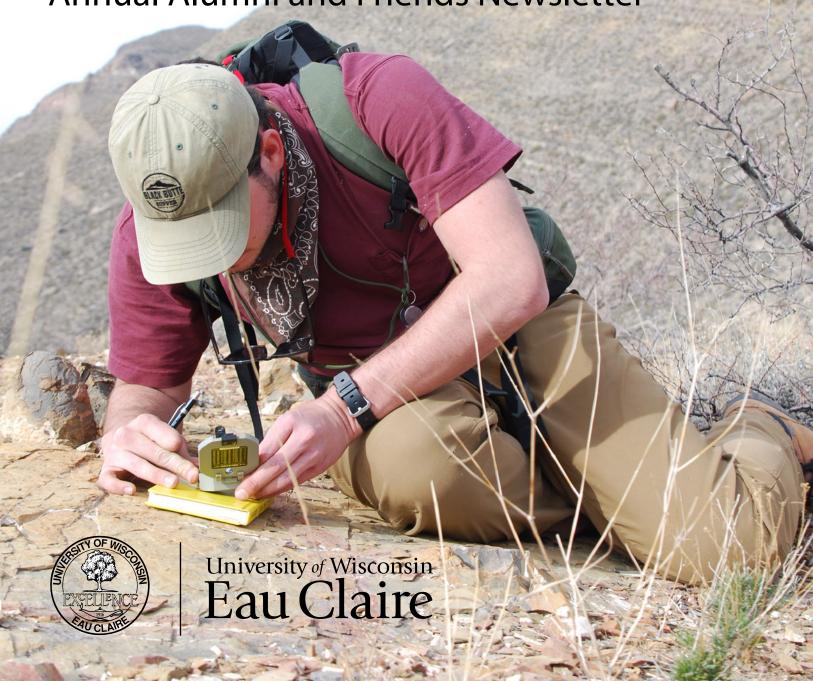


DEPARTMENT OF GEOLOGY AND ENVIRONMENTAL SCIENCE

Annual Alumni and Friends Newsletter



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Cover image: Field Camp I student measuring a strike and dip in New Mexico, Jan. 2023

LETTER FROM THE CHAIR 2023



Greetings Everyone!

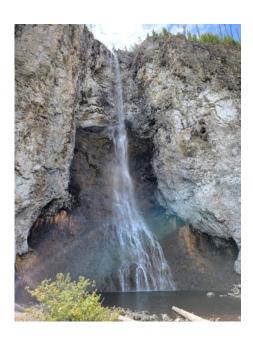
I hope this newsletter finds you in good health. It is an honor and a privilege to serve as the current Department Chair. As I reflect back on my first year as the chair, I can't help but draw parallels to when I was working in the environmental consulting field and transitioned from being a field geologist to a project manager. Of course, I had never received managerial training, so there was much on-the-job learning that took place. Becoming the chair of an academic department feels very similar to me. There's the steep learning curve, and many mistakes were made. With that said, I think I have learned a lot and I might even do a better job at this chair thing in the coming year.

Our department will be adapting to a major change this fall. After 29 years at UWEC, Brian Mahoney felt it was time for a change and submitted his retirement forms. Brian has been a force in the department since long before I arrived. He was the initiator of our current, two-part field program, and he has taught many of our required

courses. During his time here, he brought in over \$3.4 million dollars in external funding to support his research, which led to >100 peer-reviewed publications. Those publications included many UWEC student co-authors. He has given countless presentations at national and international conferences, and UWEC students have been co-authors on 65 of these presentations, including 46 in which a student was the presenting author. When we view Brian's retirement in the context of Lori's retirement last year, our department has lost nearly 55 years of institutional memory in teaching and research. We wish them both well as they move on to their next great adventure.

We were fortunate to have amazing shortterm instructional support from Drs. Iftekhar Alam, Jessica Till, and Vince Matthews. Vince stepped out of retirement to teach an engaging Earth Resources course last fall. Jessica did an amazing job recruiting students into our major in her 100-level courses in the fall, and while we wish she could have stayed longer, we are very happy for her as she accepted a Research Specialist position in Sustainable Agriculture at the Univ. of Minnesota. Iftekhar was with us the entire year, including teaching Applied Geophysics. His efforts were much appreciated as we can't offer our geophysics course very often. He also helped with field camp II in Montana. Iftekhar will start a permanent position at Ohio University in the fall. We thank each of them for their contributions and wish them all the best.

This year's annual banquet at the American Legion Hall was a fun time. We welcomed family, alumni, emeritus faculty, and friends to help us celebrate



the accomplishments of our students, including announcing summer internships, honoring our scholarship recipients, and acknowledging our graduating seniors. Our newest scholarship honors Dr. John Bergstrom (UWEC faculty from 1964 to 1982), our department's inaugural chair. Sandy Chamberlain, who was the first Geology student to graduate from UWEC, created the scholarship to support women and to honor Professor Bergstrom.

We met with our Advisory Board for the 8th consecutive year this May, and we are grateful for the valuable insights and feedback we receive from our board members. Their contributions have informed our long-term staffing plans, guided the substantial changes we made to our Environmental Science emphasis a few years back, supported and encouraged adding 'Environmental Science' to the department's name, and informed our fund-raising initiatives.

The State has approved funding for a new science and health sciences building on campus. Thus, we will have a new home as early as fall 2026. When I interviewed in the spring of 2010, Kent told me how, when he was interviewing in 1991, there was talk of a new science building. It appears that 35 years later, we will finally get that new building.

Scott Clark Professor and Chair

GEOL 312 FIELD TRIPS

By Robert Hooper

Mineralogy and Petrology I is always the first overnight field experience for majors and minors in the Department. My Fall 2022 class did the usual 3-night field trip to the Mid-Continent Rift (MCR) during the first weekend in October and two weeks later spent four nights in the Black Hills. I try to schedule these trips to take advantage of the last good field weather, and we hit almost ideal weather for both trips. The maple trees in northern Wisconsin and the Porcupine Mountains in Michigan were at peak color and the weather was mostly sunny. With relatively low water flows, we got to all outcrops below the waterfalls except for Saxon Falls, where the stream bank washed out and left a cliff about 60 feet above the outcrop with no path to the river. The highlight of the UP trip is always Lake of the Clouds in the Porcupine Mountains and the large rhyolite dome near the White Pine mine. We camped the entire three days at Beaver Lake near Mellen, WI, which is several miles from any paved roads and as close to a wilderness site as you can find in northern Wisconsin. The camping highlight for me was listening to the resident wolf pack vocalizing as I lay in the tent in the middle of the night.

The Black Hills field trip is always my favorite trip of the semester because of the great variety of rocks and minerals and the wonderful scenery of the Black Hills. We stayed at the usual campsite at Sheridan Lake, and up until COVID, we were typically the only campers in mid-October. During COVID, people rediscovered camping as a form of recreation, so this year we were surrounded by RV's running generators all night. We pulled into Sheridan Lake on Wednesday night and the temperature was a reasonable 34oF, but the wind was blowing ~25mph with higher gusts which made setting up tents a challenge. We didn't experience any rain, but it was windy all weekend. The wind made working in the camp kitchen challenging and we could not leave canopies up if we were not at the site. Several less-robust tents were destroyed by the wind, and even the locals said the persistence and severity of the winds was highly unusual. We ran into Roger Schulz (UWEC'12) who is employed by Big Rock Exploration, at the Exxon station in Hill City, SD. Roger stopped by for dinner one evening and then entertained the students around the campfire with stories from his time in the department. With partly cloudy skies, the temperatures warmed enough during the days so fieldwork was enjoyable and several campers went swimming in the evenings. Our hike to the top of Little Devils Tower, one of the highest peaks in the Black Hills, gave new meaning to windy! Students collected many mineral samples, especially garnets and staurolite in the metamorphic rocks and of course, rose quartz, beryl, and tourmaline from the pegmatites.



MinPet I students at Superior Falls on the WI (right) and MI (left) border, October 2022.

FIELD CAMP I UPDATE – NEW MEXICO

By Scott Clark

This year's field camp I went very well. Bob and I, as well as our two able teaching aides, Madeline Marchiafava and Evan Weber, taught 18 hardworking students under excellent conditions. This year marked our 25th running of Field Geology I out of the Black Range Lodge in Kingston, NM. For those who took field camp I in 1999, you may remember Brian Mahoney and Brad Burton working hard to stay one mapping day ahead of you. Since then, Brad has become the Rady Chair in Petroleum Geology at Western Colorado Univ., and as mentioned elsewhere, Brian retired this spring from UWEC. Over the past quarter century, we've had numerous instructors, and we continue to learn new things about our field areas. While a few things have changed since 1999, the core mission of our field camp has remained constant. To wit, we strive to provide a high-quality learning experience focused on collecting and recording accurate field data and using computer-aided mapping tools that students will apply across a wide range of geoscience careers.



Field Geology I students taking good field notes, January 2023. Watch where you sit...!



The Field Camp I students in New Mexico, January 2023.

FIELD CAMP II UPDATE-MONTANA

By Robert Lodge

Another field camp in stunning southwestern Montana is over and it has never looked so green here. It takes a special stretch of weather for the Montana locals to wish for the rain to stop! Nonetheless, instructors Robert Lodge and Iftekhar Alam, teaching assistant Kaine Johnson, and 13 students endured the almost daily afternoon (sometimes morning) rain showers and downpours to complete their capstone mapping experience. The second day of the stratigraphic section was definitely a soaker! The long, single-day drive proved once again to be a safer and time-saving drive and we once again visited Yellowstone National Park. This experiment is paying off and the students see spectacular

volcanic deposits, geothermal features, and hydrothermally altered rocks. Several students who took my Economic Geology recognized the different types of alteration. During our regular mapping exercises, students did an excellent job recognizing the complex structural geology of our field areas, and the camp morale was great. We also took amazing tours of the Continental Cu-Mo mine in Butte and the Lewis and Clark Caverns State Park.

Our camp would not be as enjoyable without the hospitality of Scott and Jody at the Iron Wheel. For those alumni reading this who have stayed there, you would barely recognize the place as it has been completely renovated and updated. It is a privilege to call the Iron Wheel Guest Ranch our base for field camp. Students have a clean, comfortable, and welcoming space to work on their assignments. Resident therapy dogs, Belle and Jax, kept students entertained while they were stuck inside (it rained almost every evening!). Jody prepared our final meal by smoking an impressive 30 lb rack of ribeye that had many students offering to be the TA next year so they could eat that meal again! Overall, a great time was had by all, and I am looking forward to bringing a new group to Montana next year.



"Our camp would not be as enjoyable without the hospitality of Scott and Jody at the Iron Wheel."

Field Camp II students in Yellowstone, May 2023.

8TH ANNUAL GEOLOGY/RMI ADVISORY BOARD MEETING HELD

By Kent Syverson

The 8th Annual UWEC Geology and Environmental Science/Responsible Mining Initiative Advisory Board meeting was held on May 16, 2023. We met face-to-face once again and three members Zoomed into the 4.5-hr meeting. Eleven outside stakeholders (including seven alumni) joined us from Wisconsin, Minnesota, Illinois, Colorado, and Idaho. The major discussion revolved around long-range planning for staffing and future trends in geology and environmental science. This is especially true as retirements have now become "real" in the department (Snyder, Mahoney). As always, the Advisory Board provided extremely valuable input.

We thank the professionals who attended the Advisory Board meeting. Participating in the meeting

required valuable time from our stakeholders, so we are grateful for their investment in our program. Participants included Eric Carson (Acting State Geologist, WGNHS), Mark Ciardelli (Foth, '04), Breck Johnson (Oxy, '04), Dale Kerner (Perpetua Resources, '96), Mark Kiessling (Newmont, '95), Todd Lindblad (US Silica, '13), 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).





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.

The RMI continues to have a positive impact on students. In the spring, ten students completed 24-hr MSHA new miner training with instructional support from Hoffman Construction. In addition, sixteen students (a new record) participated in the Responsible Mining Seminar where outside experts from industry and the DNR spoke about aspects of responsible resource extraction, providing expert testimony, etc. Students seeking internships in

summer 2023 had many high-quality options. We placed students in metallic mining and mineral exploration (Alaska, Arizona, and South Dakota), 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. 2023 (\$29,300), and the number of paid internships in 2012-13 (4) vs. 2022-23 (22). Approximately half of the summer 2023 internships are in hydrogeology, environmental geology, and geotechnical engineering, and the rest are in metallic and nonmetallic mining/exploration.

These successes require much relationship-building with industry. Dr. Brian Mahoney, who retired in August 2023, has been a big part of placing interns in the mining industry. In May, we held our 8th Geology and Environmental Science/Responsible Mining Initiative Advisory Board meeting. Eleven external stakeholders attended the event and we obtained valuable feedback about

our future staffing plan (see separate story). 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 department 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.



Blugold Geology alumni Mark Nelson ('06, center L) and Rory Johnson ('21, center R), working with Childs Geoscience Inc. interns Kaine Johnson '23 (L) and Lilly Glodowski '23 (R) in the Beartooth Mountains, MT, summer 2022.



Annabelle Klevann, mining intern at Teck's Red Dog mine, Alaska, summer 2023.



Justin Wuske logging rock core for his summer 2022 internship with Lost River Mining in Alaska.

TWO STUDENTS ATTEND FRAC SAND CONFERENCE IN SAN ANTONIO, TX

By Kent Syverson

Kent Syverson and two UWEC Responsible
Mining Initiative (RMI) students attended the 11th
Annual Frac Sand Supply & Logistics Conference
in San Antonio, TX, Nov. 16-18, 2022. Students
Jake Cipar (Medford, WISA Scholarship recipient)
and intern Ethan Ahlbrecht (Apple Valley, MN)
helped the meeting organizer, Mr. Pete Cook,
with meeting setup and logistics in return
for free registration and lodging at the Hyatt
Regency Hill Country Resort (a fancy place). The
students' air transportation to the meeting was
funded by generous donations to the Internship
Advancement-Geology fund (#2780). Thanks
to Pete Cook, Nick Cook, and the Petroleum
Connection for sponsoring the RMI students!



ILSG HOSTED AT UWEC IN APRIL

By Robert Lodge

Dr. Robert Lodge and co-hosts Esther Stewart and Carsyn Ames (WGNHS) hosted the 2023 Institute of Lake **Superior Geology Annual Meeting** in Eau Claire on April 23-26, 2023. Approximately 130 geoscientists from academia, industry, and government surveys gathered in Eau Claire for a twoday technical session highlighting new research happening in the Lake Superior region. Pre- and post-conference field trips showcased Precambrian geology (hosted by Lodge and Hooper), Paleozoic stratigraphy (hosted by WGNHS), and Quaternary geology/ geomorphology (hosted by Doug

Faulkner) of the Eau Claire region. Some of these locations are frequently visited by our introductory and upper-division classes, and it was interesting to have 50 geologists talking about the origin and regional importance of places like Big Falls and Little Falls.

UWEC research was strongly represented at the conference. Four students (Lilly Glodowski '23, Evan Weber '23, Kaine Johnson '23, Matt Leahy '23) all presented research (see student presentation section of newsletter). Conference attendees were impressed by the quality of their research and professionalism, and Lilly won the best undergraduate poster award. Drs. Lodge and Hooper wrote and published

two field guidebooks that are publicly available at the ILSG website. These updated guidebooks highlight new geochemical and geochronological data within the region.



ILSG field trip at our beloved Big Falls-high water along the Eau Claire River.



ILSG technical session.

BRIAN MAHONEY RETIRES AFTER 29 YEARS

By Kent Syverson

In August 2023, Dr. Brian Mahoney retired as a Professor of Geology after 29 years of service. He taught Physical Geology, Sedimentation and Stratigraphy, Earth History, and Field Camp in our program. He conducted research with many UWEC Geology majors in North and South America. He was also instrumental in the Responsible Mining Initiative and placed many of our students in paid internships. We thank Brian for his service and wish him the best in retirement!



ALUMNI AND CONTINUING STUDENTS RECEIVE AWARDS/RECOGNITIONS

Alumni and current students continue to be recognized for their achievements. This is evidence of the quality of our students, alumni, and program. We are aware of the following awards/achievements—congratulations to all!

- Dr. Terri Hogue '95 is Dean of the Earth and Society Programs at Colorado School of Mines.
- Shelby Short '22 was awarded the 2023 Robert L. Bates Memorial Scholarship from the Forum on the Geology of Industrial Minerals. At the 2023 international conference in Austin, TX, Shelby met Melissa Boerst '12 who was presenting at the meeting.
- Lilly Glodowski '23 and Evan Weber '23 have been awarded Graduate Student Fellowships from the Society of Economic Geologists. These are international awards for students starting their first year of graduate studies in the field of economic geology.
- Lilly Glodowski '23 won the Best Undergraduate Student Poster Award at the Institute of Lake Superior Geology Annual Meeting in April 2023.
- Bryanna Rayhorn '23 won an AWRA-WI Outstanding Student Presentation Award in March 2023. She was one of four students who won the award - the other three were all graduate students. As the president of the American Water Resources Association of Wisconsin told her in an email. "... and

- we don't grade undergraduates on a curve your work was judged against all other graduate and undergraduates presenting their research from all across the state."
- Annabelle Klevann x'23, was awarded a Minnesota Ground Water Association Scholarship for 2023.
- Geology major Michaela Schnell (Shawano) x'24 was awarded two prestigious university-wide scholarships from the College of Arts and Sciences for 2023-24. She received the Michael F. Fredrich Scholarship (\$2800) and the Leoba Hogan Scholarship for Scientific Research (\$1,350).

EXCELLENCE AWARDS

The department awards excellence awards for academic achievement and service to the department. The "Excellence in Geology" Award recognizes the academic achievements of the outstanding graduating geology major in coursework, faculty/student collaborative research, and potentially internships. The winners of the Geology Excellence Award for 2022-2023 are Lilly Glodowski and Evan Weber. The Excellence in Service Award recognizes the exceptional service a geology major has done for the department. Bryanna Rayhorn is recipient of the 2022-23 Geology Excellence in Service Award.

Lilly is a native of Colfax, WI, and graduated Summa Cum Laude with Departmental Honors in Geology (General Emphasis) and a French Proficiency Certificate. She participated in several research projects with Dr. Robert Lodge studying VMS deposits in Wisconsin. Lilly presented her research at SEG-Denver, ILSG-Eau Claire, NCUR, and had an internship with Childs Geoscience in Montana. She was the recipient of the David L. Risch Geology Research Scholarship. She will attend the Univ. of Manitoba with full funding to study orogenic gold deposits in Newfoundland.

Evan is a native of Holmen, WI, and he graduated Summa Cum Laude with Departmental Honors in Geology (General Emphasis) and certificates in Geospatial and Responsible Mining.

He studied Precambrian geology in western Wisconsin under the mentorship of Dr. Robert Lodge. He presented this research at SEG-Denver, ILSG (twice), and NCUR, and was coauthor of an ILSG guidebook article on the Precambrian geology of the Eau Claire River valley. He received the JRC Applied Geology Scholarship, the David L. Risch Geology Research Scholarship, the Myers/Willis Geology Field Camp Scholarship, and was part of the varsity track team for the Blugolds! Evan also had an internship with the South Dakota Geological Survey. Evan will attend the Univ. of British Columbia with full funding to study Cu-porphyry systems in British Columbia.

Bryanna is a native of Loyal, WI, and graduated Magna Cum Laude with her degree in Geology (General Emphasis). Bryanna was instrumental in making the Geology Club a vibrant group and keeping morale high in the department. In addition to her service, she conducted research with Brian Mahoney and Sarah Vitale on phosphorus in groundwater, presented this research at AWRA-WI and GSA-Denver, obtained TWO internships with Alaska Earth Sciences, and received the Myers/Willis Geology Field Camp Scholarship.

Congratulations to our Excellence award winners!



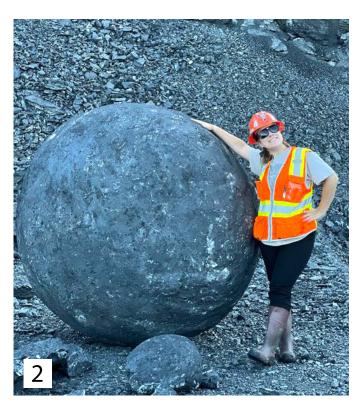
Excellence Award winners (L to R): Lilly Glodowski, Bryanna Rayhorn, and Evan Weber

SPANNING THE GLOBE!











- 1. Field Camp I moon in New Mexico, January 2023.
- 2. Annabelle Klevann, mining intern at Teck's Red Dog mine, Alaska, posing with a large concretion, summer 2023.
- 3. Economic Minerals field trip to the Duluth Complex, October 2022.
- 4. Creative Field Camp II students on a rainy day, Whitehall, MT, June 2023.
- 5. Justin Wuske doing field work in the Seward Peninsula, AK, 2023, during his internship with Alaska Earth Sciences.







- 6. Matt Leahy hard at work, Field Camp II, Montana, June 2023.
- 7. Lower Falls of the Yellowstone River on the Field Camp II adventure, Yellowstone National Park.
- 8. SUV's and trailers ready for Field Camp I trip, Jan. 2023.
- 9. MinPet I students Alaina Steinmetz and Heidi Gunderson at Lake of the Clouds, Porcupine Mountains, UP Michigan, October 2022.
- 10. Beautiful wildflower at Field Camp II, Montana.
- 11. Justin Wuske doing helicopter-supported field work in the Seward Peninsula, AK, 2023, during his internship with Alaska Earth Sciences.







SCHOLARSHIP CORNER

2023 FRESHMAN GEOLOGY SCHOLARSHIPS ANNOUNCED

Thanks to alumni and friends 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. Avery McKeown-Robbie (Naperville, IL) received the Freshman Geology Promise scholarship funded by Curt and Laura Peck. Aaron Bodger (Minnetonka, MN) and Lily McKeefry (Oshkosh) received the Blugold Freshman Geology Scholarship funded by enthusiastic **UWEC Geology and Environmental** Science alumni. We look forward to their arrival on campus this fall!

GUNDERSON WINS BECKSTROM GEOLOGY MAJOR SCHOLARSHIP

This year's recipient of the Beckstrom Geology Major Scholarship is Heidi Gunderson (Hudson, WI). This \$1000 scholarship, established in fall 2005 by alumnus Greg Beckstrom ('84), is awarded annually to a comprehensive geology major who has completed MinPet I. The awardee must have an excellent academic record and a demonstrated financial need. 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 Kevin Olds, Jr. (Eau Claire) and Rebecca Hafey (Edina, MN, water quality intern with ERIC). Recipients must demonstrate an interest in applied geology careers.

Josh Carlisle'02 established the JRC Applied Geology Scholarship. Josh and several other generous alumni donated this year to allow us to fund two scholarships. Thanks to all donors to this scholarship fund!





Rebecca Hafey

Kevin Olds, Jr.

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 2023-24 recipient of the \$2000 WISA Geology Scholarship is Lyndsie Vickers (Alva, OK). Lyndsie will be in MinPet I this fall.



Lyndsie Vickers

TWO SOPHOMORE GEOLOGY PROMISE SCHOLARSHIPS AWARDED

Curt '77 and Laura (UWEC Education '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 outstanding academic records. Recipients of the \$1000 Sophomore Geology Promise Scholarship are Samara Gries (Grafton) and Ty Sagedal (Burlington). We appreciate Curt and Laura's commitment to our Geology majors!



Ty Sagedal and Samara Gries with donor Curt Peck '77

BLUGOLD GEOLOGY ALUMNI SCHOLARSHIP AWARDED

Thanks to the alumni who have funded a merit-based, annual scholarship for Geology majors in our program. This year a \$750 Blugold Geology Alumni Scholarship was awarded to sophomore Meg Walker (Lancaster, WI). This scholarship is funded by generous donations to the Geology Advancement Fund.



Meg Walker

TWO DAVID L. RISCH GEOLOGY RESEARCH SCHOLARSHIPS AWARDED

David Risch '78 of Katy, Texas, endowed a scholarship for student researchers in the department. Scholarship recipients must be comprehensive geology majors with outstanding academic records, have an established Geology/Env. Science research track record, and plan to continue their engagement in research at UWEC the coming academic year. Recipients of the \$1100 Risch Scholarship are Claire Schoenemann (Lodi) and Michaela Schnell (Shawano).

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 his generosity in endowing these scholarships!





Michaela Schnell

Claire Schoenemann

TWO H2O WELL DRILLING & PUMP SERVICE GEOLOGY SCHOLARSHIPS AWARDED

Nolan Rodriguez '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 Scholarships are Annabelle Klevann (Hanover, MN) and Aidan Kwiatkowski (Forest Lake, MN).

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!





Annabelle Klevann

Aidan Kwiatkowski

MYERS/WILLIS FIELD CAMP SCHOLARSHIP WINNERS

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

Justin Wuske (left, Caroline, WI) and Everett LaBudda (right, Lancaster, WI) are recipients of this year's Myers/Willis Geology Field Camp scholarships. Recipients were selected based on performance excellence at Field Camp I in New Mexico. Each student received \$500 to defray expenses for Field Camp II in Montana. They connected with Curt Peck '77 and THE Dr. Paul Myers, major donors for the scholarships, at the spring banquet (see the photo)—it was a great moment!

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



Everett LaBudda (L) and Justin Wuske (R) with donors Curt Peck '77 and the scholarship's namesake, Dr. Paul Myers.

SAGEDAL RECEIVES GEOLOGY OPPORTUNITY SCHOLARSHIP

The Geology Opportunity Scholarship, donated by an anonymous friend of the department, is currently the only four-year renewable scholarship in the program. Last year's recipient, Ty Sagedal (Burlington), had a strong first year at UWEC and the \$1000 scholarship has been renewed for a second year. Ty plays varsity baseball for the Blugolds and will be in MinPet I this fall.



Ty Sagedal

DR. JOHN R. BERGSTROM SCHOLARSHIP AWARDED FOR THE FIRST TIME!

Dr. John Bergstrom was one of the earliest faculty members to help establish the Dept. of Geology independent of the Geography Dept. He was an inspiration to many of our first students, and one of those former students, Sandy Chamberlain '68, has established the Dr. John R. Bergstrom Scholarship in his honor. Sandy flew in from New York to attend the spring banquet and award the first \$500 Bergstrom Scholarship to Bri Hilton (Galesville). The scholarship recipient must be a Geology and Environmental Science major with financial need, junior or senior standing, and the guidelines express a preference for female student.

We thank Sandy Chamberlain for donating the funds to establish this scholarship! We are actively seeking to raise the balance in the account so we can increase the amount of the scholarship. If you wish to give a donation to honor Dr. Bergstrom or to support the scholarship's mission, a gift can be made to the Dr. John R. Bergstrom Scholarship fund (#2475).



Bri Hilton with founding donor, Sandy Chamberlain '68

2023 GEOLOGY BANQUET

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 ~100 students, family members, alumni, and faculty assembled on May 13, 2023.

















Paul Myers and his wife Welthy came to Eau Claire for the Dept. of Geology and Environmental Science spring banquet on May 13, 2023! Prior to the banquet, a reunion was held for Paul and some of his former students. A great time was had by all! Clockwise starting from the left: Professor Emeritus Paul Myers, Ric Kopp '75, Jacqueline Kopp, Curt Peck '77, Professor Kent Syverson, Mark Jirsa '76, Katie Schleicher (a current Blugold), Don Schleicher '85, Sandy Chamberlain '68, and Polly Wong. Paul is doing well and still leading geology field trips in Panama. Some alumni commented that Paul's memory of events is better than theirs!

NCUR - SPRING 2023

This year CERCA was not held. Rather, the UWEC campus hosted 3,600 college students and faculty members for the National Conference on Undergraduate Research (NCUR) on April 12-15, 2023 (see photo, below right). Many of our students presented at the conference and interacted/networked with people from across the country (and world). All students noted below presented posters this year. We are very proud of our students!

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

Lilly Glodowski with Robert Lodge, Characterizing volcanic host stratigraphy and syn-volcanic intrusions at the Lynne, Zn-Pb-Cu deposit, Oneida Co., Wisconsin. Also presented at SEG, Denver, August 27-30, 2022, and the ILSG meeting in Eau Claire, April 24-25, 2023. Winner of Best Undergraduate Poster Award

at ILSG.

Kaine Johnson with Robert Lodge,

Hydrothermal alteration facies of the Eisenbrey Zn-Cu Deposit, Rusk County, Wisconsin. Also presented at the ILSG meeting in Eau Claire, April 24-25, 2023.

Matt Leahy with Robert Lodge,

Petrology and geochemistry of the Paleoproterozoic Eau Claire Volcanic Complex, Eau Claire, WI. Also presented at the ILSG meeting in Eau Claire, April 24-25, 2023.

Madeline Marchiafava with Sarah Vitale and Brian Mahoney, A

comparison of geologic influence on phosphorus loading through lacustrine groundwater discharge in three lakes in western Wisconsin. Also presented at GSA-Denver, October 9-12, 2022, and at Research in the Rotunda, Madison, March 8, 2023 (see photo, below left).

Bryanna Rayhorn and Annabelle Klevann with Sarah Vitale and

Brian Mahoney, Lake Eutrophication: Natural vs Anthropogenic Phosphorus? Also presented at GSA-Denver, October 9-12, 2022; the Wisconsin Phosphorus Conference, Madison, Feb. 7, 2023; and the Wisconsin Section American Water Resources Association meeting, Wisconsin Dells, March 16-17, 2023 (winner of the AWRA-WI Outstanding Student Presentation Award).

Michaela Schnell with Phil Ihinger,

The LMI-Granite Connection? Testing the Sequential Extraction Model for Magma Chamber Evolution.

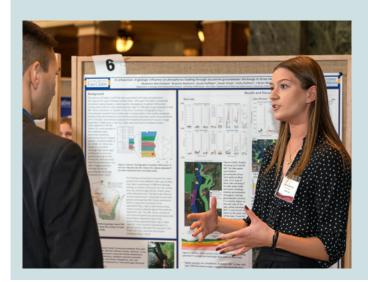
Evan Weber with Robert Lodge,

U/Pb geochronology and zircon petrochronology of Paleoproterozoic magmas from the Marshfield terrane, Penokean Orogen, Wisconsin. Also presented at SEG, Denver, August 27-30, 2022, and the ILSG meeting in Eau Claire, April 24-25, 2023.

Jackson White and Kenzie Sedlacek with Kent Syverson, Geology of the Proposed Dreamer Segment of the Ice Age National Scenic Trail, Rusk County, Wisconsin. Also presented at UWEC-Barron County's Thursdays at the U in Rice Lake, April 6, 2023.

Ben Young with Scott Clark,

Campuswide Sustainability: Designing an Early Intervention Training Module to Cultivate a Sustainably Minded Culture.





INTERNSHIP CORNER

One goal of the Responsible Mining Initiative is to provide practical work experience for our undergraduate students through paid internships. Our efforts to enhance internship opportunities have been a resounding success. Two students continued their summer 2022 internships part time into the academic year. During the past academic year and this summer, 22 students have had/will have paid internships with metallic and non-metallic mining companies, environmental consulting firms, and governmental agencies and earn ~\$252,000 in wages. This large number of paid internships is highly unusual for an undergraduate geology program.



BRONCO CREEK EXPLORATION Tucson, AZ Adam Vanderkin |



Mineral Exploration intern



Black Hills, SD Lucas Robarge Mineral Exploration intern



EAU CLAIRE CITY/COUNTY HEALTH DEPT Eau Claire, WI Michaela Schnell





Eau Claire, WI Nicole Cochems | **Utilities intern**



INTERTEK PSI Chippewa Falls, WI Bri Hilton | Geotechnical Intern





Environmental intern









INTERTEK PSI Eagan, MN Heidi Gunderson Geotechnical Intern



Waukesha, WI Cate Blair | **Environmental intern**



Rice Lake, WI Ben Young Environmental intern



FRESHWATER Madison, WI Logan Sances Geochemistry intern











Alaska Kaine Johnson



ALASKA EARTH

SCIENCES



Alaska Justin Wuske | Mineral Exploration Intern



ALASKA EARTH SCIENCES Alaska Bryanna Rayhorn | Mineral Exploration Intern



ALASKA EARTH SCIENCES Alaska Daniel Shakked Mineral Exploration Intern







Alaska Rachel Foldy | Mineral Exploration Intern



ALASKA EARTH

SCIENCES

American Engineering Testing (AET) Rochester, MN Abby Norstad |



American Engineering Testing (AET) Chippewa Falls, WI Kenny Walter |



Oshkosh, WI Rebecca Hafey **Environmental Intern**











AMI SILICA Hixton, WI Claire Schoenemann | Nonmetallic mining intern



AMI SILICA Hixton, WI Alaina Steinmetz | Nonmetallic mining intern



TECK Red Dog Mine, AK Annabelle Klevann Metallic Mining Intern



Eagle River, WI

CLEAN BOATS, CLEAN WATERS







CONGRATS, GRADS!



Spring 2023 Geology and Environmental Science Dept. graduates, 5/20/23

RECENT GEOLOGY GRADUATES

Fall 2022, Spring & Summer 2023 (unofficial list)

ETHAN AHLBRECHT	LINDSEY HENRICKS	BRYANNA RAYHORN
STEPHANIE BISER	KAINE JOHNSON	RENNER STUBBE
ANGELINA CURCIO	EVERETT LABUDDA	KALVIN WATT
LILLY GLODOWSKI	MATTHEW LEAHY	EVAN WEBER
CAROLYN GURSKE	MADELINE MARCHIAFAVA	BENJAMIN YOUNG
NOAH HALL	ABBY MURPHY	

CONGRATULATIONS, CLASS OF 2022-23!

Please stay in touch! Make sure we have your email address.

FACULTY AND STAFF NEWS

SCOTT CLARK, Professor

clarksco@uwec.edu

For those who have worked on the waste audits and waste behavior studies as we strived to find a way to successfully encourage students to improve their waste-disposal habits, this year marks a milestone. Ben Young worked with Lily Strehlow, Henry Scamehorn, and me to create a sustainability training module for incoming students. The module relied heavily on data we have been collecting and analyzing over the past eight years. Deployment of this training module is supported by university administration, and it has the potential to make a significant impact. It will be offered as an optional training to incoming students this coming fall, and we are hopeful it will become required training starting in fall 2024. I look forward to assessing the impact of this intervention over the coming years.

On the home front. This was my family's thirteenth year here in Eau Claire. Our daughter Patricia started kindergarten the year we moved here, and she graduated from Memorial High School this May. This fall she is off to UW-Madison. We'll miss her, but are excited for her as she moves onto her college years. Wishing you all a healthy and rewarding year.

ROBERT HOOPER, Professor

hooperrl@uwec.edu

Greetings, Geology and Environmental Science friends and alumni. This past year was my 40th year at UWEC! This has been a quiet year in Eau Claire for me. I taught Min/Pet I in the fall, and because Phil Ihinger was on sabbatical, I also taught Min Pet II in the spring and had a great class. I really enjoy helping teach the Field Geology I (Geol 470) course in New Mexico with Scott Clark, especially because it gets me back to the mountains (and out of Eau Claire) in January. I had a couple of students doing research on local projects along the Eau Claire and Chippewa rivers, and some research results were included in field trips for the Institute of Lake Superior Geology meeting held in Eau Claire this spring.

During my summers, I have been restoring

a Catalina 22-foot sailboat, and it is just about ready to hit the water to see if it will float. I have learned a lot about fiberglass repair and the maintenance of the teak components. I also updated the entire electrical system with LED lighting and remounted and upgraded all the deck hardware. The only travel we have been doing is to visit grandchildren in New Jersey, but we will travel more in the coming years. Stop in for a visit if you are in Eau Claire.

PHILLIP IHINGER, Professor

ihinger@uwec.edu

I was gifted a glorious sabbatical for the 2022-2023 academic year, and it has been a most invigorating time for scholarship. I've wrapped up some old projects and begun a few new ones. I've spent much of my time studying the remarkable properties of defect-free crystals, and the secrets they hold for understanding the inner workings of nature. If all goes according to plan, you will be hearing about this work soon. Meanwhile, my students Michaela Schnell, Jake Huffaker, and Kalie Ress presented our collaborative work on the origin of granite in layered mafic intrusions at NCUR in Eau Claire in April. Michaela, our university's nominee this year for the prestigious Goldwater Scholarship, enjoyed presenting at the conference, and she is excited to apply to geology graduate programs this fall. She will be travelling to the University of Illinois at the end of this summer to conduct radiogenic isotopic measurements on the rocks of the Mineral Lake Intrusive complex to further our understanding of its magmatic evolution. She will be joined by Jake, who is now in his second year in the graduate program at UIUC. I was fortunate to visit with him in Urbana-Champaign last month, when I presented a colloquium talk on the evolution of the Skaergaard Intrusion as part of their seminar series.

All is well on the home front, with Evie's high school graduation commanding much of the oxygen in our household. Evie will be attending the Univ. of MN in the fall and is eager to start the next phase of her life. Tricia and I share mixed emotions as we prepare for the 'empty nest'-- we

will miss having Evie's energy in our home. Tricia was also awarded a sabbatical this past year, and she presented two papers at conferences in the U.K. and conducted archival research in France for a book project focusing on civil society and democracy during the French Third Republic. This past year has been a special opportunity to share our research with one another while committing our ideas to writing. And although I am looking forward to getting back into the classroom in September, I am relishing the chance to continue my research and writing for the rest of this summer. Take care!

ROBERT LODGE, Associate Professor

lodgerw@uwec.edu

This year has been eventful for many reasons. Before the academic year even started, I was in Denver at the Society of Economic Geologists (SEG) Annual Meeting; it was inspiring to watch our discipline twist into greener directions that require new and challenging metals. My commitments with Metal Earth wrapped up with a successful graduate thesis defense at Laurentian University. Closer to home, Eau Claire hosted 3600 people for NCUR. In addition, I hosted the 69th Annual Meeting of the Institute of Lake Superior Geology (ILSG) in Eau Claire and took buses full of geoscience professionals from the US and Canada to see Precambrian bedrock in the Chippewa and Eau Claire river valleys. If you want to read about these areas many of you have visited numerous times, please read our published field trip guidebooks (see below). Despite these transformative events, a shadow has been lurking in the background as our department prepares to forge onward without Dr. Brian Mahoney. Thanks for all you have done for us over the years, and enjoy your retirement! Now we need to hire a replacement to teach those essential courses within our program.

My research program shifted to more local areas because of the new geochronologic data we obtained last year and to prepare for the ILSG field trips. It was a productive year, but all of my students are graduating this year. Two of my long-term students, Lilly Glodowski ('23) and

Evan Weber ('23), culminated three years of research with preparing manuscripts and fieldtrip guidebooks. They both received prestigious Graduate Student Fellowship Scholarships from the SEG for their upcoming graduate studies. Well done! Lilly continued to define the petrochemical associations of the volcanic and intrusive rocks at the of the Lynne Zn-Pb-Cu deposit. Evan and Matt Leahy ('23) spent time kayaking the Eau Claire River near Augusta to complete a geochemical, petrographic, and zircon petrochronologic (U/Pb, Lu-Hf, and trace elements) study of the Eau Claire Volcanic Complex (including Big Falls) that is changing the way we look at the tectonic assembly of North America during the Paleoproterozoic. Finally, Kaine Johnson ('23) completed a project characterizing the hydrothermal alteration at the Eisenbrey Cu-Zn deposit. These students all presented at the NCUR and ILSG meetings, and Lilly won the Best **Undergraduate Student Poster Award** at ILSG. Congrats to these exceptional graduating BluGolds!

Teaching my upper- and lower-division courses continues to be rewarding. I taught Economic Geology in a nonpandemic setting for the first time since 2019 but was inspired by all the things I learned at the SEG meeting in Denver. We did a field trip of the Duluth Complex hosted by Big Rock Exploration and toured the Eagle Ni-Cu Mine in Michigan. My Structural Geology class got the record for the warmest weather on our Baraboo field trip. We also returned to northern Minnesota to see ductile deformation in the Superior Province. Our geology students learned much on those trips and maybe, just maybe, some of them are more interested in Archean geology! For the first time, I taught our National Parks class and I learned many things! Now I have a whole bunch of places I need to visit. My Physical Geology class was full of great students who were engaged during our labs and local field trips. Hopefully, I will see some of them again in our upperdivision classes.

On a personal note, the Lodge family has aged enough to start experimenting with camping and road trips. Small camping trips to Wazee Lake near Black River Falls appear to be a core memory for the kids as they haven't stopped talking about it and

keep asking when we are doing it again. We also braved a 15-hour drive to Rocky Mountain National Park. All 5 kids crushed a 4-mile hike at 10,000' to see Emerald Lake! They are all growing up so quickly. Hillary will be starting her final year of elementary school next fall. Claudia and Meredith are marching along and proving to be smart, motivated, and caring little girls. Bruce is pumped up to go to school next year. James is old enough now to be one of the 'crew' and loves playing with his older siblings. My amazing better-half, Cassie, is making it all possible and is the engine that keeps our family going. We are living the dream!

Lodge, RWD, Zens, ZA, Jacobson, RE, Leybourne, M. (in press). Geology and lithogeochemistry of the Paleoproterozoic Flambeau Cu-Zn-Au volcanogenic massive sulfide deposit, Wisconsin, USA. Economic Geology.

Ma, C, Marsh, JH, Lodge, RWD, Sherlock, R (2023). Crustal growth/reworking and the stabilization of the Superior craton: Insights from a Neoarchean gneiss complex of the Winnipeg River terrane. Geological Society of America Bulletin, v. 135, p. 643-662.

Mathieu, L, Mole, D, Toth, Z, Rubingh, K, Haugaard, R, White, S, Ma, C, Frieman, B. Lodge, RWD, Sherlock, R, Lafrance, B. (2023). The Neoarchean, a turning point for geodynamic and magmatic processes within the Superior craton? In Whitmeyer, SJ, Williams, ML, Kellett, DA, Tikoff, B. (eds). Laurentia, Turning Points in the Evolution of a Continent. Geological Society of America, Memoirs. v. 220, p. 43-54.

Lodge, RWD, Hooper, RL (2023). Precambrian geology of the Chippewa River Valley: A transect through the western Marshfield Terrane. in Lodge, RWD (Ed.), Institute on Lake Superior Geology Proceedings, 69th Annual Meeting, Eau Claire, Wisconsin, Part 2 – Field Trip Guidebooks. v. 69, part 2, p. 1-26.

Lodge, RWD, Weber, EM, Hooper, RL (2023), Precambrian Geology of the Eau Claire River Valley: Re-discovering the Eau Claire Volcanic Complex. in Lodge, RWD (Ed.), Institute on Lake Superior Geology Proceedings, 69th Annual Meeting, Eau Claire, Wisconsin, Part 2 – Field Trip Guidebooks. v. 69, part 2, p. 47-70.

LORILIE STEINKE, Academic Department Associate

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Greetings. Another busy year has passed, and it is difficult to believe I have now been at UWEC for 33 years! I enjoy working with our students and staying connected with the alumni. It is always fun to get an update on Facebook or email from all of you, so please keep sending messages. I help my 94-year-old father with maintaining his home and making meals for him so he can still live at his home, which has given me new challenges in time management and cooking skills. My granddaughters are now 7 and 2 years old, and they and keep me entertained and happy on a daily basis. Life is good!

KENT SYVERSON, Professor

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I hope you are doing well. I have now completed my 31st year in the department. I taught Oceanography and the Responsible Mining Seminar during the academic year and enjoyed my interactions with students. For new challenges, I agreed to serve as Interim Chair of the Dept. of Chemistry and Biochemistry during the 2022-23 academic year.

The year was hectic. As always, I enjoyed quizzing Oceanography students about course content during my office hours. My office had many visits from Chemistry students and faculty as well in my role as interim chair. I also built complicated Chemistry course schedules, initiated a new crowdfunding campaign to raise money for first-year Chemistry scholarships, and helped the department recruit its next incoming class from high schools around the Midwest. My fundraising activities with the UWEC Foundation were adversely impacted by my chair duties, but alumni continue to be very generous to STEM programs and to the Dept. of Geology and Environmental Science. In addition, two students and I attended the Petroleum Connection frac sand conference in San Antonio, TX, in Nov. 2022.

I continue to work with a team of glacial geologists to create a 1:500,000-scale surficial geology map for the State of

FACULTY AND STAFF NEWS (continued)

Wisconsin. The reviewer's proof copy is gorgeous, and the map has come back from the peer reviewers – should be published in 2023. Jackson White (x'24) and Kenzie Sedlacek (x'24) spent the academic year studying a new Ice Age Trail segment in the Blue Hills and creating interpretive materials for the Ice Age Trail Alliance. They presented this research at NCUR and at a well attended seminar at UWEC-Barron County in Rice Lake. Kristen Gunderson ('95, and one of my first research students), surprised me by attending the talk in Rice Lake where she was visiting her parents! In addition, I have given my Adventures in Glacier Bay talk several times on my "intense" book tour always a fun time!

Life at home is going well. Lila and I continue to read books out loud to each other, and each evening we ride our bikes for five miles. I purchased a new Hase Trigo recumbent e-bike to help me bike around town and in the country. My family grew as we had two weddings in eight months!

Please visit us on campus!

SARAH VITALE, Associate Professor

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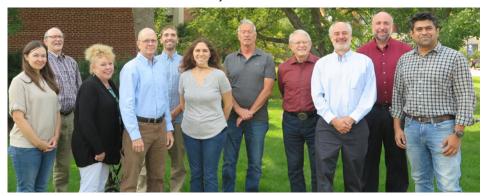
I think this was my busiest year yet at UWEC. I taught introductory Environmental Geology and Hydrogeology I courses as usual. With Phil on his sabbatical, I also had the opportunity to teach Global Environmental Change for the first time, as well as our new(ish) Seminar course for our new Geology & Environmental Science majors in MinPet I. This seminar course helps students navigate the department and introduces them to opportunities with research, internships, and careers in geology. It's always fun to meet a new cohort of students and watch them succeed as they

continue through their undergraduate experiences (and beyond!).

This past year I received ARPA grant funding to measure water quality in private wells in Eau Claire County (with co-PI Laura Suppes of the Public Health and Environmental Studies Dept.). The project provides free water quality testing to homeowners who qualify and helps the Eau Claire City-County Health Dept. expand their database. We're particularly interested in the impact of rapidly expanding high-density housing developments outside the city boundary. Several undergraduate students are working on this project. We also received grant funds through the Freshwater Collaborative of Wisconsin to run freshwater science field programs for high school and university students in collaboration with other UW campuses.

I attended a few conferences this year with student researchers, including the Annual Geological Society of America meeting in Denver, a Phosphorus Conference hosted by UW-Milwaukee's School of Freshwater Sciences, and Research in the Rotunda in Madison. UWEC hosted the National Conference on Undergraduate Research this spring. One of the sessions was hosted by the Freshwater Collaborative of Wisconsin and featured a career panel with many of our Geology alumni, including Tina Pint ('99), Brian Hennings ('99), Kris Benusa ('12), and Maddie Palubicki ('22). A big thanks to you all!

Last but not least, I'm excited to share that the UW System Board of Regents has approved my promotion to Associate Professor and granted me tenure. I'm grateful to have such supportive colleagues and wonderful students who have helped me navigate these past six years at UWEC, and I'm looking forward to future adventures!



EMERITI FACULTY NEWS

KAREN HAVHOLM, Assistant Vice Chancellor of Research, Emerita

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Greetings! This has been another busy travel year. We finally (delayed by COVID) visited Sydney, Australia, to see my sister, nephews and their families. In November the weather was beautiful there. (She claims the weather is ALWAYS beautiful there.) Then we toured New Zealand – a bucket-list item. New Zealand was a place where you almost feel the plates moving and jostling each other when looking at the landscape: rising mountains, actively building alluvial plains, volcanoes. We had a great visit, foolishly trying to see it all in two weeks. Driving on the left always adds some excitement.

March took us to "good winter" and the Snow King Festival in Yellowknife. The northern lights were amazing. Merilie and Tyler continue to thrive – Merilie crams her field work into the short summer, and it is all done via float plane or helicopter. She enjoys collaborating with geologists from across Canada who are doing minerals research in the Northwest Territories, and last summer one of her colleagues was Tara Lemke'22, a graduate student at the Univ. of Manitoba.

Finally, we spent much of June in Cyprus, where I attended my 50th high school reunion (The English School, class of '73). We had a leisurely vacation enjoying the Mediterranean Sea, the archaeology, the delicious food, and time reconnecting with old friends. We also spent some time in the Troodos mountains where the UNESCO GeoPark highlights the Troodos ophiolite. It was a thrill to touch the mantle rock exposed there. Glenn was less excited about that than I was. A few days in London visiting friends, theatre and museums rounded off the trip.

We capped off June with a family reunion in Boulder, CO, where I explained the spectacular flatirons to family. We have no other trips outside Wisconsin planned for the foreseeable future; perhaps I'll see some of you on a campus visit this coming year.

FACULTY IN FALL 2022

EMERITI FACULTY NEWS (continued)

J. BRIAN MAHONEY, Professor Emeritus

mahonej@uwec.edu

It is amazing how time flies. Twenty-nine years and it seems like yesterday. However, it is time to hang it up and see what tomorrow brings. I never contemplated retirement, but now it is here, and that is a good thing. It has been quite a ride, to say the least. The years have been filled with successes and failures, trials and tribulations, elation, and exasperation, but, mostly, laughter and joy.

One way of measuring an academic career is by the metrics: PUBLICATIONS: 44
Journal publications (1987-2022), 68 Peer-Reviewed publications (1986-2022), 140
Professional abstracts (1986-2022), 135
University Student/Faculty Collaborative Research Symposium abstracts (1995-2022). GRANTS: Total extramural funding (NSF, USGS, UW System, GeoscienceBC, Geological Survey of Canada, British Columbia Geological Survey, Freshwater Collaborative of Wisconsin (1995-2022): \$3,543,045

But numbers tell only a part of the story. It has been my privilege to conduct research on four continents. It has been my pleasure to lead field trips to locales in North America, Central America, South America, and the Caribbean. A highpoint of my career has been teaching field camp to legions of students for more than twenty years. Over the years, I have enjoyed my interaction and collaboration with my fellow faculty and staff in the Department and across the University. However, the highlight of my career has been the students. Students have driven the constant quest for external funding, the development of research projects near and far, the push for publications, the never-ending organization of laboratory exercises and field trips, and, yes, even the endless grading of those damn essays and term papers. I frequently asked myself how many more term papers on deltas I could handle, or how many new and inventive takes on the origin and evolution of the universe I could possibly take. I thank my lucky stars I have retired before ChatGPT takes over the educational system.

Retirement leads to a contemplation of one's legacy. What is meaningful and enduring? My legacy lies in the success of my former students. I am immensely proud that my former research students are found at all levels of industry, government, and academia across the US and globally. The Department of Geology has developed an excellent reputation as an academically rigorous, field-based program, and our students are in high demand. I am honored to have been a part of building that reputation and am thrilled

at the ongoing success of our graduates.

Retirement suggests perpetual relaxation and rocking chairs. Not my style. Retirement for me means moving on to a new and exciting phase of my life. Lori and I are expedition guides on Seabourn, a high-end cruise line. Our job is to provide scientific expertise and lectures on board and to take guests on hikes, zodiac cruises, wildlife viewing, and glacier excursions in Alaska and Antarctica. Our current itinerary has us in Alaska (twice), Antarctica and the southwest Pacific (Papua New Guinea, Fiji, Tahiti) over the next year, and in myriad other destinations in the coming years. The expedition gig will be interspersed with consulting contracts with Precision GeoSolutions involving greenfield exploration, leading professional field trips, and hopefully developing an advanced field school for industry. No shortage of opportunities!

It has been an honor and a privilege to work with an outstanding group of students, faculty, and staff during my time in the Department of Geology. I leave my teaching career with a great fondness for all we have accomplished. I look very forward to crossing paths with many of you as time goes by. My thanks to all for helping me during my career. All the best. Fare thee well, my friends.

PAUL E. MYERS, Professor Emeritus

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Thanks to the UWEC Geology Dept. for keeping in touch. We alumni treasure our Geo-memories. After our 7th "winter" of discovery and adventure in Boquete, Panama, Welthy and I will return to our summer home in Vermont. In Panama, Paul devotes most of his time to geological explorations of the highly interesting and unique volcanic terrane around Boquete, a city of about 25,000 situated on the flank of Volcan Baru - the tallest volcano in Panama. He shares his discoveries in field trips and classes for local expat's. His wife, Welthy, keeps everything else moving on schedule. From May to November, we will be living in Peru, Vermont, Drop in for a Green Mountain visit. I'd love to show you the local geology and scenery.

LORI SNYDER, Senior Lecturer Emerita

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Greetings, All. I hope you and your family have had a great year! My first year of 'retirement' has been amazing, and I have embarked upon some new part-time activities that have enriched my life.

One new venture is working on the

Expedition Team of a luxury cruise ship. The position entails presenting geology lectures of the region, taking the passengers on zodiac boat tours to learn about the flora, fauna, and geology of the area, and basically just socializing with, and being a scientific resource for, the passengers. It is a fun gig! I teach geology in amazing places and don't have to grade. Last fall, I spent a few months traveling from St. John's, Newfoundland, through the Caribbean and the Panama Canal, then down the west coast of South America, and finally to Antarctica. Truly a grand adventure! Others are planned.

A few years ago, I began to practice Pilates and enjoy it. This past year, I worked hard, completed courses, and recently earned my certification to teach this form of exercise! I am now teaching both private lessons and group classes at Prajna Studio in Eau Claire. We have a wonderful community, and I am enjoying the teaching experience, though it is very different from teaching geology.

I expect my new 'jobs' will continue to keep me busy. And life has new changes now that Mahoney has retired from the University. I hope the year ahead brings adventure, laughter, and happiness for you all!

JOHN TINKER, Professor Emeritus

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Hello to all present and former geology students. I miss teaching and interacting with you. I took two of my grandsons to our farm in North Dakota. Each had to listen to me talk and ask questions from the Precambrian rock of the Wisconsin Dome to the Paleocene rock of the Williston Basin of ND. I think my questions and explanations about the Pleistocene glacial deposits and the hydrogeology of the deposits nearly made them leave the truck before we got to the farm. But, I think we all had a good time.

Enjoy the coming year, work hard, stay healthy, enjoy the geology of your area, and keep smiling. I leave you with some "North Dakota Cowboy Logic: Always be yourself, because the ones that matter do not mind and the ones that mind do not matter." I send you my best regards.

Enjoy the coming year, work hard, stay healthy, enjoy the geology of your area, and keep smiling.

John Tinker, Professor Emeritus

ALUMNI NEWS

Parker Alsteens '20. Parker writes, "I am a Geologist and Licensed Drone Pilot for Mathy Construction Co. in Onalaska, WI. I have been with Mathy for three years. As a Geologist for a construction aggregate company, I have a 50/50 split between lab and field work. Duties include analyzing chemical/physical properties of rocks, investigating new and existing quarries, logging drill core, flying drones to obtain aggregate tonnage volumes within quarries, collecting samples on the drill rig, and using GIS. I couldn't be more grateful for the opportunity to be working with a company like Mathy."

Matt Bachman '21. Matt writes "I started a new Hydrogeologist position with the WDNR in the Waste and Materials Management program in August 2022. I review landfill expansion submissions and perform groundwater reviews on active and closed landfill sites. I also perform general compliance inspections and reviews across 13 counties in west-central Wisconsin."

Tanner Bakke '15. Tanner has his PG licensure in MN and is an Environmental Analyst III with Xcel Energy in the Twin Cities area.

Brandon Barber '07. Brandon has been promoted to Interim Manager of Rehabilitation Services and Physical Therapists at SSM Health in North Freedom, WI.

Kris Benusa '12. Kris is the owner of Forefront Mining Strategies, LLC. He writes, "I am focused on the mining world. Hoping to help exploration and early-stage projects plan for, and engage in, environmental review and permitting."

Jacob Boer '08. Jacob recently separated from the United States Air Force after serving six years on active duty as a Nuclear and Missile Operations Officer. He moved to Las Vegas where he is currently a full-time YouTuber making daily content about the war in Ukraine and other current events. You can check him out on his channel at "lake Broe".

Daniel Brennan '16. Dan writes, "I started a position with the Montana Bureau of Mines and Geology (MT Survey) in September 2022. I think it'll be a nice personal and professional fit for me, and I'm excited for the future. We received another sizeable STATEMAP grant for 2023, so plenty of field work this summer. I just returned from UC-Santa Barbara where we analyzed about 40 samples for U/Pb geochronology. Next month I head to Anchorage for a USGS mapping conference."

Greg Burgess '15. Greg is a Lab Geotechnician 2 at American Engineering Testing, Inc.

Makayla Chandler '20. Makayla started a new

position as a Geologist at Arcadis in Lenexa, KS.

Brian Denning '13. "I live in Woodbury, MN. I currently work as an IT project manager for Atomic Data in the Gameday department, managing IT for sports teams/large event venues across the country."

Malachi Dornfeld '22. Malachi writes, "My wife and I are moving to Boise, ID, next month. I am currently applying for geologist and hydrogeologist jobs."

Andy Eddy '04. Andy writes, "I have been at the MN Pollution Control Agency for 16 years now, and have recently become the lead PM in the Integrated Remediation Program. We oversee facilities with >1,000,000 gallon capacity, such as the airport, refineries, and pipelines."

Jacob Erickson '20. Jacob is Staff Mine Water Engineer at Global Resource Engineering (GRE) in Denver, CO.

Emily Finger '20. Emily reports, "I completed my Master's of Applied Science in Water Resources Engineering at University of Guelph, ON, Canada. I recently accepted a position with Sanborn, Head & Associates as a Project Hydrogeologist and will be working in one of their offices in New Hampshire this summer."

Mark Fiore '22. Mark writes, "I'm currently working in Rice Lake, WI, as a research scientist for American Excelsior Company's Earth Science Division, which manufactures and sells erosion- & sediment-control products."

Billy Fitzpatrick '18. Billy completed his MS at the Univ. of Arizona and then was hired as a Geoscientist with the Wisconsin Geological and Natural History Survey. Billy writes, "I started off looking at depth to bedrock in eastern WI and studying the sulfide mineralization in the St. Peter/Sinnipee. More recently, I've transitioned into bedrock mapping in southwestern Wisconsin and in the Baraboo area. I have two 1:24,000-scale maps of the areas surrounding the village of Highland in Iowa and Grant counties coming out this fall, and I'm excited about that." He attended the ILSG conference in Eau Claire.

Brian Folta '14. Brian is a Geotechnical Engineer with Barr Engineering. He is a PE in Wisconsin and Louisiana.

Scott Galetka '98. Scott writes, "September will mark 16 years in Bayfield County and 22 years in county government. It has been interesting how we use UAV's for search and rescue, searching for fugitives, crime scene data collection, tree canopy counts, non-metallic mine enforcement and invasive species detection. Just got back

from a Spring Break trip with my son (nearly 17 yrs old). We saw great geology at the Grand Canyon, Painted Desert, Petrified Forest, Meteor Crater, Arizona Museum of Natural History, and Montezuma Castle National Monument. I think my son enjoyed it more than I did."

Lindsey Henricks '23. Lindsey writes, "I've accepted a position as a Staff Geologist at Haley & Aldrich in Phoenix, AZ. I am very excited to begin my career at a company I have heard so many great things about!"

Dave Hodek '95. Dave reports, "Our oldest daughter is headed off to college this fall. It came down to UWEC and UND, but in the end she chose the frigid prairies of North Dakota for mechanical engineering. I did my best to steer her toward civil or geological engineering, but she is more interested in working on a race car than doing Atterberg limit tests or sieve analysis. I know, it's super weird, right? But she's our daughter and we love her anyway! She really did say that the Geology Department was the highlight of her UWEC tour (even though she didn't agree with me that Phillips Hall smells like science and isn't that old). So thanks again, Kent and Phil, for all the time you spent with us, you really made it a tough decision!"

Terri Hogue '95. Terri is a Professor of Hydrology and Dean of the Earth and Society Programs at Colorado School of Mines.

Andie Holm '14. Andie writes, "I am an Agricultural Marketing Specialist at the USDA's National Organic Program (NOP), part of the Agricultural Marketing Service (AMS). I've been in federal government work a little over two years, and just was promoted! At the NOP, I work in the Standards Division where I write USDA organic regulations, review technical reports on substances, manage the petition process, and work with our Federal Advisory Committee. I do all of this from the comfort of my home in Eau Claire, with occasional travel to the office in Washington DC."

Lucy Horst '18. Lucy writes, "In April 2022, I left Halliburton, the Gulf of Mexico, and oil and gas after 3.5 years. I decided to change from black gold to the real deal and accepted a Growth Geologist position with Nevada Gold Mines (JV Barrick Gold and Newmont Mining) at their Turquoise Ridge site. My primary role is to identify, drill, and develop Carlin-style mineralization targets to add to our reserve and resource ounces in the ~5 year range. Outside of work, I have adopted an adorable one-eyed great Pyrenees puppy named Monroe! This past year has made me appreciate the education I received at UWEC; it gave me the ability to apply my geology knowledge in two

vastly different lithologic and structural settings."

Jacob Huffaker '22. Jacob is a first-year master's student at the Univ. of Illinois – Urbana Champaign doing research in experimental petrology and geochemistry. His project focuses on the solubility of platinum group elements in low-temperature alkali fluids.

Alexander Hutter '16. Alex received his MS in Sedimentology from Memorial University of Newfoundland and is now a Geologist with the British Columbia Ministry of Transportation and Infrastructure.

Olivia (Iverson) Giles '12. Olivia reports, "Life and mommy-hood have been great. My two little girls are growing up so fast I can hardly believe it—one starting Kindergarten this fall and my 3-yr-old is suddenly talking so much. For work, I have been staying home caring for the girls and just completed a yoga teacher training program. I am teaching yoga a couple times a week and that has been a fun, new challenge!"

Breck Johnson '04. Breck was promoted to Rockies Net Zero Manager at Oxy. He and his family live in the Denver, CO area.

Blake Kern '22. Blake started a new position as a Field Geologist for Terracon in Plymouth, MN.

Sarah Kintner '16. Sarah is a hydrogeologist at Hydrometrics, Inc. in Helena, MT.

Samantha Kleich '20 / Elliot Draxler '19.

Samantha writes, "We completed our UW-Madison master's degrees in June and just moved to the Portland, Oregon area. We are working at a geotechnical consulting firm called Shannon & Wilson. I've been primarily working with projects related to rock mechanics, specifically an ongoing hydroelectric dam project in Washington."

Craig Koch '82. Craig writes, "I retired from teaching in 2020 and am still substituting and watching one grandson two days/week. My wife, Marie, will be retiring later this year and we will be celebrating our 39th anniversary in May. Our 5th grandchild was born in April this year. I began playing my trumpet again the year before retiring, am currently playing in three different groups (including the local UW Community Band), and have also learned to play euphonium and french horn over the past 1.5 years. Lastly, we are planning our first long trip since 2019."

Ric Kopp '75. Ric writes, "I recently retired and moved with my wife back to Wisconsin after 47 years in the oil and gas industry. We elected to return to be with family and followed our son and grandchildren who had moved here previously. I'm doing a little consulting on the side and getting reacquainted with Wisconsin

geology. Some new roadcuts and mines were not present when I was here a long time ago."

Lisa Kraft '99. Lisa writes, "I closed my small business due to Covid. No hard feelings—I am a certified Pharmacy Technician at a local hospital. I love it! Kayaking with my pup, Avie, around Madison in my free time."

Braedon Laundrie '22. Braedon writes, "I recently started a job as a GIS Technician for the Saint Mary's University of Minnesota Geospatial Services Department! I work exclusively on delineating and attributing wetlands in northern Alaska. Much of my work utilizes techniques I used in the GIS programs during Field Camp I in New Mexico. Every day I'm thankful for what I learned at UWEC!"

Bill Lazarz '98. Bill started a new position as Director of Business Development at West Central Environmental Consultants, Inc."

Lindsey Lepak '09. Lindsey is a Strategic Account Executive at SPS Commerce.

Travis Lindberg '14. Travis is a Core Logger at the Pogo Mine outside of Delta Junction, AK.

Alex Lutze '17. Alex is a geologist with American Lithium Corp. in Tonopah, NV. He is working on the exploration/development of a world-class lithium claystone deposit in Tonopah.

Madeline Marchiafava '22. Madeline writes,
"This fall I spent my time finishing up school
and working for the Recycling and Sustainability
program through Eau Claire County. In
January, I was fortunate to be asked to assist
Drs. Clark and Hooper for Field Camp I. This
summer I am moving west to Butte, MT, to
work for the Montana Dept. of Environmental
Quality's Waste Management Program."

Michele Maxson '06. Michele is a Senior Environmental Specialist with Covia. She has relocated back to Wisconsin and is overseeing Environmental Responsibilities in Illinois and Wisconsin. She is based in Tunnel City.

Chaz McCann '15. Chaz is working as an Underground Geologist at the Pogo Mine outside of Delta Junction, AK.

Audrey (Mohr) Boerner '11. Audrey writes, "This past year had a few highlights including a trip to the Pacific NW with a lava tube hike and my first visit to an active volcano, Mt. St. Helens. We also welcomed our second son, Noah. I continue working for the Eau Claire City-County Health Dept. coordinating water testing, private well permitting, and other environmental health projects. I enjoyed returning to UWEC in fall 2022 to teach the Water and Wastewater course for the Public Health and

Environmental Studies Dept. Go Blugolds!"

Jean Morrison '00. Jean reports, "I am a Research Geologist at U.S. Geological Survey in Denver. Most of my current research focuses on trace element geochemistry related to long-term impacts of legacy mine sites. This summer's field work will be in the Gunnison and Durango areas in Colorado. I had the opportunity to connect with UWEC geology students at the Annual GSA meeting in Denver (October 2022). I enjoyed getting to know them and learning how the program has evolved over the last 20+ years."

Tyson Noffke '19. Tyson is a Parks Foreman at Clearfield City, UT.

Eric Olson '13. Eric writes, "I am in my 10th year at Mathy Construction in Onalaska, WI, and working with UWEC Geology graduates Robert Servais and Parker Alsteens. We stay busy with the exploration, development, and testing of construction aggregate sources. I am now a PG in Wisconsin and Minnesota."

Maddie Palubicki '22. Maddie writes, "After graduating last May, I was recruited by fellow UWEC Geology alum and "rock friend" Ashley Zuge to join her at Tetra Tech, an international environmental consulting and engineering company. Our office is part of a group called Solid Waste East, so most of our work focuses on landfill sites across the Midwest. I am a Project Engineering Technician and have primarily been overseeing contractors working on cell constructions. Since starting my role at Tetra Tech, I have passed the Fundamentals of Geology exam and presented at a conference. It's certainly been interesting learning about the solid waste industry. There's no official garbage training, but Ashley and I have been "picking it up" as we go."

Charles Plaziak '18. Charles is a Project Professional with Adams and Wendt, Inc. in Mesa, AZ. He is responsible for coordinating teams of field and technical staff.

Aaron Rowland '09. Aaron is a Data Superintendent with Rebellion Energy Solutions in Madison, WI.

Bridget Russell '22. Bridget is a Hydrogeologist at SCS Engineers in Madison, WI.

Linnea Rustad '21. Linnea writes, "I am submitting my law school applications, so that's exciting. I am currently in Nusa Penida, Indonesia, for a research diver internship. Our current project is mapping a new dive site, so everyone is so happy to have someone who has had mapping experience. So thank you, geology! Our primary focus is on coral restoration, but we also do many fish surveys for the Indonesian government. The island I am on is known for its impressive manta

ALUMNI NEWS (continued)

and hawksbill turtle populations, so we work on identifying individuals to monitor their migration patterns. Geology is applicable in so many different areas of this internship; it's incredible."

Shelby Short '22. Shelby has completed her first year of graduate school at UT-Austin. She TAed an intro to environmental science course in the fall, which she enjoyed, but she missed the Midwestern fall!

Graydon Skok '21. Gray writes, "I am an Environmental Health Specialist at UW-Oshkosh and work in partnership with the Vilas County Public Health Dept. I manage our Water Lab, oversee our beach health program, and conduct Environmental Health Inspection throughout Vilas County."

Rachel Slonac '22. Rachel is a Field Geologist at Terracon in Cudahy, WI.

Alexandra Strand '07. Alex is a Release Manager at Fluence in the Milwaukee, WI, area.

Gillian Streeter '22. Gillian is a Stormwater Design Engineer at REI Engineering, Inc in Wausau, WI.

Briar (Striegel) Peterson '21. Briar is a GIS Solutions Specialist with MSA Professional Services in Spooner. She is enjoying her job with MSA, and appreciates how the company promotes a healthy work/life balance because she and her husband had a baby girl last year!

Alex Thompson '09. Alex is an Environmental Project Manager and Geologist at Jacobs Engineering in New Orleans, LA. Alex.

Jeremy Treague '04. Jeremy is an Enterprise Architect Leader with Schreiber Foods in Green Bay, WI.

Jake Tveite '16. Jake is an Underground Geologist at the Pogo Mine outside of Delta Junction, AK.

Betty Walter '19. Betty writes, "Things are going well in MT! I am enjoying the recreational opportunities of hiking and camping out here. I am still a geologist at Arcadis working on a handful of different environmental projects for the rail and mining sector. I plan to take the PG exam this fall!"

Danny Weber '20. Danny writes, "I have started working as a field tech for REMC, an environmental consulting firm in Salt Lake City, and have begun studying for the FG exam. I have also had my packet accepted and will be promoted to sergeant within the next few months."

Evan Weber '23. Evan will attend graduate school at the Univ. of British Columbia in the MDRU - Mineral Deposit Research Unit. He plans to study a Cu Porphyry deposit in British Columbia.

Scott Wipperfurth '14. Scott is a Senior Data Science Analyst with Grainger.

Ashley Zuge '21. Ashley writes, "I was hired at Tetra Tech as a Project Engineering Technician. I have predominantly done work with contractors on landfill gas system projects. I never thought I would be working on landfills, but it has been very interesting to learn the complexity of them. I had the opportunity in February 2022 to give a presentation to about 50 people from my division of Tetra Tech about landfill gas systems — to think a year ago I was completely clueless about landfills! I was also able to recruit my good "rock friend" Maddie Palubicki to come work with me! I highly suggest working with your friend! I passed the Fundamentals of Geology exam in March!"

In Memorium: We were saddened to learn Matt Hostak '89 passed away on 7/23/23. https:// www.legacy.com/us/obituaries/oshkoshherald/ name/matthew-hostak-obituary?id=52531669

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 that would like to sponsor the seminar series or contribute money to defray speaker costs, please contact us!

"Gondwanan Glaciations: Unraveling the Sedimentary Records of the Late Paleozoic Ice Age," presented by Dr. Libby Ives, Geology, Florence Bascom Geoscience Center, U.S. Geological Survey. 9/30/22.

"Exploration Geology at the Kensington Mine, Juneau, AK," presented by Trevor Nelson, Exploration Geologist with Coeur Alaska, UWEC Geology '21. 10/7/22.

"Through the Valleys." A documentary about a PhD student who gets his first chance to lead a research project in Mongolia and Kyrgyzstan. 10/21/22.

"Are You Interested in Going to Graduate School?" Presented by UWEC faculty in the Department of Geology & Environmental Science and the Department of Geography & Anthropology. 10/28/22.

"Transitioning from Data-Starved to Data-

Driven Decision-Making," presented by Dr. Anthony Aufdenkampe, Senior Environmental Scientist, LimnoTech. 11/18/22.

"Role of Geologists, Geographers, and Environmental Scientists in Climate Action," presented by J. Drake Hamilton, Senior Direction of Science Policy, Fresh Energy. 12/2/22.

"Using Geoscience to Search for & Locate Holocaust Mass Execution Trenches in Latvia," presented by Dr. Harry Jol and research students Mikoy Barrows and Delia Ihinger, UWEC Dept. of Geography & Anthropology, 12/9/22.

"Antarctica, Duluth Complex, Mafic Magmatic Systems, Oh My," presented by Dr. Dean Peterson, Chief Geologist, Big Rock Exploration. 2/17/23.

"Restoring Natural Systems: How Do You Plan, Monitor, and Assess Restoration of Dynamic Landscapes?" Presented by Dr. Zach Hilgendorf, Visiting Assistant Professor, UWEC Dept. of Geography & Anthropology. 2/24/23.

"Unraveling the Paleoproterozoic Evolution of Western North America through Petrographic, Geochemical, and Geochronologic Studies of the Farmington Canyon Complex, Northern Utah," presented by Dr. Liz Balgord, Associate Professor, Earth and Environmental Sciences, Weber State University (UWEC Geology '09). 3/3/23.

"Paleotectonic Reconstruction of Northwest Bengal Basin Using Petrofacies and Geophysical Studies." Presented by Dr. Iftekhar Alam, Lecturer, UWEC Geology & Environmental Sciences. 3/10/23.

"Traversing the Lithosphere: Insights from Decades of Geologic Wandering." Presented by Dr. J. Brian Mahoney, UWEC Geology & Environmental Sciences. 4/28/23.

"Debunking the Myth of Jewish Passivity in the Holocaust," presented by Paula Apsell, Chief Executive Officer at Leading Edge Productions. Senior Executive Producer Emerita. NOVA. 5/12/23.

EFFORTS TO DIVERSIFY EARTH SCIENCES WORKFORCE UNDERWAY

By Kent Syverson

Our department received a three-year, \$315,000 grant from the National Science Foundation in 2022 seeking to diversify the geology/environmental workforce (Pl's Brian Mahoney, Scott Clark, Sarah Vitale, and Kent Syverson). The program introduces select high school students from underrepresented populations to careers in the geosciences, a career path vital to solving a plethora of societal issues. With the demand for geoscientists and environmental scientists increasing, it is critical to recruit more, and therefore diverse, individuals into the field.

"The goal of this program is to create a really strong pathway and support system for students from communities who have been historically excluded from the STEM fields," says Dr. Sarah Vitale, Pl and instructor for the program. "We recognize collectively that diversity in the geosciences is critical to addressing the global issues that we face, including climate concerns, air and water pollution, and resource sustainability. We cannot solve these issues if we do not have diversity."

High school students participated in week-long experiential, field- and labbased outreach programs in summer 2022 and 2023 (6 and 8 students, respectively). Participants, who were mainly high school juniors, took field trips to Big Falls, Irvine Park, Wissota Dam (rocks and powerplant), a Covia sand mine, Cardinal Glass, Lake Altoona and the Chippewa River (water-quality sampling), and the Eau Claire wells and water treatment facilities. Students also performed hydrogeological monitoring using the UWEC well field, analyzed samples using scientific instrumentation, and learned about geoscience careers from UWEC Geology alumni (thanks to panelists Anna Baker

'09, Audrey Boerner '11, Matthew Bachman '21, Mike Chang '14, Maddie Palubicki '22, Curt Peck '77, Renee Sletten '21, and Matt Thompson '11).

Our goal is to encourage firstgeneration, women, and minority students to pursue formal geoscience training and high-paying careers in the geosciences. We hope, of course, that some of these students to enroll at UW-Eau Claire!

"Exposing high school students, specifically underrepresented students, to careers in science at a young age has profound impacts on how they see themselves in the future," says Alicia Howe, a biology and environmental science teacher at Memorial High School in Eau Claire and instructor in the GEOPAths program. "This program is a life-changing experience for these students."

We are actively recruiting prospective students (rising seniors) for our next summer outreach program (probably in June 2024). All expenses and a small stipend are paid for student participants. If you know students who would benefit from this program, or if you know high school science teachers who could guide students to us, please call this program to their attention. Thanks! With your help, we will increase the number and diversity of students in the educational pipeline, and will build upon our tradition of engaging students through experiential activities and professional opportunities. For more information about the GEOPAths program, contact Dr. Sarah Vitale at 715-836-4300 or vitalesa@uwec.edu.



GEOPAths students at Irvine Park, June 2023.

"Exposing high school students, specifically underrepresented students, to careers in science at a young age has profound impacts on how they see themselves in the future."



GEOPAths students measuring water quality in the Chippewa River, June 2023.

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, Curt ('77) and Laura ('78) Peck, and Ric Kopp ('75) pledged matching money in memory of Professor Emeritus Ronald Willis, who died in a tragic car accident in July 2015. In addition, Charlie and Sue Christopher sponsored half of Field Camp II. Alumni, friends, and companies donated \$49,400, in both large and small gifts, to Adopt a Field Camper through the Myers/Willis Geology Field Camp Scholarship fund in 2022-23! I was encouraged to see a large number of donors (71)—a healthy sign!

The impact? Funds were distributed based on financial need to 18 students in G470 and G471. All tuition expenses (\$1100) were paid for 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 \$220 in "adoption" money. In addition, two merit-based Myers/Willis Geology Field Camp Scholarships (\$500 each) were awarded.

In addition, we have created the **Field Camp Advancement-Geology & Environmental Science Fund (#2924)** to help equip the student you have adopted! This fund will pay for laptop replacement, hand-held GPS devices, and other things needed to provide a high-quality field camp experience.

If you have adopted a child, you know 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, #1633) or by sending a check to the UWEC Foundation with a subject line mentioning "Geology--Adopt a Field Camper."



Your adopted Field Camp I students working on their final project on ArcGIS, Jan. 2023.



Curt Peck '77 and Paul Myers with their adopted field campers, 5/13/23

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

Curt and Laura Peck continue to sponsor half of Field Camp I. Two thirds of their \$6000 annual donation supports need-based grants to field camp students and \$2000 of the money defrays 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 are making a huge positive difference for our students, who Curt met at the spring '23 Geology banquet.

In addition, Curt and Laura are sponsoring three \$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 '77 attended graduate school at Iowa State Univ. and worked for 36 years for Chevron in Exploration Geology, Development Geology, and 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!

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

CHARLIE AND SUE CHRISTOPHER SPONSOR HALF OF FIELD CAMP II

Charlie and Sue Christopher sponsored half of Field Camp II once again in 2023. Their \$3500 annual donation is matched 1:1 by the Alliant Energy Foundation to provide \$7000 for needbased 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!

BRECK AND ERIN JOHNSON ESTABLISH GEOLOGY RESEARCH FUND

Breck and Erin Johnson established the Breck and Erin Johnson Geology Grant (#2901) with a \$5000 donation and a \$5000 match from Oxy. Geology research students can receive up to \$1000 to support aspects of their research projects based on faculty nominations. Grants may be used to fund travel, geochemistry, thin section prep, research supplies, and travel to a meeting to present research.

Breck '04 and Erin (UWEC Communication/ Journalism '00) live with their family in the Denver, CO area. Breck is the Rockies Net Zero Manager at Oxy, and he serves on the UWEC Geology and Environmental Science Advisory Board. Thanks to Breck and Erin for their generosity!

Geology research students can receive up to \$1000 to support aspects of their research projects based on faculty nominations.



DONATIONS

HOW TO DONATE

Geology and Environmental Science 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, 96 individuals/ companies (a new record!) donated **\$89,657** to the Geology Foundation accounts. All gifts, large or small, are greatly appreciated! Please consider giving something back to your undergraduate department.

Alumni gifts to the department's advancement funds are becoming increasingly critical. **Professor Kent Syverson has been working with the UWEC**

Foundation to establish new scholarships and planned gifts. If you are interested in establishing a scholarship within the department, here are a few basic guidelines from the Foundation:

- 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.
- Annual scholarships are funded each year (a minimum commitment of \$2000/ yr for five years is required to establish an annual named scholarship fund).
- Endowed scholarships only use interest on the invested principal to fund a scholarship each year. 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). Many 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.
- **Estate gifts** can be used to establish future scholarships or support the field camp program with guidance from Kent Syverson.

If you would like more information about establishing a scholarship or planned gift, please contact Kent Syverson at 715/836-3676. If the UWEC Foundation calls you asking for a donation, please remember the Geology and Environmental Science 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 departments.

THANK YOU DEPARTMENT DONORS!

The Department thanks the generous donors listed below who have contributed to Geology and Environmental Science Department accounts with UW-Eau Claire Foundation from June 1, 2022, through May 31, 2023.

BECKSTROM GEOLOGY MAJOR SCHOLARSHIP (#1663)

Gregory Beckstrom

DR. JOHN R. BERGSTROM GEOLOGY SCHOLARSHIP (#2475)

Sandra Chamberlain Gregory and Shari Durocher Michael Mc Millan

BRECK AND ERIN JOHNSON GEOLOGY GRANT (#2901)

Breck and Erin Johnson Oxv

GEOLOGY AND ENVIRONMENTAL SCIENCE ADVANCEMENT FUND (#279)

Kristen and David Bowman Weaver Mark and Molly Ciardelli Michael and Robert Cummings Daniel and Susan De Rocher Gregory and Shari Durocher Carolyn Gurske Ice Age Trail Alliance Phillip Ihinger Sarah and Kristian Moore Isaac Orr David Risch Michael Mc Millan Steven and Pamela Olson -In Memory of Richard and Harriet Welke Roger and Julie Oreskovich James Tannler -In Honor of Ron Willis Chad and Alison Underwood Mae and Curt Willkom

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Curt and Laura Peck Chevron Corporation

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Anonymous

H2O WELL DRILLING & PUMP SERVICE GEOLOGY SCHOLARSHIP

Nolan Rodriguez

INTERNSHIP ADVANCEMENT FUND (#2780)

Ric and Jacqueline Kopp

JRC APPLIED GEOLOGY SCHOLARSHIP (#2601)

Josh and Molly Carlisle Mark and Savona Kiessling

PAUL MYERS & RONALD WILLIS GEOLOGY FIELD CAMP SCHOLARSHIP & the ADOPT A FIELD CAMPER CAMPAIGN

(* indicates adopter of at least one field camper, #1633) Alliant Energy Foundation* Badger Mining Corp.* Barr Engineering Co.* Jeff and Charlien Baker Karl and Sarah Beaster Ronald Berg* Kristen and David Bowman Nathalie and Paul Brandes Cedar Corp. Scott and Francine Clark Charles and Susan Christopher* ConocoPhillips Co.* Michael and Robert Cummings* Joseph and Teresa Drapeau* Gregory and Shari Durocher **Enbridge Foundation EOG Resources*** ExxonMobil Foundation* Michelle Forgette* Kristie Franz Lillian Glodowski Gary and Jody Graham Steven and Jennifer Hoaglund* David and Teresa Hodek Robert and Ginger Hooper

James and Debra Johnson* -In Memory of John Bergstrom Paul Knippel Craig and Marie Koch Ric and Jacqueline Kopp* -In Honor of Paul Myers and Ron Willis Carolan Laudon April Leistikow* Taryn Lopez* -In Memory of Charles Lopez Richard Marks -In Memory of Ron Willis Kevin Martindale* Vincent Matthews Michael Mc Millan **Gregory Michael** Claudia Moore* Jean Morrison and Christopher Mills Paul and Welthy Soni-Myers* Larry and Ellen Nelson* Roland and Norma Newton Jamie and Monica Oakley* Maile Olson **Bridget and Scotty Osborn** Duane and Cynthia Paul* Randall and Lori Pearson Curt and Laura Peck* Steven T. Pierce* Taylor Pierce* Barbara Piper* Heidi Rantala Bryanna Rayhorn Mara Reed **Andrew and Crystal Reuss** Merilie Revnolds Katherine Richart Lois Ristow Rebecca and Shawn Ryser Andrea Scamehorn* **Brett Shand** Laura Strumness*

Cameron Hughes*

Retta Isaacson

Lisa and Ron Struss Kent and Lila Syverson -In Memory of Ron and Thora Willis

Gene and Barbara Thornton* Sarah Vitale Nancy Worden Ashley Zuge

DAVID L. RISCH GEOLOGY RESEARCH SCHOLARSHIP (#2552)

David Risch (endowment gift)

WISA GEOLOGY SCHOLARSHIP

Wisconsin Industrial Sand Association, Inc.

DECLARED ESTATE PLANS NAMING UWEC GEOLOGY FUNDS

Gregory Beckstrom Charles and Susan Christopher Paul and Welthy Soni-Myers

IN-KIND CORPORATE SUPPORT OF RESPONSIBLE MINING INITIATIVE

Alaska Earth Sciences American Engineering and Testing American Excelsior Co. AMI Silica Badger Mining Corp. Barr Engineering Big Rock Exploration BKV Corp. Bronco Creek Exploration Giles Engineering Hoffman Construction Co. Intertek PSI **Lundin Mining** Maptek Mathy Construction Milestone Materials Monarch Paving NRRI Оху Perpetua Resources Petroleum Connection Ruder Ware, L.L.S.C. Teck Tetra Tech Twin Metals Wisconsin Industrial Sand Association (WISA)

DONATION SLIP

Our Geology and Environmental Science
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 and Environmental
Science Department Advancement Fund.

Mailing Address:

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Field Camp II students working in Montana, June 2023.

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