Letter from the Chair 2012

I hope this newsletter finds you well! It was fun seeing many of you at the UWEC Geology reunion at GSA-Minneapolis! Our alumni are doing great things, and this reflects well on our program.

Our program is more relevant than ever to the lives of people living in western Wisconsin. The top story of 2011 in the Eau Claire Leader-Telegram was frac sand exploration and mining (see separate newsletter article). Our students are being hired by Wisconsin sand-mining firms and environmental consulting firms producing reclamation plans. Eventually the DNR will need to hire people to supervise this new industry. This is a good situation for our department during times of budgetary contraction. We are also starting to see donations to the department from the frac sand patch.

Some exciting news – we just purchased three new Suburbs to replace the Yukon and truck! Yes, it is true! This has been a major issue since the demise of the University Fleet. With these vehicles, we will be able to cover the core of our fall and spring class field trips without having to operate “Enterprise Rental Car-North” in the Phillips Hall loading dock. Unlike the rentals, the Suburbs also will be able to pull trailers to support class field trips/field camp experiences in New Mexico, Montana, Rocky Mountains, UP Michigan, and South Dakota. (We just purchased three new trailers with a $5000 donation from Fairmont Minerals.) Now that vehicles have arrived, I can now turn my attention to writing the self-study report for accreditation.

Several faculty members have been away from the classroom this year. Lori Snyder took a leave of absence during the full academic year. In addition, Brian Mahoney was on sabbatical during fall semester. And not only that, but our UWEC Geology family grew by one in July as Katherine Grote and her husband welcomed a new baby boy into their family! Katherine took a full year leave of absence during the 2011-12 academic year to be a mommy, and she seems to be enjoying that time! (I thought she would miss all the grading…!) We were fortunate to hire Dr. Alan Gishlick, Dr. Reza Namdar Ghanbari, and Ms. Bridget Kelly (UWEC Geology 2009) to teach classes.

Campus is in the midst of MANY changes. Our chancellor has left for a new position in Utah. We now have a new interim dean after a failed search. A huge new Davies Center is rising between Phillips Hall and the Nursing building to the west. The old Davies Center and Campus School are currently being demolished, and a new Education building will be built on the Campus School site. These new buildings represent the first major changes in the look of the campus in twenty years.

Students and faculty continue to do wonderful things! Students (with faculty mentors) have been researching Neogene basin evolution in Argentina (Mahoney), salt in storm water and snow melt runoff (Kelly), glacial geomorphology in Wisconsin state park (Syverson), deformation history of Coast Plutonic Complex in British Columbia (Pignotta), geologic misconceptions and miscommunications (Clark), and the geochemistry of obsidian and kimberlitic diatremes (Ihinger). Audrey Mohr-Boerner (2011) went to University of Nebraska on a fellowship, and recently she received an NSF Graduate Research Fellowship. Giselle Conde (2012) was recently named a Fulbright Scholar, which I believe is a first for our department. She will spend a year studying the geochemistry of lava flows in Iceland. It’s been a great year!

I hope this newsletter finds you well! It was fun seeing many of you at the UWEC Geology reunion at GSA-Minneapolis! Our alumni are doing great things, and this reflects well on our program.

Budgetary times.

Chancellors and deans come and go. Buildings change. However, our UWEC Geology alumni remain a firmly committed, enthusiastic bunch! Your continued donations support our field program for undergraduates, fund valuable scholarships to defray ever-rising tuition expenses, and allow students to present research results at regional and national conferences. Alumni who send job announcements and speak for our Earth Science Seminar Series help our students see the world beyond the campus walls. Thanks for your support!

If you are ever in the Eau Claire area, please stop by and visit us!

KMS
Rocky Mountain Field Studies — Summer ’11

By Robert Hooper

I taught Geol 303 (Rocky Mountain Field Studies) alone this past year, but because I only had ten students, it went very smoothly as long as everyone was willing to “go with the flow”. I had a great mix of majors and non-majors, and everyone on the trip came with the right equipment to survive almost any weather situation. Memorial Day weekend we spent holed up at Center Fork campground, the only one “open” in the Bighorns. We had great weather for the stratigraphic section in Tensleep Canyon, but we returned to the east side just in time for it to start snowing. And snow it did! About 12 inches the first night and then it just kept snowing for the next two days. Because the temperature was about 32 degrees, the snow kept compacting so it rarely exceeded 20” at any one time. However, it definitely covered most of the rock exposures and made travel almost impossible. The locals all thought we were crazy but we had abundant food, dry tents and a cover over the cooking area. The other local campers all left and gave us more wood than we could possible burn in a weekend, so we made the best of what we had.

We got to the Tetons and were the first people to camp on the group loop which had just been plowed. The snowpack was deep everywhere so I added some new projects, one of which worked very well in the thin-skin (Sevier Orogeny) thrust belt exposed in Hoback Canyon. Yellowstone was also snowy. However, we hiked up Specimen Ridge, along the Firehole, and to the top of Mt Everts. We did cut the Firehole walk short when we found a bison carcass on which wolves, black bears, and grizzly bears had all been actively feeding. I had no intention of staying around a grizzly bear food source, so we made much noise on the way back to the parking lot! We did see wolf and coyote interactions for the second year in a row, and we also saw a grizzly that had just taken out one of the elk calves in the Lamar River valley. We saw many moose, including a moose swimming in the Jackson River. It was a great year for wildlife but not quite as good for rocks. This 2012 trip looks much more promising with a thinner snowpack in the Rockies.

Top 2011 Story in Eau Claire Leader-Telegram – Frac Sand Geology in Western Wisconsin

by Kent M. Syverson

Two cranes are visible in Barron County when driving north on Highway 53. A $70 million processing plant is built on the north side of Chippewa Falls. People in Eau Claire encounter trains on their way to work and hear train whistles more frequently. Job fairs to attract hundreds of people in a snowstorm. Geology is a front-page news story once or twice each week. This is the “new normal” in western Wisconsin. The frac sand mining industry has brought jobs, train traffic, and political controversy.

Sand companies are flocking to western Wisconsin to obtain the round, strong quartz grains in the Wonewoc, Jordan, and Mt. Simon formation sandstones. The sand is used in the hydraulic fracturing (“fracking”) process to enhance oil and natural gas recovery in places such as North Dakota, Texas, and Pennsylvania.

The new sand boom started in Dunn and Chippewa counties, then spread to Barron, Buffalo, Clark, Eau Claire, Jackson, and Trempealeau counties. At this time, 60+ new mines are operating or proposed in western Wisconsin, and that number is likely to grow. Many of these mines have $25 to $30 million wet and dry processing plants associated with them.

These companies are hiring our graduates — eight alumni and counting... UWEC Geology alumni work for firms such as Fairmount Minerals, Great Northern Sands, Preferred Sands, and Procore. In addition, our alumni perform services for frac sand companies at engineering consulting firms such as SEH Inc. in Chippewa Falls. Our students also are involved in research projects studying the attributes of frac sand units.

Controversy has come with the frac sand mining industry as well. Rural township and county boards have felt overwhelmed by the advent of industrial activity in areas long dominated by agriculture. Residents have expressed serious concerns about noise, dust, sand truck traffic, road degradation, and ground-water extraction. These issues have led to temporary mining moratoria in some townships and Buffalo, Dunn, and Eau Claire counties.

How much longer the sand exploration boom will last is uncertain. However, a new geology-based industry has arrived western Wisconsin. Our Dept. of Geology hopes to place many students in geology/management positions in the frac sand industry.
FIELD CAMP I – NEW MEXICO  
By J. Brian Mahoney

This year Mahoney and Pignotta took sixteen students on our annual pilgrimage to Kingston, NM. Life is good when you have nice weather and clear pavement for three solid weeks. We could not have asked for anything better! Olivia Iverson was our teaching assistant, along with Kris Benusa who joined us pro bono just because he likes the rocks so much. Both were invaluable and helped us provide a tremendous educational experience.

The Black Range Lodge was great, enhanced this year by the addition of two Straw Bale interns, Joele and Alexor, plus the amazing miniature dancing dog, Sophia. Scott Clark joined the group for the last half of the program, and his amazingly bright safety vest gave the field crews something to focus on throughout the day. Group camaraderie was wonderful, and everyone enjoyed watching Ian deal with his continually ripping pants and Josh surfing in the desert boat in Apache Gap. The Chino mine tour was excellent as always, and Olivia was offered an internship this summer after discussing with Andy Lande, the Chief Mine Geologist. Our department produces high-quality students who are much in demand, and that reputation is earned by the ongoing hard work of students and faculty alike.

No New Mexico field camp would be complete without one or several stops at the Frontier Restaurant in Albuquerque, and we made sure to stop on our way north for huevos rancheros and to collect several pounds of New Mexico roasted chiles. Life is good...

FIELD CAMP II – MONTANA  
By J. Brian Mahoney

Montana is such a magnificent place. How can anyone on earth not absolutely love spending three weeks mapping the glorious geology of Montana? Despite some minor challenges (2-3 inches of snow at the Iron Wheel Ranch, snow on the surrounding valley floors, and serious snow accumulation in the high country that shut us down for three days), everything went off without a hitch!

We had a small crew this year (n=10) as some students accepted permanent jobs before field camp. This provided some much needed flexibility as we had to deal with some relatively significant weather challenges.

Geology Field Trip to Blue Hills Felsenmeer in September  
By Kent Syverson

I will be leading a field trip to the Blue Hills Felsenmeer State Natural Area on Saturday, Sept. 22, 2012. The Felsenmeer is a truly unique place in the State of Wisconsin, and I have received many inquiries about the origin of the Blue Hills Felsenmeer. In addition, September should be the ideal time to visit the Felsenmeer (typically many bugs have died and leaves have started turning).

This field trip through UWEC Continuing Education will be different from my other field trips – it will involve some hiking away from the bus to reach the Felsenmeer. If you have never seen the Felsenmeer, this is a good opportunity because the site is not extremely easy to find…! http://www.uwec.edu/CE/programs/BlueHills.htm

Participants in the field trip can join the trip in either Eau Claire or in Cameron (see the link). Participants who travel from Eau Claire will have the chance to hear a discussion of frac sand controversies as we travel through Chippewa and Barron Counties.

If interested, feel free to register for the field trip at the CE website (or call 715-836-3636 • Toll Free: 1-866-893-2423, cost $125). In addition, feel free to pass this information along to family and/or friends who might be interested. It would be nice to have some Geology alumni on the trip!

However, unexpected challenges can lead to new opportunities, such as our discovery of a pretty decent upper Paleozoic stratigraphic section on the east side of the Devil’s Fence anticlinorium that will be a future fall-back plan! Geoff Pignotta and Olivia Iverson provided excellent guidance at the start of the field camp, and Scott Clark, in his first appearance at the Montana field camp, was invaluable during the latter part of the course. Mahoney, of course, was just there.

We had a great tour of the Golden Sun light mine with our gracious host Nancy Oyer, who provided a wonderful tour and some great insight into the power of Vulcan. We collected a zircon sample from the latite, some great insight into the power of Vulcan. Oyer, who provided a wonderful tour and some great insight into the power of Vulcan. Oyer, who provided a wonderful tour and some great insight into the power of Vulcan. Oyer, who provided a wonderful tour and some great insight into the power of Vulcan. Oyer, who provided a wonderful tour and some great insight into the power of Vulcan. Oyer, who provided a wonderful tour and some great insight into the power of Vulcan. Oyer, who provided a wonderful tour and some great insight into the power of Vulc...
1. Nate Nushart exiting a helicopter at Howe Lake, BC, during summer 2011 fieldwork investigating early Mesozoic strain in the Coast Plutonic Complex. (GSP)

2. Will Ostrenga and Nate Nushart taking fabric and magnetic susceptibility measurements in the Howe Lake Intrusive Suite in the Coast Mountains of British Columbia, summer 2011. (GSP)

3. Soon-to-be Fulbright Scholar, Giselle Conde, analyzing obsidian samples on the UW-Eau Claire FTIR. (PDI)

4. Ian Freeman and Becca Moore presented their glacial geology study of Straight Lake State Park at national GSA in Minneapolis. (KMS)

5. Kathryn Grant and Tim Moltitor sample stream water for salt runoff from roads. Their study made the front page of the Leader-Telegram on 1/9/2012. Courtesy of the Eau Claire LeaderTelegram, Andi Stempniak, photographer. (BBK)

6. Olivia Iverson mapping in the high North Coast region of British Columbia. (IBM)

7. SedStrat class tours the Wisconsin Industrial Sand Company mine in Menomonie, WI. Two of these students, Becca Moore and Amy Rasmussen, are studying the petrology of frac sand unit cements. (IBM and KMS)

8. Is this the FBI? No, the UWEC Dept. of Geology has arrived in Arkansas! Sed/Strat and Structural Geology field trip, spring 2012. (IBM and GSP)

THANK YOU
DEPARTMENT DONORS
The Department thanks the generous donors listed below who have contributed to Geology Department accounts with UW-Eau Claire Foundation from July 1, 2011 through May 11, 2012.

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   - Golder Associates, Inc.

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**ALUMNI NEWS**

The latest and greatest news from UW-Eau Claire Geology Alumni and Friends.

**Matt Aebly (2012).** Matt recently accepted a job with Procore, a frac sand company. He is working out of Eau Claire.

**Gregory Beckstrom (1984).** Greg writes, “I’m very busy with Golder’s businesses in oil & gas and mining. I travel frequently to Houston, San Francisco and many other locations where my clients have operations. This year will take me to West Africa, Poland, Kazakhstan, and Scotland. Strong oil prices and the shale gas boom have been good for our business. I also serve as the Chair of the Twin Cities chapter of the Society of Mining, Metallurgy & Exploration. Check us out at: www.smetsatwincities.org. I also have two very active teenage kids, one of whom will be starting college in a couple years. So life is busy!”

**Kris Benusa (2012).** Last summer Kris was a paid intern with Barrick Gold in Winnemucca, NV. Kris was offered a full-time job two weeks before the end of his internship (and a year before he graduated from UWEC)! Kris is now an ore-control geologist at Barrick’s mine in Winnemucca.

**Angela Berthold (2012).** Angela will begin working on her M.S. degree in geology at the University of Minnesota-Duluth this fall.

**Melissa Boerst (2012).** Melissa was hired before she officially graduated to work for ALS Minerals in Reno, NV. ALS Minerals is a commercial analytical geochemistry lab. She is using her geology/business degree to work as a Client Services Representative. She assists clients with questions they have about submitting their samples, determining which analyses to use on their samples, and answering general questions different clients/geologists have about services. Melissa says, “In a nutshell, I do a bit of everything and talk with geologists and clients all day.”

**Giselle Conde (2012).** Giselle received a prestigious Fulbright Scholarship to study in Iceland during the 2012-13 year. She will then start graduate school at the University of Minnesota.

**Dan & Jody Dahlman (1999 & 2000).** Dan reports, “Not much has changed with the Dahlman’s. Jody continues to work at Entero medics, a small medical device company near Roseville, MN. She recently received a promotion to Investor Relations, in addition to her other responsibilities, which keeps her extremely busy. I also continue to work at Ecolab in St. Paul in Regulatory Affairs. Far from the field of geology, I work to register food additive products with US federal agencies such as the FDA, USDA, and NOP. When we aren’t working at our careers, we enjoy much of our time outside either paddling in our canoe, pedaling our bikes, or dangling from a rope climbing the local geology! Jody and I love to travel and are always looking for a new adventure. We went to Greece in 2010, to the Netherlands & Germany in 2011, and to Spain in April 2012. Savannah, our (4-legged) “baby”, is now 11 and also keeps us busy with the constant need for an arm to throw her frisbee! Jody and I still return to Eau Claire quite frequently to visit her family and often get to revisit the local watering holes…you just may find us there on a Friday or Saturday night! Cheers!”

**Corrie Floyd (2011).** Corrie was a summer intern with GSA’s GeoCorps program at Mt. Rainier National Park in 2011. She spent some time working part time in Eau Claire’s frac sand industry before taking a job as a Geoscientist in the Duluth office of Barr Engineering.

**Kristie Franz (1996).** Kristie writes that in May 2011 Elia Jean Escobedo was born. “She is the greatest joy of my life,” says Kristie. [Editor’s note: Kristie was granted tenure in the Dept. of Geological and Atmospheric Sciences at Iowa State University. Congratulations about Elia and tenure! Kristie also came back to serve as a judge for UWEC’s 2012 Student Research Day.]

**Lisa (Grosvold) Davenport (2005).** Lisa lives in Battle Mountain, NV, and is a geologist for Newmont Mining Corporation. Lisa accompanied the mine superintendent and the mine’s lead engineer on a trip to tour two mines in Australia. They gathered information about mining voids left by old underground operations.

**Kristen Gunderson-Inden (1995).** Kristen writes, “I started a new job in February 2012 and ended my 110-mile daily round trip commute to work. I am now an Environmental Engineer at Charter Steel. The plant is a fully integrated mini-mill. I am still sailing on Lake Michigan and am serving as the Co-Fleet Captain for the Milwaukee Bay Women’s Sailing Organization. I am also helping my husband to produce a feature-length documentary on the health benefits of volunteering. Pretty cool to see how helping others helps yourself as well. We have been interviewing doctors and researchers and following several groups of volunteers conducting medical missions around the world. We are hoping to go on trips later this year to see them in action.”

**Brady Haas (2011).** Brady is teaching English in China.

**Mary Headrick (2007).** Mary is a Junior Scientist at the University of Minnesota.

**Matt Hostak (1989).** Matt is working as an air pollution engineer for the WDNR. He reports, “I still enjoy playing much more than working, so I do as much of the former as possible. I have traveled a bit: Lake Powell, London, Czech Republic, Austria, et al . . . (Winnebago Co. Jail - no kidding). I still have oddball hobbies like scuba diving, outhouse-digging, old-house salvage, and inadvertently *p*issing people off when my interests conflict with their limited sensitivities. In short . . . life is great (although not always easy) and I have no complaints!”

**Olivia Iverson (2012).** Olivia is working with Freeport-McMoRan Copper & Gold Inc. in Silver City, N.M.

**Bridget Kelly (2009).** Bridget completed her M.S. degree in hydrogeology at the University of Nebraska. She used electrical resistivity to map saline groundwater discharge. She immediately came back to her alma mater to teach The Future of Global Energy, Physical Geology, and Geology of National Parks in our department. [Editor’s note – it has been great having Bridget around the department once again!]

**Christopher Kohel (2006).** Chris completed UWEC Geology graduates 2011-12 at the Geology banquet.

**Recent Geology Grads**

Fall 2011, Spring & Summer 2012 (unofficial list)

Aebly, Matthew
Benua, Kristopher
Berthold, Angela
Conde, Giselle
Crist, Taylor
Douthis, Brigette
Fallenberg, Roseann
Haas, Brady
Henke, William
Hughes, Cameron
Iverson, Olivia
Junion, Jordan
Lau, Todd R.
Michael, Benjamin
Mortenson, Nathan
Nushart, Nate
Peterson, Arie
Schultz, Roger
Veit, Thomas

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LIWEC Geology graduates 2011-12 at the Geology banquet.
his master's degree in geology at San Diego State University. His thesis is entitled "Forearc Basin Analysis of the Late Jurassic-Early Cretaceous Eugenia Formation; New Mapping and Provenance Analysis in the Northern Vizcaino Peninsula, Baja California Sur."

Josh Kohn (2000). Josh and Karissa welcomed a baby girl, Hannah, into their family in July 2011. He writes, "Everything is going well at home as we all get used to each other and the routine of eating, feeding, and sleeping." Amanda (LaGesse) Lierman (2007). Amanda writes, "Prior to working as a geologist for Preferred Sands, I spent time working for Fairmount Minerals. While working for Fairmount I learned the basics about frac sand mining and the mechanics of washing, drying, and screening. This experience was valuable as we permitted and started up the Preferred Sands mine in Bloomer. I have been working as a Junior Geologist for Preferred Sands for almost two years. I spend most of my time investigating potential reserves and drilling existing and permitted areas to help develop mine plans and prove reserves. I also help maintain a variety of environmental permits. In 2009 I married Eric Lierman, and in June 2010 we welcomed our first child. We are expecting a second child in June of this year."

Tyler Mace (2001). Tyler writes, "I've worked for a software company in the Keweenaw Peninsula of the UP for nine years. I've been coding in C++ with some great colleagues, mostly from Michigan Tech. The software we write, called RadTherm, does simulations of radiation heat transfer, and is used mostly for automotive engineers worldwide. It has other uses—for example, we do some soil-moisture transfer (which would affect how soil appears in the infrared), so I use some knowledge Dr. Tinker stuck in me! My wife, an immigrant from Denmark, and I were married in 2007 in Denmark. We've focused our home life around foster care, and we've been able to watch kids grow in some great ways. We live in a beautiful place, where Lake Superior is on all sides and likewise the snow that comes from it. We enjoy kayaking in the summer and snowshoeing in the winter.

Marli Miller (Visiting Assistant Professor 1994-1997). Marli writes, "I continue to plug away at writing the new "Roadside Geology of Oregon," teaching structural geology at University of Oregon, taking geology photographs, and getting confused by the geology of Death Valley. I also do much low-level administrative work at UO as Assoc. Dept. Head. One of my "Big Projects" last fall was to create our department newsletter, which just about did me in—and gave me a huge amount of respect for Kent's yearly endeavor. But I have a Martin guitar in my office (how ironic) that keeps me grounded, and I even write the occasional song. Oh! and I'm positively THRILLED to welcome Jim Watkins (2005 UWEC Geology alum) into our department as one of my new colleagues!"

Audrey (Mohr) Boerner (2011). Audrey is a hydrogeology graduate student at University of Nebraska-Lincoln. She recently received a prestigious NSF Graduate Research Fellowship! She is studying nutrient cycling in the stream islands of the Platte River, central Nebraska. Troy Moseley (2009). Troy is employed as a hydrogeologist with METCO in La Crosse, WI. He reports, "The job is a good mix of field work and being in the office."

Nate Nushart (2012). Nate will begin working on his graduate degree in geology at the University of South Florida this fall.

Jeff Paddock (1997). Jeff is employed with the Minnesota Department of Agriculture in St. Paul. He currently oversees the clean-up of agricultural chemical spills throughout the state.

Curt Peck (1977). Curt continues to work for Chevron. He requested and received a multi-year assignment in Altau, Kazakhstan. He will be working on Chevron’s largest asset providing environmental guidance, direction, and mentoring Kazakh nationals. [Editor’s note – what an adventure!]

Renee Ransom (2007). Renee is an environmental geologist at Anteca Group, San Leandro, CA.

Andy Russ (2012). Andy writes, "I wanted to let you know that I finished my last class at UW-Whitewater over winterim, and I graduated in May. It took me a while, but I’ve finally found my way through it all. I’m living in Waukesha and am just starting the job search. Hopefully I’ll be able to find something in the Milwaukee area."

Steve Sellwood (1999). Steve reports, "After ten years of environmental consulting in Madison, I am enjoying my first year as a PhD student at UW-Madison. It has been an adjustment re-learning how to be a student again, but it is going well. My research will focus on heterogeneity and fracture flow in sandstone aquifers. It was great seeing folks at the GSA meeting in October!"

Troy Thompson (1985). Troy is a Regional Hydrogeologist, Groundwater/Water Rights and Uses Programs Manager with the US Forest Service Eastern Region in Milwaukee, WI.

Sarah Ulrich (2011). After graduating, Sarah worked for a year in a prestigious NAGT-USGS Summer Cooperative Field Program internship in the Washington, DC, area. She gave a talk on her UWEC geochemistry research at GSA-Mpls. She will begin graduate school in geochemistry at Virginia Tech this fall.

Aaron Walczak (1998). Aaron writes, "My wife of ten years now, Stephanie, and I now live in Hudson where we have a house and a few acres for our dogs to run. I am still teaching in the Hudson School District but moved up to the high school this year where I teach physics, astronomy and meteorology. I am also currently writing a new earth science curriculum which will explore mining of our natural resources (where everyday stuff comes from), the costs related to the mining (including environmental costs), and the viability of alternate energy sources (alternatives to fossil fuels). With administration approval, I plan to roll this out to juniors and seniors as another possible science elective next year. Stephanie is doing well and still working as a CPA for Wipi accounting. We continue to do lots of fun runs each year and I still enjoy competing in a few triathlons and mountain bike races each summer. But our biggest news is that in January 2012 we had a baby boy, Cooper, 7lb 5oz of healthy adorablebaby! He has added quite a new dimension to our lives and is (so far) endessly entertaining."

James Watkins (2005). Jim completed his Ph.D. in Earth and Planetary Science at UC-Berkeley. His research focus has been the evolution of the western US, silicate melt structures, and volatiles in obsidian. While at Berkeley he was awarded the 2008 Charles Meyer fellowship for his outstanding research accomplishments. Following a post doc, he recently accepted a tenure-track job in the Department of Geological Sciences at the University of Oregon. Congratulations, Jim!

Beth Wenell (1999). I have greatly enjoyed my first year of graduate studies at the Univ. of Minnesota, but I must admit that I did not fully realize how much of a career shift the subject matter would be. With a background in geology, I felt that I understood enough about soils to have a sense of what I would be studying and learning. I have gained a great deal of respect for the complexity of soils (I know I’m telling this to the wrong crowd, but soils are amazing, really...) and I am enjoying world of biogeochemistry. Among the things keeping me busy this summer are coordinating my research group’s drilling efforts in a remote nature preserve, which holds more than its fair share of logistics issues. Hopefully we’ll be able to sneak away to the Boundary Waters to mix in a little fun. I enjoyed seeing so many of you at GSA. Let me know when you are in the Cities, it’s always fun to grab a drink and catch up.

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Alumni — In Memoriam

Christine Anne Hall (age 52, UWEC Geology class of 1986) died Nov. 8, 2011, at home from cancer and other illnesses. She was born in Minneapolis, MN, and moved to Jackson, WI, in 1989 where she worked as a nanny, caretaker, and house cleaner until 2006 when she became too ill to work. She then resided in Driggs, WI.
NEWS FROM FACULTY AND STAFF

SCOTT CLARK, Assistant Professor clarksc@uwec.edu

Although I am finishing my second year in Eau Claire, it feels like I just arrived. I have no idea where this past year has gone. Like last year, my teaching load was focused on our Earth Science course for elementary and special education majors. I truly enjoy working with these students, but I am excited to teach Water Resources next spring. Although my teaching load is focused on a large, non-majors course, I have been able to interact with our majors in both research endeavors and on field trips. During this year’s winter, I joined Field Geology I in New Mexico for the Apache Gap and Rattlesnake Canyon mapping exercises. I also tagged along with our large caravan to Arkansas this semester.

My research project has been progressing well and my lab, including an eye-tracking system, is up and running. Brady Haas (2011) presented his research at last year’s Student Research Day on the potential role of image representation in generating plate-tectonic misconceptions. Brady continued to work with me over the summer before leaving Wisconsin to teach in China. His work provided an important contribution to a research presentation that I gave at the 2011 GSA meeting in Minneapolis. I also co-led a workshop at the GSA meeting on common misconceptions about plate tectonics, the Earth’s interior, and the rock cycle. This year, I have had the good fortune to work with three other motivated, hard-working geology students: Ellen Buelow, Xai Her, and Joel Smith. Ellen and Xai are conducting research that we hope will uncover the specific reasons as to why, after the devastating 2004 Indian Ocean tsunami, journalists stopped using the incorrect term “tidal waves” and started using the term tsunami. Joel will be spending the summer in the Galapagos Islands with other UWEC students and Deb Freund from the Biology Dept. Part of his work there will involve collecting survey data to improve the quality of a future interpretive education center at the Charles Darwin Research Station. I am looking forward to a productive summer full of research. Of course, I plan to take some time away from the department to explore Wisconsin with my family.


JILL FERGUSON, Analytical Scientist and Laboratory Manager fergusjw@uwec.edu

It is hard to believe another year has gone by and it’s time for another newsletter! This has been a year of growth in UWEC’s Materials Science program. The program added two new faculty and two additional staff scientists this year, bringing our group total to eight. This growth has brought new instrumentation and opportunities for collaboration with Geology faculty and students. Some new acquisitions this year include a Raman microscope (Raman with an A signifies chemical identification and imaging, while Ramen with an E may remind you of budget meals during your college days!) and a metallurgical lab complete with polishing equipment and inspection microscopes. We use these and other tools to promote faculty/student collaborative research and to support regional companies through technical problem solving. Of course, I still spend much time working with geology students and faculty on projects involving ICP-MS, XRF, and electron microscopy. I’ve also been able to work with meteorites this year through a collaboration with Phil Ihinger and Lauren Likkel (Physics and Astronomy). We are having a great time working and learning together!

As always, if you want to take a tour of our laboratories or find out if UWEC has a capability needed by your employer, please don’t hesitate to call or e-mail me. I really enjoy catching up with alumni, both recent and seasoned!

KATHERINE GROTE, Associate Professor grotek@uwec.edu

This past year has been a new experience for me – my first year of adult life where I wasn’t either going to school or going to work every day. I took the entire academic year off to be at home with my new son (he’ll be a year old at the end of June) and 4-year-old daughter.

So, I don’t have much news on the academic front, but I’m more relaxed than I’ve been in years! It’s been fun visiting family, planting a big garden, and teaching my daughter to read. I do find that I miss teaching and research though, so I am looking forward to coming back to sabbatical next year. It will be a good way to ease back into the maelstrom…

I’ve finally been at UWEC long enough to have significant numbers of alumni in the workforce, and I always love hearing how you’re doing. Please keep the emails coming, and I’m always happy to meet with you if you pass through Eau Claire!

KAREN HAVHOLM, Assistant Vice Chancellor of Research havholmk@uwec.edu

Greetings! It has been exciting around here with the advent of major sand mining operations in the area and legislative action on the state mining regulations. I miss having the opportunity to include these highly relevant events in class discussions with students. This tells you that I am still working in the research office. We held our 20th Student Research Day at the end of April. Exciting changes are in the offing, though. Next year we will take advantage of the new Davies Student Center and will expand to include oral sessions, performances, art displays and whatever else we can manage. I’ll no doubt be tearing my hair out on the organizational end, but it will allow some disciplines to shine as they have not been able to through poster presentations.

Our daughter is getting married this summer in northern Nevada, so we are looking forward to that. An exploration geologist marrying a mining engineer! Then she is off to Alaska to begin field work for her graduate studies, which she plans to do at University of Alberta in Edmonton. That will be new territory for us to visit. Those of you with younger children, be thoughtful about how you raise them. If you want them to stay close to home, don’t take them on lots of trips to exotic places and give them the travel bug.

It was great to see some of you at the GSA alumni event in Minneapolis last October. I’m looking forward to the next opportunity to connect with you, either here in Eau Claire, or wherever our paths might cross.

ROBERT HOOPER, Professor hoopperr@uwec.edu

I hope this past year has found all of you in good health. We have many geology majors, so the initial enrollment for Min/Pet I was forty students. The room only holds 36, so we had to bring in extra chairs. Running field trips with more than forty people is a completely different experience than with smaller numbers. The students are still the main reason that this job is so rewarding because the students really appreciate when a faculty member goes the extra distance to help them succeed.

My research was focused on continuing to use the Transmission Electron Microscope to examine Cr and Ni contamination in air particles collected in the Central Valley of California. One of the students (Sarah Ulrich, 2011 graduate) who worked on this project gave an oral presentation at the national GSA in Minneapolis. She did a great job of coordinating FACULTY NEWS (continued on page 8)
her talk with another talk given by Dr. Jean Morrison (UWEC Geology 2000) and Marty Goldhaber, both currently working with the USGS in Denver. I taught Rocky Mountain Field Studies (Geol 303) last year with only ten students, but that will never happen again because we now have a new formula for the number of students necessary to teach summer courses. If a course doesn’t make money, it can no longer be taught. This year I have seventeen students enrolled in Geol 303. That is a manageable number in the field but it does require three vehicles.

I was able to ski for eleven days in Breckenridge this year, but the snow in both Eau Claire and Colorado was only a fraction of the norm. I spent two weeks in January in the Caribbean snorkeling and scuba diving on beautiful and healthy coral reefs. I am finally wrapping up some of the last remodeling projects on the house, so I’ll probably have to buy a new one to start over again. I enjoy pounding nails after a day of work (and you can read into that anything you want). Stop in and visit – I still enjoy giving tours to alumni because the department has really become a showplace for modern analytical geochemistry equipment. You are always welcome.

PHILLIP IHINGER, Professor

Greetings Blugold Alums! It has once again been a busy and productive year for the Ihinger research group. I, along with seven of my undergraduate student collaborators, presented three projects (two talks and one poster) at the annual GSA meeting in Minneapolis this year. We put on a good show, with talks on the growth of hydrothermal quartz crystals, the timing and geochemical evolution of the Boulder, MT, magmatic suite, and the chemical effects of hydrothermal alteration on natural glass. Both Giselle Conde (2012) and Cameron Hughes (2012) presented their research projects at Student Research Day, and for the second time in three years, Giselle Conde walked away with first prize in her category. Giselle was also selected to participate in the Provost’s Honors Symposium, where she presented a summary of her four years of research on obsidian archaeological artifacts. She has also been awarded a Fulbright Scholarship to study rhyolite flows in Iceland, which she will undertake before launching her graduate career at the Institute of Rock Magnetism at the University of Minnesota (see Giselle’s Excellence in Geology Award biography). The Center for International Education has awarded me an International Fellows grant to collect samples along a traverse across the Alps in Switzerland. This faculty-student research project will fund the fieldwork for Aleisha Johnson (2014), Scott Wipperfurth (2012), and Todd Lindblad (2013) throughout July 2012.

Meanwhile, Tricia and I are still very happy in our new home. We love living in town, with the convenience of being close to both South Middle and Manz Elementary schools (this fall, Mati will be entering 7th grade, and Evie into 2nd), and the commute to soccer fields, art lessons, and friends’ homes is much more bearable!

J. BRIAN MAHONEY, Professor

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Seems like every year is a bit more of a blizzard than the last! I returned from leading the TIES Argentina immersion experience in May 2011. The TIES experience was tremendous from a professional, pedagogical, and personal level, and I am absolutely convinced that these types of immersion experiences will revolutionize higher education in the coming years. It was a tremendous and rewarding experience to observe the development and maturation of the students participating in TIES Argentina, and I am quite certain they have formed bonds among themselves and with Mendoza, Argentina, that will last a lifetime. It was an honor and privilege to be involved with the program.

Summer 2011 was a mix of business and pleasure, ranging from seeing the band Wide Spread Panic in the Tetons in July to finishing up the third year of the North Coast project, mapping coastal northwestern British Columbia with a mother ship and zodiac. Quite an adventure! The North Coast project has now come to a close, and all that is left is sifting through a mountain of data and working on publications – no small feat!!

I was on sabbatical in Fall 2011, in a strange arrangement that has my full-year sabbatical split between Fall 2011 and Fall 2012, in order to accommodate my coordination of the TIES program. The first half of the sabbatical in Fall 2011 went by in the blink of an eye. I devoted much of the time to sample processing and analysis of detrital zircon samples from the North Coast project, as well as work I did with Kris Benusa and Olivia Iverson in Neogene basins in Argentina during the TIES program. I also devoted a significant amount of time to the continuation of the TIES program, which unfortunately has been put on hold due to the horrid budget situation in the University these days. We can only hope that the University can recover from this setback. If someone asked, I would say that my Fall 2011 sabbatical was about four weeks long, not an entire semester! I vow not to do that the next time!!

Field Camp I in New Mexico was a highlight as always. I returned to Eau Claire in late January to teach the largest Sedimentation and Stratigraphy class the Department had in quite a while. The numbers required us to have two laboratory sessions, which both provided the necessary interaction with the students, but also put a major crimp on field trip activities. The highlight of the semester was a joint SedStrat/Structure field trip to Arkansas, which involved 55 people and eight vehicles in a major convoy. With our complement of black SUV’s, we looked like an invading force of federal agents everywhere we went. Everyone learned quite a bit and had a good time, so the logistical nightmare was worth the trouble. The best geologists are those who have seen the most rocks!!

Hope all is well out there! Please check in when you get a chance!

GEOFFREY PIGNOTTI, Assistant Professor

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The 2011-2012 year has been a good one despite the challenges in Wisconsin of late. I have had a blast teaching classes and doing research with geology majors this past year and am excited about the future, both for teaching and research. Last fall was the first time I taught Economic Geology at UW-Eau Claire and overall it went very well. I would like to send out a special thank you to Anne Gauer (one of my first research students at UW-Eau Claire!) of Maptek, the developer of the mine site software Vulcan. Anne was instrumental in helping the Geology Department acquire this industry standard software package for our computer lab at no cost. On top of that, Anne came to the Department in October and taught an Introduction to Vulcan course over three days as part of the Economic Geology class. This was a phenomenal experience for the students, and I’m certain will help those who venture into the mining world get a leg up on the competition. During the upcoming fall in Economic Geology, Anne will be coming back to Eau Claire again to teach an Introduction to Vulcan and Introduction to Grade Control course. This is an extraordinary contribution to the department. In addition, I would also like to thank Jim Miller and George Hudak of UM-Duluth for inviting us on a field trip to the Duluth Complex and Archean Greenstone Belt in Minnesota, and to Wisconsin Industrial Sand Company for giving us a tour of their awesome Menomonie facility. Both of these experiences were excellent for the Economic Geology class and helped make it a success. Field camp in New Mexico was great as usual, and I definitely look forward to keeping up the field camp tradition in the future.

Last summer was very fruitful from the research perspective as well. Nate Nushart and Will Ostrenga accompanied me to Bella Coola, British Columbia, to map and sample for a variety of fabric analyses in the Coast Plutonic Complex. We are investigating how strain was accommodated in arc plutons during the early to middle Mesozoic using magnetic fabrics, digital image analysis, anisotropy of magnetic susceptibility, microstructures, and electron backscatter diffraction. Some of this work was completed at the UM-Twin Cities campus, and both Nate and Will made trips to the UM to complete laboratory analyses. Their hard work was very valuable and we all learned a lot during the course of these projects — both
This past year I taught Glacial Geology craving for honor, glory, and power….

I continue to serve as chair with UW-Eau Claire students – majors and non-majors alike. I still enjoy work with UW-Eau Claire students – majors and non-majors alike. I continue to serve as chair of the Dept. of Geology – this helps fulfill my passion.

This past year I taught Glacial Geology and Oceanography. My Glacial Geology class was large and I toiled under the grading load. However, I think the students benefit from the technical writing experiences provided.

My fall was dominated by the national Geological Society of America meeting in Minneapolis. I co-led an Ice Age Trail pre-meeting field trip and co-chaired an oral session in honor of my former Ph.D. advisor, Dr. David Mickelson. Dave Mickelson received a well-deserved distinguished Quaternary Geology division career award at the meeting, so many of Dave’s former grad students returned to celebrate his achievements. Many UW-Eau Claire alumni attended the meeting as well. The UWEC Geology party at Brits Pub was a grand success (see separate article and photos). Thanks to all who attended!

I have been working with students Becca Moore (2013) and Ian Freeman (2013) and the Wisconsin DNR to develop high-quality geologic interpretive materials for Straight Lake State Park. This new park showcases a beautiful tunnel channel and esker, and recently the Ice Age Trail was constructed through the park. Ultimately a hiking guide and interpretive videos will be given to the WDNR for the use of park visitors. Becca and Ian presented a rough draft of their hiking guide during my GSA Ice Age Trail field trip, as well as a poster at the conference. Thus, geologists from the US, Sweden, Iceland, and elsewhere were able to see the results of their labors!

My wife and I had the honor of attending the wedding of Audrey Mohr (2011) and Zach Boerner in New Ulm, MN, last July. Both are “All-Star” students of mine, and the wedding and reception were great celebrations of the importance of families. Jeff Schels and his family stopped by for a brief surprise visit, and he is doing very well. I was also pleased when research student Corrie Floyd (2011) took a job at Barr Engineering in Duluth. On a sad note, I am still shocked by the June 2011 death of one of my early research student, Pete Bement (1995) announced in last year’s newsletter. Pete worked to refine the northern boundary of the Driftless Area. I will always remember Pete spray-gluing his poster in the parking lot of a motel in Lincoln, NE, prior to a NC GSA meeting! Assembling posters is much easier these days...

My eldest daughter left for UW-La Crosse last fall. To deal with pay cuts and college expenses, I have become more involved with consulting in the frac sand industry. I have worked with sand companies, realtors, and private landowners. I decided to set up my own LLC to formalize my activities. These connections are starting to reap dividends for UW-Eau Claire geology students in the form of jobs, internships, and donations to the department. This summer Dr. Brian Mahoney and I will be supervising two geology majors in a petrographic study of frac sandstone cements.
The Wisconsin Industrial Sand Company [WISC], a division of Fairmount Minerals, recently donated $5000 to the Department of Geology. This donation was used to purchase three new trailers in support of our field geology program. These new trailers replaced two trailers that had served valiantly on trips to New Mexico, Montana, Black Hills, UP Michigan, Arkansas, and many other points of the compass! However, it was time for the old trailers to enter a well-deserved retirement.

WISC operates several sand mines in western Wisconsin, including underground mines in Pierce County and a surficial mine in Menomonie. These mines supply sand for glass manufacturing, foundries, and the oil and gas industry. Several of our geology classes have taken field trips to the mine in Menomonie, and this has been an excellent learning experience for our students. Michele (Skahaug) Maxson (UWEC Geology 2006) is Regional Environmental Health and Safety Officer for WISC.

We think this is the largest gift received by the Dept. of Geology. Thanks to WISC and Fairmount Minerals for partnering with us as we train the next generation of geologists (and non-geologists as well)!

The spring Geology banquet is always a fun time to eat a fine meal, recognize graduating seniors, say goodbye to classmates after another year, and reminisce about field trips gone by! This year approximately ninety students, parents, and faculty assembled in at the American Legion in Eau Claire for the event. Some major donors to the department also attended to meet the students they are helping. Departmental awards were made, and the Geology Club once again presented awards for Best Flannel, "Best" Jokes, Most Ripped (awarded for repeated problems with pants in New Mexico!), etc.
Giselle Conde and Olivia Iverson Presented the “Excellence in Geology” Award for 2011-2012

The “Excellence in Geology” Award recognizes the academic achievements of the outstanding graduating geology major, both in coursework and in faculty/student collaborative research. The winners of the Geology Excellence Award for 2011-2012 are Giselle Conde and Olivia Iverson.

GISELLE CONDE
(written by Phil Ihinger)

Giselle Conde is originally from Madison, WI, and she will graduate this year with a double major in Geology and Spanish. Her research efforts have proven very productive: she delivered first-authored poster presentations at the 2010 and 2011 national GSA conferences (in Denver and Minneapolis) as well as the 2009 Goldschmidt Conference in Davos, Switzerland. She also delivered a first-authored oral presentation at the national GSA conference in Portland, OR. Her work has been featured at four UWEC Student Research Day celebrations, and she carried away first prizes in her category at two of those events. During her undergraduate career at UWEC, she spent one semester studying abroad in Spain, one semester studying abroad in Argentina, and one semester with the National Student Exchange studying at Cal-State Chico. She was the recipient of the 2010 Leoba Hogan Scholarship, the 2010 Roma Hoff Scholarship, and the 2011 Michael F. Fredrich Scholarship here at UWEC. In 2010, she received a highly competitive Petroleum Research Fund Supplement for Underrepresented Minority Research from the American Chemical Society. We just learned that Giselle received a prestigious Fulbright Scholarship to study in Iceland for 2012-2013 before she begins her doctoral

Geology Excellence Award winners, Giselle Conde and Olivia Iverson.

OLIVIA IVERSON
(written by Brian Mahoney)

Olivia Iverson was awarded the 2012 Excellence in Geology award for her outstanding contributions in geologic research and in the classroom. Olivia, from Hudson, WI, was originally an art major who saw the light after taking an introductory geology course with Lori Snyder. Once she found geology, she dove in with a vengeance. She was awarded the 2010-11 Golder Associates Geology Major Scholarship in recognition of her outstanding performance in the classroom. Olivia participated in the 2011 TIES Argentina international immersion experience. During that semester, she conducted collaborative research with Mahoney and his Argentinian colleagues on Neogene basin evolution in southern Argentina. Her stratigraphic studies and detrital zircon analyses formed the basis of a presentation at the Rocky Mountain GSA conference in Albuquerque, NM, in May 2012, as well as at the 2012 Provost Honors Symposium, with coauthor Kris Benusa. Olivia also worked as a field assistant with the Geological Survey of British Columbia in 2011. There she mapped in the field and conducted stratigraphic, geochemical and geochronological studies of Triassic and Jurassic volcanic arc assemblages in the Dease Lake area of northern British Columbia. These investigations led to an invited presentation at the Cordilleran Tectonics Workshop in Victoria, British Columbia in February 2012.

Olivia’s geologic expertise and experience as a teaching assistant in field camp led to an offer of a summer internship at Freeport-McMoRan’s Chino mine in Silver City, NM, following graduation in spring 2012. This internship is the first step toward a long and productive career in economic geology, and the Department wishes Olivia all the best in her new endeavors!

FORMER EXCELLENCE AWARD RECIPIENTS:
1995-1996: Kristin Weaver and Chad Underwood
1996-1997: Sarah Weaver and Mark Holmes
1997-1998: Tom Danielson and Michelle Haskin
1998-1999: Mae Willkom and Beth Wenell
1999-2000: Jean Morrison and Carrie Rowe
2000-2001: Katie Thomburg and Karl Beaster
2002-2003: Sarah Gordee and Ben Paulson
2003-2004: Laura Strumness and Mark Ciardelli
2004-2005: Jessica Lopez and James Watkins
2005-2006: Gillian (Jill) Krezoski and Christopher Kohel
2006-2007: Adam Kjos and Catherine (Kate) MacLaurin
2007-2008: Cale Anger and David Kawatski
2008-2009: Anna Baker and Elizabeth Balgord
2009-2010: Jae Erickson and Crystal Nickel
2010-2011: Taylor Crist and Audrey Mohr

Benusa wins 2011-2012 Annual Award for Service

(written by Brian Mahoney)

The “Annual Award for Service” recognizes the exceptional service that a geology major has done for the department. Kris Benusa was awarded the 2011-2012 Annual Award for Service for his outstanding contributions to both the department and the education of our students. Kris, a double major in geology and Spanish, was an indispensable component of the 2011 TIES Argentina immersion experience. His interest, motivation and willingness to help his colleagues, the instructors, and our Argentinian collaborators was simply outstanding, and was key to making the program successful. Back in Eau Claire, Kris served as a teaching assistant in Geology 110, and was always available to help his colleagues with confusing geologic issues. Kris volunteered to attend Field Camp 1 in New Mexico as an unpaid second teaching assistant, in order to both to hone his geologic skills and to help the field camp students develop their own geologic techniques. Kris graduated in Spring 2012, and took a full time position as a geologist for Barrick Gold at the Turquoise Ridge mine in Nevada. He will do very well there.

Kris is a rare individual: absolutely trustworthy, always willing to help, and unfailing in his devotion to the department, its students and faculty. The Department is indebted to him, and thanks him for being a role model for other students.

FORMER SERVICE AWARD RECIPIENTS:
2003-2004: Sarah Prindiville
2004-2005: Christina Piper
2005-2006: Amanda LaGesse
2006-2007: Amanda LaGesse
2007-2008: Michelle Forgerre
2008-2009: Brennan Kadoski
2010-2011: Jessica Meyers and Audrey Mohr
The Geology funds with UW-Eau Claire Foundation are used to support a wide range of activities in the Department including student travel to professional meetings, faculty/student field trips, faculty recruitment, and student scholarships. The attached slip is intended to make it easy to contribute to the Geology funds. Please be assured that your gift will be greatly appreciated and it will be used effectively within the Department. In addition to financial support, we also welcome and encourage your support by volunteering to speak to our majors/minors about your job experiences, offering possible job opportunities to our students, or by the donation of equipment or field supplies.

During the past year, 35 individuals/companies donated $14,847 to the Geology Foundation accounts. Please understand that all gifts, large or small, are greatly appreciated! Please consider giving something back to your undergraduate department.

Due to state budget cuts and increasing gasoline prices, alumni gifts to the department’s advancement funds are becoming increasingly critical. Therefore, we have been working with the Foundation Office to learn more about establishing a named lecture series, new scholarships, etc. If you would happen to be interested in establishing a scholarship within the Department of Geology, here are a few basic guidelines from the Foundation Office.

• All gifts to the UWEC Foundation are tax deductible to the fullest extent allowed by law. You may use cash, checks, credit cards, stocks or other tangible assets to fund a scholarship.
• There are two types of scholarships: the annual scholarship, which is funded each year, and the endowed scholarship, where principal is invested and only the income is used for the annual scholarship award.
• A minimum commitment of $500 is required to establish an annual scholarship fund.
• A minimum investment of $10,000 is required to establish an endowed fund; there is no maximum.
• The name of the scholarship is determined by the donor(s). Most name a scholarship after their family or the name of a loved or honored one. Some have endowed scholarships in the name of a favorite professor.
• The donor(s) may help develop scholarship criteria with the assistance of a development officer. Preferences rather than requirements are most often expressed. Preferences may involve academic major, financial need, international study, academic promise, first-year student or upper-division status.
• IRS regulations prevent donors from designating family members as recipients or from selecting the recipients themselves. Donors may be notified of the finalists and will be notified of the recipients.

If you would like more information about establishing an annual or endowed scholarship, please feel free to contact the Foundation Office at 715/836-5630. We ask that if the UWEC Foundation Office calls you asking for a donation, please remember the Geology advancement funds! If you work for a corporation or a geology-related firm, please inquire if your company has a matching program for contributions to academic geology departments.

DONATION SLIP
University of Wisconsin Eau Claire Foundation, Inc.

_________ Yes, I wish to support the Geology Department through my tax-deductible gift of

$_________ (if check is used and enclosed, make payable to UW-Eau Claire Foundation, Inc.)

Name ___________________________ ___________________________ ___________________________

Address ___________________________ ___________________________ ___________________________

City__________________________State__________Zip____________________

Phone ___________________________ Email ___________________________

Please indicate below how you wish your contribution to be recorded:

_____Record jointly with my spouse (Spouse's name) ____________

_____Record in my name only ____________

_____In memory of ______________________________

Credit Card Gift _____VISA _____MasterCard _____Discover _____American Express

Number ___________________________ Exp Date ___________________________

Signature ___________________________

Date ___________________________

_____My employer (or my spouse's) will match this gift. Employer: ___________________________

_____I have made plans to benefit the Geology Department through my estate. Please have someone contact me.

_____Please send me information about how I might make provisions in my estate to benefit the Geology Department.

Mailing Address: UW-Eau Claire Foundation, Schofield Hall 214, 105 Garfield Ave, Eau Claire, WI 54702-4004. Or give immediately by going to http://www.uwec.edu/fndn/giving.htm

Our Geology Department Advancement Fund is the primary support fund for the department. It is used to support a wide range of activities in the Department including student travel to national meetings, special research and instructional equipment, faculty recruitment, and the seminar program. If you choose, your gift can also be applied in part or total to individual scholarship award funds. See information above for minimum commitments for establishing your own scholarship. Undesignated funds will be credited to the Geology Department Advancement Fund.

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Earth Science Seminar Series

The Earth Science Seminar Series continues to bring excellent speakers to campus. It provides faculty and students with the opportunity to interact with other scientists working on a broad range of research topics, and it also allows us to “show off” our department and research equipment to the visitors…. Below are the talks presented during this academic year. Seminars schedules are posted on the Geology website. In addition, if you live in the area and would like to receive e-mail announcements about upcoming seminars, please contact Dr. Scott Clark at clarksc@uwec.edu. If you work for a company that would like to sponsor the seminar series or contribute money to defray speaker costs, please contact us!

Dr. Alan Gishlick, Department of Geology, UW-Eau Claire, “Geology from Bizarro World: Creationism and the Grand Canyon,” 9/16/11.

Dr. Jim Miller, Department of Geological Sciences, University of Minnesota-Duluth, “The Precambrian Research Center at UMD: Training Students for Jobs in Minerals Exploration,” 9/28/11.

Dr. Jim Miller, Department of Geological Sciences, University of Minnesota-Duluth, “The Geology and Mineral Deposits of the Duluth Complex,” 9/29/11.


David Kimbrough, San Diego State University, “The La Posta Magmatic Event: A Late Cretaceous TFG Pulse in the Peninsular Ranges Batholith,” 10/7/11.

Anne Gauer, UWEC 2008, Geologist, Maptek, “My Metamorphosis from College Student to Fully Functioning Adult (A Unique Journey into the Mining Industry),” 10/14/11.

Dr. Kent Syverson, Department of Geology, UW-Eau Claire, “So You Want to Go to Graduate School?” 11/4/11.

Dr. Scott Clark, Department of Geology, UW-Eau Claire, “What should be the learning goals and learning outcomes of a General Education Earth Science course? …And, who says so?” 2/3/12.


Welthy and Paul Myers sitting on an elephant’s knees after a 2-hour jungle ride along the Rapti River in southern Nepal.

of India - you know, where people tell you how to quick-fix your computer. Bhutan and Nepal were two countries Welthy and I had always dreamed of seeing, so we did it.

Although these two countries are nearly contiguous along the south side of the high Himalayas, they are much different socially. Bhutan (15,000 m²) is predominantly Buddhist and isolated. It is fabulously beautiful, mountainous, and unspoiled. Its national Constitution is founded on the principle of “Gross National Happiness”. Reality! It shows. The national sport is archery. Bhutanese people work and play hard, TV is relatively new, and most of its 700,000 people love their young, progressive King and Queen.

By contrast, Nepal (57,000 mi²) is predominantly Hindu, much more cosmopolitan, and has a huge influx of trekker-tourists. Its cities, especially Kathmandu, are crowded and polluted. Since the topography is extreme - with elevations ranging from over 25,000 feet along its northern border down nearly to sea level in the south, Nepal’s ecosystems and agriculture are extremely diverse. Needless to say, our three-week tour was also diverse. For example, take our modes of transportation: airplane, bus, river raft, dugout canoe (cruising past crocodiles), elephant (chasing tigers and “barking” deer) and ox-cart, not to mention lots of walking. And in these countries, there is no such thing as a flat place. We had dinner at the home of a Sherpa (a Mt. Everest climber-guide), hung out with kids at a school high on a mountain ridge accessible only by steep trail, and stayed several nights in isolated riverside tent camps. Every turn in the trail was another gorgeous scene. Needless to say, I nearly used up my camera and sketch pad (see photos). If you ever get a chance to visit Bhutan or Nepal, don’t put it off. Go!

Although I’d love to write volumes more about this experience, space is limited. If you want to know more about them or our trip, just contact me by e-mail. We’re now planning a December trip to Patagonia, Chile and Argentina, and a cruise down Danube River from Budapest the following year. You KNOW, of course, you’re always welcome at our Peru house in the Green Mountains. Call us – the UWEC Geology office has our phone number!

John Tinker, Professor Emeritus tinkerjr@truewest.net

I extend a warm hello to all present and former students and faculty of the Geology Department. I visit the UWEC campus library several times a semester to check out maps. The students look busy, somewhat happy, and always on the move.

Consulting still takes up some of my retirement time. Work is mainly for the non-metallic mining industry. Geology has been a good profession for me and I hope for you as well.

As of February 2012, I still have 28 chickens and two guinea hens. The eggs are excellent and the chickens in the freezer are delicious when cooked. In the newsletter two years ago, I asked the question, “Why chickens?” I still do not have an answer other than I did have baby chicks one Easter when I was about 10 years old. A friend gave them to me, and my parents let me raise them in our living room until they moved out to our backyard. Maybe it is friends and parents who get you in trouble later in life!

My father-in-law shot a mule deer in North Dakota last fall. I did not have a North Dakota hunting license this year so I was the designated finder, dresser, hauler, and processor of the deer. How can you argue with a 93 year old? Again, no deer in Wisconsin. That bad habit needs correcting.

Enjoy life and your family. I send you my warm regards.

George Hudak, Precambrian Research Center and Natural Resources Research Institute, University of Minnesota-Duluth, “Recent Developments Understanding the Volcanic, Magmatic, Tectonic and Metallogenic Evolution of the Ely Greenstone Formation, Vermilion District, NE Minnesota,” 4/5/12.


Kris Benusa, Olivia Iverson, and Dr. J. Brian Mahoney, Department of Geology, UW-Eau Claire, “Eau Claire in Argentina: TIES Argentina and Neogene Basin Evolution in the South-Central Andes,” 4/27/12.
The Department held a UWEC Geology alumni reunion associated with the national GSA meeting in Minneapolis. The party was held October 11, 2011, at Brit’s Pub and Eating establishment in downtown Minneapolis.

Thirty-nine alumni, faculty and former faculty, and friends attended the gathering. A good time was had by all! We need to do this again sometime!

List of attendees:
Aebly, Matt
Baird, Graham
Borchardt, Nic
Brandes, Nathalie
Brandes, Paul
Clark, Scott
Crist, Taylor
Faulkner, Doug
Floyd, Corrie
Gauer, Anne
Hagarud, Ralph
Havholm, Karen
Heimdahl, Jacob
Hooper, Bob
Johnson, Beth
Kohn, Josh
Lueth, Virgil
Maes, Stephanie
Mahoney, Brian
Mills, Christopher
Mohr-Boerner, Audrey
Morrison, Jean
Morrison, Omie
Noto, David
Osborn, Bridget
Paddock, Jeffrey
Peterson, Steve
Pignotta, Geoffrey
Pint, Tina
Sellwood, Steve
Strong, Nikki
Syverson, Kent
Tannler, James
Thompson, Troy
Tomlinson, Erik
Ulrich, Sarah
Underwood, Chad
Wenell, Beth

1. Nic Borchardt (2009) and Jake Heimdahl
8. Jean Morrison (2000), Omie (2033), and Christopher Mills
Johnson wins Golder Associates Geology Major Scholarship

by Phil Ihinger

This scholarship, established fall 2005 by Greg Beckstrom (UWEC Geology 1984), is for comprehensive geology majors who have completed Mineralogy-Petrology I, developed an excellent academic record, and demonstrated a financial need.

Aleisha Johnson is the 2012-13 recipient of the Golder Scholarship. Aleisha graduated from White Bear Lake High School (MN) and is now a junior in our program. Last fall, she received the highest grade in her Min-Pet I class of forty students (the largest Min-Pet I class in the history of our department!). Aleisha will be conducting fieldwork in the Swiss Alps during the summer of 2012 with Professor Phil Ihinger and two fellow undergraduate students. She will be collecting hydrothermal quartz crystals along a traverse across the mountain range. Her project will examine the growth of quartz crystals from fluids that reflect a wide range in metamorphic conditions. She will use Fourier Transform Infrared Spectroscopy to examine the effect of temperature on crystal growth rate and the nature of quartz crystal morphology.

Student Research Day—Spring 2012

The Twentieth Annual UW-Eau Claire Student Research Day was held April 30, 2012, in Zorn Arena on the UWEC campus. This event showcases faculty/student collaborative research occurring on campus. The Geology Department has been very well represented throughout the years, and this year was no exception. All of the students noted below presented posters this year. We are very proud of our students!

Note: Students who presented posters at professional conferences are also indicated. Student travel to conferences was supported with money from the Geology Advancement Fund and the Office of Research and Sponsored Programs.


Kathryn F. Grant, Keilor J. Eggen and Timothy H. Molitor with Bridget B. Kelly and Katherine R. Grote, “Assessing the Impacts of Urban Road Salting on Tributaries of the Chippewa River near Eau Claire, Wisconsin.”

Cameron A. Hughes with Phillip D. Ihinger, “Infrared (IR) Spectroscopy of Olivine from Kimberlilc Diatremes.”


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Myers/Willis Field Camp Scholarships

Field camp experiences have become increasingly expensive for students. This scholarship, established by the department in 2006, is intended to lessen the financial burden of field camp for excellent students who also have financial need. The scholarship also honors the contributions of Dr. Paul Myers and Dr. Ronald Willis, geology professors at UWEC who worked very hard to establish a strong field component in our young geology program.

Rebecca Moore (Champlin, MN) and Marcus Hopkins (Chippewa Falls, WI) are recipients of this year’s Myers/Willis scholarships. Recipients were selected based on performance excellence at Field Camp I in New Mexico. Each student will receive $500 to defray expenses for Field Camp II in Montana. Congratulations!

The Geology Dept. hopes to offer Myers/Willis scholarships to more students each year as the scholarship fund balance rises. We encourage all alumni who have benefitted from our field experiences over the years to contribute to this fund. In addition, this is a great way to honor Paul and Ron for their dedication to our field program! See page 12 for information about contributing to this important scholarship fund.


William G. Ostrenga and Nathan N. Nushart with Geoffrey S. Pignotta, “Quantifying Magmatic Strain in Plutons Using Anisotropy of Magnetic Susceptibility in the Coast Plutonic Complex, British Columbia, Canada.”

Sarah Ulrich with Robert L. Hooper, “Transmission Electron Microscope Analysis of Trace Elements in Individual Air Particulates from the Central Valley of CA: A Preliminary Assessment of Potential Impacts of Air Particulates on Human Health.” [Editor’s note: This was not presented at Student Research Day. Rather, Sarah gave this oral presentation at the GSA national meeting in Minneapolis, MN, October 9-12, 2011.]