report rankings (the only CSU institution to do so). We continue to run our program with 8 faculty lines, although hiring freezes and economic conditions have resulted in several positions being maintained with contractually limited appointments. As such we must wish Drs. Zanazzi and Smirnova a fond farewell and thank them for their hard work in teaching a variety of courses in geoscience and energy. As well, we welcome our newest term-limited faculty member, Dr. Allison Weinstein (petrology, structural geology and introductory classes). Additionally, we are in the midst of several searches that will bring new faces to the department next year. It will be exciting to have new faculty as our number of students continues to grow. We have nearly doubled the number of majors over the past 3 years (118 as of my last counting), and the number of graduating students is rising (31 students in the past 2 years, which exceeds 2 year totals going back to 1997-98). Several recent EES students are in graduate school; others are K-12 teachers, or work as environmental scientists in CT and elsewhere. Some alumni teach classes at CSU institutions, e.g. Heath Carlson (class of 2002) at ECSU and Julie Rumrill (class of 2005) at SCSU. Jennifer Goyette (class of 2007), in addition to graduate school and working for ConocoPhillips in Alaska, has tried her hand at semi-pro women's football.

Lastly, I want to point out some new elements of this newsletter. Unlike last year, this newsletter primarily will be made available electronically. We have added a new alumni photo gallery that can be accessed from the Alumni Link on the EES homepage http://www.easternct.edu/~hyattj/EES_AlumniGallery/. These galleries include images taken over the past decade or so. **So ... enjoy the newsletter and take a moment when you finish to send us an email update on what you are doing for inclusion in the newsletter next year (see the last page for guidelines).**

EES FOUNDERS NIGHT — APRIL 17, 2010



Nearly 70 alumni and friends returned to Eastern last April for an evening celebrating the EES Founders Ray Smith, Sherm Clebnik, and Henry Snider. A wonderful night was had by all, beginning with an informal reception and facility tours in the science building followed by dinner and speeches in the student center. Of note, alumni Tim White (class of 81) shared memories and humorous anecdotes about his uncle Ray Smith and the role that Ray played in inspiring Tim to go on and become a professional geologist. Tim is now assistant director for collections and operations at the Yale Peabody Museum of Natural History. Similarly, Fred Johnson (class of 78) senior vice president for GEI Consultants, Inc. spoke fondly of all founders commenting on the value of the smaller class sizes and personal interaction with his professors while at Eastern. Fred recounted field trips and lessons learned not only in geology and preparation for graduate school but also on the importance placed in treating students as individuals. Other highlights included comments from President Núñez and Dean Cid. However, the floor really belonged to Sherm and Henry who extended their thanks for the events of the evening and their thoughts on how the department has grown through time. It really was a night to remember!

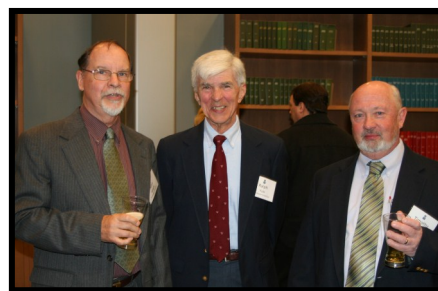




THE LEGACY CONTINUES

As you may recall from the last newsletter, the event honoring the EES founders also served as the beginning point to establish the EES founders fund which supports student research and travel to professional meetings.

Thanks to the generous contributions of about 30 EES alumni and others the fund has now reached the endowment level and as such provides funds to help our students in perpetuity. With continued growth the fund will enable us to take more students to professional meetings, develop more extensive field trips and provide greater support for undergraduate research. As of the writing of this piece the fund now has just over \$18,000. This is sufficient to provide more than \$500 per year for student research and travel. In fact, the founders fund helped to cover accommodation costs for three students at the Northeast-North central Geological Society of America meeting in Pittsburgh during spring break. Three faculty and seven students went to this meeting and one student, Toni Langevin, presented research on sedimentary records of environmental change in Ashford, CT.



While this is a great start, we hope to see support for the fund continue to grow. On a personal note, I contribute to this fund because I know that it makes a difference in supporting those students who are intent on pursuing careers related to their studies in EES. I encourage you to consider making a tax-deductible contribution to this fund of any size so future EES students can benefit from high-impact learning through undergraduate research, attendance and participation in future conferences, and organized field trips. If you have interest in contributing please contact Mr. Pete Dane, Associate Director of Institutional Advancement, at danep@easternct.edu or (860) 465-4513. Or, you may simply make a check or credit card donation, payable to The ECSU Foundation, Inc. and designated for "Founders of EES Fund", and mail to the foundation, 83 Windham Street, Willimantic, CT 06226.



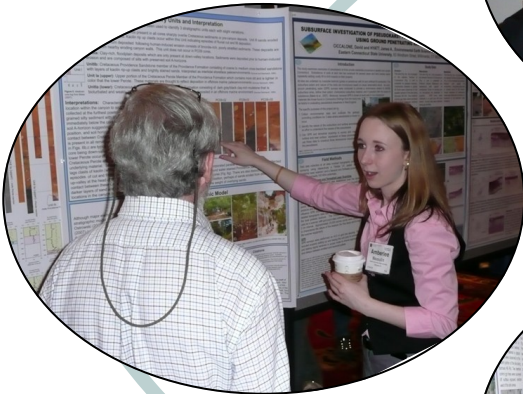
2010 Northeast Geological Society of America Meeting March 13, 2010—Baltimore, MD



On March 13, 2010, 11 EES students travelled with professors Peter Drzewiecki and Drew Hyatt to attend the 2010 Annual Northeast Geological Society of America Meeting in Baltimore, MD. After about 7 hours in a van enduring the professors' bad jokes, the group arrived at the Sheraton Downtown where the event was held. Students attended presentations, viewed posters, and talked with graduate school representatives over the 3-day meeting. They also got to see their professors lecture to an audience of peers – something that can be very eye-opening when seen for the first time.

Student attendees included David Ciccalone, David Cook, Jamie Duff, Sarah Edwards, Jessica Farrell, John Hansen, Daniel Lolos, Kelly Martin, Amberlee Nicoulin, William Oster, and Charles Stoloff. A number of students, including Ciccalone, Farrell, Martin, Nicoulin, Oster, and Stoloff presented posters of their undergraduate research. Several student presenters were surprised by a visit and friendly words of praise from Dr. Jean Bahr, then president of GSA. All the students benefited tremendously from experiencing their chosen major in a professional setting.

Drs. Hyatt and Drzewiecki also presented work of their own at the meeting, including both their research that involves undergraduate EES majors and online educational tools in geoscience being developed at Eastern.



2011 NE-NC Geological Society of America

Just back from the 2011 NE-NC Geological Society of America Meeting – Spring break provided the time for professors Peter Drzewiecki, Alison Weinstein, Drew Hyatt, and Roy Wilson to travel with 7 EES majors (Toni Langevin, Amberlee Nicoulin, Sarah Edwards, Brian Clark, Ewa Ogorzalek, Breton MacLeod, and Emily Lallier) to Pittsburgh, PA for the NE-NC GSA meeting. Faculty presented research related to carbonate mud mounds (PD) and virtual field trips (DH) while Toni Langevin presented a poster examining vibracore samples collected from a small pond at the Church Farm property in Ashford, CT.



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Despite the 10 hour drive and arriving back at 3:30 am, the meeting was a great success. Students felt that they learned a great deal about a variety of geologic topics and, more importantly, they have a better understanding of how professional meetings in the geosciences are run. Everyone also very much enjoyed visiting Pittsburgh, checking out the downtown area, and socializing with geologist from throughout the northeast and north central part of the country. It was a great meeting, and many thanks to the School of Arts and Science, Academic Affairs, AAUP union funds, and the new EES founders fund for making this possible.

2012 NE Geological Society of America Meeting

If you've wondered what a professional geological meeting is about, your chance to find out is coming. The 2012 Northeast Geological Society of America meeting will be in Hartford March 18-20, 2012 at the Hartford Marriott Downtown. The meeting theme focuses on 200 years of geology in the northeast, bringing together diverse studies in basic and applied geology. Information about the meeting may be obtained from the meeting website (<http://www.geosociety.org/Sections/ne/2012mtg/>). We certainly plan to attend with presentations by both faculty and students from Eastern. We hope to see you there.

GEOLOGICAL SOCIETY OF AMERICA

Meeting and Exhibition
October 31—November 3, 2010
Denver, Colorado

Written by **Tim Talley**
ECSU Public Relations Assistant

Willimantic, Conn. — Several Eastern Connecticut State University faculty members presented at the 122nd annual meeting and exhibition of the Geological Society of America (GSA), from Oct. 31—Nov. 3, 2010 in Denver, CO. Eastern presenters included Peter Drzewiecki, associate professor of Environmental Earth Science (EES) and secretary of the Limnogeology Division of the GSA, Fred Loxsom, Eastern's endowed chair of sustainable energy studies, Drew Hyatt, chair of the EES Department, and Alevtina Smirnova, assistant professor of Environmental Earth Science. More than 6,000 scientists attended the convention, which covered 156 topics including geochemistry, petrology, volcanology and alternative energy.

Drzewiecki presented with Hyatt on the data they collected from their research in modern alluvium at the bottom of Providence Canyon State Park in Georgia. Several EES students helped with the research.

"Through our presentation, we were able to generate substantial interest in our research," said Drzewiecki. "I was able to discuss ideas and create research collaborations with geologists from Ohio University and the University of Massachusetts for additional research I am conducting on rocks in central Connecticut. These discussions will drive the direction of my research for the next few years."

Hyatt presented a poster titled "Utilizing Interdisciplinary First-Year-Program Clusters and Interactive Media to Enhance Field-Based Learning in Connecticut and Georgia." Andy Jones, associate professor of visual arts, Craig Naudemec, media production specialist from media services, Lisa Curtiss, multimedia assistant from media services, and Drzewiecki contributed to the presentation.

"The conference was quite worthwhile both for feedback on the poster, but also because of growing interest in terrestrial laser scanning which we are now using with our students in EES," said Hyatt. "There were also opportunities to discuss media development with Wiley Publishing and to discuss research and program development with colleagues from many institutions."

Loxsom and Smirnova delivered a presentation on "Energy Education in the Geoscience Classroom: Preparing Future Citizens, Scientists and Policy Makers." With colleagues from other universities, Loxsom also presented workshops on electric vehicles, wind energy and a new course that he and Smirnova developed, called Methane Hydrates.

The GSA is the nation's premier organization for geologists of all disciplines, and its annual conventions provide a venue for geologists to present their research ideas to others and receive critical feedback.



A giant, environmentally-friendly blue bear, eavesdrops on the presentations in the Colorado Convention Center.

Sustainable Energy Symposium Report

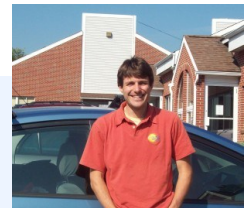
Fred Loxsom — Endowed Chair Sustainable Energy Studies



On Tuesday, November 30, more than 250 Eastern students participated in a Sustainable Energy Symposium at ECSU. Students presented the results of their research and study as posters, PowerPoint presentations, pamphlets, videos, and, in one case, as a musical performance. Topics ranged from analysis of environmental problems to the use of wind power, energy conservation, and renewable energy to reduce consumption of fossil fuel.

Many students, faculty, staff, and members of the Willimantic community attended the symposium to see the posters, talk to the student authors, and watch the presentations. President Elsa Núñez and Nancy Tinker, director of Facilities Management and Planning, were among those in attendance.

The students who presented at the Symposium are studying sustainable energy either as part of their liberal arts studies at ECSU or are in the process of completing the Energy Science track in the Environmental Earth Science BS program. The students are currently studying sustainable energy with Paul Sanderson, Jon Russell, Vishnu Khade, and Fred Loxsom. Dr. Loxsom is the Endowed Chair in Sustainable Energy Studies at Eastern.



In addition to the student presentations, Dan Britton from Sunlight Solar presented a lecture about his experiences working in Connecticut's Green Energy industry.

Bob Horrocks, Drew Hyatt, Bill Leahy, Denise Matthews, Bill Black, Joel Rosiene, Carol Williams, and Norma Vivar judged the student posters and presentations. The judges made awards for technical contents, communication, and originality. They also made awards for outstanding work by students in the introductory course, Sustainable Energy and the Environment, and outstanding work by students in advanced energy courses. The winning groups are listed below.



Award	Title	Student
Technical	Water Conservation	Olivia Puckett, Katie Kehoegreen, Nicole Rouillard, Katie Nystrom, Sheridan Vernon
Communication	Cape Wind Advantage	Robert Azukas, Joseph Cassella, Jonathan Holtzworth, Stefanie Paschen-May, Alexis Smith
Originality	Recycling in the Willimantic Community	Shannon Delahanty, Taylor Renaud, Lauren Biatowas
Outstanding Introductory	Cape Wind	Jordan Brayman, Katherine Cote, Justin Kessler, Karyssa Rodriguez, Jon Waldstein
Outstanding Advanced	Assessing Marine Hydrate Deposits	Ian McCary, Eric Lindquist, Connor Morrison, Christina Cedrone

Undergraduate Research



Nicole Gardner (center) and Jeff Brinklow (right) examine rocks on an EES-130 field trip.

Nicole Gardner – Nicole Gardner, a sophomore EES major, worked on a research project with Peter Drzewiecki during the summer of 2010 collecting spectral gamma radiation data from cores taken from the Portland Arkose in Hartford, CT. Natural radiation from the cores can be used to correlate lake beds from one core to the next, and provide a more rigid stratigraphic framework for interpreting facies distribution and Jurassic climate variations in the Hartford Basin. This technique is similar to correlating borehole gamma logs, but it utilizes a handheld Gamma-ray Spectrometer owned by Eastern's EES department. Gamma-ray data will be combined with geochemical data analyzed at UMass, which will provide information about temporal changes in lake salinity and biota, which reflect changes in climate.



Amberlee Nicoulin winches one of her research cores out of the ground at her field site in Georgia.

Amberlee Nicoulin – Amberlee Nicoulin, a senior EES major worked on a joint undergraduate research project with Drew Hyatt and Peter Drzewiecki examining cores taken along a stream in Providence Canyons State Park in southwestern Georgia. This site preserves one of the most spectacular examples of human induced erosion in the country, and Amberlee's project was aimed at understanding the sediment types and distribution that filled the bottom of one of the canyons. Amberlee collected her cores in the summer of 2009. During the 2009/10 academic year, she collected grain size, moisture content, and bulk density data in order to interpret the cores. She completed a research report and presented her results at the 2010 Northeast GSA meeting in Baltimore. Amberlee plans to attend graduate school.



William Oster III documenting down-stream transport of sand at his research field site in Georgia.

William Oster III – William Oster III is a recent graduate of the EES department and is now working on Master's Degree in Geology at Kansas University. During his senior year at Eastern, he completed an undergraduate research project with Peter Drzewiecki interpreting Ground Penetrating Radar (GPR) data of the sediment filling a canyon at Providence Canyons State Park in southwestern Georgia. He collected the data in the summer of 2009, and spent the 2009/10 academic year processing and interpreting a 3-D GPR record in order to better understand the stratigraphic architecture of the valley fill. His data were used to interpret the depositional history of the sediment. Will presented the results of his research project at the 2010 Northeast GSA meeting in Baltimore.

Undergraduate Research



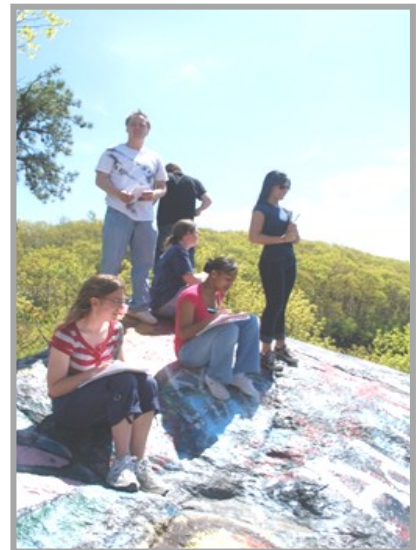
Toni Langevin – Graduating senior Toni Langevin has been conducting research that examines sedimentary records of environmental changes preserved in vibracore samples recovered from a small pond on the ECSU Church Farm property in Ashford, CT. Toni's study recognizes the presence of both natural changes involving river sedimentation and soil forming processes, as well as more recent human-induced changes that have conditioned sediments deposited in the pond since the early 1900's. One particularly interesting aspect of this work is that 210-Pb records of mass sediment loading to the pond indicates that local land use near the pond has been responsible for 3-fold increases in sedimentation in the pond until 1957 after which sedimentation rates decreased substantially.



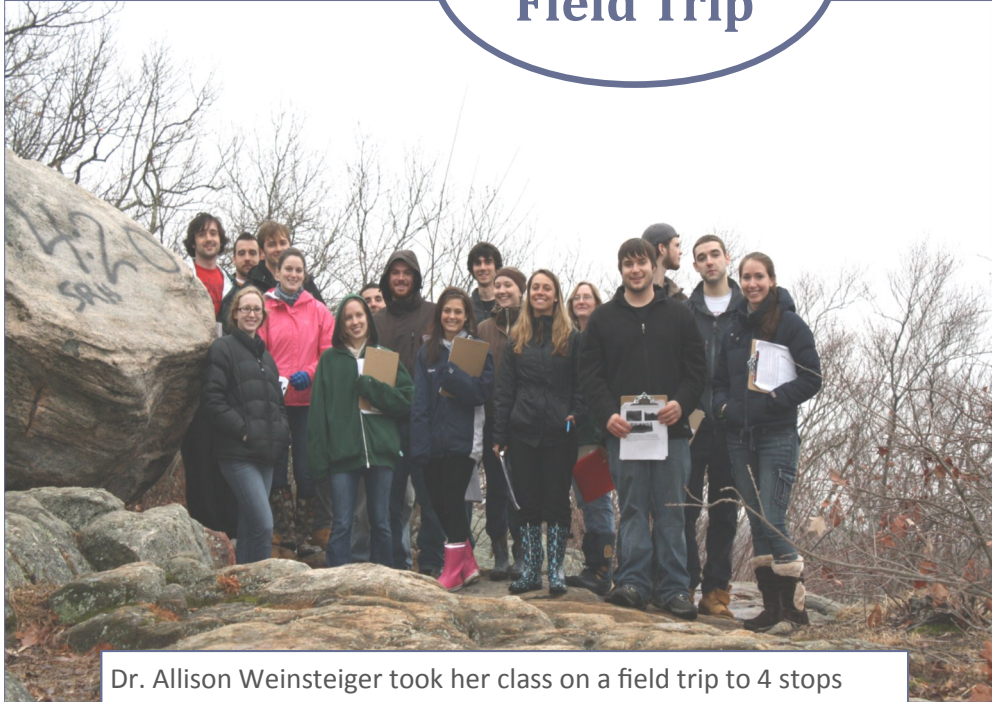
Mimi Cedrone, Ian McCary, Lindsey Belliveau – These EES majors have been conducting practicum work with Drew Hyatt learning how to collect survey data using a terrestrial laser scanner, pole photographic work for use with laser data, and test runs using ground penetrating radar through the ice at Andover Lake. Much of this work has been undertaken at Dinosaur State Park. The students have assisted in collecting approximately 200,000 survey points which will be used to build a three-dimensional computer model of the trackway. In addition vertical photographs collected from a 25 foot high pole will be used to texture the computer model in order to create a photo-realistic rendering of the survey space. The plan at this stage is to provide the park with a detailed map of the prints sometime in the summer. Follow up research will use 3D survey data to characterize individual trace fossil form in order to test whether forms produced by different individuals can be identified from the form indices alone.



**EES 130 and
EES 344
Field Trips**



EES 356 Field Trip



Dr. Allison Weinstein took her class on a field trip to 4 stops around the Willimantic Dome in Willimantic and Mansfield, CT. Students took strike and dip measurements of bedding planes, joints, dikes and various metamorphic fabrics.



Thanks for the Memories



GIS at Eastern Dr. Roy Wilson

Geographic Information Systems (GIS) began at Eastern in the early 90s. When I arrived here I was given the task of creating a GIS program. The first job was to obtain funds to build a computer laboratory. I was fortunate enough to get a grant from the high technology program of the state of Connecticut. These funds enabled us to purchase equipment and begin to build a lab. David Oyanadel of the data center and myself spent many weekends setting up a networked lab in Goddard. We had obtained the space when the computer science department moved to the new Webb Hall.

The first software we used was IDRISI, a raster based system that is strong on modeling and analysis. We eventually switched to ArcGIS, the market leader in GIS and the one which most students will encounter on the job. The state of Connecticut purchased a state license which enabled us to afford it. Over the years ESRI has added extensive vector and raster analysis capabilities to ArcInfo. It means the courses you may have taken a few years ago are much different than the present courses.

We now have a minor in GIS which consists of three courses: basic, advanced, and an applications course. With the recent increase in students we hopefully will add a remote sensing or geostatistics course to the minor. Two additional supporting science or computer science classes are also required. The objective of the minor is to enable our majors to use GIS to model environmental problems. Occasionally I have had a student who really gets into it and wants to be a GIS analyst. I encourage them to minor in computer science along with their EES major. It is a great background with which to work in the environmental field.

The emphasis in the program has always been on problem solving. After an introduction to basic concepts in the first course, the advanced and applications courses are a series of simulations and modeling problems. The system is not just used to make a map! The basic commands and procedures are quickly forgotten when a student graduates but how to use a problem solving approach in environmental analysis hopefully will stick. One of the nice things about this job over the years has been the terrific ideas students have come up with in their application projects. It is a challenge to both them and me to come up with some solutions.

It has been a wonderful experience to have taught GIS here at Eastern over the years. How can you beat a job in which the material is constantly changing, you have talented students and you get to work with smart people who are dedicated to their jobs? The next GIS person will be lucky to get this job.

**Retiring
June 1, 2011**

Faculty Updates



Allison Weinstein (2010—present)

Allison Weinstein joined the EES program this year, Fall Term 2010, to teach Mineral and Rock Analysis (a.k.a. Mineralogy and Petrology) and Earth Structure. Allison received a Master's from the University of Connecticut and a PhD from Oregon State University. At OSU, Allison was the Electron Microprobe technician and conducted quantitative and qualitative elemental analyses for researchers from a variety of departments, including Geology, Oceanography, Chemistry, and Material Science. Originally a Biology major, Allison's interest in Geology began when she took an Introduction to Geology class to fulfill a "General Education Credit" requirement.

Allison's current research focuses on the formation of oceanic crust at slow-spreading ridges. She uses microscopic textural analyses combined with mineral trace element analyses to determine the processes that lead to the formation of mid-ocean ridge basalts. Additionally, Allison sailed as a staff scientist on IODP Exp. 304 and is analyzing the gabbroic drill core samples to understand the mechanisms of crustal accommodation during periods of spreading dominated by low magmatic input. Outside of the classroom, Allison enjoys mineral collecting and takes frequent field trips around the state to investigate the geology.

This term, Allison Weinstein led several field trips around Connecticut. Students and their friends and family learned about the past mining history of Cobalt, CT while exploring the mine ruins and abandoned mine shafts. Students collected various mineral samples including muscovite, feldspar, and quartz. Students also learned about the structural and mineralogical history of East Haddam with a trip to Gillette's Castle. Lastly, students went to an abandoned pegmatite quarry in Haddam and collected excellent specimens of doubly-terminated tourmaline. This spring, Allison plans on leading more trips as well.



Group picture in front of deformed outcrop near the Eastern Boarder Fault, along the Connecticut River, East Haddam, CT. Steven Levesque, Chris Hamley, Anna Sauve and her nephew, Allison Weinstein and daughter Madeleine, Lindsey Belliveau and her brother. Photo by Keith Weinstein.



Catherine Carlson

Professor
of
Hydrogeology
and
Hydrology

The new year brings new opportunities for student research in hydrology. EES 450 Hydrological Research Methods, is being offered on a trial basis this Spring semester. The course will introduce students to collaborative hydrological research—laboratory, computer, and field research methods. In teams of two or three, students will design, conduct, and present their research projects. Four of the ten enrolled EES 450 students got a jump start on their projects. Lauren Daulizio and Toni Langevin used the Fall 2010 semester to set up the Hydrochemistry lab in preparation for their hydrochemistry research, earning credit for EES 480 Instrumental Methods in Hydrology. David Cook and Breton MacLeod both received Jean Thoresen Scholarship Awards for their proposed collaborative research project using heat as a tool to investigate groundwater/surface water interaction.

The Certificate in Environmental Management and Policy continues to attract students from outside EES, and is used as a stepping stone to the BGS in Environmental Management and Policy. However, our own Jeremy Willcox completed the Certificate this Fall and is using the Certificate and EES major to pursue graduate studies in environmental management next Fall. In the meantime, Jeremy applied for, and was offered, three external internships for the Spring semester, accepting the internship with the Connecticut Council of Environmental Quality.



Peter Drzewiecki

Associate Professor of Sedimentology & Stratigraphy

The 2009/2010 academic year has been a busy one for everyone in the EES Department! In fall 2009, I taught Oceanography and two sections of the Geology of National Parks. One of the National Parks sections was taught within the First-Year Program, and included a linked 1-credit course meant to help students adjust to life in college. Along with Dr. Nadin, I took students on a field trip to Rhode Island to examine rocks and structures that can't be easily observed in Connecticut. In spring 2010, I taught Ancient Environments and Sedimentology and Stratigraphy as usual. Both classes were my biggest yet. This is good news for the department, but it created a number of logistical problems in the classroom and on field trips. I also helped instruct a course in the Honors Program that taught students how to conduct research. Drew Hyatt and I took about 8 students to the local GSA meeting in Baltimore where a number presented their undergraduate research projects.

My main research focus this past year was working closely with Drew Hyatt and two EES students, William Oster and Amberlee Nicoulin, to interpret Ground Penetrating Radar and vibracore data collected in Georgia during the summer of 2009. We were able to image and characterize the nature of the sediment that fills a human-induced erosional canyon. I also continued working on the red beds of central CT. This past summer, I collaborated with geologists from Ohio University, The University of Tennessee, and the CT Geological Survey to collect geochemical, sedimentological, and gamma-ray spectrometer data for cores extracted for the lower Portland Formation in Hartford. This work, which also involved one EES student, Nichole Gardner, is an attempt to improve correlations among about 30 cores in the region, and to better understand the tectonic and climatic controls on Jurassic sedimentation in Connecticut.



During the fall of 2010, I was fortunate to be on sabbatic leave. I worked primarily with colleagues at the Connecticut State Geological Survey, trying to finish up some of the many projects we began over the past several years. It was a wonderful experience, and helped build some bridges that will provide EES majors with internship experiences at the Survey. My main accomplishments included writing portions of two papers, completing a geological map of the Hartford South Quadrangle, developing educational resources for the Connecticut State Geological Survey, and avoiding as many university obligations as possible.

On a personal note, I have begun running on a steady basis. I would like to say it was to improve my health, but I think it is more of a coping mechanism for having a teenager in the house now! I have also been doing a lot of camping, biking, and hiking with my son's Boy Scout troop, and have had to ward off bears in NH and coyotes in CT!

Drew Hyatt

Professor of Geomorphology

The past year has passed by in a blur! My understanding of busy has been redefined in a positive way, as I try to accustom myself to the challenges of the chairperson role. That said, I've really enjoyed myself. Field methods and process geomorphology ran in the fall and we got to use some of the new equipment including the ground penetrating radar and a terrestrial laser scanning (also called ground-based lidar).

I continue to enjoy the opportunity to work with our students on research. Last summer EES majors Erica Tefft and Toni Langevin conducted GPR work in Eastern's Arboretum as well as collecting vibracore samples from the Church Farm Pond. Toni just presented on her work at the NE-NC GSA meeting in Pittsburgh. In addition to these students, majors Lindsey Belliveau, Ian McCary, and Mimi Cedrone have been conducting practicum work helping out with scanning at Dinosaur State Park (DSP), and conducting radar surveys through the ice at Andover Lake. I also finally finished up some of the web work that enables people to undertake immersive virtual field trips to sites in Georgia (go to the following: <http://www.easternct.edu/~hyattj/Othersites/ArtRocksPCSP-ver1/> and click on Learning Module and look for hot links to view sediment cores, videos, virtual walks and flythroughs at Providence Canyon State Park). This web work is part of a larger Art Rocks project that will include an Art show at Quinebaug Community College in the fall of 2011, featuring art work by Andy Jones (designer of the CT quarter) and associated geological content.



Fred Loxsom

Endowed Chair of Sustainable Energy Studies



The new Energy Science track in EES has attracted many new majors and I have spent most of my time during the last year developing courses for the track and advising students in the program or supervising their projects. I am offering for the first time a course that introduces students to analysis and simulation software that is useful for understanding building and renewable system performance. Students in the energy track are interested in internship opportunities and summer jobs in energy geosciences and I have been developing more of these opportunities for them. Last spring I took a group of 10 students to Jamaica where we studied renewable energy and completed a service learning project where we installed a wind turbine at a high school near Montego Bay. This was an excellent experience for all the students and a logistical challenge for me.

At the beginning of the summer, I gave a pair of talks at the American Solar Energy Association annual meeting in Phoenix and took a day off to hike up and down the Grand Canyon and to learn about the geology of the canyon. I also took a course from BPI to become a certified Building Analyst; it was a good experience to be back in the classroom. During the fall, I worked with a faculty team supported by NSF and the National Association of Geoscience Teachers to offer an energy workshop at the GSA meeting in Denver. I also attended the American Association of Sustainability in Higher Education (AASHE) annual meeting (also in Denver) and presented two talks about the Eastern Sustainable Energy program. Currently I am working with Alicia Demaio, a senior EES major, on a project supported by the Connecticut Clean Energy Fund (CCF) to monitor the performance of a low-cost solar hot water system to be installed on campus this spring.



As we near Earth Day, Norma Vivar (my technical assistant) and I are launching a series of energy-related activities, including a symposium, a lecture, a book discussion, and a trail run. Two of my students are completing internships this semester, one with a non-profit group in Willimantic, and another back in his home town in New Jersey. A third student is working on his honors project involving geothermal heat pump systems. Two other students will be engaged in internships this summer, one at the Millstone nuclear plant and one with the state Geological Survey working on a geothermal energy project. I am looking forward to the summer when I plan to start writing a textbook in energy geosciences.

Former EES Alums News

William G. Warzecha (*Graduated 1976*) Since graduating from Eastern, I worked in the environmental health field at the state, local and health district level. In 1983, I was hired as a geologist with the CT DEP serving as the geologist/hydrogeologist for the CT Environmental review teams. In the early 1990's I transferred to what is now the DEP's Remediation Division becoming a supervisor in 1997. I received a Master's degree in Environmental Management & Policy in 1997 from Rensselaer Polytechnic Institute. I reside in Norwich, CT with my wife Kathy and daughter's Emma and Haley.

Pete Wilson (*Graduated 1976*)—While I would love to say I have been employed in the field for which I received my degree, that is not the case. I can only say the degree, with its science based curriculum, did help place me in my current position. I have been employed at 3M Purification (formerly CUNO Inc.) in Meriden, CT for over 30 years in the Technical Services group as a Senior Sales Specialist. I will admit that Geology always has, and always will be an interest of mine. Over the past several years my wife and I have traveled through many of our National Parks in CA, AZ, UT and WY. Besides observing the stunning and spectacular vistas, having an understanding of how the forces of nature created those landmarks, only added to my enjoyment. You can look at all the books and travel videos you want, but until you see the Grand Canyon, the Tetons and Yellowstone in person, they cannot be fully appreciated. I am very lucky to say I was taught by Professors Henry Snider and Sherman Clebник. However, it was the late Raymond Smith who was both my teacher and advisor, and guided me through the curriculum. 35 years later I still have fond memories of a June 1975 field trip, as Dr. Smith led us through 5 northeastern states. It helped drive home the fact that fossils don't really come in a box, but rather are found in a road cut or coal mine. The evenings sitting around a campfire sipping a beer (sometimes in the rain), just added to the memories.

Frank Bartolomeo—(Environmental Analyst III DEP- Site Assessment and Support Unit)—I *graduated in 1978* with a bachelor's degree in EES and a secondary education minor. I have worked the Department of Environmental Protection for the last 23 years. Our program performs subsurface assessments at sites looking for or delineating pollution. We have done demonstrations in the past at Eastern (Installing test wells or soil cores with our Geoprobe) and are open to future events, if you wish.

Cynthia (Cindy) Gianfrancesco (*Graduated 1988*)—I am a Principal Environmental Scientist with the Rhode Island Department of Environmental Management (RIDEM) where I have been employed for over 21 years. I currently manage the RIDEM Targeted Brownfields Assessment program which conducts environmental assessments of contaminated sites. I have also served on the Situate Conservation Commission for the past 5 years.

Joel Bolduc (*Class of 1992*)—After I left Eastern in 1992, I worked 2 years at the CT DEP, 3 years doing air consulting, 6 years at a pulp and paper mill in Pensacola FL, and the last 4 years as Environmental Manager at a cement plant in Colorado. In 1999, I obtained a Masters of Environmental Management from Duke University. I noted you have a new track in sustainable energy science – that is great. We recently opened a 108 kW solar photovoltaic system at our plant. It is about the size of a football field. A cement plant is a large consumer of electricity (our peak demand is 35 MW) so green energy is important to use in the long run. In addition, climate change is a big issue for us as the calcination and combustion processes generate large amounts of CO₂. I am working right now on developing a spreadsheet to calculate CO₂-equivalent emissions since the new EPA GHG reporting rule requires us to report CO₂ for the 2010 year by March 2011. Beyond managing day-to-day compliance with water usage, storm-water, haz waste, recycling, air emissions/permitting etc. I have been involved with some interesting projects at our plant. We have opened a public nature trail in a former gravel pit that has been reclaimed into a beautiful wetlands area. Last year we distributed 4,000 CFL's to the local community and offered a \$5000 employee reimbursement for the purchase of a hybrid vehicle. Times are difficult now; however, I would be interesting in talking to my employer and yourself about setting up an internship in the future. Perhaps a co-op. I did two co-ops while at Eastern and they were greatly beneficial. It is great to hear of the changes at Eastern. I remember all of the professors mentioned in your letter well, especially Dr. Clebник and his glacial geology course. Good luck with the changes!

Jesse Gawrys—After graduation in *May of '98* I took a temporary field tech position with Normandeau Associates, Bedford NH. I spent the better part of 6 months working on a fish kill study to measure the temperature of the cooling water discharged from the 5 major Con-Edison power plants in NYC. In early '99 I decided working inside was a better fit for me. I spent 2 years working for a start up bio-tech company in Beverly MA in their buffer/media production labs until the company folded its US operations. After a brief layoff I went to work for a transportation company based in N. Billerica MA as the remediation project manager. After spending more time in lawyer's offices and court rooms I decided it was time to move on to where I am now. I am currently a Site Environmental Associate III at Genzyme Corporation, a biotech company in Cambridge Ma. My responsibilities include overall site environmental compliance management as well as project contributor for 2 USGBC LEED certified New Construction buildings, one Platinum and the other Gold. My current endeavors include implementation of a combined ISO 14001 / OHSAS 1800 Management System and management overall site environmental compliance. I have been lucky enough to continue professional development becoming a US Army Corps of Engineers Certified Wetlands Delineator, State of Massachusetts Toxics Reduction Planner, ISO 14001:2004 Environmental Management Systems Lead Auditor and I am currently in the process of training to become a Certified Environmental Manager (CEM).

Holly S. Eccleston (*Class of 1996*)—I am a Materials Engineer, Business Area Expert Representative Materials Characterization & Chemical Processes, Pratt & Whitney. I have been living in East Haddam. My house is located in the area of the Eight Mile River and Burnham Brook Nature Conservancy. I remember Dr. Clebnik every time I see an outcrop or erratic:)

Stephany Smith (*Class of 2004*)—I am a Junior Planner for the consultant engineering firm CME Associates, Inc. in my home town of Woodstock, CT. My responsibilities include environmental permitting, GIS Mapping, and permitting and project tracking for the CT DOT engineering liaison program for CME's E. Hartford branch. I have worked at CME for nearly 6 years now. I started as an intern while finishing my last year at Eastern. When I first began working at CME, I mostly dealt with environmental site assessments and report writing. Today, I am working more in the permitting and planning aspects of environmental consulting. I am engaged and busy planning my October 2, 2010 wedding with my fiancé Charlie Dubina. We hope to visit Crater Lake National Park in Oregon on our honeymoon; a geologic site I have always wanted to see first hand.

Jennifer LaFlamme (*Class of 2008*)—After graduation, I was hired by Fuss & O'Neill as a hydrogeologist, conducting the same activities I am currently doing, which is mainly groundwater sampling. In February '09 I was laid off, but quickly picked up by Apex. in South Windsor where I am an Environmental Scientist. Pretty soon I will be working my way into the office to assist project manager on various environmental remediations. I'm living happily in Ellington with my boyfriend Greg, our boxer, Rex, and our cat Lily.

Bethany Busch (*Class of 2009*)—I am currently an aquatic lab technician at New England Bioassay, a division of GZA GeoEnvironmental. I was hired as a temp, but it is looking like they will be hiring me as a permanent employee.

Daniel Lolos (*Graduated 2010*)—Upon completion of a B.S. of Environmental Earth Science at ECSU, I now am enrolled in a M.S. of Geosciences program at the UConn. Currently, I am receiving a full tuition waiver and a \$20,000/year stipend to work as a Teaching Assistant for the Geosciences Department. I also continue to work seasonally for the U.S. Geological Survey's Student Career Employment Program as a Hydrological Technician, in the Water Resources Division at East Harford, CT. My current Master's Thesis project at the UConn consists of investigating global faunal disappearances from the stratigraphic record across the Frasnian-Famennian stage boundary (approx. 367Ma) of the Late Devonian Period mass extinction event.

Christopher Manzi (*Graduated 2010*)—I am currently working as a Field Chemist for EQ Northeast out of Wrentham, MA. Although the office is located in MA the majority of the clients I deal with are in Connecticut. EQ Northeast is an industrial hygiene and remediation company with branches all over the United States. I work in the Lab-pack department. My job is to sample, identify, profile, segregate, label, and making ready for shipping (following all DOT and EPA regulations) of chemicals that need to be disposed of. Although not in the realm of EES it is good experience until more jobs open up in geology related business.



Jen Goyette—Update

I spent the summer in Anchorage, Alaska, completing an internship with ConocoPhillips Alaska Development, and the fall in Houston, TX, doing another internship with ExxonMobil Upstream Research Company. The internships were amazing experiences both personally and professionally. I climbed many mountains in Alaska with my dog Dexter, ran into numerous moose, and ate tons of fresh salmon and halibut. My project for ConocoPhillips involved studying faults, and called heavily upon my GIS experience that I gained during my undergraduate career at ECSU. Houston proved to be a very different environment than Anchorage, but was equally rewarding. Houston is a culturally diverse city with outstanding museums, theaters, and my personal favorite, restaurants. Although there were no mountains to be climbed, I joined several softball leagues, played full-contact flag football (got recruited for women's professional football), and ran the only trails I could find in the city.

My internship project for ExxonMobil was more research based and involved studying mechanisms of fracture formation and fracture distributions with implications for predicting natural fractures in the subsurface. Both internships opened up many career opportunities leading to my recent decision to take a permanent position with ConocoPhillips Alaska starting August 1, 2011. I am now back in Laramie, WY, finishing my master's degree in structural geology at the University of Wyoming. I will defend my thesis at the end of April, and graduate in the beginning of May. I will likely spend some time with my family in CT during the summer before starting my new position in the fall.

Jen Goyette
Outstanding EES Student
2007 & 2008

In Memoriam



Douglas Craig Zimmerman
Graduated from ECSU in 1980 with a degree in Environmental Earth Science.



ZIMMERMAN, Douglas Craig Douglas Craig Zimmerman, age 52, Woodstock Valley, CT On June 8, 2010, Doug collapsed while on a lunchtime run. Medics were unable to revive him. Doug was born happy in Beverly, MA on July 26, 1957. He graduated from Penney High School in E. Hartford CT in 1975 and from Eastern CT State University in 1980 with a degree in Environmental Earth Science. His career in public service spanned 27 years with the CT Dept. of Environmental Protection. Doug started at DEP as an intern, then became a hazardous waste inspector, and ultimately his hard work and technical skills were rewarded by promotion to Supervising Environmental Analyst. In college, he was co-President of the Outing Club, and later he volunteered for 8 years with the Woodstock Historical Society as Vice President and Program Chair. Doug was an avid mountaineer, rock and ice climber. From the time he was a young boy, he loved the outdoors, and hiked the trails in CT, NH, and NY with his father, brother, and friends. He went on to become a technical mountain climber. With his climbing buddies, he traveled to various places in the U.S, Canada, Alaska, and Peru. Doug and his friends Bob Plucenik and Doug Bonoff were first ever to conquer South Kennedy in the Yukon Territory in Canada. Bob commented that, of all the men he climbed with, Doug was the one he trusted most to be there when needed.

Doug was also a reckless softball player, giving all he could to help his team. He dislocated his shoulder three times flinging himself after balls. He could fix just about anything. No task was too big for him to tackle. He was always there for his wife, family, friends, co-workers and neighbors, ready to lend a helping hand. He had a great sense of humor and lived life with gusto.

Remembering Mary Rogers



Prof. Mary Rogers Beckert, retired Professor of Astronomy, passed away on December 2, 2010. She will live on the memories of many in the Willimantic and Storrs communities for her indomitable spirit, and lifelong work towards improving science education, equal rights for women, and higher education opportunities for all—*Dean Carmen Cid*

In the history of Eastern Connecticut State University there have been faculty members who stand out in the memories of those who knew and taught with them, faculty who played a major role in the development of the University as it exists today, faculty who were held in high regard for both the quality of their service to the University and for who they were as colleagues. Mary Rogers Beckert, who passed away last week at the age of ninety three, was such a person.



Mary Rogers Beckert laid the foundation for both the Department of Physical Sciences and the Department of Environmental Earth Sciences at Eastern. When I came to Willimantic State College in the fall of 1966 to teach physics, all science lab courses were taught in three rooms on the second floor of Shafer Hall. One room was used to teach biology, a second was dedicated to science education under the direction of Robert Wickware, who would become Dean of the College, and after whom the Wickware Planetarium is named, and in the third room, Mary's room, all the other sciences were taught. It was a time before departments existed here. When departments were formed, she became the first Chairperson of the Department of Earth and Physical Sciences. With the major emphasis on teacher education at the College at that time, all students were required to take two semesters of biology in their freshman year and a year long course in the physical and earth sciences as sophomores. The sophomore course was Mary's course. In it she taught astronomy, meteorology, geology, chemistry and physics. The year before I came, Max Ferguson was hired to teach additional courses in chemistry, and in my first year, a geologist and I were hired to teach in our respective specialties. Mary continued to teach the required sophomore course.

In the spring of 1967 we moved to the then new, now the old science building, Goddard Hall. It was the second building on the North Campus and was referred to somewhat enviously by a member of the English Faculty as "that temple of science with its priests and priestesses." Mary was instrumental in the design and the equipping of the second floor of the building, in which she included a faculty lounge with men's and women's showers for those wanting such facilities after geology and biology field trips. She managed to obtain the maximum amount of equipment for her part of the new building with the funds available by ordering many of the pieces of physics equipment as kits to be assembled. I spent a good part of that semester soldering and assembling those kits. Mary would check in occasionally and see how I was doing.

In the early 1970's money became available to build the Science Annex, now known as the Planetarium. In addition to being involved in the design of that facility, Mary became the first Planetarium Director. In that role she expanded the Planetarium's use to the way it functions today, used not only in the teaching of astronomy but also as a facility that presents programs to the public and surrounding school system classes. Back then, she did both the teaching and the presenting.

Mary was highly respected by both faculty and students alike, for her competence as a teacher, for her willingness to go the extra mile for the benefit of her students, and for who she was as a person. She was someone who would downplay her own achievements and accomplishments in favor of those of her colleagues. Yet, if something needed to be said or done, she could be forceful when she thought she needed to be. She would knock on the office door of anyone in the administration, including the President, if she decided that person needed to hear something she thought important. When I asked her if I could change some of the items on her equipment order list for Goddard Hall in order to obtain equipment I needed in general physics, she of course agreed, but said I should give my changes to the then Business Manager. He was a crusty, older gentleman, who with secretarial help, conducted the financial matters of the College as essentially a one person show. When I mentioned Mary's name in relation to the list, I heard him say to himself "that damned woman." That alone, is a tribute to who Mary was. She had obviously knocked on his door a number of times in relation to Goddard Hall.

Mary was also a mentor to younger faculty members such as myself. Fresh out of graduate school, I benefited greatly from her advice and experience as an educator. Her suggestions as to how I might improve my teaching were always presented in a constructive and considerate way. The number of faculty and staff at Eastern who knew Mary has diminished over the years since her retirement in 1989. If there have been legendary members of the faculty at this University, then Mary Rogers Beckert is surely one of them. However, the highest accolade I can give her is that she was first and foremost a teacher, a teacher who cared about her students and colleagues and gave them the best she had.

*Tim Swanson, Chairperson
Department of Physical Sciences*



Send us your Updates for Future Newsletters

We would very much like to include more updates from former EES students in our next newsletter (the 2010-11 academic year). Also, we are always interested in knowing what people are up to now.

If you would like to contribute, please e-mail responses to the following questions to either Zosia (carlquitz@easternct.edu) or myself (hyattj@easternct.edu).

All the best for a great year! Drew Hyatt, Chairperson, Department of Environmental Earth Science.



To help us build the next newsletter, please send the following:


1. Name, graduation year, current e-mail address.
2. Tell us what you do now (and if you are ok with our including this information in the newsletter).
3. A brief paragraph updating us on what has happened to you since graduating (or over the last year, if you submitted a response for the current newsletter).

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