Dear Alumni and Friends of the Earth Science Department,

The leaves have pretty much fallen from the trees and there is even snow on the ground, so it is that time of year to update you all on the happenings in Latham Hall. As you’ll see in this newsletter, we’ve been quite busy with the many outreach activities we do, as well as the field trips for our courses, and of course the regular business of classes, labs and research.

Things have changed quite a bit in Latham Hall, with Dr. Kenneth De Nault being granted emeritus professor status and the hiring of Dr. Alexa Sedlacek to support our new environmental science degree. We are also actively searching for another faculty position in Air Quality. We were fortunate to have the environmental science degree approved just before the start of fall semester, and in only a few months we already have 10 majors pursuing the degree! Also, the majority of prospective new students to our department indicated that they were interested in following the environmental science degree. We are also actively searching for another faculty position in Air Quality. We were fortunate to have the environmental science degree program approved just before the start of fall semester, and in only a few months we already have 10 majors pursuing the degree! Also, the majority of prospective new students to our department indicated that they were interested in following the environmental science degree. We are also actively searching for another faculty position in Air Quality. We were fortunate to have the environmental science degree program approved just before the start of fall semester, and in only a few months we already have 10 majors pursuing the degree! Also, the majority of prospective new students to our department indicated that they were interested in following the environmental science degree.

Recent events have shown us that we need to not only concern ourselves about quality, which we have no problem delivering, but also quantity. Having a significant increase in our student population is one of the first foundations we can use for requesting more faculty positions.

With all of the changes in our department, we continue our efforts to expand the impact of our department on the UNI community and beyond. As you’ll see in the newsletter, we’ve continued our extensive outreach activities, and in 2014 we’ll be kicking off a new educational endeavor with the generous support of the Iowa Limestone Producers Association through a short course for teachers on Iowa’s Geological Resources. We continue to provide our students with memorable and educational (of course) experiences, such as the May trip to study the water resources of the American West, trips to the local quarries, telescope observations of the heavens, tracking of winter storms, exploration of the Maquoketa caves, and the annual trip to Casey’s Paha – how many of you remember that one? If you live in Iowa, you may be aware of a new initiative in your community, the STEM (Science, Technology, Engineering, Mathematics) initiative supported by the state of Iowa. At a November STEM event in the Five Sullivan Brothers Convention Center in Waterloo, the Earth Science department was well represented by not only faculty and staff, but also eager Earth Science majors. These folks were on hand to help keep hundreds of youngsters interested in science through a variety of hands-on activities centered on the Earth Sciences. This is probably one of our most important tasks outside of Latham Hall – to keep future generations interested in science and eager to pursue STEM careers.

(Continued on Page 13)
Teaching, Outreach, and Research on for middle and high school teachers to learn member, offered a 2-week summer institute IMPACT program, of which I am a team In July, the University of Northern Iowa’s dry/normal precipitation are all equally The Prediction Center’s outlook provides no winter season. At this point, the Climate early fall, our thoughts turn to the coming follow by a very dry late summer and beans, and potatoes all did exceptionally week. My crops of tomatoes, green weekend. Thankfully, I finished digging made its way south out of Canada over the appearance as I write this year’s news, Winter weather has made an early thanks to a polar high pressure system that appearance as I write this year’s news, It is hard to believe that I am starting my fifth year at UNI. Nothing earth shattering has happened since last year. I’ve taken no major trips or expeditions to parts unknown. I continue chugging away teaching Inquiry into Earth and Space Science (the intro course for elementary education majors). This course continues to evolve and is a joy to teach. I also taught the sequel to Inquiry (Investigations into Earth and Space Science), and this spring I will be teaching a graduate-level science education course, Research Methods in Science Education. I continue to work on my research project where I am investigating changes in student confidence towards teaching science after completing my courses. So far the results are encouraging, and I am ready to see if I get similar results from the other Earth Science intro courses. Outside of UNI, I was recently named an Associate Professor of Earth Science & Science Education. So 2013 was not a particularly fruitful year at the University of Northern Iowa, but with adversity comes equal opportunity. My family and I struggled with academic cuts/uncertainty, the destruction of the M. Price Laboratory School, and the breaking apart of a community. It became explicitly clear that higher education, is not unlike any other business; perhaps we were too idealistic/ naive! The face of education and for that mat matter our civilization, is rapidly changing. As in any democratic society, there are really only two choices: 1) cut your losses and move on; or 2) hunker down and perhaps clarity. My family and I with adversity comes equal opportunity. My family and I struggled with academic cuts/uncertainty, the destruction of the M. Price Laboratory School, and the breaking apart of a community. It became explicitly clear that higher education, is not unlike any other business; perhaps we were too idealistic/ naive! The face of education and for that mat matter our civilization, is rapidly changing. As in any democratic society, there are really only two choices: 1) cut your losses and move on; or 2) hunker down and use your skills, talents, and temporarily weakened ambition to create a civilization that you can be proud of. Some of my geochronological research has shown that during times of societal unrest, humans generally move towards familiar and perhaps comfortable settings. My family and I have selected option #2 and moved back toward our rural roots. We have relocated to rural Iowa and are enjoying a renewed sense of purpose and community. I am very excited about many recent UNI and personal developments. I am encouraged by on-going movements that seek to effectively communicate geology’s critical role in global development, conservation, poverty, climatic change, energy, geo-hazards, water/ sanitation, infrastructure, and use of natural resources. Here’s to an amazing 2014 - if there is one thing I have learned from this past year, it is that it will take a lot of hard work and creativity, and in the end that might not even be enough, but at least you did your part!
I am gathering a large volume of field and biogeochemical transformations data at the University of Northern Iowa (UNI) on nutrient exchange and the hydrologic cycle. I am working with the faculty and staff of the Department of Geology to develop a research group and involve our majors in field and laboratory work. In June 2014 Jim will be retiring from the Earth Science Department after 39 years of service. I look forward to developing this program and will give you an update next year!

Mohammad Iqbal
Professor of Geology

Greetings to friends of the department! A happy and productive year. It was nice to meet so many of you in different occasions this past year. No doubt the months have gone fast, but it was fun. The highlight of my activities this past year was my professional development assignment (PDA) in the fall of 2013. I worked on a flood-related project in the Cedar River watershed. As you know, there is no natural resource more important than water to the economy and quality of life in Iowa. Recent climate change, frequent flood events, and associated damages to the aquatic ecosystem and human properties have brought the water issues to center stage. My research is focused on discharge analysis of the watershed as it relates to large storm events. Additionally, I am looking into high sediment loads and turbidity in surface water bodies that continue to be a serious problem in Iowa.

Meanwhile, I have received a research grant from the newly formed Iowa Nutrient Research Center (INRC). The project deals with distribution, transport, and biogeochemical transformations of agriculturally derived nitrogen and phosphorus in the Cedar River watershed. I am gathering a large volume of field data from the above projects that are expected to strengthen the department’s hydrology course offerings. I looked at the results of our students who have contributed significantly to these projects through routine sampling and are now working on the last year’s results. It has been a very interesting and enjoyable year to work with the students.

I have also attended many local, national, and international meetings in geosciences. It’s been a busy year, and I look forward to the next one.

Mike Stevens
Instructor

“Time is not measured by the passing of years but by what one does, what one feels, and what one achieves.” Jawaharlal Nehru

So, another year has been written in the calendar. It is time to break with tradition in a number of ways. After 55 sections of Capstone, I had the great pleasure to teach Intro to Geology this fall semester. It is always good to get the creative juices flowing by doing something different. To that end, I will be taking on Structural Geology and US of the Optics - Petrography course in the spring. Research is ramping up again with New Mexico igneous rock chemistry and isotope work in various stages of planning or execution, and a possible return to West Texas.

On the home front, the family is fine, and finishing our 2008 flood rebuild with the installation of a new wood-burning stove. Our morning chats as he sips his first cup of coffee is and has always been a great way to start the morning. He is a great mentor for instructors and a very good friend as well.

Other than that, Cynthia and I continue to raise our four 4-legged kids and are watching another 4-legged critter for the time being. Cynthia continues to work at the Grout Museum. She was moved to the collections department to help work with the damaged inventory caused by a water pipe breaking in the storeroom above. Also, she’s working on an on-line course. So, she’s been very busy this past year. We hope that the year to come is a healthy and happy one for all of you.

Alexa Sedlacak
Assistant Professor of Earth Science

I moved to the Cedar Valley this summer, after completing my Ph.D. in Geological Sciences at The Ohio State University. My husband, Patrick, and I lived in Columbus, Ohio, for six years, but moving to the Cedar Valley was like coming home. We grew up in eastern Iowa, and are happy to be back - this time with our toddler, Penelope, and pets, Cedar Falls and the surrounding community are welcoming, and we are impressed with the area’s great coffee, beautiful parks and extensive trails.

This semester, I’ve enjoyed teaching Earth History and Environmental Geology. The quality of UNI students and their willingness to work hard continues to impress me. I benefit greatly from the work of my teaching assistants, Mohammad, Cynthia, and Ouachitas. Stay safe, and keep in touch.

JAMES WALTERS
Professor of Geology

In June 2014 Jim will be retiring from the Earth Science Department after 39 years of service.
WHERE ARE YOU NOW (PROFESSIONALLY/PERSONALLY)?

I am currently living and working (remotely) in Brandon, Iowa, with my husband and two children (ages 8 and 11 years old). I spent the previous two years living and working in Houston, TX, for the Lunar and Planetary Institute (LPI), a NASA-funded science research organization which is a part of the larger non-profit Universities Space Research Association (USRA), as an Education and Public Outreach (E/PO) Specialist. I have been very fortunate to have been able to continue my work for the LPI from Iowa over the past year.

WHAT HAVE YOU BEEN DOING SINCE LEAVING UNI?

Since graduating from UNI in the spring of 2001, I have completed 30 hours of graduate work towards a M.S. in Geosciences specializing in Meteorology/Climatology at the University of Nebraska-Lincoln and used my education to take on the role of the Science Educator at the Bluedorn Science Imaginarium, part of the Grout Museum District, in Waterloo, IA. I served in this position for about 5 years and was responsible for the development and facilitation of all of the science education in the building. This included school tours, the Museum School program (with the Waterloo & Cedar Falls public schools), development and design of new hands-on exhibits, science shows, monthly hands-on science days for the general public and families, homeschool programs, oversight of interns and volunteers, annual rocket camps, Boy Scout badge days, Girl Scout programs, as well as playing an active role in the marketing, promotion, & funding of these programs. During my time at the museum, I gained a tremendous amount of experience in informal (out of the classroom) science education and learned the importance of fostering strategic partnerships and collaborators for successful programs.

In July of 2011, I was offered an exciting opportunity to join the Education and Public Outreach (E/PO) team at the Lunar and Planetary Institute in Houston (my current position), which I happily accepted. It was a difficult decision since all of our family and friends were in Iowa, but it’s a risk that I’m glad that I took! Through my work at the LPI, I have had the honor of meeting and working with some of the most amazing and talented people I’ve ever encountered. But better, though, is the love and passion that my fellow E/PO specialists and educators possess. It truly makes work much more enjoyable when the people you are with love what they do!

As an E/PO specialist, I primarily work to develop and deliver Earth and space science educational materials, resources, and professional development training to other educators across the country (and across NASA). My work largely involves taking the latest in Earth and Planetary science research and discoveries and making it into something usable and understandable for various audiences - such as other educators, families, and the general public. In many ways, E/PO specialists act as a bridge between the science world and rest of the world at large. I find this exciting since it means I have the opportunity (and challenge) to inspire the next generation of scientists, engineers, and explorers through my work and the products/activities that I create. In particular, I feel it is important to help bring the true nature of science to my audiences. That science is not just a set of facts in a textbook but rather a way of understanding the world and universe around us. There is a lot to be excited about with all of the great NASA missions currently exploring our solar system, and it is fun to be the person to share the discoveries with people who may not realize how active exploration is right now in Earth and planetary sciences.

The primary focus of my work with the LPI has been the development of freely available informal science educational materials and activities and delivery of professional development trainings to informal educators from across the country through the LPI’s Explore program (www.lpi.usra.edu/explore/). This program started by serving and training public librarians but has expanded to include other informal educators such as museum staff, Girl Scout leaders, and camp professionals/interpreters. The Explore program is designed to engage children in Earth and space science in libraries and other out-of-classroom environments. Finally, I am also a member of the NASA Science Mission Director’s Planetary Science E/PO team, where I help to strategize, plan, and deliver professional development opportunities for the NASA Planetary Science E/PO community as a whole. Within this group, I have also helped to co-lead a task force on professional development related to serving underserved/unrepresent- ed audiences in science education.

WHAT ARE SOME OF YOUR HOBBIES AND INTERESTS?

I have always enjoyed the outdoors, and have continued some of my favorite hobbies which include horseback riding, gardening, star gazing, and, more recently, running 5K’s. After returning to Iowa, I discovered a new passion for health and fitness through the Next Level Extreme Fitness Program in Cedar Falls – it is an amazing group (family) of people and has had a very positive impact on me and my family. I never would have believed that I would be good at running, let alone enjoy it, but I’ve discovered a love for the challenge of it. It has served as a good reminder to never settle in life, but rather to continue to try new things and push myself out of my comfort zone. That is the best way to really grow and learn… a good reminder for an educator.

WHAT DO YOU ENJOY MOST ABOUT WORKING WHERE YOU ARE NOW?

In my work for NASA E/PO over the past 2 years, I have been able to experience and take part in some amazing opportunities and events - from NASA mission launches such as the Mars Science Laboratory (Curiosity Rover), Lunar Atmosphere and Dust Environment Explorer (LADEE), and Mars Atmosphere and Volatile Evolution (MAVEN) missions, to becoming an authorized certifier for the lunar sample education disks from Johnson Space Center, and traveling across the country to train other informal educators in NASA hands-on activities, resources, and science content. I have thoroughly enjoyed the diversity of tasks and opportunities within my current position. Not many jobs provide this range of opportunities and experiences!

HAVE YOU RECEIVED ANY OTHER DEGREES SINCE GRADUATION OR DO YOU PLAN TO CONTINUE YOUR EDUCATION IN THE FUTURE?

Since graduating from UNI, I have completed 30 hours of graduate work towards a M.S. in Geosciences. However, I do not have any additional educational plans for the foreseeable future.

HAVE YOU BEEN THE RECIPIENT OF ANY AWARDS OR SPECIFIC ACCOMPLISHMENTS?

I was honored to be the recipient of an American Meteorological Society Government/Industry Graduate Fellowship, sponsored by the National Weather Service. One of the final programs – and one that I am particularly proud of - that I helped to start at the museum before moving on to my current job was a new High Altitude Balloon (HAB) program, funded by the Iowa Space Grant Consortium. (CONTINUED ON PAGE 10)
SUNDAY at the QUARRY

On Sunday, October 6th, the UNI Earth Science Department celebrated Earth Science Week by participating in the Sunday at the Quarry event. This annual event is sponsored by the BMC Aggregates and provides a chance for the general public to learn more about Earth Science. Various state and local groups offered educational activities for the young and young-at-heart. Visitors could also smash some limestone chunks in search of fossils or calcite crystals, or travel down into the quarry itself. An estimated 750 people braved the cloudy and drizzly weather and partook of the festivities at the Raymond Quarry just east of Waterloo.

This year’s theme was Our Resourceful Earth, and like past years, the UNI Earth Science Department had a strong showing. Kyle Gray asked visitors to match common household items (like drywall) with their associated Earth materials (such as gypsum). This activity was first put together by Jim Walters and was a huge success with the younger kids. Chad Heiselt had people map rocks in a small sandbox filled with different types of rocks. Several majors from the Earth Science Department (including a few teaching majors) assisted with the activities and had fun interacting with the public. Jim Walters and Lee Potter greeted visitors down in the quarry and explained the stratigraphy exposed on the quarry walls. Our newest faculty member, Alexa Sedlacek, also popped in for a while. For some reason, Siobhan Morgan thought that a thick cloud layer was a sufficient excuse to avoid setting up her telescope for viewing the sun.

Despite the rainy day, the event was a success, and we look forward to the 2014 event.

MADDIE PIKE

Senior Geology major Maddie Pike spent a large portion of her summer in the southern hemisphere, where she created geological maps as part of Michigan Technological University’s South Africa Field Camp. The camp took place in Cape Town, South Africa, the Langeban Lagoon in West Coast National Park near Langebaan, South Africa, and the Cape Fold Belt Mountains near Ladismith, South Africa, from early May to early June 2013.

“I decided to attend the South Africa field camp because I have done very little traveling in my life and wanted to see another part of the world. This field camp allowed me to see the geology of an area that is completely different from the central United States that I am familiar with, and it enabled me to learn more about the geological history of the southern hemisphere.”

Pike had always planned to enter the field of geology, and initially decided to attend UNI because of the welcoming atmosphere created by the faculty and students in the Department of Earth Science. “Classes taken in the Earth Science Department prepared me for field camp by providing me with the knowledge to assess the geology of regions of South Africa and translate that information into a map.”

In her mapping excursions, Pike was able to visit many interesting areas. “While in South Africa I learned so much about all aspects of geology and mapping techniques that allow me to think more critically about concepts, whether they relate to geology or not,” said Pike.

While exploring these regions, Pike gained valuable skills, which she plans to use in her future endeavors.

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After graduating, Pike is looking forward to attending graduate school for hydrogeology or paleontology and using knowledge that she has acquired from professors at UNI.

“I have had many influential professors. All of my professors have provided me with great advice, from learning the material in class, to advice on graduate school and life in general. Some of my professors have also really impacted me and have enabled me to find interests in many fields of geology, fields that I will be pursuing further in graduate school.”
It’s nearing the end of another year, and Earth has gone around the sun again. This is the time to greet old friends and remember those who are no longer with us as we take joy in celebrating new friends. I’m glad to have made it around the sun once more. Going around the sun is a concept that would have meant nothing to our distant forbearers. I have quite often thought about how our knowledge of the size and arrangement of the universe has given us a different sense of our place in the world. A few centuries ago, people thought in terms of only thousands of miles to all that exists. Now we think in terms of billions of light years and a world billions of years old. Likewise, not many generations ago, people had no knowledge of the microscopic. Amoebas, bacteria, and diatoms (you know I would get around to those) could not be imagined. One has to wonder what people in the future will be talking about that we are now unaware of. That’s why we build atom smashers, spaceships, and microscopes — why we have universities.

Speaking of diatoms, I have been looking for those single-celled algae in 55 million-year-old coal. After attending a diatomist workshop at Iowa’s Lake’side Lab in June, I started to examine coal from Montana and North Dakota. So far, I’ve had no luck, but if I find any, you can be sure you’ll hear about it next year. The North American Diatom Symposium was held this year in Bar Harbor, Maine, and because someone has to attend these meetings, I sacrificed my time and resources to spend warm summer days by the ocean. It was hard!

Betsy and I have been in some 26 states and two Canadian provinces this year — from Maine to California and Montana to North Carolina. We are trying to warm the planet by burning all that gasoline. And as I write this blurb, the world outside my window could use a little warmth. Winter has arrived in Cedar Falls.

Here’s wishing you a happy and prosperous year as we go around the sun one more time.

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(continued)

If you have the chance to attend one of these events, or to present your own experiences to a group of youngsters, I’d strongly urge you to do so.

For myself, I’ve continued to teach an array of astronomy courses and continue with my own outreach activities with the weekly observatory or planetarium shows. This fall we had nearly 400 visitors to the McCollum observatory — including students from Waterloo schools, Hawkeye Community College and two groups of Boy Scouts (and parents). I was also able to travel to Poland to present results of my research on variable stars, and do a little bit of tourism (and have some pierogis as well).

Please keep in touch; we are always interested in our students’ many activities and achievements. And as usual, I would like to thank you for your continued support and interest in our students’ many activities.
The IMPACT Program began its eighth year of programming in July 2013 after receiving a three-year grant from the Iowa Board of Regents through the Title II A Improving Teacher Quality State Grant Program for Higher Education. The grant management team at UNI includes Dorwen Hayek and Lori Seawel (Information Technology Services – Educational Technology), Marcy Seavey (Iowa Academy of Sciences) and Alan Czarnetzki (Earth Science). Eight middle and high school teachers are participating in the 2013-2014 program year. Participants attended a two-week summer institute on the UNI campus in July 2013 and are receiving on-going support via the Iowa Communications Network, webinars, and school visits by the grant management team. The goal of IMPACT is to provide participating teachers with sustained, intensive professional development that results in demonstrable and measurable improvement in student academic achievement in mathematics and science. The content areas we focused on were weather analysis and forecasting (using materials developed by the STORM Project in the Department of Earth Science), GLOBE (Global Learning and Observations to Benefit the Environment) protocols for making scientific measurements, and inquiry techniques for the science classroom. Participating teachers develop two Technology Integration Action Plans (TIAP) for their classroom using STORM and GLOBE content. Many of the current and past participants will be presenting on implementation of their TIAPs and the resulting student projects at the Spotlight on Technology Day, scheduled for February 27, 2014, on the UNI campus. IMPACT participants receive a modest stipend and can register for graduate credit.

Currently, there is a somewhat-irritating ad running on cable television. The ad shows a husband and wife discussing their financial situation and then cuts to a gorilla who says “but don’t listen to me, I’m just the 800-pound gorilla in the room.” The gorilla is intended to be a metaphor representing the need for long-range financial planning, something that is obvious but often ignored. Some bloggers have criticized the ad as being a mixed metaphor and point out those creators of the ad should have used “the-elephant-in-the-room” metaphor if they were talking about something that people know (or see) but still choose to ignore. It doesn’t matter. My story deals with neither elephants nor metaphors.

### A TRIP TO...

**PARTANNA, SICILY**

Four UNI Earth Scientists embarked on an adventure this past summer near Partanna, Sicily. Dr. Chad Heinzel (Associate Professor of Geology) led three undergraduate students (Angela Pearsen, John Chesley and Victoria Arreko) in geochronological field research. Our preliminary objectives were to begin developing two data sets: 1) characterization of Partanna, Sicily’s, natural resources (clay and stone), and 2) confirm the presence of a geochronological record capable of addressing questions surrounding the Neolithic Revolution (6000 BC). We collected over one-hundred geologic (clay, stone, and ceramic) samples. Analyses (chemical and physical) of these samples are facilitating interpretations that directly tie western Sicily’s prehistoric communities with their geologic environment, providing a “window” into their lives.

Our efforts have identified an abundance of natural resources as well as a robust archaeological record dating back to the Mesolithic (10,000 BC). One of the most promising finds was a paleosol (buried soil) with significant cultural materials! These artifacts (lithic and ceramic) date to the Late Mesolithic to Early Neolithic. This paleosol may represent a soil, “natural time-capsule”, of the Neolithic Revolution, or time when humanity was evolving from hunting/gathering to agrarian lifestyles! In addition to identifying and characterizing the natural resources and artifacts, we constructed a series of Geographic Information Systems (GIS) maps that will serve as the basis for future work investigating western Sicily’s prehistoric landscapes, to depict the Mesolithic to the Neolithic, and to present the results to our students and colleagues.

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Another exciting year has flown by and it has brought on a wealth of new experiences and events to make 2013 a great year for SGE. Last year we saw many of our active members graduate and move forward with their lives, but those voids have since been filled with new members who will certainly continue to help SGE grow.

We currently have 21 active members in the Chapter. During spring semester last year, we initiated four new members and an additional five members in the fall. The current officers were elected last April and include: President John Chesley, Vice President Victoria Arneola, Secretary Roberts Spielbauer, and Treasurer Madison Pike.

The members of SGE have ardently given their time and volunteered for events such as Sunday at the Quarry during Earth Science Week. Our members helped visitors identify their time and volunteered for events such as Geo-nights, the annual holiday party, and some of our members graduated and moved forward with their studies.

We are currently planning a showing of a documentary called “Switch” that discusses energy and how the transition of energy resources will shape our future.

This year in order to help SGE raise money we decided to make t-shirts. Making t-shirts for SGE had been talked about for well over a year, but this year we finally managed to make it happen. SGE will sell pop, candy, and other snacks in our student room as another source for raising money.

Sam completed his undergraduate degree at the Iowa State Teachers College, now known as the University of Northern Iowa. He later obtained a master’s degree from the University of Iowa followed by post-graduate studies at the University of Missouri-Columbia. Sam had a long career in education starting with teaching positions in several Iowa cities. He then became the Guidance Director for the Fond du Lac, Wisconsin, school district. In 1964, he began his career at UV-Stout as the Assistant Registrar.

He retired in 1991 as the Assistant Chancellor for Student Services/Dean of Students. At that time, the Stout Student Association medallion was renamed the Samuel E. Wood Medallion award.

Sam was survived by his wife Lois and four children, Mark (Julia) Wood, Dale (Robin) Wood, Roger (Heidi) Wood, and Diane (David) Flowers. He has 11 grandchildren and 2 great-grandchildren and is also survived by his sister-in-law Mary (Robert) Stanislaid. Sam was preceded in death by his sister and brother-in-law Dorothy and Tony Stucky. His greatest joys in life were for his family and working with the students at UV-Stout. The family would like to thank the Memonocal Mayo Medical staff for their care and compassion in his final hours.

Another volunteer activity that some of our members helped out with was the annual event known as Snapshot. For this event, we worked with the Black Hawk Soil and Water Conservation District and the Iowa Department of Natural Resources to test the water quality at various locations along Dry Run Creek. We looked at the quality of water within a small time interval to more accurately help treat potential pollutants in the water. One of our biggest accomplishments this year was becoming Blue Zone Certified, showing our organization is committed to well-being.

A number of social events have been held this year in order to help strengthen the SGE community at UNI. Our biggest social event was our welcome back lunch for students and faculty at the start of the academic year. We have also organized events like movie nights, the annual holiday party, and some of our members regularly participate in Geo-Thursday to exchange stories and laughs with their fellow peers. We are currently planning a showing of a documentary called “Switch” that discusses energy and how the transition of energy resources will shape our future.

This year in order to help SGE raise money we decided to make t-shirts. Making t-shirts for SGE had been talked about for well over a year, but this year we finally managed to make it happen. SGE will sell pop, candy, and other snacks in our student room as another source for raising money.

After seeing many of our members graduate from UNI, taking the next big steps in their lives, we are thankful for their participation and help in making Gamma Sigma what it is today. We encourage our new initiates to continue being active in SGE and bring new ideas to the table to make SGE an even greater organization. If you would like to follow us throughout the year, make sure to check out our Facebook page at www.facebook.com/unisge. The Gamma Sigma Chapter of SGE thanks you for all your support!

John Chesley
Chapter President
SEMINARS

SPRING 2013

Dr. Dylan Blumentritt
University of Minnesota
Eosinophilic Myocarditis
Lessons from Lake Pepin and Atmospheric Radiotelesopes

Dr. Alexa Sedlacek
The Ohio State University
The End-Permian Mass Extinction and Early Triassic Recovery: Isotopic Evidence for Continental Wikamian and Enhanced Weathering

Dr. Jie Xu
George Washington University
Complex Effect of Mineral-Water Interfacial Chemistry on Microbial Cell Viability and Biofilm Formation

INTERNSHIPS

2013

Justin Edwards
Wapsipinicon State Park
Recreational Aide
Spring 2013

Ariel Williams
ES Interpreptive Naturalist
UNI Museum
Museum Intern
Spring 2013

Andrew Klok
Earth Science
Greens/Fairway Maintenance
Beaver Hills Country Club
Summer 2013

Lorrianna Scarf
Earth Science & Environmental Science
Planetarium/Outreach Assistant
Grout Museum
Summer 2013

Dillon Vosika
Earth Science
Conservation Aide
Butler County Soil & Water Conservation District
Summer 2013

Christian McLaughlin
Earth Science
Park Maintenance & Naturalist
Mapskuta Caves State Park
Summer 2013

Stefanie Hogan
Earth Science BA & Earth Science Teaching
Volunteer in Park (YIP)
Oregon Caves National Monument
Summer 2013

Nathan Jacobsen
Earth Science
UNI Museum
Museum Intern
Fall 2013

Kelsey Stevenson
Earth Science
Planetarium/Collections Intern
Grout Museum
Fall 2013

STUDENT RESEARCH

CHAS SUMMER UNDERGRADUATE RESEARCH SYMPOSIUM
AUGUST 2, 2013
UNIVERSITY OF NORTHERN IOWA

Jordon Althenhofen, B.A. Earth Science
Academic Achievement Award

Summer Undergraduate Research Program (SURF) Scholarship

Taylor Garton, B.A. Earth Science & Music: General Studies
CNS Earth Science Scholarship

Robin Griffith, B.A. Earth Science
Donald and Margaret McKay Scholarship

Nathan Jacobsen, B.A. Earth Science
Academic Achievement Award

Emily Petersen, B.A. Earth Science
Louise Hearst Speer Memorial Scholarship

CNS Earth Science Scholarship

Sarah Siperstein, B.A. Earth Science
Academic Achievement Award

Larry Shonk, B.A. Earth Science
History Teaching Dean’s Student Award Nominee

Zachary Lenth, B.A. Geology
CNS Earth Science Scholarship

Collin Barker, B.A. Geology
Student Opportunities for Academic Research (SOAR) Award

Anthony Boxleiter, B.S. Geology
Student Opportunities for Academic Research (SOAR) Award

John Chesley, B.S. Geology
Summer Undergraduate Research Program (SURF) Scholarship, Academic Achievement Award

Madison Pike, B.S. Geology
Jan Harcken Scholarship

Joseph Reinders, B.S. Geology
Biology & Biomedical
CNS Earth Science Scholarship

Anthony Boxleiter, B.S. Geology
Summer Undergraduate Research Program (SURF) Scholarship

Alecia Herzog, B.A. Earth Science
Academic Achievement Award

John Chesley, B.A. Earth Science
Academic Achievement Award

Alicia Petersen, B.A. Earth Science
Louise Hearst Speer Memorial Scholarship

The GEOLOGICAL SOCIETY OF AMERICA ANNUAL MEETING
OCTOBER 27-30, 2013
DENVER, COLORADO

Angela Petersen, Zach Lenth and Dr. C. Elliott Heinzel
Mapping the Surficial Geology of Bremer and Hardin Counties (Iowa), A Five-Year USGS/EDMAP/UNI Investigation

Victoria Arreola, John Chesley, Michael Kolb & Sebastiano Tusa
A Preliminary Geoarchaeological Survey of Panarea, Sicily (The Belice River Valley)

Graduate School for the Study of Science (SOAR)

GRADUATES

2013

May 2013 Graduates

Jordon Althenhofen, B.A. Earth Science

Anthony Boxleiter, B.S. Geology

Wesley Gatlin, B.A. Earth Science

Benjamin Harken, B.A. Earth Science

Zachary Lenth, B.A. Geology

Cody Mireles, B.A. Geology

Dustin Quade, B.A. Geology

Andrew Sheets, B.A. Earth Science

Interpretive Naturalist

Elizabeth Webler, B.A. Earth Science

Summer 2013 Graduates

Alicia Herzog, B.A. Earth Science

Andrew Klok, B.A. Earth Science

Interpretive Naturalist

Carla Wright, B.S. Geology

Zach Zurbord, B.A. Geology

Fall 2013 Graduates

Erin Boyd, B.A. Earth Science

Christian McLaughlin, B.A. Earth Science

Andrew Klok, B.A. Earth Science

Anyiah Petersen, B.A. Earth Science

Sarah Spierstein, B.A. Earth Science

Kelsey Stevenson, B.A. Earth Science

Anthropology

Melissa Zimmerman, B.A. Earth Science

Scholarships

2013

MCSF Scholarship

Purdue University

Old Gold Award

NASA Scholarship Award

Space Grant Consortium

Wayne & Jan Anderson Summer Field Camp Award & Academic Achievement Award

Zachary Lenth, B.A. Geology

CNS Earth Science Scholarship

Collin Barker, B.A. Geology

Student Opportunities for Academic Research (SOAR) Award

Anthony Boxleiter, B.S. Geology

Student Opportunities for Academic Research (SOAR) Award

John Chesley, B.S. Geology

Summer Undergraduate Research Program (SURF) Scholarship, Academic Achievement Award

Madison Pike, B.S. Geology

Jan Harcken Scholarship

C.W. Lantz Undergraduate Scholarship, Wayne & Jan Anderson Summer Field Camp Award

Academic Achievement Award

Joseph Reinders, B.S. Geology

Biology & Biomedical

CNS Earth Science Scholarship

Alison Schell, B.S. Geology

B.A. Earth Science

CNS Earth Science Scholarship

W.A. Tarr Award

NASA Scholarship Award

Space Grant Consortium

Wayne & Jan Anderson Summer Field Camp Award & Academic Achievement Award

Alicia Herzog, B.A. Earth Science

Larry Kelsey Memorial Scholarship

Casey Clark, B.A. Earth Science Teaching

Bill & Terri Brehl Scholarship, Academic Achievement Award

Larry Shonk, B.A. Earth Science Teaching & History Teaching

Dean’s Student Award Nominee

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Melissa Zimmerman, B.A. Earth Science

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Casey Clark, B.A. Earth Science Teaching

Bill & Terri Brehl Scholarship, Academic Achievement Award

Larry Shonk, B.A. Earth Science Teaching & History Teaching

Dean’s Student Award Nominee

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1960's

MARY ANN (MARSH) SMITH
B.A. Earth Science (#88)
M.A. (#72) Offshore Science Education
Princeton, IL

Retired educator - I am thoroughly enjoying retirement, spending more time with our grandchildren, reading, traveling, volunteering and a fair amount of loafing. I love to hear about the department and send special greetings to Dr. Wayne Anderson.

1970's

ELDON BIRD
B.A. Earth Science (#70)
P.A. Earth Science (#72)
Bestendorf, IA

Retired Educator - Enjoying retirement with travel throughout the USA! Also spend time on the golf courses and bass fishing! After all the years of work, I have now committed to a life of play!

Our granddaughter has just been accepted at UNI - 4th generation of Panther Pride!

BILL BRECHT
B.A. Earth Science Teaching (#72)
St. Charles, MO

Retired educator - Since retiring from teaching in 2002, I've been working part-time at the Lewis & Clark Museum in St. Charles. My wife Teri (UNI #73) and I enjoyed attending the Science Education Awards Banquet and visiting the campus last April. Our son Charles, my wife Teri (UNI '73) and I enjoyed attending the Earth Science Awards Banquet and visiting the campus last April. Our granddaughter has just been accepted at UNI - 4th generation of Panther Pride!

LYLE SILKA
B.A. Geology (#72) & P.S. Geology (#75)
Oklahoma State Univ.
Haymarket, NE

Consulting Hydrogeologist
Silka Consulting Services Inc.

Providing hydrogeologic consultation, investigation & remediation for subsurface contamination issues for the past 5 years mainly in Nebraska involving petroleum releases, dry cleaners, and As-Pb in old orchards. While my opinion is somewhat biased at that date, I could not have done better than UNI. However, I'm not quite fossilized yet!

NORM HEADER
B.A. Geology (#73) M.S. (#77)
Tucson, AZ

Retired Staff
Department of Geosciences, University of Arizona

This past year has kept me busy trying to protect the San Pedro Valley in southern Arizona, where I have a cabin and a community of friends. We have been struggling against a gigantic transmission system in the valley and working to establish a National Wildlife Refuge. In early February, my geology buddy Russ Jacobson visited Tucson again for the Tucson Gem and Mineral Show, and we had a great time wandering around looking at fossils and minerals. Other trips during the year included visiting the Pinacate Volcanic Field in northern Sonora and the Guadalupe Mountains in west Texas. I also visited my family in Iowa and returned through Colorado, escaping the state the very breathing that the rain began that devastated the Front Range. Retirement keeps me busier than ever. I need a rest sometimes!

JIM JANSSEN
B.A. Geology (#72)
M.A. Ed Psych-Teaching (#80)
Waverly, IA

Retired - Carla and I continue to enjoy the benefits of retirement—time to travel to see family, have fun, play, do community service, and to have a more balanced life.

MARK BOLSON
B.A. Geology (#73)
Tucson, CO 80233

Retired

KAREN ASHAUG
B.A. Science (#74)
Fairport, NY

WW WebSphere Channel Sales IBM Software Group

Employed in software channel sales with IBM Software Group - Application Integration Middleware business. Thirty three years IBM career has included U.S. field sales, mainframe hardware planning, network services planning, WW software business development and WW software channel sales. Summer time explorations to the Maine coast - Acadia National Park and winter excursions to the Canadian Rockies. Value of the earth science curriculum to my roles at IBM—disciplined study habits, project management, business skills as well as exercising conscience.

DEBORAH MILLER
B.A. Geology (#76)
Des Moines, IA

Specialist QA/Testing Nationwide Insurance

I'm a hacker. Our company software developers write programs which we both prove work properly and then try to hack. My retired history teacher husband, Danny, and I am doing a lot of traveling, now that our sons both have families of their own. Most recently we cruised along the west coast of italy and southern Spain. High point: Pompeii - much bigger than I expected. Good mix of our interests: archeology, geology and history.

MICHAEL ROCHÉ
B.A. Geology (#76)
Apache Junction, AZ

Retired

1980's

TOM SCHWARZ
B.A. Geology (#82)

Greetings Everyone! Hope all is well. We are doing great out in lovely Montana. I am starting my 26th year with my 16th trip to Big Sky Mon. and am excited another ski season is starting!

This spring I was fortunate enough to go on my 8th in a row rafting trip down the Colorado River & the Grand Canyon! The geo of it from the bottom is breathtaking. Hope everyone is fine and come visit Montana!

KENDALL MATTSON
B.A. Earth Science and Biology Minor ('88)
Walcott, IA

Technician for Heavy Equipment John Deere

It has been another super busy year training technicians on Hitachi mining shovels and John Deere electric drive loaders. Mining for gold, copper, and coal is going strong in North and South America, and I still enjoy getting close to the Earth. The UNI library was where I met my wife; we have now been married for 25 years. We have four children, the oldest of whom is now attending Iowa State. I have many good memories from UNI and would like to go back to see all the changes on campus.

BRIDGET MCMINTYRE JACOBSON
B.A. Earth Science (#88)
Urbandale, IA

Elementary School Nurse
Blank Children’s Hospital

After years working with the National Park Service and National Forest Service in first firefighting and then in Prescribed Natural Fire Burning and Fire Behavior, I went back to school and got my degree in nursing. I've been an RN now for 20 years. I first worked on the Basic Critical Care Unit with the Pediatric Intensive Care Unit at the University of Wisconsin in Madison. When I had our family I changed positions from the PICU to school nursing. So happy to be back in Iowa. Tod Dr. Anderson I take my daughter to the Rockford Falls at least once a year. I love that place!

KIM BUETL
B.A. (#89) Earth Science Education M.A. (#93) Science Education E.M. (#08) Educational Leadership

High School Associate Principal
Lin-Mar Community Schools

Having started at Lin-Mar upon my graduation from UNI, I am now in my 25th year - time does fly! I taught Earth Science and Chemistry for 18 years and have now been an Associate Principal, going on my 7th year. I oversee 8th & 10th graders, as well as the Fine Arts Program. My son is a junior in college, studying Civil Engineering – All of those Legos I have purchased over the years are about to pay off! In our spare time, we like to fish, boat, walk the family beagle, and just be outdoors in general.

PAT LYMAN
B.S. Geology (#89)
Cedar Falls, IA

Happy retired……THIRLLED to be retired - Health continues to be viable and transplanted kidney still functioning as they would like it to be. Still volunteering at grade schools teaching rocks and minerals to fourth graders. Playing golf as the weather allows, shooting trap and skeet more now than hunting. Mary and I travel when opportunities arise; the big one for the year was a cruise to Alaska with friends. We spend part of the winter on South Padre Island, clearing out of there before the spring breakers show up. Enjoying life and all it offers.

PAUL DEINEU
B.A. Science (#91)
State Center, IA

Science Teacher
West Marshall Schools

GAYLEN HIESTEIMER
B.S. Geology (#92)
Cedar Falls, IA

Operations Manager
Cardno ATC

The summer of 2013 included a family trip to Cody, Wyoming, to visit family and explore Yellowstone National Park. The geysers and geologic features amazed us all. The wildlife viewing was fun with numerous close-ups with binoculars on the roads. The scenery is a much appreciated change to Iowa with not much topping the Bearthooth Highway and the Silver-Gate area. Other stops along the way out and back included the Carne Palace, Mount Rushmore, Savoy, SD and Devil's Tower. We're looking forward to what adventure we'll take in 2014!

BRADLEY BLOCK
B.A. Earth Science and Natural History Interpretation (#93)
Custer, SD

Chief of Interpretation
National Park Service - Jewel Cave National Monument

Bradley entered his sixth year at Jewel Cave National Monument. He continues to enhance the interpretive programs and services for the Monument.
This past year, he completed a $512,000 remediation project within the visitor center, upgrading the exhibits and displays.

The project not only focused on improving visitor experiences but also included aspects that complemented accessibility guidelines for all audiences.

For instance, rather than placing a map on a wall for visual appeal, a digital map was created that visitors could view on a touchscreen monitor. This allows everyone the chance to scroll through the map at their leisure and locate specific passages, cave rooms, etc. for kids, a crawl-through tunnel was incorporated into the exhibit, encouraging them to become cave-seekers for a day. Most noted was the creation of hand-wand guides through the exhibits and provide interpretive narration of each display. We all had a chance to visit the Monument and check out the displays on their next vacation to the Black Hills.

Bradley was also nominated for the NPS Freeman Tilden Award this past fall. He was one of six candidates within the Midwest Region to potentially move forward into the national ranking. Although he was not selected, it was truly an honor to be nominated by his peers.

Bradley’s wife, Cherri, entered her graduated studies at the University of Arkansas. She continues to teach English and coach cheerleading. This past fall, her cheerleading program transitioned from sideline cheer to competitive cheer. At their first contest in October, the cheerleaders took fourth place in the nation.

Logan turned 14 this year, and Darian is 11. Each of them stay busy with school, activities, and after-school sports. Logan ran cross country this year as an 8th grader and took first place in the JV meet. Darian’s love remains with dance, although she just started basketball and soccer to enjoy the competition. Like probably every alumni, the family keeps busy most every day (and night) as well.

Bradley invites his fellow Earth Science majors to visit the Black Hills and give him a call at any time. Students interested in working for the National Park Service may contact him at any time. Students interested in working for the National Park Service may contact him at any time.

Then, best wishes to everyone for the working for the National Park Service may contact him at any time.
rewarding work I do with MAP, this year I’ve gotten more involved in other areas at the university. These opportunities include: serving as a staff adviser for Alternative Breaks, coaching for Transfer 2 Terp (a program that assists transfer students), serving on the Division of Student Affairs Learning Outcomes Committee, and teaching academic leadership courses for the School of Education. This past November, I co-hosted the Association of Outdoor Recreation and Education (AORE) National Conference in College Park. The conference brought together professionals and students in the field of outdoor recreation and education to exchange information, promote the preservation and conservation of the natural environment, and address issues common to college, university, community, military, and other not-for-profit outdoor recreation and education programs. After two years of planning, it was rewarding to see the conference come to fruition.

When not working, I’m preparing for the next race. This past year, I completed the Delaware Marathon, the Smallwood Olympic Triathlon, and the Culpepper International Triathlon.

MARIA HOEKSTRA
B.A. Earth Science Teaching (‘09)
Cedar Falls, Iowa

8th Grade Earth Science Teacher
Holmes Jr. High
Cedar Falls Community School District

Life is going so fast! My daughter, Adaline, is 3 years old now. My husband and I both work in the Cedar Falls area and love it here. We are enjoying the fast-paced world of being young professionals and parents. It is a crazy life, but very rewarding as well. Hope all is well at Latham.

JOE ZEITLER
B.S. Geology (‘09)
Juneau, AK

Production Geologist
Hecla Greens Creek Mining Co.

After leaving UNI, I headed to South Dakota to begin graduate work at the South Dakota School of Mines and Technology. I finished my Master’s degree in Structural Geology and Ore Deposits in the fall of 2012. Prior to that I had moved up to Juneau Alaska in July 2012 to begin working at the Greens Creek Mine. At the mine, my duties include face sampling and underground mapping in addition to working closely with the other geologists, engineers and miners to ensure we are extracting ore in a profitable manner. Probably the best part of my job is knowing that every day is different and never boring. I hope that everyone out there is well and enjoying their time after UNI as much as I was this past year.

2010’S

SEAN NEWLIN
B.S. Air Quality (‘10)
Cedar Rapids, IA

Environmental Scientist
Stanley Consultants Inc.

I am currently teaching 9th grade physics down in Kansas City. On top of teaching, I started an environmental club at our school, which has really taken off. Last February, I proposed marriage to Kelsey Hampton, a UNI biology alumni and current graduate student at KMUC for cancer research. We are having a fun time planning for our wedding and taking care of our two kittens.

ELIZABETH WELDER
B.A. Earth Science (‘12)
Navuda, IA

Americorps Forestry Aid
State Tree Nursery-DNR

WHAT HAVE YOU BEEN UP TO?

UPDATE US

E-mail updates to siobahn.morgan@uni.edu

Log on today and “LIKE” University of Northern Iowa Earth Science

DEPARTMENT OF EARTH SCIENCE IS ON FACEBOOK

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YOUR CONTRIBUTIONS MAKE A DIFFERENCE

Your contributions make a difference!

We sincerely appreciate the support from our friends and alumni. Contributions to our scholarship funds by our friends and alumni play an increasingly greater role in maintaining the tradition of excellence the Department of Earth Science has established over the years. Your gift will directly impact a student, perhaps by contributing to a department scholarship awarded to a student or to cover the costs associated with taking a class out into the field or possibly by providing support for registration and travel to a professional conference where students will present their undergraduate research results.

We hope you will consider a contribution to one or more of the scholarship funds we have established. Donations can be made using the form on the next page or via on-line giving by following the links provided at the earth science alumni page, www.earth.uni.edu/alumni.html.

Contributions can be made by check or by credit card. Credit card information will not be kept on file.

Name ________________________________________________________________

Address: __________________________________________________________________

City __________________________ State __________ Zip __________

E-mail __________________________________________ Phone __________

☐ This is a new address, phone or email.

If we would like to support the following fund(s):

$ __________________ Earth Science Alumni Fund (21-220024)

$ __________________ Wandering Coprolite Quasi-Endowed Fund (20-220408)

$ __________________ Wayne and Jan Anderson Summer Geology Field Camp Fund (21-212415)

$ __________________ Larry A. Kelsey Memorial Quasi-Endowed Scholarship (20-210460)

$ __________________ Louise Hearst Speer Endowed Scholarship (30-210113)

$ __________________ Charles J. Hearst Quasi-Endowed Scholarship (20-210313)

$ __________________ Jan Harken Quasi-Endowed Scholarship (20-212413)

$ __________________ Bill & Teni Brecht Scholarship (21-212682)

$ __________________ Total

You can also donate through the secure online link provided at the department website www.earth.uni.edu.

☐ My (or my spouse’s) company, __________________________ (name), will match my gift. (Please contact your HR office for details and matching gift form to be submitted with payment).

Payment Method (select one):  Check enclosed - Payable to the UNI Foundation

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Beginning (mo/yr) / __________________

Signature (required) __________________________ Date __________

*(Credit card information will not be kept on file.)

Card Type (circle one): VISA MasterCard Discover American Express

Card # __________________________ Expiration Date __________________________