What an unusual year for the Department of Geology!

As I’m sure it did for you, navigating the COVID landscape proved challenging for our students and faculty alike. One learns the value of face-to-face, student-faculty engagement when instruction switches online or becomes muffled behind the ever-present mask. For geologists, it meant our instruction time in the laboratory was cut in half, and many longer field trips were under threat of cancellation. Geology did its best to adapt to online instructional modes, but that essential personal touch, for the most part, was lost during this past year and a half. Having said that, our students got through 2.5 semesters of advanced course work despite the pandemic. While our summer 2020 and winter 2021 field camps were cancelled, most longer field excursions were conducted within their respective ‘bubbles’. Extra vehicles were required and all participants were required to wear masks, but all introductory courses with required field trips delivered field trips. Our geology majors were troopers, and they tolerated the rollercoaster ride that wasn’t always fun. For their perseverance and patience, I give them all a hearty Thank You!

We have been working on several important initiatives. One major accomplishment was the rollout of our revised Environmental Science emphasis. We anticipate that this rigorous and applied emphasis will play an increasing role in our geology program, and we believe it will help recruit more high school and undeclared UWEC students into our program. Also, this past spring we hosted our annual Advisory Board meeting, discussed our future staffing plan, and received valuable input (as always!). Our wonderful Advisory Board consists of fourteen alumni and friends of the Department representing academia, local and state governmental agencies, and partners in the mining and environmental science industries. In addition, Brian Mahoney spent much time on the planning committee for the new science hall. Thanks to his efforts, the building plans include useful teaching/research spaces for Geology when the new building is actually built (and that timeline is very uncertain at this point).

I am writing this update as our three Department Suburbans (newly arrived in the COVID era) pull away from the Iron Wheel Guest Ranch after the successful completion of Field Camp II. Again, a BIG shoutout goes to the nine students who completed both Field Camps back-to-back: first the 3-week stint in 90+-degree heat in Kingston, NM, and then Field Camp II in Whitehall, MT. Our majors are indeed resilient, and we are delighted that many students participated in internships in 2020-21 (see details elsewhere in Dig It).

We are all hoping next fall brings normalcy back to Phillips Hall. Please stay in touch with us; your support during such crazy times is critical to us!

Phil Ihinger
Professor and Chair
GEOL 312 FIELD TRIPS

By Robert Hooper

Despite the threat of COVID constantly hanging over our heads, the 2020 Min/Pet I group had as normal a fall semester as possible. I was allowed to offer all the local field trips and we squeezed in field trips to both the Upper Peninsula and the South Dakota. The field trips had reduced capacities in the SUVs and each student had a private tent in the national forest campgrounds. We still cooked group meals and ate as a group, and there was no COVID associated with the field trips. Due to the camaraderie in the course, students essentially formed a "Min-Pet bubble" for socialization and no COVID virus was transmitted between students in the course. The format allowed this course to be just about as normal as during any other offering, and the students were appreciative of the normalcy.

Merilie Reynolds, a recent PhD recipient from the Univ. of Alberta and Karen Havholm’s daughter, accompanied both long field trips and most Friday afternoon local field trips as well. I was thankful for the extra professional help on the trips, and I think Merilie learned a great deal about both field trip logistics and the geology of the areas we visited. One major difference this year—everyone seemed to be camping! I have never worried about finding campsites in October, but during COVID it seems everyone was interested in camping—even when the weather was iffy.

The field trip to the UP was the first weekend in October and we caught the maple trees at the absolute peak of color in much of northern Wisconsin and Michigan. The weather was variable, as usual, with spotty rain and some spectacular sunny, cool days. We made it up to the Porcupine Mountains in the UP and had sunshine for the Lake of the Clouds viewpoint and a beautiful crisp morning to visit the rhyolite dome near White Pine, MI. The trip to the Black Hills was offered two weeks later (mid-October) and we camped for four nights at Sheridan Lake (northern Black Hills). The weather was cool, averaging about 40F, with intermittent snow in camp but sunny during the days (except for Saturday where a forecast of "snow showers with little to no snow accumulation" turned into an all-day 4” snow event). Because of the snow, we went to the western Black Hills and stopped at Jewel Cave National Monument. The cave was closed because of COVID, but the park was open for hiking, so we did a four-mile hike through the park looking at the Paleozoic sedimentary rocks and the spectacular fire scars from recent summer burns. Overall, the students in the class had a great time and appreciated getting away from campus for a couple long weekends and forgetting a little bit about all the COVID restrictions on campus.

FIELD CAMP I UPDATE – NEW MEXICO

By Scott Clark

The Geology Department’s Field Geology I course has been run in New Mexico every January since 1999 when Brian Mahoney and Brad Burton led the first offering. At least that was the case until this year when we were compelled to postpone field camp as a rising wave of coronavirus impacted the nation.

Fortunately, many things fell into place to run the course in May, starting with simply getting permission from university administration to run our off-campus, living-learning-community course during the pandemic; having access to vaccinations that became available in time for all of us to be vaccinated before we headed out; and the Black Range Lodge being able to accommodate us. The success of field camp was aided by two amazing teaching assistants, Retta Isaacson and Mallory Gross, who provided excellent instructional and logistical support. Of course, we had tasty nightly meals – I think Bob’s homemade pizza was this year’s highest-rated dinner (even beating out his pork Chili Verde).

In what has become something of a tradition, Gene and Barbara Thornton greeted us each afternoon as we came in from mapping on their ranch. Beyond welcoming around 20 students to map on their land every year, the Thorntons have also donated to our Adopt a Field Camper program! Speaking of donations, we sincerely appreciate all donations we receive—from recent alumni and those who graduated many years ago, to the many friends of our program who simply believe in what we are striving to accomplish at field camp.

While we were extremely grateful everything came together for field camp, we hope our first May offering of field camp in south-central New Mexico will also be our last. Returning to our regular Winterim offering of Field Geology I next January will mean we won’t be dealing with afternoon high temperatures in the mid-90s and students will have a semester sandwiched between their two, intense three-week field courses. They also will have Field Geology II immediately after spring semester so they will complete their six weeks of field camp by early June. That means having more internship opportunities because they will be available to start working while most other geology majors across the nation will still be at their field camps.

With this year’s field camp fresh in our memories, we are already working to make next year’s offering a successful learning experience for our students.

Landowner Gene Thornton (center) with his adopted “Geology grandkids,” the Field Camp I students in New Mexico, summer 2021.
After taking a (forced) break from Field Camp II in 2020, we returned to southwestern Montana for our annual capstone experience. It was a unique experience for us because we had students from different cohorts (some students completed Field Camp I in January 2020 and others who just drove 20+ hours from Kingston, NM, to escape the summer heat. Yes – some of our students just completed a straight 6 weeks of field camp (which is quite common around the country). Instructors Robert Lodge and Phil Ihinger, TA Retta Isaacson, and 13 students met at the Iron Wheel Guest Ranch for a refreshing mapping experience in the structurally complex rocks that many of you remember so well. The group, despite being already tired from the previous field camp or rusty after the long pandemic “pause” between field camps, showed resilience and were an impressive crew to watch conquer their map areas. It was also great to see students from different cohorts bond and work together in their shared capstone experience. On our days off, we toured mines and museums around Butte and the Lewis and Clark Caverns State Park.

What a difference two years makes! The new owners of the Iron Wheel Ranch, Jody and Scott, have completely remodeled the place. New furniture, bedding, paint, flooring, and meat smokers (YUM!). Jody and Scott are wonderful hosts and are injecting new life into the business. Best of all, they want us to keep coming back! We were truly lucky to stay in the Iron Wheel 2.0, and we definitely enjoyed the new bedding and mattresses after hard days in the field. Students unwound by playing with the dogs, Belle and Jax. To cap it all off, Jody and Scott prepared a delicious meal featuring an impressive smoked 22 lb. ribeye roast. Overall, this was a very successful field camp and we look forward to returning next year.

Zoom session required valuable time during an unprecedented time in industry and in agencies, so we are grateful for their investment in our program. Participants included Todd Lindblad (US Silica, ’13), Greg Beckstrom (’84), Audrey Boerner (Eau Claire City-County Health Dept., ’11), Ken Bradbury (State Geologist, WGNHS), Mark Ciardelli (Foth, ’04), John Guhl (SEH), Breck Johnson (Oxy, ’04), Dale Kerner (Perpetua Resources, ’96), Vince Matthews (Emeritus State Geologist, Colorado Geological Survey), Maureen Moore (Maptek), Tina Pint (Barr Engineering, ’99), Bob Servais (Milestone Materials, ’04), and Roberta Walls (WDNR).

We thank the professionals who attended the Advisory Board meeting. Participating in the 6TH ANNUAL GEOLOGY/RMI ADVISORY BOARD MEETING HELD

By Kent Syverson
The 6th Annual UWEC Geology/Responsible Mining Initiative Advisory Board meeting was held on May 4, 2021. The COVID-19 lockdown once again prevented us from meeting in person, but we had a valuable two-hour Zoom meeting with the Advisory Board members. Thirteen outside stakeholders (including eight alumni) from Wisconsin, Minnesota, Colorado, and Idaho participated. The major discussion revolved around long-range planning for staffing (retirements are likely in the next three years) and student recruitment. As always, the Advisory Board provided extremely valuable input.

We thank the professionals who attended the Advisory Board meeting. Participating in the
RESPONSIBLE MINING INITIATIVE UPDATE

By Kent Syverson

In November 2013, the UW System awarded UWEC Geology a $451,000 Economic Development Incentive Grant for the Responsible Mining Initiative (RMI). This grant was awarded to prepare highly qualified graduates for work in the mining industry, the environmental consulting industry, and in regulatory agencies such as the DNR. Despite the COVID pandemic, the RMI continues to have a positive impact on students. In the spring, eleven students completed a 1-cr VULCAN special topics course, thanks to support from Maptek and instructor Brian Mahoney. Internships in summer 2021 came roaring back after a pandemic-impacted summer 2020. We placed students in metallic mining (Alaska, Michigan, and Montana), the environmental industry (mainly in the Midwest), and in governmental agencies. Here are two other telling statistics: Geology scholarships and grants in 2013 ($2500) vs. 2021 ($27,336), and the number of paid internships in 2012-13 (4) vs. 2020-21 (18). Approximately two-thirds of the summer 2021 internships are in hydrogeology and environmental geology, and the rest are in metallic mining/exploration.

These successes have required much relationships-building with industry. In May, we held our 6th Geology/Responsible Mining Initiative Advisory Board meeting via Zoom. Thirteen external stakeholders attended the event and we obtained valuable feedback about our future staffing plan (see separate story). In non-COVID years, faculty have attended professional meetings in Minnesota, Wisconsin, Toronto, and Texas to network with potential stakeholders. Lots of work, but it has been exciting to see students benefit from these new opportunities (see separate articles about internships, scholarships, and donations). Thanks to all partners with the Responsible Mining Initiative!

The Responsible Mining Initiative is providing amazing opportunities for our students. The scholarships reduce student debt. The internships provide a valuable window to the working world. When internships and scholarships/grants are added to field experiences and our strong collaborative research program, the Dept. of Geology is offering an undergraduate education unavailable at other universities. This is preparing our STEM graduates for the work force and graduate school. If your company might want to partner with the RMI through an internship, donation, or speaker, please contact Kent Syverson or Brian Mahoney.

Maddie Palubicki, intern with the South Dakota DENR, summer 2020.
Katherine Langfield collects stream data in Little Niagara Creek on lower campus. Looking south toward the “new” Davies Center.

Undergraduate research has been a big part of Katherine Langfield’s college experience. However, the UWEC senior geology major still was nervous about presenting her research for the first time during a professional conference. The Lake City, MN, native need not have worried because her presentation earned her first-place honors in the Best Presentation category even though other presenters included graduate students. Langfield was one of just five student award winners at the conference.

“I'm still in shock,” Langfield says of her success at the Wisconsin section conference of the American Water Resources Association, the premier meeting of water science professionals in Wisconsin. “This was my first presentation at a conference. I have presented posters before, but never given talks. And it was my first virtual conference. I was super nervous and intimidated. I was the only student, undergraduate or graduate, in the baseflow section, and that only heightened my anxiety. “Then, in the moment, I was able to just calm down and let all the times I practiced take over.”

Langfield’s presentation focused on her work as a member of a UWEC student-faculty research team that is collaborating with the WDNR on research involving stream flow measurements. For the project, Langfield collected monthly baseflow stream measurements in north-central Wisconsin. The data was entered into a DNR database where it can be used to quantify the effect of farming and water withdrawals on regional surface water.

In her March 2021 AWRA presentation, Langfield shared information about the first two years of the regional project.

“Katherine has been involved in the stream flow project with me since it began and stepped into a leadership-type role on her own early on,” says Dr. Sarah Vitale, an Assistant Professor of Geology who leads the project. “The project has continued smoothly largely due to her dedication, including helping to train new students who join the project. It has been a pleasure to work with her, and she will be missed when she graduates.”

Langfield also worked on an experimental petrology research project with Dr. Phillip Ihinger, Professor of Geology and Chair of the Geology Department, to study natural and artificial silicate glasses and historical glass trade beads from Michigan.

By working alongside faculty research mentors, Langfield says she has gained the knowledge, skills, and confidence to help her succeed in her future career. “Research is a huge experience that’s shaped my time here,” says Langfield, who graduated in May with a geology major and a creative writing minor. “Had I gone to a larger university, there’s a much lower chance I would have become involved in research, let alone be first author, on projects as an undergraduate student. Research has taught me so many valuable skills, as well as given me direct application for what I learn in class.”

Langfield was undecided on a major when she came to UWEC. “I liked geology when I was younger but didn’t see myself pursuing it because I didn’t know what types of jobs were available,” Langfield says. “I was undecided as a freshman but decided to take Geology 110 with Dr. Ihinger just to see if I was still interested. During the first outdoor lab to Little Falls, I fell in love with geology and changed to a geology major shortly after.”

That outdoor lab was the first of many meaningful outside-the-classroom experiences. According to Langfield, faculty in the Geology Department do a tremendous job of teaching in their classrooms, but they also weave many real-world experiences into the program. “For example, the department’s field camp in New Mexico was a phenomenal experience for me,” Langfield says. “Mapping in the desert for three weeks taught me so much about geology that can only be learned outside of the classroom. Overall, the amount of time spent out in the field for many of the classes is a real strength. Another strength of the department is how many students do research and internships. It’s such a great way to develop skills for our careers, as well as to get experience in different areas of geology.”

Langfield, recipient of the David Risch Geology Research Scholarship and 2021 Excellence in Geology award, will attend graduate school at Michigan Tech University this fall to study structural geology/volcanology.

Blugold Geology interns Rory Johnson (left) and Bridgett Russell (right) doing exploratory drilling near the Stillwater Mine, MT, summer 2021. They are pictured with the drill manager for Group Ten Metals, Blugold Geology alum Mark Nelson ’06. Blugold Geologists are everywhere!
FROM ITHACA TO OKINAWA 1928-1949, BY DR. PAUL Myers

Editor's Note: Dr. Paul Myers was a Professor of Geology at UWEC from 1969-1997. Paul was "stuck" in Panama during the pandemic and said he was bored. The editor promptly gave him an assignment – to write a brief autobiography! What follows is the first "chapter" of his interesting story! See the entire autobiography at https://tinyurl.com/3fc6rk3.

Paul (left) and brother Gordon (potted, right) taken by Uncle Dick Owlett in 1931 in Ithaca, NY. This is before wheels were invented. Dick Owlett was a semi-professional photographer at an Ithaca camera store.

Paul broke the early morning peace and quiet of Tompkins County Memorial Hospital in Ithaca, NY on October 10, 1928. The hospital hasn’t been the same since. Although there were actually hospitals way back then, dinosaurs were still roaming the streets looking for someone to eat.

During the early 1930's and the beginning of the Great Depression, my dad didn't think it was all that great because he was a piano teacher when music was not a high priority for most people. In 1930 and 1935, I was joined by brothers Gordon and Bob, who ate almost as much as I did. No way Dad could support a hungry family of five by teaching home lessons, so we drove his Packard to farms around Ithaca where people traded food for lessons while we cavorted in the barns with their siblings. Our diets during the Depression were mostly 'leftovers.' Fortunately, Mom was resourceful. But she worried about us constantly, with good reason. We thrived on our bicycles, sleds, and skis in and around Ithaca's gorges and cemeteries. Our home was only six blocks from Ithaca Falls which we secretly climbed without equipment. In one of our many nerve-wracking 'adventures,' we 'remodeled' the crumbling chimney on our farmhouse for which we were painfully 'rewarded.'

As the mid-1930's Depression gradually took its toll on piano students, Dad was forced to look elsewhere for gainful employment – teaching music at public schools in the Finger Lakes farmlands north of Ithaca. And for us kids, there was always work for money by picking beans, de-tasseling corn, mowing lawns, etc. During later summers we helped Dad paint houses. At school during the war years, women teachers, many of them with no experience, replaced the men who were fighting overseas. Although my primary academic interest was science, few people were qualified to teach it.

On Sundays we all sang in the Presbyterian Church choir and on many other occasions 'volunteered' to play at various gatherings. Closets in our house were full of 'experimental' instruments which we played – loudly. As our part of the 'war effort,' we built, flew, and crashed numerous model airplanes and kites. As I climbed the academic ladder at the school where Dad led the orchestra, band, and choir, I was expected to do my part. My maternal grandmother, who was a well-known violinist and organist, dutifully handed me the obligatory violin which I played, poorly, until I graduated in 1946. So much for high school.

The GI Bill had been extended to high school graduates in 1946, so I enlisted in the Air Force for three years right after high school. This would provide me with a door to the future, including sufficient funding to pay basic university expenses for at least four years. In the Air Force I would be flying all over the world. Not too shabby. After basic training in Texas, I went to Denver for six months training in B-29 gunnery systems and eventually ended up as a B-29 gunner at Kadena Air Base, Okinawa. From there we flew frequent missions all over the Pacific including Japan, Korea, Philippines, Hawaii, Guam, and most of the other Pacific bomber bases. We bombed 'uninhabited' islands, transported officers' cars and liquor from Hawaii, overflew Nagasaki and Hiroshima, and thumbed our noses at attacking MI'G's in Korea. What did you do for excitement in 1947? Editor's note – read Paul's entire autobiography online!

(Above) Beached transport ships carried ashore, anchors and all, during a destructive typhoon in October 1945. We climbed aboard the center ship via the anchor chain and went to the bridge where we found the captain's log describing his scary experience. These ships in 1947 were being removed as military salvage from Okinawa and sold to the Chinese Nationalists under Chiang Kai-shek.

(Below) B-25 light bomber like those flown off an aircraft carrier to carry out the Doolittle Raid on Tokyo. We flew from Tinian Island to Okinawa in this plane (~1400 miles.) Flying in this plane was like riding a fast motorboat on choppy waves.

(Above) Paul during a tour several GI's took to northern (unoccupied) Okinawa Island, a very wild mountain wilderness full of Japanese soldiers who were still hiding from the American occupiers, not knowing the war was over.
1. Maple leaf on Chippewa County’s Ice Age Trail maintains a positive attitude during the COVID-19 pandemic! Taken by former Geology ADA Nancy Amdahl in October 2020.


3. Chef Hooper makes his signature pizza at Field Camp I.


5. Shelby Short, intern with the USFS in the Chippewa National Forest (MN), summer 2020. Note the large white pine and her mosquito netting!
6. Bryanna Rayhorn sampling groundwater flow into a lake to determine phosphorus flux.

7. Field Camp I students seeking shade on a hot day in New Mexico.

8. Earth History group photo on field trip to Thomson Dam, MN, Oct. 2020. Field trips during the COVID-19 pandemic were “different.”


10. Gearing up for a field day in New Mexico on the steps of the Black Range Lodge.

11. Field Camp I students eat breakfast in Dillon, MT, on the way to Field Camp II. After 20+ hours on the road, spirits are still high!
SCHOLARSHIP CORNER

2021 FRESHMAN GEOLOGY SCHOLARSHIPS ANNOUNCED
Thanks to alumni for funding merit-based, annual scholarships for high-potential incoming freshman who are majoring in Geology. This year three recipients were selected, and each will receive $1000. This year’s winners of Blugold Freshman Geology Scholarships are Makenzie Sedlacek (Inver Grove Heights, MN) and Aidan Kwiatkowski (Forest Lake, MN). Jake Cipar (Medford) received the Freshman Geology Promise Scholarship funded by Curt and Laura Peck. Congratulations to these recipients, and we look forward to their arrival on campus this fall!

HANEL WINS BECKSTROM GEOLOGY MAJOR SCHOLARSHIP
This year’s recipient of the Beckstrom Geology Major Scholarship is Sara Hanel (Eau Claire). This $1000 scholarship, established in fall 2005 by alumnus and environmental consultant Greg Beckstrom (’84), is awarded annually to a comprehensive geology major who has completed Mineralogy-Petrology I. The awardee must have an excellent academic record and a demonstrated financial need. This is our longest-awarded scholarship in the department. Thanks to Greg for his continued support of this scholarship!

TWO JRC APPLIED GEOLOGY SCHOLARSHIPS AWARDED
The recipients of $1000 JRC Applied Geology Scholarships are Malachi Dornfeld (Juneau, geotechnical intern with Intertek PSI) and Evan Weber (Holmen, drilling intern with the SD Dept. of Env. and Natural Resources). Recipients must demonstrate an interest in applied geology careers.

Josh Carlisle (UWEC Geol ’02) established the JRC Applied Geology Scholarship. Josh conducted research with Dr. Bradford Burton at UWEC. He graduated with a BS degree in Geology and a Minor in Business Administration and immediately started working in industry. Josh and his family live in Denver where he is the Environmental, Health, Safety and Regulatory Director for BKV Corp. Thanks to Josh for his generous donation!

WISA FUNDS SCHOLARSHIP IN MEMORY OF RICHARD BUDINGER
The Wisconsin Industrial Sand Association (WISA) donated money to the UWEC Responsible Mining Initiative in memory of Rich Budinger, former president and spokesperson for WISA and a wonderful friend of the UWEC Geology program. Rich passed away in June 2018. We thank WISA for honoring Rich in this way—Rich had a heart for preparing geology students to do evidence-based investigations.

The 2021-22 recipient of the $1650 WISA Geology Scholarship is Michaela Schnell (Shawano). Michaela will be in MinPet I this fall. Please see the separate Dig It article about Curt and Laura’s background and their generous donation. We appreciate their commitment to our Geology majors!

FIRST-EVER SOPHOMORE GEOLOGY PROMISE SCHOLARSHIP AWARDED
Curt (UWEC Geol ’77) and Laura (UWEC ’78) Peck donated money to establish the Sophomore Geology Promise Scholarship in spring 2021. Recipients must be geology majors enrolled in MinPet I in the fall and have an outstanding academic record. The recipient of the $1000 Sophomore Geology Promise Scholarship is Thomas Hebert (Merrillan).
Thanks to the alumni who have funded a merit-based, annual scholarship for Geology majors in our program. This year a $500 scholarship was awarded to Tara Lemke (Hilbert, WI).

David Risch (UWEC Geology ’78) of Katy, Texas, has endowed an annual, merit-based geology research scholarship. Recipients must be non-freshman comprehensive geology majors with outstanding academic records. The recipients of $500 Risch Scholarships are Bridget Russell (Apple Valley, MN) and Bryanna Rayhorn (Loyal). Nolan received a BS in Geology’s Environmental Science emphasis. He participated in an entrepreneurial capstone experience where he developed a business plan for a well drilling business. He now operates H2O Well Drilling & Pump Service. We thank Nolan for his generosity!

This year FOUR Geology majors were awarded five prestigious university-wide scholarships. Sara Hanel (Eau Claire) received the $1300 Leoba Hogan Scholarship for Scientific Research. Mark Fiori (Milton) received the $1000 Gritzmancher Science Education Fellowship. Maddie Palubicki (Mondovi) received the $1700 George & Geraldine Rossman Scholarship for the second time, as well as the $2800 Kell Container Corp. Faculty/Student Collaborative Research Scholarship. Dr. George Rossman is a UWEC alumnus who teaches at Cal Tech. Shelby Short (Hackensack, MN) received the $2800 Michael F. Fredrich Scholarship for the second time. Having so many recipients from one department is unusual and an external recognition of the quality of our Geology majors. In addition, Trevor Nelson (Hammond) remains a recipient of the prestigious Goldwater Scholarship for top-tier STEM majors in the USA.

BLUGOLD GEOLOGY ALUMNI SCHOLARSHIP AWARDED

DAVID L. RISCH GEOLOGY RESEARCH SCHOLARSHIP AWARDED

TWO H2O WELL DRILLING & PUMP SERVICE GEOLOGY SCHOLARSHIPS AWARDED

GEOLOGY MAJORS RECEIVE UNIVERSITY-WIDE/NATIONAL SCHOLARSHIPS

Sara Hanel
Mark Fiori
Shelby Short
Madie Palubicki
Trevor Nelson

Sara Hanel
Mark Fiori
Shelby Short
Madie Palubicki
Trevor Nelson

Tara Lemke
Bridget Russell
Bryanna Rayhorn
Madeline Marchiafava

Tara Lemke
Bridget Russell
Bryanna Rayhorn
Madeline Marchiafava
The spring Geology banquet is a fun time to eat a fine meal, present awards, recognize graduating seniors, say goodbye to classmates after another year, and reminisce about field trips gone by! This year ~65 students and faculty assembled on May 7, 2021, at the Rod and Gun Club Park in Eau Claire for the socially distanced event. This was the first time we had seen everyone for more than a year!

Outdoor venue for the spring banquet

ADA Lorilie Steinke with Lifetime Award for Service to Geology plaque presented at the spring banquet. Lorilie has been our ADA since 2006. Congratulations, Lorilie!

We are graduating!

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Student Research Day – Spring 2021

The 29th Annual UW-Eau Claire Student Research Day (now part of CERCA) was held virtually on April 19-23, 2021. 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 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 registration/travel to conferences was supported with money from the Geology Advancement Fund and the Office of Research and Sponsored Programs. Many conferences were virtual because of COVID-19.

Maggie Callahan, Jacob Erickson and Madeline Marchiafava with Sarah Vitale and J. Brian Mahoney, “Assessment of the source and mobility of phosphorus in the hydrologic system in western Wisconsin.”

Lilly Glodowski with Robert Lodge, “Determining the relationship between intrusive and volcanic rocks at the Lynne Zn-Cu-Pb Deposit, Oneida Co., Wisconsin.” Presented at the May 2021 ILSG virtual meeting.

Thomas Hebert and Jon Sargent with Phillip Ihinger and Papia Rozario, “Fossilpedia™: Geospatial data curation and mapping of fossils from the Hell Creek Formation in South Dakota.”

Retta Isaacson, Madeline Palubicki, Jacob Erickson, Maggie Callahan with Sarah Vitale and J. Brian Mahoney, “Surface water and groundwater chemistry of western Wisconsin: establishing an environmental baseline.” Presented at the Wisconsin AWRA meeting, March 3-4, 2021.

Katrina Kawak and Mark Fiore with Scott Clark, “Analysis of lunchtime waste-sorting habits at the university student center.”

Katherine Langfield and William Guenther with Phillip Ihinger, “Experimental study of hydroxyl stretching in aluminosilicate glass cooled from high temperature at variable quench rates.”

Katherine Langfield, Angy Rafferty, Mark Fiore and Jacob Erickson with Sarah Vitale, “Measuring stream baseflow conditions in west-central Wisconsin.” Presented at the Wisconsin AWRA meeting, March 3-4, 2021. Winner of Best Student Presenter award.

Tara Lemke with Robert Lodge, “Mineralogical and geochemical characterization of hydrothermal alteration at Lynne Zn-Cu-Pb deposit, Oneida Co. WI.” Presented at the May 2021 ILSG virtual meeting.


Erickson and Langfield presented the “Excellence in Geology” Awards in 2020-2021

The Excellence in Geology Award recognizes the academic achievements of the outstanding graduating geology major, both in coursework and in faculty/student collaborative research or internships. The winners of the Excellence in Geology Award for 2020-2021 are Jacob Erickson and Katherine Langfield. Congratulations to Jacob and Katherine!

Jacob is a native of Maplewood, MN, and he graduated with a Hydrogeology degree in December 2020. He participated in a research project with Drs. Sarah Vitale and Brian Mahoney studying elevated levels of phosphorus in both surface water and groundwater. His work resulted in presentations at Research in the Rotunda (Madison), the Geological Society of America Annual Meeting (virtual), and the Wisconsin Section of the American Water Resource Association Meeting (virtual). He was recruited to UWEC with a Unimin Geology Freshman Scholarship, and he also received a Covia Sophomore Geology Scholarship and an H2O Well Drilling & Pump Service Geology Scholarship – that’s quite a list! He is currently employed as a Staff Scientist with REGENESIS Remediation Services in Mishawaka, IN.

Katherine is from Lake City, MN, and she graduated with a major in Geology (Hydrogeology and Water Chemistry emphasis) in May 2021. She participated in research projects with Dr. Phil Ihinger (geochemistry of glass trade beads) and Dr. Sarah Vitale (stream baseflow measurements in north-central Wisconsin). Her presentation at Wisconsin section conference of the American Water Resources Association earned her first-place honors in the Best Presentation category (see separate article)! She also presented research at the Microanalysis Society. She was the recipient of the Covia Sophomore Geology Scholarship and the David Risch Geology Research Scholarship. Following graduation, Katherine will attend graduate school at Michigan Tech University for an MS in structural geology/volcanology.


Maddie Palubicki, Retta Isaacson, Jacob Erickson with Sarah Vitale and J. Brian Mahoney, “A case study at Mud Lake: the influence of phosphorus loading through lacustrine groundwater discharge on eutrophication events in a stratified flow-through lake in western Wisconsin.” Presented at the Wisconsin AWRA meeting, March 3-4, 2021.

Angy Rafferty and Maddie Palubicki with Sarah Vitale, “Three-dimensional mapping of Eau Claire County Aquifers.”

Katie Richart with J. Brian Mahoney, “The potential role of the Choiyoi Eruptive Activity in the Great Permian Extinction.”

Shelby Short with Robert Lodge, “Characterizing felsic volcanic rocks of the Lynne Zn-Cu-Pb deposit, Oneida Co., Wisconsin.” Presented at the May 2021 ILSG virtual meeting.

Evan Weber with Robert Lodge, “Petrography of the sulfide ore zones in the Lynne Zn-Cu-Pb deposit, Oneida Co., Wisconsin.” Presented at the May 2021 ILSG virtual meeting.
One goal of the Responsible Mining Initiative is to provide practical work experiences for our undergraduate students through paid internships. In many cases Blugold geology majors are given hiring preference over students from other universities!

Internship opportunities have come roaring back after a COVID lull last summer. Six students continued their summer 2020 internships part time into the academic year. This summer, 18 students have had/will have paid internships with metallic mining companies, environmental consulting firms, and governmental agencies and earn ~$148,000 in wages. This large number of paid internships is highly unusual for an undergraduate geology program.

WISCONSIN DOT
Eau Claire, WI
Nathan Raymaker | Environmental Intern

WISCONSIN DOT
Eau Claire, WI
Mark Fiori | Environmental Intern

WISCONSIN DOT
Eau Claire, WI
Braedon Laundrie | Environmental Intern

INTERTEK PSI
Chippewa Falls, WI
Malachi Dornfeld | Geotechnical Intern

SOUTH DAKOTA DENR
Vermillion, SD
Evan Weber | Geology and Drilling Assistant Intern

WISCONSIN DNR
Eau Claire, WI
Rachel Slonac | Geotechnical Lab Intern

WISCONSIN DNR
Eau Claire, WI
Gillian Streeter | Environmental Intern

WISCONSIN DNR
Eau Claire, WI
Angy Rafferty | Environmental Intern

WISCONSIN DNR
Eau Claire, WI
Gillian Streeter | Environmental Intern
CONGRATS, GRADS!

RECENT GEOLOGY GRADUATES
Fall 2020, Spring & Summer 2021 (unofficial list)

MATTHEW BACHMAN
LUCAS BORDEN
MAGGIE CALLAHAN
JACOB CVIKOTA
JONAS ECKERT (MINOR)
NATHAN EISENZIMMER
JACOB ERICKSON
AUSTEN FAIRBANKS
MALLORY GROSS
RYAN HEYRMAN (MINOR)
RETTA ISAACSON
RORY JOHNSON
RUBY KWALLEK
KATHERINE LANGFIELD
DEREK LINDQUIST
CHELSEA MORAN
KALIE RESS
KATHERINE RICHART
CHASE SONDAY
BRIAR STRIEGEL
NICKOLAS WOEHLERT

CONGRATULATIONS, CLASS OF 2020-21!
Please stay in touch! Make sure we have your email address.
Reflecting on this past academic year leaves me looking forward to the coming year, and as of this writing, things are looking much better for how we'll be teaching in the fall. From personal losses to changes in how we did our jobs, everyone I know has been impacted by COVID. Converting to online offerings of courses, then converting to hybrid (online lecture and in-person labs) with labs needing to be split into partial labs to follow COVID spacing guidelines led to significant changes in my approach to teaching and in how students learned.

My course load was rather routine with Earth Science, Water Resources, and Computers in Geology in the fall, Field Geology I, which was originally scheduled for Winterim but became a summer course as discussed in the Field Camp I update, and then more Earth Science and Water Resources in the spring. The spring semester went better than the fall as I was assigned a large enough classroom for Water Resources so everyone could attend; for Earth Science, I reserved a large lecture room for all labs not involving rocks or minerals, so I had all students in those labs. I spent as many of the other lab periods as I could out in the field. While having some labs meet in Centennial Hall wasn’t ideal, it worked out fairly well.

In regard to research, I had two students give well-done virtual presentations at professional meetings last summer and fall: Zhi Yee Teh (’20) presented on waste-sorting behaviors of students at the NC/SC GSA meeting in May, and Lily Strehlow (’20) presented her research on implementing a zero-waste philosophy at UWEC at the Global Conference on Sustainability in Higher Education in October. Research during the academic year continued to focus on understanding waste disposal habits, striving to design effective interventions to generate less methane in landfills (e.g., encouraging composting of food waste instead of throwing it in the trash), and improving recycling, especially of common items like aluminum cans and soda bottles. Mark Fiore (’21) and Katrina Kawak (’21) collected observational data on how well students sort their lunchtime waste (time spent sorting and the quality of the sorting) and worked on an educational video. Mark will continue that project in the coming year.

In other news, no 4-H county fair was held last summer, so that was the first summer we have not had an outreach booth at the fair since before 2013, back when Scott Wipperfurth (’14) and Aleisha Johnson (’14) led our county fair outreach effort. In other outreach news … well there isn’t any, but I am hoping to restart visits to elementary schools during the coming year. Wishing everyone the best for the remainder of 2021. Take care and be well.

In other news, no 4-H county fair was held last summer, so that was the first summer we have not had an outreach booth at the fair since before 2013, back when Scott Wipperfurth (’14) and Aleisha Johnson (’14) led our county fair outreach effort. In other outreach news … well there isn’t any, but I am hoping to restart visits to elementary schools during the coming year. Wishing everyone the best for the remainder of 2021. Take care and be well.

ROBERT HOOPER, Professor
hooperrl@uwec.edu
The last year has been anything other than exciting. COVID kept us in town and hunkered down by the fireplace most of the year. One saving grace of staying at home—we have a new geology puppy (Serrano), a golden retriever and labrador retriever mix, and she has kept me active with several walks every day. Serrano will be a great field dog once she receives more training.

I continue to teach MinPet I (Geol 312) in the fall and Physical Geology and Geochemistry in the spring. I modified my courses for the 20/21 academic year to keep teaching them mostly face-to-face. Even during a pandemic, student participation and attendance in my sections was very close to normal and I led most local field trips in both my introductory courses and for MinPet I. I was disappointed when the January field camp in New Mexico was postponed until May 2021 because of the pandemic, but Scott Clark and I were able to run a mostly normal field camp in late May out of Kingston, NM. I always look forward to spending much of January in New Mexico because the weather is usually great for mapping and warmer than Wisconsin. Southern New Mexico in late May and early June does not have ideal weather for mapping, but the flowers on the cactus were a bonus. The evil-looking ocotillo in the Apache Gap field areas had beautiful red flowers on top with small green leaves making it look less evil, but the ocotillo still provided the same impediment to choosing the correct path to the next outcrop...

I joined the University Senate as a faculty member back in 1986 and have served as a faculty representative for most of my tenure. Last January, I resigned my Senate position so Scott Clark could gain the experience of working within the broader university community. Not attending the Senate and associated committee meetings has resulted in much more unscheduled time, but I miss the interaction with my colleagues across campus. I am still working on research projects with undergraduates on the petrology of peraluminous, garnet-bearing rhyolites from the Black Hills and have a student working on the mineralogy of the rare element-enriched pegmatites along the Eau Claire River. I would love to have the students present the research at meetings, but not if the meetings are virtual. In the past year I have participated in too many virtual events and cannot wait for the return of normal.

Outside of work, my family decided I needed a project sailboat to keep me busy, so they bought a Catalina 22 that will require all sorts of new skills to return it to original sailing shape. My goal is to restore the boat to like-new condition. Hopefully by summer 2022 the boat will be in the water and sailable. It seems my family’s idea behind the sailboat is that my love of sailing might make me consider the retirement option. Retirement would certainly look more appealing if the sailboat were docked in a tropical port in the Caribbean. I continue to love teaching geology, especially geology in the field, and the constant interaction with creative young minds keeps me active and alert. I encourage alumni to stop by the department whenever they are in town. We love to connect with old friends!

PHILLIP IHINGER, Professor
ihinger@uwec.edu
Greetings, Alumni. Congratulations on surviving the COVID era! I’m happy to report that the Ihinger research program was, for the most part, NOT shut down during the pandemic. Two projects (one with Chase Sunday and Austin Piazza looking at the Eagle Mine magmatic sulfide deposit, and one with Shane Kohls utilizing LabVIEW to control depressurization in our rapid-quench pressure vessels) were postponed because of pandemic-related issues in summer 2020. Chase was fortunate during this academic year to complete
another project examining the Stillwater layered intrusion in Montana. Meanwhile, through the persistent work of our amazing students, four other projects saw tremendous progress through the COVID year. Katherine Langfield and Will Guenther successfully tested an alternative model for the cause of the prolonged tail associated with the fundamental IR absorption mode of hydroxyl stretching in silicate glass. These two budding scientists performed a series of experiments in our hydrothermal apparatus and examined the quantum excitation of low-energy vibration modes in the far infrared spectrum. Katherine ('21) will begin her graduate career at Michigan Tech this fall and Will is making progress toward graduation. Kalie Ress ('21) compiled a century’s worth of whole-rock geochemical data on various sections of the mighty Bushveld Intrusive Complex in the Republic of South Africa and compared the magmatic evolution of the 250 x 200 km magma chamber to the much smaller (2 x 1 km), but equally famous Skærgaard Layered Intrusion (Greenland). You will be hearing more on the results of Kalie’s study in the near future. In addition, I collaborated with my friend, Dr. Paul Thomas in the Dept. of Physics, on two separate projects this past year. One, with student collaborator Colleen Olson, focused on simulating the diffusion of hydroxyl species in growing quartz crystals; the other, with student collaborator Tyler Gonzales, involved simulating the interaction of micrometeorites with the Earth's atmosphere. Katherine and Tyler were featured in separate articles posted on the UWEC homepage and are worth reading. Meanwhile, life at home has remained very busy. My life partner, Patricia Turner, was recognized as a Max Schoenfeld Distinguished Professor, and she continues her research on the growth of civil society during the French Third Republic. Ghislaine, after completing her editing certificate at UC-Berkeley, has set up shop on the worldwide internets, while Mati just graduated with her political science degree from Sciences Po Paris, Campus de Reims, France. Despite COVID, Mati was able to participate in a year of ‘study abroad’ (at Northwestern University in Evanston, IL!) and loved her experience. My youngest daughter, Evie, completed her sophomore year of high school while playing softball (when allowed), participating in Civil Air Patrol, and thoroughly diving into her new passion, pottery. We all welcomed our first family dog in July 2020: Kaia is now a major focus of our attention, and we couldn't be happier. As for me, in my spare time, I’ve been contemplating the secrets of the physical universe (nothing short of my own Grand Unified Theory). Perhaps you’ll hear more about this in the near future… Take care, All!

ROBERT LODGE, Associate Professor
loberger@uwec.edu

My first year as a tenured Associate Professor was a busy one. In addition to navigating the moving targets of COVID restrictions on the state, county, city, and campus levels, we are still trying to teach the best possible classes and give our students research opportunities. I think my students got the best experience I could offer while experimenting with new teaching styles, technologies, and modified exercises. It is nice to see things starting to return to normal and hopefully conditions continue to improve. Nonetheless, I think I learned some new things about teaching and mentoring students during the pandemic that will stick with me even if we are completely back to “normal.”

My research program got took a significant pivot when my colleague, Dr. George Hudak of NRRI, donated >2000’ of drill core from the Lynne Zn-Cu-Pb deposit near Rhinelander, WI. I suddenly needed a bunch of new students to tackle different research topics on this core. The trick: I can’t store 2000’ of core in Phillips Hall. Luckily, the university leases an obscure lab off campus with the space to store the core for a while. Shelby Short ('22), Tara Lemke ('22), Lilly Glodowski ('23), and Evan Weber ('23) divided the task of characterizing the volcanic, intrusive, and hydrothermal rocks of this deposit. In addition, my Metal Earth team of Trevor Nelson ('21) and Rory Johnson ('21) conducted U/Pb geochronology and trace element geochemistry of zircons from Archean granitoid plutons. The student researchers all presented their work at the virtual Institute of Lake Superior Geology meeting. That seems like a pretty successful research program considering the strange year we had. I’m proud of what my student collaborators accomplished.

Teaching during the pandemic made for some interesting adjustments. No overnight field trips coupled with lockdowns caused cancellation of our annual Economic Geology trip to Eagle Mine and the Structural Geology trip to the Soudan Mine. We did travel to see the reclaimed Flambeau mine site (a flop because they removed the interpretive signage!), the Eisenbrey deposit outcrops (which didn’t require trespassing, honestly!), and the famous folded quartzites in Baraboo, WI. Except for some occasional awkwardly recorded lectures, my upper-division classes seemed relatively normal. Small class sizes in the Geology program were a luxury when other larger classes were split because of room capacities. My Physical Geology class was a bit more challenging with labs essentially cut in half because of room capacity limits. However, this forced me to explore additional outdoor exercises to avoid teaching split classes inside--another win! Despite the challenges, teaching Physical Geology is always fun and hopefully I will see a few of those students again in my future upper-division classes. It seems to be a tradition – another newsletter means another baby announcement! We had a pandemic baby, James, born in summer 2020. The Lodge family home is a busy place! Hillary and Claudia survived a hybrid in-person/virtual school year. Meredith, Bruce, and James enjoyed having their big sisters around when they would normally have been at school. And somehow, my wonderful wife, Cassie, managed to survive the chaos. She seems to have endless ambition for providing our kids activities and opportunities. We all made it through the worst of the pandemic unscathed (I hope it’s over!), and now we are awaiting the easing of international travel restrictions so our Canadian families can visit their new grandson.

J. BRIAN MAHONEY, Professor
mahoneyj@uwec.edu

Greetings! It has been a tumultuous year, as everyone realizes. COVID-19 has resulted in some significant shifts in our societal patterns, and academia and industry are no exception. Remote and hybrid teaching are not the way to promote quality learning, but aspects of
FACULTY AND STAFF NEWS (continued from page 17)

it will remain. Zoom meetings have taken over the world, and will probably be a standard for a long time. Geology requires a hands-on approach to research and learning, but aspects of our jobs will be very different moving forward. It is difficult to develop a research program, write a manuscript, coordinate internships, and do the multitude of other activities remotely, but we will figure it out. My research programs in Argentina, Honduras, and British Columbia are on hold for at least another few months, but I look forward to getting back to them as some degree of normalcy returns in 2021-22. 

I utilized the COVID year to move forward on a number of fronts. The long-awaited Nanaimo manuscript has been completed and will appear in Geosphere shortly. My thanks to the large number of alumni who assisted with that project! I continue to research the Belt Supergroup of MT, ID, and BC, working on basin reconstruction. Currently working on a number of projects in AK, ID, and MT, and look forward to expanding into new areas as the pandemic subsides.

We are putting serious effort into recruiting new students into the Department and the University. I am on the Steering Committee of the Freshwater Collaborative of Wisconsin, a consortium of all campuses in the UW System to promote freshwater science in the state. Faculty from UW-Eau Claire, River Falls and Stout will be running the inaugural Freshwater Science Field Experience this August. The course consists of a week-long series of modules focused on different aspects of freshwater in western Wisconsin. We have 18 high school juniors and seniors participating, and hope to encourage a number of them to undertake careers in STEM fields at the UW. Should be most interesting! Colleagues and I in the Department (Clark, Snyder, Syverson, Vitale) were just awarded an NSF grant from the GEOPaths program to recruit underrepresented minorities into the Geosciences. Over the next three years, we will develop a focused program designed to recruit and retain underrepresented minorities from western WI and eastern MN into the UWEC Geology program. Stay tuned for more details!!

This is an exciting time to be in the geosciences. Despite COVID setbacks, the resource industry is booming and will continue to do so. The need for strategic minerals is immense and growing steadily, which translates into amazing opportunities in geology, hydrogeology, and environmental science. It is a great time to be a geologist!!!


LORI SNYDER, Senior Lecturer 
snyderld@uwec.edu

Greetings once again! I hope that that you and your loved ones are managing and potentially thriving during this terrible pandemic. My update is brief. This has been one of the most challenging years of my teaching career. National Parks went entirely online for the year, so much of fall semester was managing that transition while teaching in-person Environmental Geology. Then, in the spring, Global Energy was offered in an online format. While I have become slightly more adept at managing technology, I will also state, without reservation, that online teaching/learning is not as effective nor as enjoyable as in-person interaction. I am hopeful that this next year will bring a more positive and productive experience for all at UWEC.

Travel was subdued this past year. We did spend a week in summer 2020 at Whitefish Lake, MT, with friends and took a post- spring 2021 semester snorkeling jaunt to the Turks and Caicos Islands. As I write this, I am getting ready for field work in Alaska, so things are looking up! I hope they are for you as well and send my best for a wonderful year.

LORILIE STEINKE, Academic Department Associate
steinklm@uwec.edu

Greetings! It’s been an interesting year in the department and with life in general. This marks 31 years for me at UWEC! My daily interaction with students has been largely via email and I greatly miss seeing everyone face-to-face, but helping our students is still my favorite part of working here.

My family continues to do well. This past year we welcomed new family members with the marriages of both of my children.

I am also excited for the birth of my second grandchild in August 2021!

KENT SYVERSON, Professor
syverskm@uwec.edu

I hope you are doing well—these have been trying times for everyone. I have now completed my 29th year in the department. I still enjoy teaching college students! Last fall I taught Earth Resources for the first time and learned many new things. Oceanography was taught with recorded lectures and required Zoom sessions to force students to explain processes using three-star logic. The required Zooms enhanced their critical-thinking skills and made the class more personal for students. My Responsible Mining Seminar this spring was completely on Zoom. I had an excellent slate of speakers for the seminar, including some “far-afeld” speakers to take advantage of the Zoom format.

It was a busy year. I found creating new lectures for Earth Resources and recording Earth Resources/Oceanography lectures kept me hopping in the fall. We also revised and resubmitted an NSF funding proposal to diversify the geology student body at UWEC. I continue to work as a part-time development officer with the UWEC Foundation to help Chemistry, Biology, and Geology raise funds for faculty and student initiatives. Thanks to Geology alumni and friends who have been willing to speak with me! Your generosity through large and small gifts is enhancing educational experiences for Blugolds (see separate articles in this newsletter).

I am working with Chelsea Moran (’21) and a team of glacial geologists to create a 1:500,000-scale glacial geology map for the State of Wisconsin. Chelsea’s geology and GIS skills were perfect for the project. She presented her research at the virtual NC GSA meeting, and recently we submitted our digital contacts to the WGNHS. I will work on the 1:500,000-scale map for Chippewa County this summer.

Life continued during COVID... Lila and I read several books out loud to each other (our favorite – “Alexander the Great” by Philip Freeman). I biked more than 2900 miles in 2020 (a new personal record with my e-bike), and that was my major way to spend time outdoors. Our “baby” just graduated from Minnesota State
University-Mankato with a mechanical engineering degree and is now gainfully employed. All of our kids have now been “launched.” I enjoyed a socially distanced Labor Day reunion with three sisters and a spouse who all took my Oceanography class. My book *Adventures in Glacier Bay* (Amazon) has introduced me to new people and re-connected me with old friends, so that has been fun as well.

School has been a lonely place. Please get your vaccinations and then visit us on campus!

**SARAH VITALE, Assistant Professor**
vitalesa@uwec.edu

Hello everyone! It's a relief to be on the other side of this year. My daughter finished kindergarten (mostly remote), my toddler spent the entire fall semester at home, and Baby Vitale #3 joined our family in December. I taught Hydrogeology I and Environmental Geology in the fall and took much needed teaching leave this spring. While we've had some valuable family bonding time over the last several months, I'm glad to be getting back into normal routines, enjoying a relaxed summer in Eau Claire, and excited for a more typical upcoming academic year.

Hydrogeology research continues with several enthusiastic undergraduate researchers. Projects are supported through the WDNR and through Freshwater Collaborative of Wisconsin grants in collaboration with UW-River Falls and the USGS Upper Midwest Water Science Center. Several students presented their research at the Annual Geological Society of America and Wisconsin Section of the American Water Resources Association meetings (both virtual and all oral presentations). Graduating senior Katherine Langfield won an award for best student presentation at AWRA, competing against both undergraduate and graduate students! Another notable accomplishment includes Maddie Palubicki (’22) receiving the Kell Container Corporation Scholarship through UWEC, awarded to a student conducting outstanding collaborative research. I'm very proud of all of the student researchers in the Hydrogeology Research Group for their efforts and accomplishments.

This was our first year offering our revised Environmental Science emphasis, and I'm pleased with early indicators of its strength. My new lecture course “Understanding Earth's Environment” was officially approved and will be offered Spring 2022. This past spring, I ran an educational outreach workshop focused on groundwater and soils to local Future Farmers of America high school students, with support from two UWEC geology majors. I hope to continue this outreach in future years with additional hands-on field components. I think that’s everything I have to report and hope you’re all doing well and staying healthy!

**EMERITUS FACULTY NEWS**

**KAREN HAVHOLM, Assistant Vice Chancellor of Research, Emeritus**
havholk@uwec.edu

Greetings, all. I am now a year or so into retirement, spent mostly holed up at home or getting exercise in the Eau Claire countryside. I am looking forward to my first travel since retirement – first to a Wisconsin lakeside weekend, then, throwing caution to the wind, a plane flight to my college reunion in Ohio. It seems daunting to get back out into the world.

It was delightful to have Merilee at home last fall while she taught Geology 110 at UWEC. It was challenging for her to teach 100 students in Schofield Auditorium, with 20% of them participating from home quarantining at any one time, but overall, she had a good experience, including working with a student on a research project and going on the MinPet I field trips. As you can imagine, she was more than ready to head home in December, especially because her husband could not cross the border from Canada to visit all fall. She then went on to her current position working for the Geological Survey in Northwest Territories in Yellowknife. Nearly to the Arctic Circle, it is known for northern lights displays. We can’t wait to visit.

My three weeks as a census enumerator last summer were very interesting – only got yelled at or the door closed in my face a few times. Most people were pleasant and helpful if I could find them home. I was impressed with the system, and I think you can depend on the census data. Otherwise, life continues as normal with home improvement projects, sorting through years of collected stuff to decrease the clutter (a project that will take years), some poetry writing, and lots of audiobook “reading,” as well as walking, biking, kayaking, and pickleball.

Now that travel is beginning to be possible, hope to see some of you if you come through Eau Claire. Thank you for your continued support of the department and the university.

**Paul Myers, Professor Emeritus**
paul.myers600@gmail.com

Paul and Welthy were “locked down” in Boquete, Panama, during 2020, learning how to survive self-quarantine, virtual field trips, and Zoomey during the new social order imposed by COVID. Although we’d like to think it’s temporary, alas, evolution is a one-way street. My planned geology field trips to local points of interest near Boquete were cancelled, but a few of us die-hards sneaked out and shot some videos to be used later as inferior substitutes for real outdoor group learning.

Since Welthy and I plan to spend future winters in Panama, we're trying to sell our “solar home” in the Green Mountains ski country of Vermont. This necessitates painful downsizing— disposing of “very personal collections” of photos, journals, specimens, maps, and other memorabilia— the tools of our trade, so to speak. If you haven’t experienced this process, please know it’s agonizing. If you have, please empathize.

Life goes on, and we’ll get through it. Write us a comforting letter sometime. And please donate to the Myers-Willis Geology Field Camp account at UWEC.

We wish you success and good health for the coming year. Drop by the Geology Department sometime. It’s changed.

**John Tinker, Professor Emeritus**
tinkerjr@triwest.net

Hello to all present and former geology students. Another year has gone by in my time and geologic time. Other than for the COVID pandemic, each day of this last year has been a joy to live. I hope all of you are also enjoying life, your work, and your friends and family. Appreciate your knowledge of geology whether you are or are not working as a geologist. Stay healthy, work hard, and keep smiling!
ALUMNI NEWS

Parker Alsteens ’20. Parker writes, “Mathy/Milestone Materials hired me in July 2020 as a full-time lab technician within the geology department. I will also be a part of the drone piloting program and become involved in core log identification.”

Alex Arendt ’16. Alex is a Cartographic Technician at USDA-NRCS in Madison, WI. He writes, “Things are going great, really excited about the new job! I work at the NRCS state office in Madison as a REMSA employee.”

Lucas Borden ’20. Lucas writes, “I was hired by Intertek PSI as an assistant driller. I am enjoying the job very much. I am based out of the Waukesha office so it is close to my parents’ home.”

Anna (Brickheimer) Beckman ’16. Anna writes, “I’ve been elected to the Dunn County Historical Society Board of Directors, and I’ve been helping them with their ‘natural history/geology’ materials. We are putting together a ‘Dunn County Finders’ program where kids can bring in items (rocks, fossils, shells, random findings) and earn points or trade them for other items. We also want to develop a ‘real life’ stratigraphic section of Dunn County. I recently passed the Professional Geologist exam and will soon receive a fancy customized stamp.”

Natalie Brock ’20. Natalie is working as an Environmental Health Scientist at Davis County Health Dept. in Clearfield, UT. Natalie writes, “I will be helping out with water quality testing in the county. I also am an investigator for disease prevention (basically helping out with this COVID madness). So far I am loving Utah--it’s beautiful!”

Taylor (Crist) Pierce ’12. Taylor recently accepted an Environmental Protection Specialist II position with the Colorado Dept. of Public Health and Environment in the Denver area.

Tom Danielson ’98. Tom (M.Sc. in Geology at the Univ. of British Columbia) is the Chief Dam Safety Engineer for Puget Sound Energy in Burlington, WA.

Elliot Draxler ’19. Elliot reports, “I started graduate school at UW-Madison in fall 2020. I am working towards a Civil and Env. Engineering master’s degree with a focus on geological/geotechnical engineering. The program is structured so I can graduate in a year (fall/spring/summer) if I do not engage in research. It is also flexible to accommodate me if I conduct research. I have been studying hard for the fundamentals of geology test, so I hope that goes well.

Jacob Erickson ’20. Jacob is a Staff Scientist with REGENESIS Remediation Services in Mishawaka, IN.

Brooke (Fahrenkrog) Lund ’07. Brooke is a Hydrogeologist with the MN Dept. of Health in Ely, MN.

Christopher Fell ’04. Christopher joined R&M (Anchorage, AK) as Senior Geologist in April 2014.

Corrie Floyd ’11. Corrie writes, “I am still working at MN DNR and leading the state’s aggregate leasing and mapping programs. We’re expecting our 3rd kiddo in 2021.”

Brian Folta ’14. Brian is a Project Geotechnical Engineer at Golder Associates in the Milwaukee area. He received his PE in 2020.

Eli Fredrickson ’17. Eli is an Exploration Geologist with Donlin Gold LLC in Anchorage, AK.

Nick Freiburger ’04. Nick writes, “I’ve been 100% remote since mid-March 2020—what a year! Overall, it has been enjoyable—our kids are 2 and 4 years old now, and we’ve been able to spend extra time with them. I hope the future has plenty of work from home time, but I will enjoy the face-to-face meetings again! I’m still with Chevron. We went through a large reorg and round of layoffs late last year. The industry is still a lot of fun—a never-ending string of technical and economic challenges makes for a lot of fun problem solving. I have learned and applied a broad set of skills in petroleum engineering, drilling, finance, and planning, so have survived to this point. In the latest reorg, I moved to Suriname exploration, which has been a lot of fun.”

Maddie Gorg ’20. Maddie is a Field Engineer for American Engineering Testing, Inc in St. Paul, MN. She writes, “I’m doing well and enjoying my job. It’s been a lot of work with soils, which has been interesting.”

Kevin Gostomski ’05. Kevin writes, “After many years in metals exploration, I have settled into earth science education in partnership with the American Museum of Natural History in NYC, where I earned my MAT degree. The newly reimagined Hall of Gems and Minerals will be opening Spring 2021. It’s incredible! If anyone would like a free private tour, please drop a line and say hello. My wife and I have a one-year-old geologist in training named Bryson (he is an expert on the metamorphic facies of Central Park with an eye for garnet.)”

Katy Grant ’14. Katy is a Hydrologist at the MN PCA in Minneapolis. Katy writes, “I’ll be working in the site assessment unit, mostly on Superfund sites. I’m excited for a change of pace!”

Bryan Hardel ’09. Brian is a Geologist at Big Rock Exploration in Minneapolis.

Jeffrey Hessburg ’19. Jeffrey is a Field Geologist at GSH Geotechnical Consultants, Inc. in Madison, WI.

David Hodek ’95. David writes, “Teresa has continued to work as a nurse treating patients with COVID-19. The kids have been learning virtually this year, coping with the lack of social interaction and our own weaknesses as instructors. I’ve been living and working in Grand Forks, ND and Thief River Falls, MN since last August because we’re in the middle of construction during the pandemic, and I only see my family sporadically. Teresa and I are fully vaccinated now (April). Because we haven’t spent much time together as a family this past year, we decided to take a month-long break from Duluth and live somewhere else. We chose Myrtle Beach, SC, and while we can’t fully experience the area (kids aren’t vaccinated), it’s a nice break from routine. I’m working remotely...”

So far I am loving Utah--it’s beautiful!

Natalie Brock ’20

Josh Carlisle ’00. Josh is the Environmental, Health, Safety and Regulatory Director at BKV Corp. in the Denver area.

Doug Cieslak ’93. Doug is the owner and Hydrogeologist at Land Legacy Environmental Consulting and Manager at Milwaukee Health Dept. Home Environmental Health Division.

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The kids have been learning virtually this year, coping with the lack of social interaction and our own weaknesses as instructors.

David Hodek ’95

and the kids are still doing virtual learning, but I’m sitting on the balcony of the condo on the beach and writing this while watching some dolphins.”

Ric Kopp ’75. Ric writes, “Survived the 2020 oil industry downturn and the current upswing. Activity for 2020 was restricted due to price and/or ability to get access to markets because of the pandemic. Now faced with what affects the new administration will put on industry, both oil and gas mining. The pandemic shut down travel and many of the grandkids activities. Did spend a lot of time visiting the grandkids at their place or ours. Hopefully, after vaccinations, we will travel again and maybe visit UWEC. Pray all are well and field camps are a great success this year.”

Kevin Krenik ’82. Kevin writes, “Retired in February 2021 after 35+ years with ExxonMobil. The bulk of my career centered on the development of oil & gas fields along the inland Gulf Coast and offshore Gulf of Mexico. I expect to remain in the Houston, TX, area.”

Katharine Langfield ’21. Katherine will attend the Univ. of Arkansas in the fall to pursue an MS in fluvial geomorphology.

Troy Moseley ’09. Troy is an Environmental Engineer at Crystal Surveyor at Magee Geophysical Services, LLC in Kronenwetter, WI. “I have been hired as a full-time Staff Surveyor at Magee Geophysical Services, LLC in Kronenwetter, WI.”

Samantha Kleich ’18

I am getting into the groove of things -- other than my dining room doubling as an office space/classroom.

Samantha Kleich ’18

Carly receives her MS in Geology/Earth Science from Memorial University of Newfoundland. She is now an Exploration Geologist with Karus Gold Corp. in North Vancouver, BC.

Mark Nelson ’06. Mark is a Drill Program Manager for Group Ten Metals out of Red Lodge, MT. He is running a drill program on the Stillwater West project (PGE-Ni-Cu-Au) near Nye, MT.

Josh Olson ’14. Josh writes, “I’m doing pretty
ALUMNI NEWS (continued)

well in Kansas. The Kansas Water Office is still fully remote, so I’ve been splitting my time 60/40 between my apartment in Kansas and staying with family in Wisconsin.”

Steven Peterson ’97. Steve writes, “Our family is good, and we are up to 2 grandkids- a granddaughter living us and grandson in Eau Claire! Though we haven’t seen him since the pandemic started, we’re certainly looking forward to visiting him and the rest of our family up north. In 2020, I finally published my USGS Professional Paper on Groundwater Availability of the Northern High Plains Aquifer. Took a lot longer than I wanted, but I think we found a few interesting things:”

I finally published my USGS Professional Paper on Groundwater Availability of the Northern High Plains Aquifer.

Steven Peterson ’97

Ryan Prechel ’06. Ryan is COO of Dana Foods Inc. in Hillsboro, WI.

Andrew Rockweiler ’11. Andrew is a Project Engineer at MSA Professional Services in La Crosse.

Kyle Roloff ’17. Kyle is a Quality Engineer at Colder Products Company in St. Paul, MN.

Jessica Stamp ’20. Jessica writes, “I am a water quality lab technician at Superior Fresh in Hixton. I’m doing a lot of water testing and some research.”

Kinsey Stoll ’16. Kinsey completed her MS in hydrogeology at UMD in 2019 and is now a Geologist with Barr Engineering in Duluth. She works with Blugold Irv Mossberger ’94.


Chad Underwood ’96. Chad writes, “It has been a pretty quiet year for family trips, but our family has remained healthy and happy throughout the pandemic. Alison has taught in-person at the elementary level all year, and our kids were fortunate to do a combination of hybrid and full in-person classes. Our kids will be entering high school in the fall. That kind of freaked me out a little bit and made me realize how quickly time goes by! Looking forward to more family hiking trips once things return to ‘normal’.”

Adam Wiest ’18. Adam is a Geologist at Tintina Montana, Inc. in White Sulphur Springs, MT.

Ryan Willgohs ’19. Ryan writes, “I am a Geotechnical Geologist contracted by Talon Metals to assist with their mineral exploration project in Tamarack, MN. Talon is a small mining company that is in a joint venture with Rio Tinto. The main project objective is to supply nickel to the electric vehicle industry. The geologist community continues to remind me that I made the right choice when I began my undergrad at Eau Claire.”

EARTH SCIENCE SEMINAR SERIES

The Earth Science Seminar Series continues to bring excellent speakers to campus. It allows faculty and students to interact with other scientists working on a broad range of research topics, and it also permits 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. If you live in the area and would like to receive e-mail announcements about upcoming seminars, please contact Dr. Scott Clark at clarksco@uwec.edu. If you work for a company wishing to sponsor the seminar series or contribute money to defray speaker costs, please contact us!

“Student engagement and faculty support through undergraduate research.” Presented by Dr. Catherine Chan, Executive Director, Office of Research and Sponsored Programs, UWEC, 9/18/2020.

“Crustal structure and seismicity east of the Mississippi.” Presented by Dr. Erin Cunningham, Center for Earthquake Research and Information, Univ. of Memphis, 9/25/2020.

“Through the Valleys.” A documentary about a PhD student who gets his first chance to lead a research project in Mongolia and Kyrgyzstan, 10/9/2020.

“Are you interested in going to graduate school?” Presented by UWEC faculty in the departments of Geology and Geography and Anthropology, 10/16/2020.


“The impact of Lake El’gygytgyn, NE Russia, on our knowledge of polar climate: This changes everything.” Presented by Dr. Julie Brigham-Grette, Continental Scientific Drilling 2020 Distinguished Lecturer, Professor in the Dept. of Geosciences, Univ. of Massachusetts-Amherst, 2/26/2021.

“Shoreline response to littoral drift cell disturbance and lake-level change along the southern Lake Michigan coast.” Presented by Dr. Erin Argyilan, Professor in the Geosciences Dept., Indiana University-Northwest, 3/5/21.

“The role of electrodynamics in Saturn’s upper atmosphere.” Presented by Dr. Jess Vriesema, Associate Lecturer, Dept. of Physics and Astronomy, UWEC, 3/12/21.


“From bathtub to baselevel: Origin of through-flowing drainages in extensional tectonic landscapes.” Presented by Dr. Phillip Larson, Professor, Director of Earth Science Programs, Co-Director EARTH Systems Research Laboratory, Minnesota State University, Mankato, 4/9/21.
ADOPT A FIELD CAMPER
CAMPAIGN UPDATE

By Kent Syverson

In 2017 we initiated an “Adopt a Field Camper” campaign to defray rising tuition costs for Field Camp I students. Dr. Paul Myers and Ric Kopp ('75) pledged matching money in memory of Professor Emeritus Ronald Willis, who died in a tragic car accident in July 2015. Many other alumni, friends, and companies donated $23,275, in both large and small gifts, to Adopt a Field Camper through the Myers/Willis Geology Field Camp Scholarship fund in 2020! I was encouraged to see another record number of donors this year (57)—a healthy sign!

The impact? Funds were distributed based on financial need to sixteen G470 students. All tuition expenses ($1100) were paid for eight students with “High” FAFSA financial need, 75% of tuition paid was for students with “Medium” need, and 50% of tuition paid for students with “Low” need. Each field camper, regardless of need, received at least $100 in “adoption” money. Field Camp II costs were defrayed for nine students with financial need.

If you have adopted a child, you know that adoption is a long-term commitment! More field camp students will be leaving for New Mexico and Montana next year, and we hope alumni and friends will consider a donation of any size to Adopt a Field Camper and provide grants and scholarships for Field Geology I and II students. Donations can be made at connect.uwec.edu/geology (select Myers/Willis Geology Field Camp fund) or by sending a check to the UWEC Foundation with a subject line mentioning “Geology—Adopt a Field Camper.”

CURT AND LAURA PECK SPONSOR SCHOLARSHIPS AND HALF OF FIELD CAMP I

Curt and Laura Peck have pledged to sponsor half of Field Camp I for four years (2021-24). Two thirds of their $6000 annual donation will support need-based grants to field camp students and $2000 of the money will defray field camp expenses for all field camp students regardless of financial need. This half sponsorship and other donations to the Adopt a Field Camper program make a huge positive difference for our students.

In addition, Curt and Laura are sponsoring two $1000 Geology Promise Scholarships for four years using matching funds from Chevron Corp. These scholarships will be awarded to an incoming freshman geology major and a student taking MinPet I during his/her sophomore year.

Curt (UWEC Geol '77) attended graduate school at Iowa State Univ. and worked for 36 years for Chevron in Exploration Geology, Development Geology, with the Environmental Management Company. The last four years of his career he supported Chevron’s largest asset in Atyrau, Kazakhstan (Tengiz field) as an Environmental Manager to TengizChevroil. Curt and Laura (UWEC SPED '78) have many stories to tell from this overseas adventure!

“Laura and I are pleased to be able to support the dreams and aspirations of future UWEC Geology students as they find their way through life, always remembering that a helping hand always helps more than the recipient understands.”

Thanks so much to Curt and Laura Peck for generously extending a helping hand to our Geology students!

CHARLIE AND SUE CHRISTOPHER SPONSOR HALF OF FIELD CAMP II

Charlie and Sue Christopher have pledged to sponsor half of Field Camp II for two years (2021-2022). Their $3500 annual donation is matched 1:1 by the Alliant Energy Foundation to provide $7000 for need-based grants to field camp II students each year.

Charlie (UWEC Geol minor '74) participated in Dr. Ron Willis’ field camp in Wyoming. After helping with a minerals-related surveying project in South Dakota, Charlie decided to attend MATC in Madison to become a surveyor. He was a line surveyor with Alliant Energy for 31 years.

Thanks so much to Charlie and Sue Christopher for supporting our field camp students!
Field Camp I students packing for another day in a New Mexico field area, summer 2021.

Beautiful pine trees in the Black Hills, MinPet I field trip, October 2021.

Dr. Scott Clark giving instructions to Field Camp I students in New Mexico, summer 2021.
DONATIONS

HOW TO DONATE

Geology funds with UWEC Foundation are used to support many activities in the Department including student travel to professional meetings, faculty/student field trips, student recruitment, and student scholarships. Your gift will be greatly appreciated and used effectively within the Department. In addition to financial support, we also welcome your support by volunteering to speak to our majors/minors about job experiences and sending potential job opportunities to our students.

During the past year, 85 individuals/companies donated $64,090 to the Geology Foundation accounts. All gifts, large or small, are greatly appreciated! Please consider giving something back to your undergraduate department.

Due to state budget challenges, alumni gifts to the department’s advancement funds are becoming increasingly critical. Professor Kent Syverson has been working with the Foundation Office to establish a named lecture series, new scholarships, etc. If you are 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 $30,000 is required to establish an endowed fund; there is no maximum.

- The scholarship name is determined by the donor(s). Most name a scholarship after their family or the name of a loved or honored one.

- 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, 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 will be notified of the recipients.

If you would like more information about establishing a scholarship, please contact Kent Syverson at 715/836-3676. 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.

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 June 1, 2020 through May 31, 2021.

BECKSTROM GEOLOGY MAJOR SCHOLARSHIP

Gregory Beckstrom

DR. JOHN R. BERGSTROM GEOLOGY SCHOLARSHIP

Sandra Chamberlain (in memory of John Bergstrom)

GEOLOGY OPPORTUNITY SCHOLARSHIP

Anonymous

GEOLOGY PROMISE SCHOLARSHIP

Curtis and Laura Peck

Chevron Corp.

JRC APPLIED GEOLOGY SCHOLARSHIP

Joshua Carlisle

HYDROGEOLOGY ADVANCEMENT

Curtis and Laura Peck

Chevron Corp.

PAUL MYERS & RONALD WILLIS GEOLOGY FIELD CAMP SCHOLARSHIP & the ADOPT A FIELD CAMPER CAMPAIGN (* indicates adopter of at least one field camper)


GEOLOGY ADVANCEMENT FUND

Mark Ciardelli Ray Fiflett Gail Lundeen Zachary Lydon Sarah and Kristian Moore Steven and Pamela Olson In memory of Don and Dorothy Nelson Roger and Julie Oreskovich Curtis and Laura Peck Steven Pierce David Risch Chad and Alison Underwood Mae and Curt Willkom

H2O WELL DRILLING & PUMP SERVICE GEOLOGY SCHOLARSHIP

Nolan Rodriguez, H2O Well Drilling Pump Service LLC

DAVID L. RISCH GEOLOGY RESEARCH SCHOLARSHIP

Chevron Corp. Nicholas and Juli Freiburger Curtis and Laura Peck David Risch

WISA GEOLOGY SCHOLARSHIP

Wisconsin Industrial Sand Association, Inc-- In memory of Richard Budinger

CORPORATE CONTRIBUTIONS TO RESPONSIBLE MINING INITIATIVE

Barr Engineering BKV Corp. Childs Geoscience Inc. Coeur Alaska, Inc. Covia Corp. Foth Environmental Hoffman Construction Co. Intertek PSI Inc. Lundin Mining Maptek Mathy Construction Milestone Materials Monarch Paving NRRI Oxy Perpetua Resources Petroleum Connection Precision Geosolutions Ruder Ware, L.L.C. Short, Elliot, & Hendrickson Inc. (SEH) Smart Sand Inc. Teck Wisconsin Industrial Sand Association (WISA)
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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$ _______  Geology Department Advancement Fund (#279)
$ _______  Myers/Willis Field Camp Scholarship Fund (#1633)  **(Adopt a Field Camper)**
$ _______  Emeriti Faculty Scholarship Fund - Unnamed (#1632)
$ _______  Dr. John R. Bergstrom Scholarship (#2475)
$ _______  Hydrogeology Advancement (#2271)
$ _______  Internship Advancement - Geology (#2780 – NEW!)
$ _______  Total Contribution (tax deductible)

________  My employer (or my spouse's) will match this gift.

________  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.

Please indicate how you wish your contribution to be recorded:

- [ ] Record jointly with my spouse ______________________________
- [ ] Record in my name only
- [ ] In memory of ____________________________________________

**PAYMENT METHOD**

- [ ] My check is enclosed (made payable to UW-Eau Claire Foundation)
- [ ] If you wish to pay using a **credit card**, please go to connect.uwec.edu/geology and select a Geology fund option.
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