DIG IT
Volume 25, Summer 2020
DEPARTMENT OF GEOLOGY
Annual Alumni and Friends Newsletter
I hope you are all well during this strange time. We know many of you are suffering from the pandemic on some level. Times are uncertain, and it seems prospects for the future are changing every day. Indeed, Covid-19 truly impacted our students this year. All UWEC students were sent home in mid-March (a week before spring break), and all classes were completed online. We were also forced to postpone both the university’s graduation ceremony and our annual Department ‘End-of-Year Awards Banquet’ (still regularly hosted at the American Legion). Our annual Advisory Board meeting was held remotely via Zoom. As you know, our lower- and upper-division courses are laboratory-intensive and were thus negatively impacted, especially when the field season was entirely cancelled. And yes, our Field Camp II experience in Montana was cancelled too. Fortunately, only four of the students were denied this all-important capstone experience, as many of our graduating students had taken it the previous year, while the other enrolled students will take it next year. And when they do, they will travel in style! Brian Mahoney worked tirelessly to bring three new 2020 Chevy Suburban 1500’s with towing packages to campus (see photo) and to sell the “retiring” field vehicles. Thanks, Brian!

Despite all of this, I think our students (and faculty) did surprisingly well, given that experiential geology learning is not amenable to virtual instruction. Our annual University CERCA celebration (the old ‘Research Day’), as well as the regional North-Central GSA meeting, were held online, and many of our students successfully uploaded their research presentations into the virtual conferences. In other good news for our Department, Trevor Nelson (’21) won the prestigious Goldwater Scholarship (the tenth in the history of UWEC, and the second Blugold geology major). Last December, two of our distinguished alumni received prestigious awards from UWEC: Kristi Franz (’95) earned the President’s Award, and Bridget (Wolfe) Osborn (’08) earned the Outstanding Recent Alumnus Award. With respect to our faculty, Dr. Robert Lodge was awarded tenure, and Dr. Kent Syverson recently published a personal memoir about his field research in Glacier Bay, AK. After serving as Director of the Office of Research and Sponsored Programs for 14 years, we celebrated Dr. Karen Havholm’s retirement from the University. Many of you know Karen was a Professor of Geology from 1993-2005, before taking the reins at ORSP. Coincidentally, her daughter, Merilie Reynolds (who recently received her PhD in Economic Geology from the University of Alberta) will be joining our staff this fall as an Instructional Academic Staff. We warmly welcome Merilie to our department! Meanwhile, our faculty remains committed to teaching and scholarship, with the central priority of improving the lives of our students… even if it has to be done virtually. Take care,

Phil Ihinger
Professor and Chair

One of three new 2020 Chevy Suburbs for geology field trips.
By Robert Hooper

GEOL 312 FIELD TRIPS

When we were in the Porcupines, most of the snow on Saturday, and a brief glimpse of the sun with some partly cloudy skies on Friday, rain and in October, we saw the full gamut of weather to study the Mid-Continent Rift (first weekend in northern Wisconsin all autumn). The weekend we were on the south shore of Lake Superior to study the Mid-Continent Rift (first weekend in October), we saw the full gamut of weather with some partly cloudy skies on Friday, rain and snow on Saturday, and a brief glimpse of the sun when we were in the Porcupines. Most of the rock exposures along the streams were under water which made the waterfalls spectacular but made accessing the rocks impossible. The students still had a great time and spirits were remarkably high given the inclement weather.

The Black Hills field trip (October 16 to 20, 2019) was successful, but the weather was cool and windy all weekend long. We pulled into the campground at Sheridan Lake (Black Hills National Forest) at midnight on Wednesday with weather and sunnier skies in New Mexico. I cohort departed Eau Claire for warmer – NEW MEXICO – field camp experience for students. We could be swimming if it were warmer...

Water is high on G312 field trip—difficult access to the outcrops!

FIELD CAMP 1 UPDATE – NEW MEXICO

By Scott Clark

On January 1st of this year, the Field Geology I cohort departed Eau Claire for warmer weather and sunnier skies in New Mexico. Along the way to the Black Range Lodge, we made our annual stop at the Frontier Restaurant in Albuquerque for a welcome-to-New-Mexico breakfast. Once we were at the lodge, everyone pitched in to transform it into our base camp. The group consisted of nineteen students and four instructors; Bob Hooper and I were ably assisted by two recent UWEC alumni: Dan Brennan (’16), who has earned his M.S. from Idaho State University and is currently pursuing a Ph.D. at Curtin University in Perth, Australia, and Samantha Kleich (’18), who is starting graduate school at Montana Tech in the fall.

Field Geology I students with their new field vehicle, a 1956 Bel Air, owned by Gene Thornton. Gene and Barb Thornton (far right) graciously allow access to our Trujillo Canyon field camp project each year. Generous landowners like the Thortons make our Field Camp I a rich experience for students.

I’m happy to report that field camp ran smoothly, students worked hard, spirits were high, the food was great, and we could not have asked for better weather throughout the entire three weeks. Having the “privilege” of extracting a number of thorns and splinters from the soles of students’ feet led me to reflect on using my hand lens in a way I had never envisioned. As always, we respected the land we map on and worked to remain in the landowners’ good graces. To that end, they all appreciated their blocks of WI cheese – especially Gene and Barb Thornton at Trujillo Canyon. Speaking of Gene and Barb, they talked about how they enjoy our yearly visit, and were more than happy to let students cruise around in Gene’s 1956 Bel Air after a day in the field. (Trivia question: Where is the gas cap on a ’56 Bel Air?) This year’s concert at the Hillsboro Community Center was performed by award-winning banjo player, Jeff Scroggins, who was supported by a quality band of local musicians. The biggest hiccup occurred when the transmission in the lead Suburban gave out on the interstate in Iowa just before sunrise as we were driving home. We weren’t impressed, especially with the wind chill hovering at 20ºF. If I didn’t know better, I’d say the SUV broke down out of spite because, with new Suburbans arriving in the spring, this was going to be its last long trip!

While it was great to see and support all of the learning that took place, we had no idea that because of COVID-19, Field Geology II would be cancelled, which meant that Geol 470 was the only field camp experience for some graduating seniors. Let’s hope both field camps will run next year.

Field Geology I students Graydon Skok (L) and Rory Johnson (R) at the Great Unconformity.
TRIP-GUNFLINT TRAIL

By Robert Lodge

With Dr. Mahoney on sabbatical in Fall 2019, instruction of Geol 418 (Earth History) fell on my plate. And of course, I wanted to show them some cool Precambrian rocks! After discussions with Mark Jirsa (UWEC Geology ’76) at the Minnesota Geological Survey, I decided to take them to the northern part of the Gunflint Trail (side note: we were <1 km from the Canadian border). Students learned to map on rocks from the 2.69 Ga Superior Province, the 1.9 Ga Gunflint Iron Formation (including the “other” great unconformity between those units), impact breccias from the Sudbury event, and Mid-Continent rift intrusions of the Duluth Complex and Logan Sills. Despite some difficulties taking measurements with Bruntons on magnetic iron formation, students came away from this experience with a much better understanding of the amazing geology of the Lake Superior region and the fundamentals of mapping.

We stayed at the historic Gunflint Lodge and enjoyed sunny, but cold, weather throughout our time. In addition to awesome geology, students enjoyed a picnic lunch on the beaches of Lake Superior, observed peak fall foliage in Minnesota’s northwoods, and viewed the northern horizon. Students learned to track through our time. In addition to

Funded research based at UWEC untangles a complex phosphorus issue

Modified from UW WRI article by Jennifer A. Smith dated March 27, 2020

Unsightly and potentially toxic algal blooms have grabbed headlines in Wisconsin. Such blooms are driven by excessive levels of phosphorus or other nutrients. This can result in eutrophication, a process in which oxygen becomes depleted from a body of water, causing ill effects for fish and other aquatic life—and harming human activities like tourism and commercial fishing.

While agricultural runoff is a frequent source of excess phosphorus, research funded by the UW Water Resources Institute (WRI) looks at a complex example in western Wisconsin where the answers are not so clear.

Drs. Vitale and Mahoney are investigating the possibility that naturally occurring phosphorus deep in the aquifer elevates levels of phosphorus in both surface water and groundwater

Drs. Sarah Vitale and J. Brian Mahoney from the UWEC Geology Dept. are investigating the possibility that naturally occurring phosphorus deep in the aquifer is the driver behind elevated levels of phosphorus in both surface water and groundwater. The study is regional and includes a case study focused on the Mud Lake area in Barron County, ~45 miles north of Eau Claire.

Vitale and Mahoney received funding in WRI’s 2019-20 cycle for the study assessing the source and mobility of phosphorus in the hydrologic system in western Wisconsin. Joining them as a collaborator is Anna Baker (UWEC Geology ’09), a hydrologist with the USGS’ Upper Midwest Water Science Center. Five UW-Eau Claire geology majors are gaining valuable hands-on experience by assisting the research team with fieldwork, collecting and interpreting data, and giving presentations at professional meetings.

In fact, three of those undergraduates—Emily Finger, Evan Lundeen and Jacob Erickson—had a scientific poster accepted to the annual “Posters on the Hill” event hosted by the Council on Undergraduate Research in Washington, D.C. While the April 2020 event was canceled due to the COVID-19 pandemic, the students’ selection to present their research to members of Congress and their staffs remains a badge of honor. And before state travel restrictions were in effect, Mahoney and two of his students presented their work at a “Research in the Rotunda” poster session in the Wisconsin State Capitol.

While the WRI-funded portion of this project began in summer 2019, the work had its beginnings three years earlier. Said Vitale of her colleague, Mahoney: “Brian initially started the foundations of this project in 2016. He started having students look at water quality in western Wisconsin because there was a lot of concern over what the increase in silica sand mining would do to water quality in this part of the state.”

At the time, Mahoney and his students analyzed water from a variety of sources, like municipal wells and streams. They were surprised to find a large amount of phosphorus in both groundwater and surface water in the area.

“That stood out as a really big red flag, because everybody says there’s not supposed to be
phosphorus in groundwater. It’s always been assumed it will absorb onto sediment surfaces—and so the high concentrations of phosphorus in groundwater led to this project’s current form,” said Vitale.

This sparked curiosity about possible natural sources of phosphorus and how that phosphorus might be moving through the system. In 2018, Vitale and Mahoney began a case study investigating groundwater discharge into Mud Lake, a lake with eutrophication problems. “The way we wrote this [WRI] proposal was to help continue the investigation. It’s been able to fund a second season of investigation for Mud Lake, as well as continued investigation of regional water quality.” Vitale and her collaborators plan to use the funding to draw conclusions about sources of naturally occurring phosphorus.

Summarized Vitale, “We hope to wrap up the regional investigation and to constrain which aquifers seem to be the biggest problem. Where is phosphorus concentrated the most in different aquifers? And in these deeper aquifers, the phosphorus is probably sourced from the rock itself, so which rocks are the main contributors to that?”

The team’s WRI funding continued through June 2020. Other funds supporting this work have come from UWEC’s Office of Research and Sponsored Programs, the UW System Water Research Fellowship Program (which allowed the project to expand to Lake Altoona in Eau Claire County), and a fiscal year 2021 grant from the State of Wisconsin Groundwater Research and Monitoring Program.

Vitale, Mahoney, and Baker all bring different areas of expertise to the study. Vitale is a hydrogeologist who specializes in aquifer flow characterization. Mahoney brings a background in geochemistry, and so his primary focus is understanding rock chemistry and how it influences water quality. Baker’s primary expertise is in phosphorus migration through sediment transport, so she is helping the team understand what nutrients might be from the water and which might be from the sediment.

In spring 2019, Vitale shared some results from this project at the meeting of the American Water Resources Association—Wisconsin Section. As the research progresses, findings are also being shared with key stakeholders like the WDNR, USGS, Wisconsin Geological and Natural History Survey, and organizations in the Eau Claire area.

GEOLGY MAJOR NAMED UW-EAU CLAIRE’S NEWEST GOLDWATER SCHOLAR—TREVOR NELSON WEARS MANY HATS...

Modified from News Bureau article by Julie Poquette dated April 6, 2020

A career exploration project in the sixth grade sparked Trevor Nelson’s interest in geology, and since becoming “hooked” after one class his first semester at UWEC, he’s never looked back. Nelson, a senior geology major from Hammond, WI, recently was named a recipient of a 2020 Goldwater Scholarship, one of the most prestigious U.S. national scholarships awarded to individuals “who show exceptional promise of becoming this nation’s next generation of natural sciences, mathematics and engineering research leaders,” according to the Goldwater program website.

Nelson is the tenth Blugold to be named a Goldwater Scholar (Blugold Geology alumna Sarah Kintner (nee Knudson) also was a Goldwater Scholar in 2015-16). The scholarship awards up to $7,500 a year to help cover a recipient’s college tuition, fees, and room and board.

Contributing to Nelson’s selection for the Goldwater Scholarship was his experience doing faculty-student research as a UWEC undergraduate. He has worked on research with Drs. Robert Lodge and Phillip Ihinger of the Geology Department.

“Trevor’s abilities as a field geologist—a fundamental part of being a successful geoscience researcher—are unparalleled amongst his peers and predecessors,” Lodge wrote in a letter recommending Nelson for the Goldwater honor. “I believe Trevor is one of the most promising student researchers that I have interacted with—ever. His intelligence, research abilities, enthusiasm for learning and eagerness to work are inspirational to students and professionals alike and will ensure he’ll prosper beyond his time here at UW-Eau Claire.”

Nelson attributes his selection for the Goldwater Scholarship to the support he has received from Lodge and others at UWEC. “The backing by my professors, Dr. Phil Ihinger and Dr. Robert Lodge, my Goldwater Scholarship mentor, Dr. Karen Havholm, and the entire geology faculty helped me through the entire process,” Nelson says. “Everyone connected to me has made a positive impact and created an amazing once-in-a-lifetime undergraduate experience. I am truly thankful for all of my connections through UW-Eau Claire and could not have received this scholarship without all of the continued support.”

Havholm, UWEC’s recently retired assistant vice chancellor for research and sponsored programs, was the university’s campus representative for the Goldwater Scholarship Program when Nelson applied for the honor. In guiding Nelson through the Goldwater process, “I learned that there is much more to Trevor than good grades,” Havholm says. “He has a strong work ethic, is not deterred by even major setbacks, responds positively to critique of his work, and is extremely organized as he balances full participation in a varsity sport with his academics. That allows him to take advantage of learning opportunities, such as the two research projects he has worked on. It was a pleasure to work with him and I am thrilled with his Goldwater success.”

Nelson agrees that his multiple involvements at UWEC, including being a member of the Blugold football team as well as collaborating on research with his professors, have helped him learn to keep things in balance. “Being part of the UW-Eau Claire football team has been one of the largest aspects of my life while attending UW-Eau Claire,” Nelson says. “It complements my academics and makes me even more focused on what my priorities are and how I schedule my everyday life.”
Staying focused includes keeping in mind some advice from head football coach Wesley Beschorner, to “be where your feet are,” Nelson says. “That small phrase reminds me to focus on everything I have — all of my academics, athletics, family and friends.”

Nelson is determining whether to attend graduate school or join the workforce immediately following his graduation from UWEC, but his eventual career goal is to work in the metallic mining industry with a focus on improving mining processes. “What intrigues me about metallic mining is that it is the basis of nearly everything in our lives nowadays,” Nelson says. “Metal is the basis of our phones, cars and just about anything you can think of.”

Four years as a hydrogeologist before pursuing a master’s degree in hydrology and water resources from the University of Arizona, followed by a doctorate in civil engineering from the University of California, Irvine. In 2006 she accepted a faculty position in the Dept. of Geological and Atmospheric Sciences at Iowa State University, where today she is a tenured associate professor and is currently serving as department chair. A nationally recognized research scientist, Franz has authored or co-authored 24 peer-reviewed journal articles since 2003 and presented research findings at more than 30 professional conferences and meetings over the past five years.

Franz, whose research focuses on improving the prediction of watershed behavior, has obtained more than $2 million in grant funding for her studies, many of which are aimed at improving flood and water supply forecasts across the country. Her work includes mentoring both graduate students and undergraduates, and she views their successes as her biggest impact on the science of hydrology. Franz said UWEC geology faculty have remained a source of support and guidance as she has advanced in her career.

“One of the most important opportunities I received at UW-Eau Claire was engaging in undergraduate research projects under the guidance of professors,” Franz said. “These experiences [with Geology professors John Tinker and Kent Syverson] were invaluable for gaining insight into how research is done, learning about my scientific strengths and weaknesses, and defining my interests and goals.”

Bridge (Wolfe) Osborn ’08 received the Outstanding Recent Alumnus Award, which acknowledges the special achievements and great promise of alumni who are within 15 years of their graduation from UWEC. Bridgett was the first Blugold to complete UWEC’s geology dual-degree in engineering in partnership with the University of Minnesota, through which she earned a bachelor’s degree in geology from UWEC and a bachelor’s degree in geological engineering from the U of MN. She also enjoyed a successful track and field career as a Blugold, becoming an All American in the heptathlon her senior year.

A water resource project engineer with HR Green, said Osborn’s dedication and talent make her highly deserving of recent accolades. “Bridget brings lots of energy and dedication to finding practical, cost-effective solutions for her clients while improving the environment and quality of life for the communities she serves,” Jain said.

We congratulate both Kristie and Bridget on their alumni awards—the awards are well-deserved!
RESPONSIBLE MINING INITIATIVE UPDATE

By Kent Syverson

In November 2013, the University of Wisconsin 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.

The RMI continues to have a positive impact on students. Our students have obtained MSHA 24-hr New Miner training on campus, VULCAN training, networking opportunities at industry conferences, and high-quality paid internships. Many opportunities were truncated this spring by COVID-19. However, this provides a good chance to look back at the first six years of the RMI.

Some 126 Blugold geology majors graduated between 2015 and 2020. The 87 internships held by graduates were in diverse fields (58% environmental/geotechnical, 26% nonmetallic mining, 13% metallic mining, and 3% energy). Of the students attending graduate school, 50% completed at least one paid internship and 100% participated in collaborative research. These are impressive numbers for an undergraduate geology department!

Are we preparing highly qualified graduates for work in the mining industry, the environmental consulting industry, and in regulatory agencies? Yes! Based on data for 2015-2020 graduates for whom I had recent employment data (n=44), our recent grads are employed in the following fields: 59% environmental/engineering, 16% frac/non-metallic mining, 14% metallic mining, 7% regulatory agency/gov., and 2% geological surveys. Typically, it takes many years before graduates obtain jobs in regulatory agencies, so this percentage is likely to grow.

These successes have required much relationship-building with industry. In May, we held our 5th Geology/Responsible Mining Initiative Advisory Board meeting. Twelve external stakeholders attended the Zoom event and demonstrated continuing commitment to our Responsible Mining Initiative. Faculty have attended professional meetings in 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 not available 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.

5TH ANNUAL GEOLOGY/RMI ADVISORY BOARD MEETING HELD

By Kent Syverson

The 5th Annual UWEC Geology/Responsible Mining Initiative Advisory Board meeting was held on May 12, 2020. The COVID-19 lockdown prevented us from meeting in person, so we utilized Zoom to provide a one-hour update to the Advisory Board members. Twelve outside stakeholders (including seven alumni) from Wisconsin, Minnesota, Colorado, and Idaho received updates about the new Environmental Science emphasis, COVID’s impact on classroom and field instruction, new vehicles, research, internships, and fundraising.

KAREN HAVHOLM RETIRES

Includes text from News Bureau story dated August 28, 2019

Dr. Karen Havholm, long-time Geology professor and leader for UWEC’s nationally recognized faculty-student collaborative research program, retired 1/31/2020.

Karen was raised in Okinawa, Japan, and Cyprus, and then came back to the College of Wooster (Ohio) to complete her undergraduate degree. This led to a teaching stint in Tehran, Iran (where she met her husband Glenn) during the Iranian Revolution of 1978-79. She can tell some interesting stories from this time! She returned to the USA and received a PhD in eolian sedimentology from UT-Austin. This was followed by visiting professorships at Colorado College and the Univ. of Washington.

Karen was hired to be our science education specialist in the UWEC Geology Dept. in 1993 and achieved the rank of full professor. She taught Earth Science (primarily for education majors), Earth Resources, and some field camp course offerings. She conducted research with numerous undergraduate geology majors in rocks of the Paleozoic of Wisconsin, the Mid-Continental Rift, and young dunes in Manitoba and the Atlantic Coast.

In 2006 Karen was named Assistant Vice Chancellor for Research and Sponsored Programs and Director of the university’s Center of Excellence for Faculty and Undergraduate Student Research Collaboration. Under Karen’s leadership, undergraduate research continued to flourish at UWEC. In 2016 UWEC was honored by the Council on Undergraduate Research [CUR] as the top master’s-level university in the country in providing excellent undergraduate research programs. She also was instrumental in UWEC’s successful bid to hold the National CUR Research Conference in Eau Claire in 2023.

Karen has taken steps to ensure her support for faculty-student research will continue after her retirement, establishing an endowment through the UWEC Foundation that can continue to grow. “I want to help secure the future of student research at UWEC,” Havholm said. “To launch the Mentored Student Research Endowment Fund, my husband and I have committed to match all gifts made to the fund until it reaches the endowment level of $25,000.” More information and a link to give to the Mentored Student Research Endowment Fund are available on the UWEC Foundation website.

Congratulations, Karen! You will be missed!
1. 2020 Field Camp I—Austen Fairbanks shows off his stylish, yet functional, mapping vest. His grandfather, Professor Emeritus Paul Myers, had this vest made for himself and then he passed it on to Austen!

2. Beautiful clouds and scenery at a Field Camp I mapping site, January 2020.

3. If you ever encounter this geology field crew in the wild, don’t run—just back away slowly… Blugold Metal Earth research team in Ontario, Canada. L to R: Makayla Chandler, Rob Lodge, Natalie Brock, and Trevor Nelson.

4. Geology SUV’s in the snowy Black Hills (MinPet I field trip, fall 2018).

5. Makayla Chandler presents her Metal Earth research at the PDAC Conference in Toronto, ON, March 2020.
6. Buy your Valentine’s Day treats from the Geology Club, February 2020. (This is a rare photograph from the in-person part of spring semester!) L to R: Maddie Gorg, Makayla Chandler, and Austen Fairbanks.

7. Leopard seal off the shores of Elephant Island, Antarctica (photo by Brian Mahoney). Elephant Island is where Ernest Shackleton’s men hunkered down while Shackleton sailed to South Georgia Island for help.

8. Environmental intern, Dee Vang, in the MN PCA’s mobile lab (summer 2019).


10. Katherine Langfeld teaching geology at the Eau Claire County 4-H Fair (summer 2019).
MATHY CONSTRUCTION CO. AND MILESTONE MATERIALS SPONSOR HALF OF THE 2020 FIELD CAMP I

Field Geology I crew at our home in New Mexico, January 2020.

For the third year in a row, Mathy Construction Company and Milestone Materials (a div. of Mathy) have sponsored nineteen Field Camp I students. This sponsorship reduced the costs for each student attending our three-week field camp in New Mexico and helped defray increasing tuition costs.

Mathy Construction and Milestone Materials -- both based in Onalaska, WI -- provide production and placement of hot mix asphalt and are leading suppliers of construction aggregates throughout the Midwest. The companies are major supporters of the Responsible Mining Initiative at UW-Eau Claire and have a long-standing relationship with faculty members in the Department. Mathy/Milestone has hired several Blugold Geology graduates in the past including Bob Servais, Milestone Materials’ geologist and UWEC Geology ’04 alumnus, whom represents Mathy/Milestone on our Advisory Board.

“Mathy and Milestone value their relationship with the UW-Eau Claire Geology Department. We were, once again, pleased to be a part of such a valuable and defining experience as Field Camp I for another class of Blugolds,” said Servais.

The Geology Department and its students thank Mathy Construction Co. and Milestone Materials for this generous donation!

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. I’m pleased to report that many other alumni, friends, and companies donated $27,990, in both large and small gifts, to Adopt a Field Camper through the Myers/Willis Geology Field Camp Scholarship fund in 2019! I was encouraged to see a record number of donors this year—a healthy sign!

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

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 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.”

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. In addition, if you live in the area and would like to receive e-mail announcements about upcoming seminars, please contact Dr. Scott Clark at clarksco@uwec.edu. If you work for a company that would like to sponsor the seminar series or contribute money to defray speaker costs, please contact us!

Former Blugold Professor Lung Chan (left) during his visit to UWEC, fall 2019.


Dr. Paul Myers, Emeritus Professor of Geology, UWEC, “Wausau’s 1,500 m.y. old volcano: Don’t expect an “eruption,” 10/4/19.

Dr. Lung Chan, Department of Earth Sciences, University of Hong Kong, Deputy Director, HKUSPACE, University of Hong Kong, former UWEC Professor of
The “Excellence in Geology” Award recognizes the academic achievements of the outstanding graduating geology major, both in coursework and in faculty/student collaborative research. The winners of the Geology Excellence Award for 2019-2020 are Elliot Draxler, Emily Finger and Evan Lundeen. Congratulations to Elliot, Emily, and Evan!

Elliot is a native of Eau Claire, and he graduated with a General Geology degree in December 2019. He participated in a research project with Dr. Phil Ihinger studying the origin of the Eagle sulfide deposit in UP Michigan. Elliot’s work resulted in an accepted abstract to the NC GSA meeting. Elliot completed two paid internships—one with Market & Johnson in Eau Claire, and last summer with Lundin Mining (Eagle Mine) in UP Michigan. He was co-recipient of the first Josh Carlisle Applied Geology Scholarship in 2019. Elliot will be attending graduate school at Montana Tech (Butte, MT) for a master's degree in geological engineering.

Emily is from Helenville, WI, and she graduated with a major in Geology (Hydrogeology and Water Chemistry emphasis) in May 2020. She has participated in several research hydrogeology research projects with Dr. Sarah Vitale. She presented this research at NC GSA, national GSA, WI AWRA, the Research in the Rotunda event in Madison, and was invited to present her work at the annual “Posters on the Hill” event hosted by CUR in Washington, D.C. Last summer she completed a paid internship with Lundin Mining (Eagle Mine) in UP Michigan. She was the recipient of the Beckstrom Geology Scholarship, Unimin Sophomore Geology Scholarship, Leoba Hoban Scientific Research Scholarship, Myers/Willis Field Camp Scholarship, and the Kell Container Corporation Scholarship. That’s quite a list! Following graduation, Emily will attend graduate school at the University of Guelph for an MS in hydrogeology.

Evan is a native of St. Paul, MN, and he graduated with a major in Geology (Hydrogeology and Water Chemistry emphasis). He participated with several hydrogeology research projects with Dr. Sarah Vitale and Brian Mahoney studying nutrient transport in surficial and ground water. He had an abstract accepted to present at WI AWRA. Evan completed two paid internships—one with Kraemer Mining & Materials in Burnsville, MN, and last summer with Foth Environmental in DePere, WI. He was recipient of a Covia Responsible Mining Scholarship and co-recipient of the first Josh Carlisle Applied Geology Scholarship in 2019. Evan is also the winner of the Geology Excellence in Service Award for 2019-2020. The “Excellence in Service” Award recognizes the exceptional service a geology major has done for the department. Evan's outstanding work with the Geology vehicles has helped keep Lorilie sane! Evan has accepted a full-time hydrogeologist position with Kraemer Mining & Materials in Burnsville, MN.
SCHOLARSHIP CORNER

2020 BLUGOLD FRESHMAN GEOLOGY SCHOLARSHIPS ANNOUNCED

Thanks to alumni for funding a merit-based, annual scholarship 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 are Abigail Covert (Huntley, IL), Kadon Hansen (La Crosse), and William Speech (Brookfield). Congratulations to these recipients, and we look forward to their arrival on campus this fall!

PALUBICKI WINS BECKSTROM GEOLOGY MAJOR SCHOLARSHIP

This year’s recipient of the Beckstrom Geology Major Scholarship is Maddie Palubicki (Mondovi, WI). This $1000 scholarship, established in fall 2005 by alumnus 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!

WISA FUNDS SCHOLARSHIP IN MEMORY OF RICHARD BUDINGER

The Wisconsin Industrial Sand Association (WISA) donated $5000 last year to the UW-Eau Claire 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. He was the first person to attend the UWEC Spring Geology banquet to announce a major donation to the department (spring 2012). This year the donation is funding one $1500 WISA Geology Scholarship during the 2020-21 academic year. We thank WISA for choosing to honor Rich in this way—Rich had a heart for preparing geology students to do evidence-based investigations.

The 2020-21 recipient of $1500 WISA Geology Scholarship is Jonathan Sargent (Cudahy). Jonathan will be in MinPet I this fall.

TWO JOSH CARLISLE APPLIED GEOLOGY SCHOLARSHIPS AWARDED

Josh Carlisle (UWEC Geol ’02) of Denver, CO, has established the Josh Carlisle Applied Geology Scholarship. Recipients must have an interest in applied geology careers. The recipients of $1000 Josh Carlisle Applied Geology Scholarships are Katherine Richart (Plymouth, WI, former intern with Teck) and Rachel Slonac (Muskego, intern with Ocean Connections).

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 Colorado where he works for Extraction Oil & Gas. Thanks to Josh for his generous donation!
TWO BLUGOLD GEOLOGY ALUMNI SCHOLARSHIPS AWARDED

Thanks to the alumni who have funded a merit-based, annual scholarship for Geology majors in our program. This year two $500 scholarships were awarded to Chase Sonday (Eau Claire) and Bridget Russell (Apple Valley, MN).

GEOLOGY MAJORS RECEIVE UNIVERSITY-WIDE SCHOLARSHIPS

This year Geology majors were awarded two prestigious university-wide scholarships. Maddie Palubicki (Mondovi) received the $1300 George & Geraldine Rossman Scholarship. Dr. George Rossman is a UWEC alumnus who teaches at Cal Tech. Shelby Short (Hackensack, MN) received the $2200 Michael F. Fredrich Scholarship. These scholarships are an external recognition of the quality of our Geology majors.

DAVID L. RISCH GEOLOGY RESEARCH SCHOLARSHIP AWARDED

David L. Risch (UWEC Geology ’78) of Katy, Texas, has endowed an annual, merit-based geology research scholarship. Recipients must be comprehensive geology majors with outstanding academic records, have an established Geology research track record, and plan to continue their engagement in research at UWEC in the coming academic year. The recipient of the $1150 Risch Geology Research Scholarship is Katherine Langfield (Lake City, MN).

David received a BS in Geology and Physics at UWEC and an MS in Oceanography at Texas A&M. He began his 31-year career in the energy industry as an exploration geophysicist initially with Phillips Petroleum Co., then Schlumberger, and retired from BHP Petroleum in 2013. Thanks to David for endowing this scholarship!

TWO H2O WELL DRILLING & PUMP SERVICE GEOLOGY SCHOLARSHIPS AWARDED

Nolan Rodriguez (UWEC Geol ’18) donated money to establish the H2O Well Drilling & Pump Service Geology Scholarship. Recipients must be non-freshman comprehensive geology majors with outstanding academic records. The recipients of $500 H2O Well Drilling & Pump Service Geology Scholarships are Madeline Marchiafava (Mounds View, MN) and Kalie Ress (Marshfield, WI).

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!

GEODESY MAJORS RECEIVE UNIVERSITY-WIDE SCHOLARSHIPS

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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!

Our efforts to enhance internship opportunities have been a resounding success. Two students continued their summer 2019 internships part time into the academic year. During the past academic year and this summer, 16 students have had/will have paid internships with metallic and non-metallic mining companies, environmental consulting firms, and governmental agencies and earn ~$83,000 in wages. Despite many internships being cancelled because of COVID-19 issues, this large number of paid internships is highly unusual for an undergraduate geology program.

**WISCONSIN DOT**
Eau Claire, WI

**Mallory Gross**
Environmental Intern (Wetlands)

**WISCONSIN DOT**
Eau Claire, WI

**Lucas Borden**
Geotechnical Lab Intern

**WISCONSIN DOT**
Eau Claire, WI

**Maddie Palubicki**
Geologist and Drilling Assistant Intern

**INTERTEK PSI**
Chippewa Falls, WI

**Trevor Nelson**
Geotechnical Intern

**U.S. FOREST SERVICE**
Walker, MN

**Shelby Short**
Soils/Hydrology Intern

**MSA PROFESSIONAL SERVICES**
Rice Lake, WI

**Briar Striegel**
Geotechnical Intern

**SOUTH DAKOTA DENR**
Vermillion, SD

**Maddie Palubicki**
Geologist and Drilling Assistant Intern

**WISCONSIN DNR**
Eau Claire, WI

**Angy Rafferty**
Environmental Intern
Our findings at the NC GSA meeting in May. This was GSA’s first-ever fully online meeting. Poster presenters uploaded both their poster and a 5-minute accompanying video. The brief videos were a great way to get session attendees to engage with the poster presentations.

Beyond teaching and research, I was happy to have a few outreach activities over the past year including the seventh consecutive year of talking about geology with fairgoers in the STEM tent at the 2019 Eau Claire County 4-H Fair. As with the geology students who helped with outreach at prior fairs, Katherine Langfield (21) was another excellent student co-presenter. Late in 2019, I enjoyed giving a planetarium presentation to middle school and high school students; and, in early 2020, I had much fun giving a “Geology Rocks” presentation to 4th graders at a local elementary school. A big project (22.5 feet big) finally came to fruition last summer when a geologic timescale banner highlighting geologic events relevant to Wisconsin was put on permanent display in the David R. Obey Ice Age Interpretive Center, which is located in the Chippewa Moraine State Recreation Area. Carly Mueller (’18), Elizabeth Brunner (’17), and Cathy Sikolia (nee Karlovich, ’17) put in many hours on this project and it is rewarding to see it up at the Ice Age Center.

That’s my news for now. Be well and please stop by the department to say hi when you can.

ROBERT HOOPER, Professor

Well, we all made it through another academic year, and this last year was full of excitement! This completes my 37th year of teaching at Eau Claire, and it was not my favorite year of teaching! I continued to teach MinPet I in the fall and Geochem and Physical Geology in the spring, and I also was co-instructor for Field Camp I.

I still love to teach geology, especially if the teaching is in the field or face-to-face. I found teaching online, as we did for the last half of the spring semester, is not my cup of tea! To be satisfied while teaching, I need the classroom community and the immediate feedback from students. I taught the last half of Geochemistry online but used MS-Teams for video conferencing and live-streaming lectures. I got some initial grief from some administrators for using synchronous video for this course, but several students thanked me at the end of the semester for keeping their experience “more normal”. Generally, students did well with online instruction, but they did not enjoy the experience and students have no desire to replace face-to-face with online. I find that refreshing because I have no desire to teach upper-division geology courses online.

After field camp Ginger and I rented a home for ten days on the Pacific Coast of Baja, Mexico

Robert Hooper, Professor
making sure faculty and staff have a voice in university planning and governance; this is becoming increasingly important given the headwinds facing higher education! I look forward to returning to face-to-face instruction and running field trips in the fall. The university seems committed to continuing the high-impact practices that make an education on the UWEC campus special.

**PHILLIP IHINGER, Professor**

*ihinger@uwec.edu*

Kent reminds me that I need to write a personal post, in addition to the requisite Department update provided on pg. 1. He says, “Your life doesn’t completely end when you become Chair.” I suppose he’s right. Frankly, being Chair has kept my hands pretty full during this crazy time, but Kent has proven to be an excellent and much appreciated mentor: THANK YOU, Kent! This past fall, I taught a large section of Geol 110 (3 sections of Physical Geology) and developed a new 1-credit course to introduce our new Geology majors to the culture and ethos of our Program (serving as a companion course to MinPet I). The 110 course was one of my favorite experiences in my career (it’s great to know that after all these years, I’m still not tired of teaching this class). Meanwhile, the new majors course also proved remarkably successful (we’re doing it again in the fall). Our MinPet I students were introduced to the entire faculty and alerted to the many research, internship, and scholarship opportunities available to them in our program. I missed teaching Field Camp II with Rob Lodge this May/June, but in the long run, the one-year hiatus may prove beneficial to both of us. This spring, I taught MinPet II to an eager group of 14 talented students, who were all as disappointed as I was to lose the second half of the semester to the pandemic. To my surprise, all students indicated a strong interest in taking a supplemental, 1-credit Microscope Methods course this fall to cover the experiential learning that was scrapped when we were sent home. I can only hope that this course won’t get cancelled before we can sneak in the learning.

My research program has remained surprisingly vibrant, thanks to the dedicated work of my collaborating students. Jackie Anderson (’18), Dee Vang (’19), and Katherine Langfield (’21) presented two posters at the annual Microanalytical Society Meeting in Minneapolis last July. They showed that one can accurately measure the chemistry of precious glass samples on an SEM without applying the compromising carbon coat, and their work was well-received by the Analytics community. They also presented results on the successful geochemical characterization of 18th century Native American glass trade beads. Dee flew to Phoenix and presented a follow-up study specific to beads recovered from Ft. Mackinac, MI, and compared her results to similarly-colored glass fragments collected from the historic glass-making region in central France. The glasses from France had peculiar double-humped infrared absorption spectra, and Katherine Langfield and Will Guenther have been pursuing a theoretical model based on quantum chemistry and testing the model using the experimental cold-seal apparatus (yeah for them!). Elliot Draxler, who graduated last December, continued his work on the origin of magmatic sulfide deposits at Eagle Mine and submitted his work to the NC GSA meeting in Duluth, which was converted to a virtual conference. Chase Sunday and Austin Piazza have also been involved in deciphering the enigmatic deposits. I have also had the great fortune of collaborating with Professor Paul Thomas (Physics) on two exciting projects involving finite element modeling, with Colleen Olson (’20) on quartz growth and Tyler Gonzales (’21) on the infall of micrometeorites from space.

**This summer saw the arrival of our new puppy, Kaia**

*Philip Ihinger, Professor*

On the home front, the big news for our family is that our numbers have now grown. No, we’re not pregnant (phew), but this summer saw the arrival of our new puppy, Kaia. My girls have been begging for this addition for twenty years, so you can imagine the excitement this cutie has brought into our home!

**ROBERT LODGE, Associate Professor**

*lodgerw@uwec.edu*

Boom! Tenure! It looks like I am sticking around for a while.

**Boom! Tenure! It looks like I am sticking around for a while.**

*Robert Lodge, Associate Professor*

I can finally unpack that last box at my house and settle into Eau Claire. I have been here long enough not only to get tenure, but also to forget how many years I have been here (I think this is my sixth). You have all heard about this COVID-19 thing and how it has impacted everyone, so I’ll focus on positive aspects of this year.

My research program has had near-complete turnover with only one returning student. My dedicated research team continued to study topics centered around Precambrian geology and mineral deposits. I had three students, Makayla Chandler (’20), Natalie Brock (’20), and Trevor Nelson (’21), spend five weeks in northern Ontario, Canada, taking part in the Metal Earth research program led by Laurentian University (Sudbury, ON). Their research topics were as diverse as the geology of an Archean greenstone belt! Danny Weber (’20) and Shelby Short (’22) continued research on Wisconsin’s metallic resources in collaboration with Great Lakes Exploration. And Sal Kass (’20) gave the first-ever (to my knowledge) external presentation on the Archean basement at Field Camp II in Montana. Students presented their research at the PDAC Convention in Toronto, ON, and at the first-ever virtual North-Central GSA meeting in Duluth, MN (technically it was held wherever you were). Even with the global pandemic, these students had very successful semesters of research and should be proud of their efforts.

On the teaching side of things, it was a very interesting year! While my colleague was on sabbatical, I taught Earth History for the first time. The new prep was challenging, but it better connected me with our students’ learning path. Until now, it seems like I mostly taught upper-division students in their last semester. I believe students had a rewarding
experience (or at least that is what I’m telling myself). The Structural Geology class had to learn part of their materials online once the pandemic shut things down; comments were largely positive, and they had a meaningful experience. Many Structural students are around next year and will be invited to go on the field trips. My Physical Geology classes are always fun, even with the shortened spring semester. Hopefully I will see a few of them in my upper-division classes in a few years!

At home, the Lodge family is busy as usual. Despite the negative impact the shutdown had on our students, my family enjoyed my company for the first time in late May/early June since we moved here in 2014 because Field Camp II was cancelled. Hillary, Claudia, Meredith, and Bruce are loving the extra summer time with Dad. Cassie is keeping me busy with home improvements previously on the backburner because of busy spring and summer field work commitments. Hillary and Claudia did well with homeschooling and will start 2nd grade and kindergarten next fall, respectively. Meredith is now having full conversations, and Bruce is running and messing with his sisters all the time. Good times!

J BRIAN MAHONEY, Professor
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Greetings once again! This has been an insane year, full of serious highs and devastating lows, but, at this point, everyone seems to be moving ahead. I hope this newsletter finds you and yours safe and healthy!

Highlights: Sabbatical Semester! Fall 2019 was my last sabbatical semester here at UWEC. Faculty are only eligible every 7 years, and 7 years from now I will be in a grass hut on a beach between a coral reef and a volcano! My sabbatical project involved research in the Andes of Argentina, but of course I squeezed in a variety of activities. Started off with a couple of weeks in El Corpus, Honduras, helping develop an exploration program for an epithermal gold project. A very interesting project, but the drill campaign is currently on hold due to the global pandemic. Hope to complete it next year.

Continued working on a major detrital zircon project investigating the Belt Supergroup in Montana, Idaho, and British Columbia. The massive (>20 km) succession of Mesoproterozoic sedimentary rocks has befuddled geologists for decades. The Belt Basin contains some of the largest Pb, Zn, and Cu deposits in the world, so understanding the basin evolution is critical.

Started a wonderful new adventure with a three-week cruise to Antarctica.
J Brian Mahoney, Professor

Started a wonderful new adventure with a three-week cruise to Antarctica. I was selected to be an Expedition Team Member on the Seabourn Quest (https://www.seabourn.com/en_US/cruise-destinations/antarctica-patagonia.html). This is a high-end luxury cruise ship, limited to 400 passengers. My job was to provide scientific lectures, give seminars on the geology of the areas we were cruising through, and escort guests on field trips to the Antarctic Peninsula via Zodiac. What an amazing way to see a spectacular landscape! The guests were tremendous—my lectures involved 200 people who were actively engaged and peppering me with questions, and not even one person worried about how this information would impact their grade!!!

Returned from the southern polar ice cap just in time to head to the equatorial Pacific. Spent a wonderful couple of
weeks snorkeling in the atolls of French Polynesia with Lori. Accommodations varied from high-end to Robinson Crusoe-style as we island-hopped through the archipelago. Could spend a year there and not see the entire country. The drift snorkeling was spectacular.

Spent three weeks in January working on our research project in Argentina with a combined group of Argentinian, San Diego State, and UWEC scientists. We are investigating the influence of massive PermoTriassic volcanism recognized in the Choya Group on the Great Permian Extinction. The rocks are spectacularly exposed in deep canyons incised into the high spine of the Andes. We have funding for two more years of field work in the area and will get back as soon as we can.

Lowlights: Returned to EC after a wide-ranging sabbatical, ready to teach enthusiastic students in SedStrat and Societal Issues in Earth Science. We were just getting rolling when the coronavirus rolled across the country. By mid-March campus was a ghost town and we were scrambling to transfer all learning to online experiences. Our department prides itself on its field-based experiential learning, which was all lost once the virus arrived. SedStrat went into a module mode, and the beauty of in-person learning disappeared. This has been a very long slog for everyone, and I am hoping that our current cohort of students will hang tough and put in the extra effort needed to excel in this environment.

Summer field research experiences have been cancelled, and the many of our hard-won internships are on hiatus. Hoping to do a bunch of combined SedStrat and Earth History field trips this fall to try to catch up. Keep your fingers crossed we can keep the virus at bay long enough to look at some rocks!! Stay strong, all—these are bad times, there is no doubt....but it can only get better! All the best!

LORI SNYDER, Senior Lecturer
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Well, it has been quite a year! I hope that this newsletter finds you and your loved ones well, and I send you my very best during these turbulent times. After a relaxing summer, the year began well. I taught the usual array of courses and enjoyed working with the students, particularly my First Year Experience (FYE) section. It is wonderful to witness the growth of students in the first few months of their university careers.

In January, Brian and I went on a wonderful excursion to French Polynesia. Tahiti is the largest island and the location of the capital, but the country consists of 118 islands and atolls that extend for over 2,000 km. Travel in the country was challenging. A few of the islands have highlands consisting of spectacularly steep topography covered in lush vegetation and waterfalls. Many of them are large atolls with beautiful lagoons and narrow, sparsely vegetated, low-lying land. Of course, one of the main reasons for visiting this South Pacific paradise was to see the ocean life—and it was stunning.

![The reefs are in good condition and the inlets into the lagoons provided amazing drift snorkeling – colorful coral, an incredible diversity of fish, sharks, dolphins and more. A memorable trip.](image)

Lori Snyder, Senior Lecturer

And then came Spring semester and COVID-19. Everyone and everything have been strongly impacted by this pandemic and, often, pre-COVID life feels very distant to me. The face-to-face university closed just before the spring field trip season, which was very disappointing. The transition to online format was frustrating for faculty and students alike, but we made it through. As I finish this yearly update, the future is uncertain, and I continue to hope for the best! Stay safe.

LORILIE STEINKE, Academic Department Associate
steinklm@uwec.edu

Greetings! This year marked my 30th year anniversary at UWEC! It doesn’t seem possible I have been on campus for that many years. Things continue to move forward in the department. We received three new vehicles for field trips this year which was a great accomplishment. As always, the office remains a busy place taking care of travel needs, reimbursements, class scheduling, and whatever our students may need (which of course is my favorite part of the job).

This year also brought a new family member to our clan as my oldest, Morgan, married her long-time partner, Nicolas, in June. They will continue to live in Iowa. My granddaughter Opal is now four and starts school in September! She is the love of my life and brings me more joy than I ever thought possible.

I hope this newsletter edition finds you all well. Please remember to stop by the office when you are in Eau Claire and keep us updated about your life!

KENT SYVERSON, Professor
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I hope you are doing well—these have been trying times for people in all walks of life. I have now completed my 28th year in the department. I still enjoy teaching college students! The past year I taught Geomorphology, Oceanography, and the Responsible Mining Seminar. In mid-March 2020 we switched to “alternative instruction” because of COVID-19. I missed student interactions and felt like a grading machine. This reinforced what a wonderful job I have most of the time! For example, in December my wife and I took my former research students, Audrey Boerner and Becca Ryser, and their families out to eat, and it was fun catching up with them!

I started a part-time position with the UWEC Foundation in July 2019. I am helping other STEM departments find internships, fund student scholarships, and start advisory boards. I have been learning many new things.

It was a busy year. In September, I accompanied two Responsible Mining Initiative interns to the 8th Annual Frac Sand Supply & Logistics conference in San Antonio, TX. We also revised and resubmitted an NSF funding proposal to diversify the geology student body at UWEC. It was a treat seeing Kristie Franz ’95 and Bridget Osborn ’08 receive UWEC alumni awards in December! In addition, this past spring I had an excellent slate of speakers for the Responsible Mining Seminar.

I look back at the COVID-19 season with a sense of loss, as I suspect many of you do as well. A noteworthy UMD hockey
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. I look forward to seeing you when this COVID mess is over!

It has been a whirlwind year with a combination of successes and minor setbacks. Brian and I continue to investigate phosphorus contamination in western Wisconsin and were awarded a second year of funding through the State of Wisconsin Groundwater Research & Monitoring Program, collaborating with Blugold geology alumna Anna Baker ('09) at the USGS. I have also established a partnership with the WDNR to have students measure base flow in several regional streams. Fortunately, we have been permitted to continue our field work during the summer, so water research continues amidst the pandemic! Just prior to the university shutdown, two students presented their work on lacustrine phosphorus loading at Research in the Rotunda (Madison), and several shared their water-related research posters at the Wisconsin Industrial Sand Association meeting in Eau Claire. Graduating senior Emily Finger ('20) was invited to present her research at Posters on the Hill in Washington, DC. COVID-19 resulted in the event being moved to a virtual presentation on Twitter (#pohgoesvirtual).

A highlight of this past year has been the establishment of our revised Environmental Science emphasis, which continues to provide students with a strong foundation in geology while also tailoring the degree to fit their interests and career goals. We are excited to officially have students pursuing this revised major this fall! I continue to teach Environmental Geology as well as Hydrogeology I and II. I am often impressed with the transition of our majors as they move through the Hydrogeology course sequence, with increased ability to think critically and refine their hydrogeologic field and analytical skills.

The pandemic certainly caused disruption and some disappointments this past semester, but we're all proud of how our students handled the sudden shift to online instruction, and we wish the very best to our graduating seniors.
Natalie Brock with Robert Lodge, “Petrogenesis and geochemistry of the Central Sturgeon assemblage, Sturgeon Lake greenstone belt, Ontario.”
Emily Finger, Evan Lundeen and Jacob Erickson with Sarah Vitale, “Assessment of the source and mobility of phosphorus in the hydrologic systems in western Wisconsin.” Accepted for presentation at the annual “Posters on the Hill” event hosted by the Council on Undergraduate Research in Washington, D.C. Presented virtually because of COVID-19. Also presented at the Provost’s Honors Symposium.

KAREN G. HAVHOLM, Assistant Vice Chancellor of Research, Emeritus havholkg@uwec.edu
Greetings, all. Everyone had a lifestyle change this spring with the arrival of the pandemic, so I didn’t feel alone when I retired at about the same time. For me retirement = pandemic = stay at home, so far. I handed off to my successor in the research office (Catherine Chan from UW-Whitewater, a long-time colleague who is already doing a great job) right before the stay-at-home order. Thankfully, I was not responsible for putting CERCA (Student Research Days) online at the last minute.
Highlights of the last year have included winning our bid to host the National Conference on Undergraduate Research in April 2023, as well as Geology major Trevor Nelson winning a coveted Goldwater Scholarship. We also had four faculty (psychology, math, and chemistry - winners; history - finalist) recognized nationally by the Council on Undergraduate Research (CUR) for the high quality of their mentoring of research students. It was great to welcome Kristi Franz and Bridget Osborn back to campus to receive their alumni awards. I also had several chances to celebrate my retirement along with university colleagues.
Since retirement I have been involved in continued remodeling projects at the cabin as well as my home office. I have had fun doing things I didn’t have (or make) time for in the past couple of decades: cooking, exercising, reading for interest and pleasure, writing poetry, and just doing whatever the heck I please. I continue my involvement with CUR. It is challenging to be the treasurer of an organization during this economically unfavorable time. I also signed up to be a Censu worker later in the summer. Submit your online form so no one needs to track you down! Eventually we plan to do some traveling when it is safer to do so.
Looking forward to seeing any of you who come through Eau Claire. Thank you for supporting the department and the university.

PAUL E. MYERS, Professor Emeritus paul.myers600@gmail.com
Greetings from Panamania, where we are STILL in “Locktown.” HOWEVER, we can’t complain because life here is relatively easy - if you’re not in a hurry. When we came here last October things were quite “normal”, so I scheduled 11 one-day field trips to various local sites. Fortunately, seven of them (all filled to capacity) took place as scheduled, Then COVID struck in March and shut down everything. SO while awaiting a “recovery”, we’ve come to realize that these changes are uni-directional with little chance of a “return to normal”. This outcome was unimaginable only five months ago. I will be interested to see how you reconfigure UWEC learning experiences and would be pleased to participate in any way I can.
Now, with COVID, we must quickly invent new ways to teach and learn - safely. Necessary changes will require innovative solutions. How can we safely maintain full-time learning? What changes will be needed to assure safety in the classroom, lab, and field? What are the best ways to learn “remotely”? Will behavioral changes be necessary? Students and staff with imagination should be an essential part of the solution. The university can, and should, play a major role at this time of radical change in our lives. An outstanding attribute of the UWEC has always been its sincere and dedicated role in participatory community action. Good luck with all of it.
Welthy and I are in the process of selling our Vermont house, so our future is also full of uncertain “opportunities”. For the time being, while public transportation is not a safe option, we’re reluctant to leave Panama.
Please keep in touch. We NEED to hear from you! After all, we’re “family”, right? I would especially like to hear about what your life is like as a geology student, especially in lab or Field Camp, your concerns about the future, and how your life has changed since COVID arrived.

JOHN TINKER, Professor Emeritus tinkerjr@triwest.net
Hello to my former students and to students post my retirement. I hope all of you had a good past year and are looking forward to the coming year.

When your former students retire, you know your time and geologic time are moving forward.
John Tinker, Professor Emeritus
CONGRATS, GRADS!

PARKER ALSTEENS  EMILY FINGER  JESSICA STAMP
NATALIE BROCK  MADELYNN GORG  MICHAEL SWARTCHICK
MAKAYLA CHANDLER  CONNOR JUSTICE  DANIEL WEBER
MASON DAVIS  SALVATORE KASS  KALEIGH WILLGER

December 2019 Geology graduates, Elliot Draxler and Connor Justice, with Sarah Vitale.

RECENT GEOLOGY GRADUATES
Fall 2019, Spring & Summer 2020 (unofficial list)

CONGRATULATIONS, CLASS OF 2019-20!
Please stay in touch! Make sure we have your email address.
Veronica Aranda ‘18. Veronica is working as an Engineer Wastewater Scientist at SEH in Chippewa Falls. Veronica reports, “I joined the Chippewa Falls office in April 2020. Because April was in the middle of the pandemic, I have been working from home with occasional site visits. I have only met my supervisor and manager in person. Adjustments have been different, but they are good at working with me virtually and making sure I understand everything!”

Alexander Arendt ‘16. Alexander is a data specialist at Roadview in Fitchburg, WI.

Brandon Barber ‘07. Brandon is a physical therapist at The Richland Hospital, Inc. in North Freedom, WI.

Karl Beaster ‘01. Karl writes, “Sarah and I are still enjoying living in Duluth in the same 1912 house we bought in 2003, just two years after I left UWEC. Time moves quickly when one is busy fixing up an old house, raising 3 girls (Emelyn 15, Grace 15 and Camilla 12), trying to be a good spouse (depends on the day...), and holding down a job to pay some bills. Still working on remediation and groundwater monitoring projects with Enbridge. I feel good doing something that I was educated to do by a great bunch of folks in the UWEC Geology Dept.—Tinker, Havholm, Hooper, Syverson and Mahoney to name a few! Forever grateful for your guidance and education. It truly shaped my life. Two of my daughters made it to the state science fair this year, and Emelyn, a freshman at Duluth East High School, received an opportunity to attend the International Science & Engineering Fair in Anaheim, CA, for her studies of the phytoaccumulation of iron in Brassica juncea (brown mustard). Proud parent moment.”

Kris Benusa ’06. Kris is a Senior Scientist/Project Manager at Twin Metals Minnesota, LLC in St. Paul, MN.

Melissa Boerst ‘12. Melissa is working for MDA in Reno. She is mapping a large hydrothermal gold deposit and digitizing all historical mining and geology maps from the Comstock mine.


Nicole Butkus ‘11. Nicole writes, “Currently, my Geologist position at GSG Consultants involves working with the Geotechnical and Environmental departments on construction and environmental projects. In addition, I’m currently working to make the Schaumburg office’s laboratory fully functional with accreditation-level quality.”

Sandra Chamberlain ‘68. Sandra writes, “We are on shutdown and working remotely. As I work in the “Virtual Campus” of Monroe Community College in NY, we were considered essential for about 2 1/2 weeks. We already had 350 classes online and about 40 hybrid classes. Now everything is online, and it has been challenging. The team has been outstanding to work with and I am learning all sorts of stuff. Students seem to be getting the big picture and I transition them to the resources they need to successfully finish the semester—Zoom, Voice Thread, Ensemble, etc. have become their best friends.”

Doug Cieslak ‘93. Doug reports, “Spring 2019, my family was on a heritage tour of southern China with my 14-year-old Chinese daughter, and now we are on quarantine. What a difference a year makes. I have had the good fortune to work as a hydrogeologist and conservationist. I currently work in the WDNR as a Hydrogeologist and privately as environmental consultant of my own business, Land Legacy Environmental, outside the State of Wisconsin. In my free time, you can find me at a hockey rink cheering on my daughter or in southern California learning to surf. I am always excited to hear from other alumni, so send me a note.”

Andy Eddy ‘04. Andy writes, “I am in my 15th year working as a Project Leader for the MPCA, now managing a mix of Superfund and Closed Landfill Program sites in the Remediation Division.

Beth Fisher ’99. Beth is an Assistant Professor at Minnesota State University-Mankato. She writes, “I’m currently teaching Physical Geology (some engineering students are required to take this) and Intro to Earth and Space Systems (300-level). Next semester I will teach Physical and the university’s first offering of Intro to Soil Science.”

Rachel Fliflet ’16. Ray is a Materials Quality Engineer at Hoffman Construction Company in Black River Falls, WI. She is setting up a mobile aggregate testing lab for the company and will oversee aggregate quality for DOT projects.

Lynn Galston ‘08. Lynn reports, “I’ve been working in Houston, TX, for the Norwegian national oil company Equinor since 2014. My work has been managing data related to developing oil and gas wells and integrating that data across the business. More recently, I’ve been managing internal networks of different subject matter experts to meet the data needs of users throughout project lifecycles. I have accepted a position in Stavanger, Norway, to help manage some of these networks on a corporate level. Looking forward to moving with my husband and 2-year-old daughter once the pandemic is over!”

Anne Gauer ’08. Anne writes, “I recently moved back from Quebec where I was the technical expert on the sales side of Maptek’s business. Learning French, demonstrating software, attending conferences, and enjoying all Canada has to offer was amazing and I learned a lot. Now I am back in Colorado as a Geologist III with the Maptek’s Technical Services Team. I work with the clients who use our software to solve problems, teach, and consult.”

Alan Gustafson ‘12. Alan writes, “I have been working for Robert E. Lee & Associates in Green Bay the past three years conducting environmental site assessments and managing contaminated soil/groundwater remediation projects. My job is very similar to that of Katy Grant, Tim Molitor, Becca (Moore) Ryser, and Josh Leable, except I’m way better (and I can’t wait until they read this sentence!). I still go hunting and fishing way too much and spend much of my time studying for the Principles/Practices portion of the PG exam.”

Jeffrey Hessburg ’19. Jeffrey is a Geospatial Technician at Continental Mapping Consultants in Madison, WI.

Dave Hodek ’95. Dave writes, “Still enjoying my time up here in Duluth, MN. It’s been a change
with going from being on the road about two weeks a month to being at home all the time. My wife is a nurse (UWEC Nursing ’96) so her job has been a lot more stressful than mine lately, and frankly continues to be much more important. We are serving as amateur teachers with both kids at home. It confirms I was correct when I decided to avoid any kind of instruction profession back in college. We are trying to enjoy the time we’re spending together, taking lots of walks in nature, collecting agates from our gravel road, hiking local trails, and dusting off my guitar. We’re eagerly anticipating spring in Duluth, which should come sometime in early June and hoping that summer falls on a weekend this year.”

Matt Hostak ’89. Matt writes, “Still living in Oshkosh, and still as happy as a pig in mud. I have been “gainfully non-employed” since 2014, but my days are filled volunteering to help others. Most of my volunteer work is with Habitat for Humanity. For fun, I’m still an avid “treasure hunter”, discovering and excavating old outhouse pits. I consider myself VERY fortunate and VERY blessed in every way.”

Cameron Hughes ’12. Cameron completed her Ph.D. at UT-Knoxville and is a Geoscientist at ExxonMobil in Houston, TX.

Adam Jacobson ’03. Adam is an Environmental Program Manager at Ingersoll Rand in the La Crosse, WI, area.

Aleisha Johnson ’14. Aleisha writes, “This spring I defended my PhD in Geochemistry at Arizona State University. For the last six years I performed experiments and built weathering models to understand how the rise of oxygen in Earth’s atmosphere influenced the biogeochemical cycling of elements at Earth’s surface. The last three years of my work were funded by NASA’s graduate fellowship program because we’re learning that early Earth could be an analogue for other habitable (and inhabited) exoplanets. I’ve accepted an NSF postdoctoral fellowship to work at the University of Chicago, where I’ll further develop titanium isotopes to trace the ancient composition of Earth’s continental crust. I can’t thank the UWEC Geology Department enough for starting me on this path!”

Salvatore Kass ’20. Salvatore is an Engineering Field Technician at Intertek PSI in Waukesha, WI.

Kendra Keon ’14. Kendra is a Geologist with Arcadis in Milwaukee, WI.

Andrew Kennedy ’04. Andrew is a Technical Support Specialist at Jamf in the greater Minneapolis-St. Paul area.

Ric Kopp ’75. Ric writes, “As of this March, with $23 oil and a worldwide pandemic, the oil patch is in interesting times. Production is holding for now but time will tell as companies cut back expenses, and in some cases, personnel. I am staying busy on the contract front as companies are evaluating acreage positions, wells, and future drilling and completions. Everyone in the family is well. I am working to schedule a visit to Eau Claire when the current shutdowns allow.”

Sarah (Knutson) Kintner ’16. Sarah reports, “I’m currently a geologist with AECOM in Seattle, WA. Much of my work is local remediation projects. In April 2019, I graduated with my M.S. in environmental science from Washington State University; my thesis was on nitrogen cycling in green stormwater infrastructure. We’re loving life in the Pacific Northwest — lots of hiking and backpacking with our Great Dane, Zepto.”

Adam Krieger ’09. Adam is a Senior Account Executive at Location, Inc. in Minneapolis, MN.

Steph Larsen ’01. Steph writes, “New York is great! We live our new farm, our yak herd has settled in nicely, and the kids are awesome. Soren is the most musical baby I’ve ever met—put an instrument in front of him and he’s such a happy guy. Brigid is such a good big sister too, at 3.5 she’s so aware of herself and her surroundings.”

Tyler Mace ’00. Tyler is a senior software engineer with Tools & Automation at Argo AI in Houghton, MI.

Nathaniel McFarland ’18. Nathaniel is a GIS Technician at Peoples Economy Cooperative in Rochester, MN.

Ben Michael ’11. Ben is the Director of Customer Success at JAMF. Ben writes, “Today (6/1/20) is my 10-year anniversary with Jamf. It has been quite a journey from starting that Technical Writing internship in June 2010. I, the company, and the world have all changed so much. All in all, I am thankful for the human-first leadership, talented peers, and passionate customers & partners. I have never considered leaving Jamf, and couldn’t be more excited for the next 10!”

Audrey (Mohr) Boerner ’11. Audrey writes, “This past year has flown by as my husband Zach and I continue to learn a new skill: parenting! Our son Beau turned one and will be a geologist-in-training in no time. I continue working in our well and groundwater program at the Eau Claire City-County Health Department. I generally focus on private well permitting and environmental health issues such as emerging contaminants and land use planning. This year my role temporarily shifted to public communication as our department took on COVID-19 response activities.”

Rebecca (Moore) Ryser ’13. Rebecca writes, “I am a Hydrologist in the Voluntary Investigation Cleanup Program (VIC) at the MN PCA. My primary responsibility is technical review of environmental documents, project management of brownfield sites, and writing VIC assurance letters related to liability protection and environmental closure.”

Sean Morrison ’15. Sean is a geomorphologist at Inter-Fluve in Minneapolis, MN. He earned his M.Sc. in 2017 at the University of Waterloo, Ontario. Sean uses geologic principles to assess ancient, historic, and modern landscapes to maintain and develop functional and resilient ecosystems.

Irvin Mossberger ’94. Irvin reports, “I continue to work primarily on contaminated sediment and geotechnical (wind turbine foundations, pipeline horizontal directional drilling pre-scoping) drilling field projects from Barr Engineering’s Duluth office. Last fall I spent several months overseeing the installation of artesian pressure relief wells at the foot of two dams in lower Michigan. Also oversaw groundwater monitoring well installation at a local mine and some frac sand drilling. It’s been great working with UWEC alumni at Barr over the years. I’m big into the sport of curling and last year discovered how fun the Winnipeg Folk Fest is.”

Mark Nelson ’06. Mark is a Drill Control Geologist at Group Ten Minerals in Red Lodge, MT. Mark reports he is a Professional Geologist (registered in Idaho) and “an aspiring haul
project related to rock snot (look it up!) in North Shore streams, and 3) the continued collaboration with awesome colleagues from many formerly glaciated places! Although Grandma’s Marathon was cancelled for 2020, my running club is meeting virtually until we can run together again. My parents are keeping me busy, as I try to make sure they take isolation seriously. My dog is tired of me being at home and leaves the room when I start talking to her. I hope you are well. Look me up when you are in Duluth!”

My dog is tired of me being at home and leaves the room when I start talking to her.
Heidi Rantala, '97

David Risch ‘78. David reports, “I don’t have much to say except “Still Alive”. Sandy Rushworth and I went to Antigua in the Caribbean for some snorkeling and beach time Feb 20-29. We had a great time, though the coral reefs have not recovered from Hurricane Irma in 2017. We spent a couple days at the Houston Science Museum when we returned, and they asked us to self-quarantine until March 15. When our quarantine was up, the museum closed for a month, then extended the time of closure as things evolved to everyone staying home. Consequently, I am finally getting projects done around the house (including a will) and starting to feel retired (after almost 7 years) without the regular 2-4 days/week at the office. I'm looking forward to reading about his accomplishments in the future.”

Aaron Rowland ‘09. Aaron is an Environmental Geologist at The Foth Companies in Ely, MN.

Jim Scriver ‘79. Jim started working for Bureau of Land Management in 1989. He is currently Deputy Director of Energy and Minerals in the California Region. He plans to retire in late August.

Samantha Taylor Kaney ‘13. Samantha is a Senior Geologist at Haley & Aldrich in Phoenix, AZ.

Emmi Teige ‘09. Emmi is a challenge course manager for the Pali Institute in Running Springs, CA.

Kyle Tollefson ‘17. Kyle is finishing his master’s degree in geology at Louisiana State University with plans to pursue a PhD.

Ashley Thompson ‘18. Ashley writes, “I am a park manager for Juneau County Castle Rock Park. In the summer, my main focus is the park, and in the fall and winter I will be doing a lot of forestry work. Much environmental work comes with managing our county forests, and I am excited to see how the rest of the year goes. I am a mommy now—Emberly is 5 months old and full of naughty energy! Lastly, I am also engaged.”

Chad Underwood ‘96. Chad writes, “I visited the UWEC campus in spring 2019 when I presented at an American Society of Civil Engineers (ASCE) Wisconsin Section conference held at the “new” (new to me!) Davies Center. I was able to get together with Kent Syverson and catch up on things going on in the Department. I ran into Lori Snyder during my visit too. It was good to see both Kent and Lori. I’m writing this at the end of our kids’ Spring Break, wishing I could write about another hiking trip in the desert southwest, but unfortunately, we cancelled those plans and were homebound due to Covid-19 concerns like many others. Hoping for a more exciting geology-filled Spring Break next year!”

I’m writing this at the end of our kids’ Spring Break, wishing I could write about another hiking trip in the desert southwest.
Chad Underwood, ’96

Duabchi (Dee) Vang ‘19. Dee was a hydrogeology intern last summer with the MN PCA. Dee writes, “Thanks to my experiences at UWEC, I am currently working as a Hydrogeologist with the WDNR in a beautiful city—Eau Claire! I am excited to explore the area as a permanent resident and have big plans for the future.”

Jane Williams ‘17. Jane is a Geologist at WSP in Black River Falls, WI.
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, faculty 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, offering possible job opportunities to our students, or donating equipment or field supplies.

During the past year, 81 individuals/companies donated $41,624 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 associated with COVID-19, alumni gifts to the department’s advancement funds are becoming increasingly critical. Therefore, we have 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. Some have endowed scholarships in the name of a favorite professor.
- 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 the Foundation Office at 715/836-5630. We ask that if the UWEC Foundation Office calls you asking for a donation, please remember the Geology advancement funds! If you work for a corporation or a geology-related firm, please inquire if your company has a matching program for contributions to academic geology departments.

THANK YOU DEPARTMENT DONORS!
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