THE DICKIN-STONE-IAN

GEOSCIENCES DEPARTMENT NEWSLETTER
2024 Edition

INSIDE THIS ISSUE

Department Update from the Chair

Hello to alumni near and far!

I hope this note finds everyone well. My first two years as department chair have been eventful ones for our program. In Spring 2023, the department underwent a very successful external review. One outcome of that review is that we decided to change our name to better distinguish ourselves within the Dickinson community. If you weren't already aware, we are now Dickinson's Department of Geosciences! Be assured that our new name does not reflect any fundamental change to the nature of our program or our ongoing mission to educate students about the Earth.

In addition to our name change, the end of the '22-'23 academic year also saw a change of staff in our front office. Our beloved and long-time academic departmental coordinator (ADC), Deb Peters, retired in May 2023. Deb was an integral and indispensable part of the department for over a decade and served the college in various capacities for 25 years. Although we weren't sure how we would fare with Deb's departure, we have been incredibly fortunate to welcome our new ADC, Kerri Thauby, into the program. Kerri has transitioned seamlessly into the ADC role and has done a tremendous job keeping everything running smoothly in the department over the past year. Please welcome Kerri!

UPDATE FROM THE CHAIR

I have several updates on achievements by our faculty. I am thrilled to announce that Jorden Hayes received a promotion to associate professor with tenure this May! Jorden continues to innovate in her teaching, maintain a vibrant NSF-funded research program, and is a leader for the GNOMES program, a field camp focused on providing a meaningful research experience in critical zone science and geophysics for a diverse cohort of undergraduate students. I am also excited to share that Ben Edwards received a Fulbright grant to support his Spring 2025 sabbatical research on ice-volcano interactions in Chile. Ben plans to work with local Chilean guides and students to identity, characterize, and map the volcano-ice deposits located along the Villarrica Traverse Trail at Vólcan Villarrica. Congrats to Jorden and Ben!

As a department, we have been busy with lots of events and opportunities for travel. We continue to host our "Welcome Back" gathering in September, our holiday luncheon in December, our end-of-the-year picnic in May, and a graduation brunch for seniors and their families. Marcus and Ben led a trip to Iceland in August 2023 with 10 majors, including several 2023 graduates who did not get the usual opportunities to travel abroad due to the pandemic (check out page 3 for more on this trip). We also continue to host exciting speakers through our alumni-supported Potter Lectureship. The two most recent lectures have focused on the timely and important issues of increasing diversity in the Geosciences and the growing role of climate science in the insurance and global risk industry. Please see page 8 to learn more about our 2023 Potter lecturer, Dr. Kristina Keating and our 2024 Potter lecturer, Dr. Scott St. George.

Finally, this June, the department was honored to host an event in celebration of the 50th reunion of the class of 1974. The event, organized by three 1974 alums, hosted nine Geology majors from that class in addition to alums from the classes of 1971, 1984, 2016, and several current students and faculty. Professor Emeritus Noel Potter also attended and gave a talk on the long and storied history of our department. It was inspiring to connect so many people across the decades and we hope to host more events in the future to bring together our geology, earth sciences, and geosciences graduates! Please reach out to us if you are interested in organizing a similar event for your class at a future alumni weekend. To all our alumni: we love hearing from you—please reach out anytime to connect!

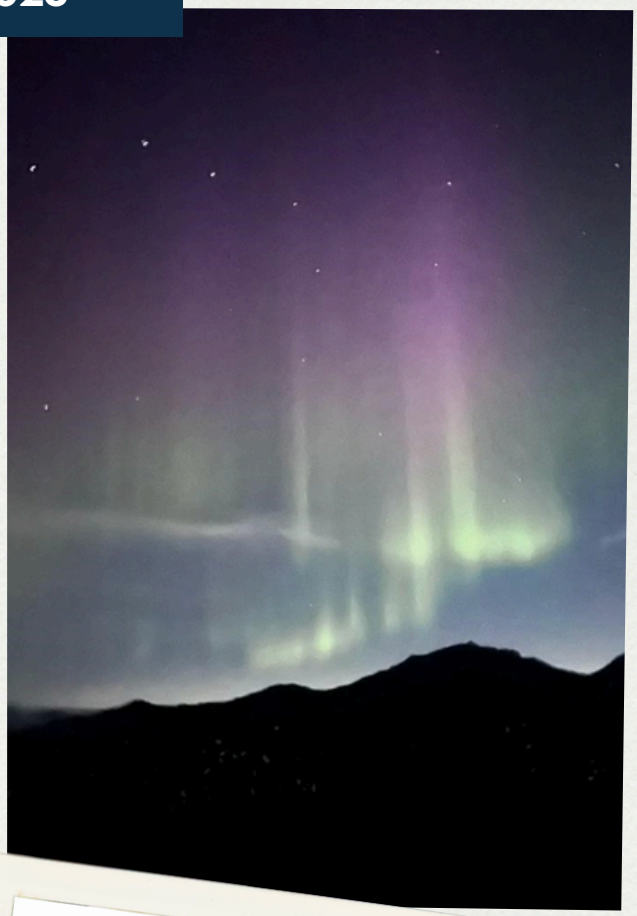
Wishing you all health and happiness in the coming year,
Alyson

GLOBAL EXPERIENCES

CASSA FIELD TRIP TO ICELAND 12-21 AUGUST 2023

In August 2023, Ben Edwards and Marcus Key led a 10 day field trip to Iceland made possible by the Cassa Field Trip fund. The trip included six current students, four alumni from 1974 to 2023, and one professor from the War College. We saw a degassing lava flow, but our timing was between active eruptions. Highlights included:

- Thingvellir National Park
- Gullfoss waterfall
- Geysir geyser
- Secret Lagoon geothermal spa
- Boating in Fjallsárlón glacier lagoon with icebergs and seals
- A day trip to Heimaey island to see the town buried under lava and lots of puffins
- A hike to Geldingadalir eruption site
- Offroading drive to Volcano Huts across braided streams
- Seljalandsfoss waterfall
- Hellisheiði geothermal powerplant
- Viewing the Aurora borealis



Field trips such as these are supported by our generous alumni who have endowed the David and Cary Cassa Extended Field Trip Fund. This fund supports extended field trips beyond those ordinarily associated with regularly offered courses. Thank you to all our alumni who make these trips possible!

GLOBAL EXPERIENCES
VILLARRICA, CHILE 2023 AND 2024

In the winters of 2023 and 2024, Dickinson students traveled to Chile with Professor Ben Edwards in support of his NSF funded research on volcano ice deposits at Volcan Villarrica, which may be one of the most dangerous ice-covered volcanos on Earth.

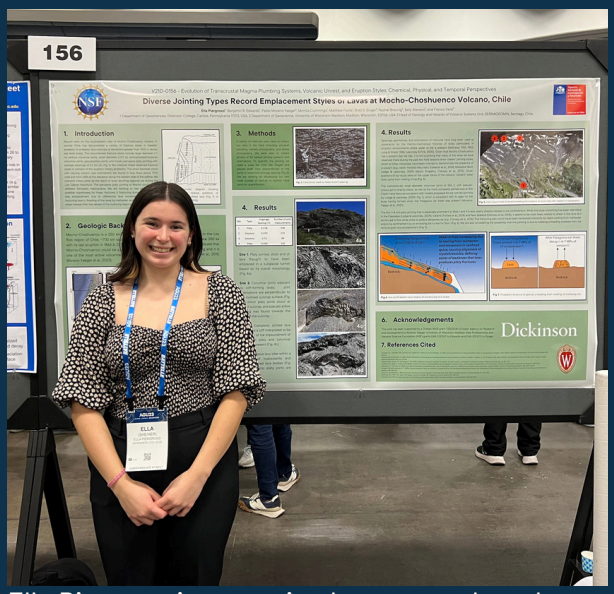
DEPARTMENT HAPPENINGS

Environmental Geophysics students in the field

Axel Heiberg Island summer 2022 Arctic Trip

Faculty & staff from across the Dickinson campus community gather to celebrate Deb Peters' retirement in May 2023

DEPARTMENT HAPPENINGS



Ella Piergrossi presenting her research at the 2023 AGU Conference

2024 Geochemistry class visiting the site of a former millpond in Boiling Springs, PA

Earth's Hazards students measure stream discharge along the Yellow Breeches

Oceanography field trip to Cape Henlopen State Park in Lewes, DE

END OF SEMESTER EVENTS

End of the year picnic in May 2023

Faculty and students gathered for the 2023 holiday party and sing-along

Faulty and students at the graduation brunch for the class of 2024

2023–2024 POTTER LECTURES

The Potter Lecture was established by alumni, colleagues, and friends of the department in 2004 who set up an endowed lectureship to honor Emeritus Professor Noel Potter. The annual Potter Lecture is an opportunity for our students to meet and engage established scientists and to have discussions about their research, career paths, graduate school, and career opportunities beyond the limestone walls. We are grateful to all the alumni and friends of the Geoscience department who continue to support the Potter Lectureship Endowment.

19th Annual Potter Lecture, April 17, 2023

Dr. Kristina Keating, an associate professor in the Department of Earth and Environmental Sciences at Rutgers University - Newark. delivered the 19th Potter Lecture entitled, **"Diversity, Equity, and Inclusion in Earth Science: Why it's important and what we can do**." Dr. Keating's research spans critical zone science, hydrogeophysics, cryosphere geophysics, biogeophysics, and soil science. She is actively involved in science education research to engage students from groups historically underrepresented in the geosciences.

20th Annual Potter Lecture, February 28, 2024

Dr. Scott St. George, a Canadian climate scientist/geoscientist with 20+ years experience in water security, climate change and natural hazards, delivered the 20th Potter Lecture entitled, "**Cassandra on Contract: Why the Global Risk Industry is Hiring Climate Scientists Like Never Before**."

For a complete list of all previous Potter Lectures click here.

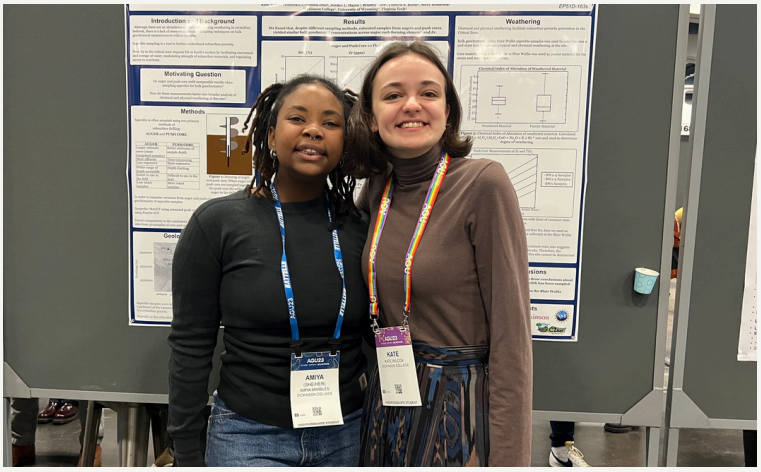
ALUMNI-SUPPORTED STUDENT FACULTY RESEARCH, INTERNSHIPS & FIELD CAMP

Through the generous donations of our alumni, we are able to support a wide variety of student-faculty research projects. Thank you to all our past and present donors!

Henry Hanson Research Prize

The Henry Hanson Research Prize is endowed by friends, family and former students in the memory of Professor Henry Hanson. This prize is awarded by the department to support research by rising sophomores, juniors, and/or seniors who demonstrate initiative, curiosity, creativity, and promise in the field.

- **Patrick Noonan '23** (2022) - Characterizing methanogen microbial communities on rural farmland at the Dickinson College Farm (Advisor: Ben Edwards)
- **Dylan Rasinski '23** (2022) - Ontogenetic morphologic variation in ceratopsid dinosaur frills (Advisor: Marcus Key)
- **Amiya Marbles '26** (2023) - Uncovering the Critical Zone Structure at Two Catchments in the Baltimore Piedmont Using Ground Penetrating Radar (Advisor: Jorden Hayes)
- **Katie Wilcox '26** (2023) - Auger vs. Push Core: Methods of Sampling Saprolite to Understand Bedrock Weathering in the CZ (Advisor: Jorden Hayes)
- **Ander Pahre '25** (2024) - Investigating trace metals in millpond legacy sediments in Mt. Holly Springs, Pennsylvania (Advisor: Alyson Thibodeau)



Amiya Marbles '26 and Kate Wilcox '26 at the 2023 meeting of the American Geophysical Union

William W. Vernon Research Prize

The William Vernon Research Prize was established in honor of Professor William Vernon, the founding member of the department. It is awarded annually by department faculty to outstanding rising senior majors in support of their laboratory or fieldwork or travel to present results at a recognized professional conference as part of their senior independent research project.

- **Madelaine McDowell '23** (2022) - *Growth checks in erect bryozoans as climate proxies* (Advisor: Marcus Key)
- **Christian Knight '23** (2022) - *Extending the record of glacier change on southern Ellesmere Island, Nunavut, Canada* (Advisor: Ben Edwards)
- **Angelina Treglia '25** (2024) *Investigating trace metals in millpond legacy sediments in Boiling Springs, Pennsylvania* (Advisor: Alyson Thibodeau)
- **Monica Cummings '25** (2024) - *Reevaluating the lead isotope composition of potential galena sources used to produce Rio Grande glaze wares in New Mexico* (Advisor: Alyson Thibodeau)

Angelina Treglia '25 prepares sediment samples for isotope analysis

ALUMNI-SUPPORTED STUDENT FACULTY RESEARCH

The Atlantic Richfield Foundation Research Award

The ARCO Award was established from an endowment set aside to offset expenses for student research. The Atlantic Richfield Foundation Research Award is awarded by the department to rising sophomores, juniors, and/or seniors

- **Sarah Wood '23** (2022) - Carbon cycling at the Dickinson College Farm (Advisor: Ben Edwards)

Endowed prizes awarded by the college for research and internships:

The Jeffrey Niemitz Endowed Student Research and Internship Fund

This fund was established by Suzanne Kairo '83 in honor of Professor Emeritus Jeffrey Niemitz. 'This grant helps students to participate in research and internship experiences related to the holistically responsible use of Earth's natural resources.

- **Jonathan Hof '25** - Summer 2023 Internship with NY/NJ Baykeeper

The Robert Allen Jansen Memorial Student-Faculty Research Grant

This grant is awarded by the College's Research and Development Committee for a student-faculty research team involving a Geosciences sophomore or junior.

- **Angelina Treglia '24 and Prof. Alyson Thibodeau** - *Investigating trace metals in millpond legacy sediments in Boiling Springs, Pennsylvania*

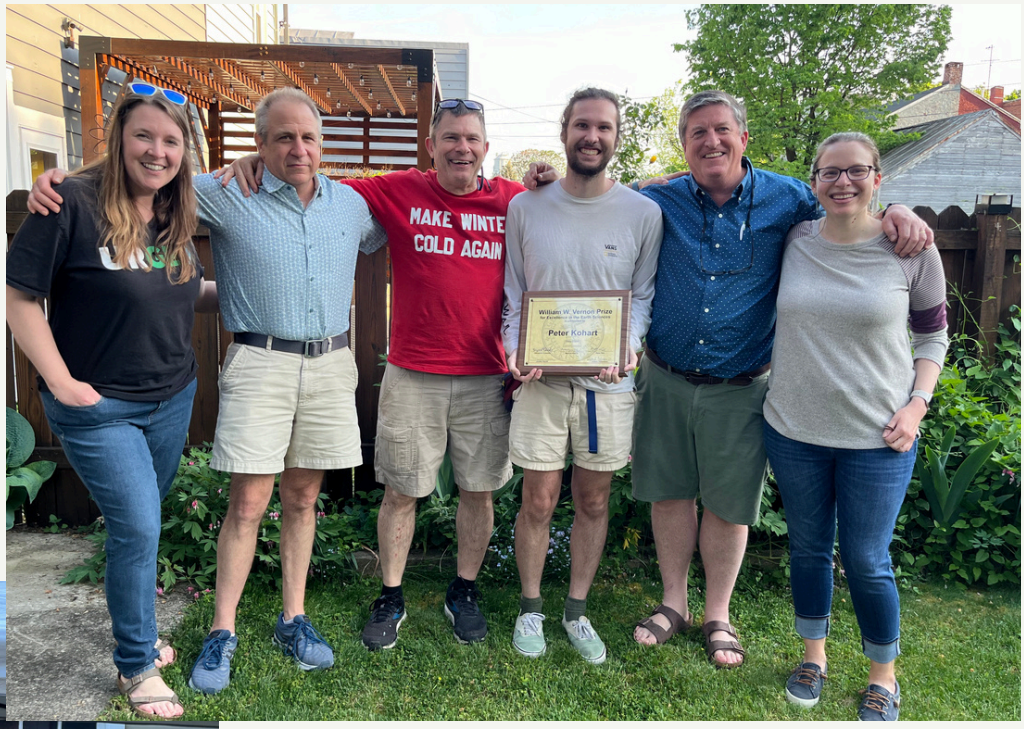
Internships and Field Camps for the classes of '23, '24, & '25

- **Elizabeth Cassell '23** - Internship at Union Quarries in Carlisle, PA
- **Natalie Cist '23** - Student Teaching of Geoenvironmental Sciences at Carlisle High School
- **Ian Shull '23** - Intern at BL Companies, Meriden CT
- **Claire Hallman '23** - GIS intern, Langan Engineering and Environmental Consulting in Doylestown, PA
- **Evan Bechtel '23** - Technical Scientific and Engineering Intern, PA Geological Survey's minerals section, Middletown, PA
- **Peter Scarborough '23** - Geotechnical intern, Keller Management Services, Odenton, MD
- **Marissa Biundo '24** - Materials Testing Intern at TerraSense, Totowa, NJ
- **Braeden Ascelrod '24** - Intern at BL Companies, Meriden CT
- **Jonathan Hof '25** - REU Site: Dynamic Urban Environmental Systems and Sustainability in Newark, NJ
- **Corrine Charney '25** - Intern at Floura Teeter Landscape Architects, Baltimore, MD
- **Matthew Foote '23** - Lehigh University Field Camp
- **Peter Kohart '24** - University of Missouri Field Camp

WILLIAM W. VERNON PRIZE FOR EXCELLENCE

The William W. Vernon Prize for Excellence

This prize was created to honor Professor Bill Vernon at his retirement by faculty, alumni, students, and friends. Since 1992, the department faculty award one graduating senior the Vernon Prize for Excellence in Geology. Criteria for the selection of this award winner include the cumulative grade point average, contributions to the department, and promise for the future. We are thrilled to announce our 2023 and 2024 Award Winners: **Natalie Cist '23** and **Peter Kohart '24**! Congratulations!



A list of historic individual student research projects; public presentations from conferences, symposia and exhibitions; and peer-reviewed publications can be found here.

DEPARTMENT UPDATES

George S. Rennie, III ('62) by Marcus Key

George S. Rennie, III (B.S. Geology, Dickinson class of 1962) passed away in 2022. George had a productive career as an artist in many different media. His early work involved making plaster casts and life-size models of dinosaurs, trilobites, and other invertebrate animals for the Yale Peabody Museum (YPM). One of his most famous models was of the Deinonychus claw of Velociraptor fame in Jurassic Park. Below is a photo of George working in his lab at YPM in 1969.

Last year, George's daughter Natasha Lehman (middle) and her son Edwin (right) from Connecticut generously donated to the Rennie-Rilling museum George's spectacular collection of rocks, minerals, trilobites, and fossil fishes. Many generations of future students taking Paleontology will benefit from this donation.

David C. Rilling, M.D. ('62) by Marcus Key

David C. Rilling, M.D. (B.S. Biology, Dickinson class of 1962) passed away this spring. David's love for fossils began in the Geology department working in the paleontology lab with his classmate George Rennie. David went to medical school after college, then served in a MASH-like surgical team in Vietnam. He was awarded the Bronze Star Medal and was honorably discharged as Lieutenant Colonel in 1996. He was Chief of Surgery at Lock Haven Hospital where he practiced until 2020 when he finally retired after 53 years as a doctor. His hobbies included collecting minerals, fossils, artifacts, sculptures, and pottery. His favorite fossils were trilobites. Over the years he donated many fossils to the Rennie-Rilling Museum of Earth Sciences which was named after David and his classmate George Rennie. Many generations of our students taking Paleontology have benefited from his generosity.

Here is one of many beautiful specimens that David donated to our paleontology teaching collection: *Kettneraspis williamsi* from the Devonian Haragan formation of Oklahoma.

GNOMES (Geophysics of the Near-Surface: an Outdoor Motivational Experience for Students) by Jorden Hayes

GNOMES 2023 Cohort

In the United States, geosciences lack representation from minoritized racial groups and there has been little progress improving diversity despite efforts since the early 1970s (Bernard & Cooperdock, 2018; Sidder, 2017). Through GNOMES (Geophysics of the Near-Surface: An Outdoor Motivational Experience for Students), we provide pathways for students to enter the geosciences by offering early exposure to the field, education in geophysical methods, authentic research experiences, and a supportive network. We also train near-peer mentors in the program to lead the participant experience and gain experience themselves creating inclusive spaces.

Students spend two weeks in the field collecting data and rotating among four groups to learn a variety of geophysical methods (seismic refraction, electrical resistivity, ground-penetrating radar, and surveying). They process their data and create presentations on the results. Students are then given the option to continue working with their data in the fall in preparation for presentation at the AGU Fall Meeting. We are currently in the sixth year of the program having spent four years at a site near State College and the last two in Baltimore County.

> **I never imagined I would do anything this awesome in my life.**
>
> **~Kevin Diaz ('27)**

> **...I learned that someone like me from my background could have a career in geophysics.**
>
> **~ Aisha Rodriguez ('22)**

GNOMES 2024 Cohort

If you are interested in learning more about our program or would like to chat about diversity and inclusion in the geosciences please feel free to contact me: hayesjo@dickinson.edu

GNOMES is funded by NSF Award #2119389 and is a collaboration between Rutgers University-Newark, Dickinson College, Towson University, John's Hopkins University, and Penn State University.

Field Methods Course Revision by Peter Sak

Spring 2024 marked a revisioning of the Field Methods course. The previous version of the course which I had taught since 2005 was built around a series of six field-based projects and a five-day trip to southern Ontario. The projects emphasized specific skills (e.g., pace and compass mapping, reconnaissance mapping, measured sections, surveying, etc.) that were useful for geoscientists. While a well-appreciated elective among the majors, the course had a narrow audience.

This year with departmental support, I taught a new course with some similarities and modern twist. Introduction of GIS for Field Scientists replaced Field Methods in my teaching rotation. After teaching a section of the Introductory GIS course each of the past two spring semesters, it became clear that there was an unmet need for an Introductory GIS course emphasizing techniques commonly encountered by field investigators. In addition to introducing the fundamentals of spatial reasoning and modern GIS, the newly developed course introduces students to the departmental surveying equipment. Labs were a mix of field and desktop projects. For one project, students used high-resolution GPS to survey the locations of deer exclosure pens in the Reineman Preserve (in southern Perry County) and then used available airborne LiDAR data to determine if tree canopy heights varied between the surveyed exclosure extents and the neighboring forest. Spoiler alert: they didn't. After a robust in class discussion, students determined a more testable research question that a biologist might want to ask at the site. Another highlight was reoccupying the meanders site along Route 74, north of campus. This year marked the 50th anniversity of the surveying project that was started by students in one Noel's courses. Returning with the Field GIS course, we resurveyed the site and then placed all the legacy data into a common spatial reference frame and were able to look at spatial changes over the past 50 years. It was fascinating to watch as students grappled with transferring older survey data that were not tied to geographic coordinates to a common coordinate system. While frustrating at times, the exercise highlighted the utility GIS for analyzing and visualizing data.

The course culminated in a poster session where students presented the results of their semester-long research projects. The diversity of projects reflected the range of majors enrolled in the course. While the traditional Field Methods course occasionally enrolled a non-Geosciences major the new GIS for Field Scientists course attracted students from Archeology, Biology, Environmental Studies and Geosciences. The diverse interests of the students lead to a broad range of research topics and a successful poster session where students were able to discuss the techniques that peers used to address their research questions. In the years ahead, I look forward to teaching the course again in the years ahead. Among the tweaks that I can envision are changing the name to "Introduction to GIS for Field Investigators" and perhaps creating a collaborative weekend field trip with another course. Stay tuned.

FACULTY UPDATES

Professor Marcus Key

Where did the last two years go?!?! I am just coming off my second all year sabbatical. It was the best one yet, very productive and fun! Maria finally retired, so she was able to travel with me! Maria and I began with a week of sampling bryozoans on sea turtles coming ashore at night to nest on Jekyll Island, GA. In August, Ben and I led a 10 day Cassa field trip to Iceland with six current students, four alumni from 1974 to 2023, and one professor from the War College. Then Maria and I went to Europe for a wonderful month of field and lab work with colleagues in England, Ireland, Hungary, and Czech Republic followed by a vacation in Poland and Lithuania. My research on that trip focused on collecting and studying bryozoans fouling crabs from the Miocene rocks around Budapest. Next, we went to Texas for a month of family weddings, disc golf, and visiting our two TX-based children. I spent a month in January-February doing lab work at the Smithsonian Marine Station in warm sunny Fort Pierce with a colleague. In the spring we snuck in a short trip to Mexico to see the pyramids and Mexico City's world famous archaeological museum. Then we went back to Texas for more disc golf, collecting giant bryozoan colonies in the Pennsylvanian of north central Texas, followed by a romantic 40th wedding anniversary date stuck in the DFW airport for 8 hours due to horrendous weather.😊 Now I'm home for a while writing up manuscripts and playing disc golf with our two PA-based children. We're building an 18 hole course in a sinkhole rich forest next to our church here in Carlisle, so lots of chain saw work! Research highlights include converting previous student senior theses into submittable manuscripts and working on a manuscript with Ben Edwards. Ben helped me apply Structure from Motion technology to build digital elevation models of bryozoan colony surfaces, a first in bryozoology. This summer we'll be taking road trips to visit family in MA, MI, IN, and OH. I'm excited to return to the classroom in the fall to teach Sedimentology & Stratigraphy and Energy Resources. Next time you're in Carlisle, let me know so we can grab a beer and catch up.

Associate Professor Alyson Thibodeau

Over the past two years I have been busy with chairing and teaching duties, developing new research directions, and spending time with my partner, Chris, and 5-year-old son, Simon. This coming year will be my third as department chair, at which point I will confidently hand the reins over to Jorden! Although chairing has kept me very busy over the past two years, I have also been working hard to solidify our new introductory course (Foundations of Earth Sciences) and teaching GEOS 331: Geochemistry. Research-wise, I have been working to develop new projects investigating the trace metal and isotope geochemistry of millpond sediments in Cumberland County. This research builds upon work started by my predecessor, Jeff Niemitz, and through it, I have been able to learn a lot about the local history of Boiling Springs, Mt. Holly Springs, and the Carlisle area. After this academic year, I am planning to take a much-needed sabbatical which will hopefully include travel back to the Arizona and other parts of the American Southwest to continue my research on pre-hispanic turquoise mining and exchange. On the personal side, my son Simon is about to enter Kindergarten! Time really flies. I love keeping up with former students and alumni, so please stop by if you're in the Carlisle area! Cheers, Aly

FACULTY UPDATES

Professor Ben Edwards

It's been another busy two years! Another fantastic trip to Iceland, this time via the Cassa Fund with Marcus (see travel section for pics), a trip to the far northern Axel Heiberg Island (see travel section), two more trips to Chile with six students as part of my ongoing research there (see travel section), and most recently a second edition of the Volcano-Ice Summer Program based out of Bend, Oregon (taught to Portland Community College students). Lots and lots of teaching, including two overflowing Introduction to Arctic Studies classes (and another scheduled for Fall 2024), Earth Materials, Introduction to Soil Science and a full Foundations of Earth Sciences course, and guest lectures on the Arctic and Antarctic at our neighboring U.S. Army War College. While most of my service has been devoted to building the Arctic program, I served with Pete on the reformulated GIS advisory group to help re-envision what our GIS future holds. And I also managed to help get a few scientific papers into press, including a Geological Society of America Bulletin article on the eruptive history of Mocho Choshuenco volcano in Chile, another Icelandic paper with long-term collaborator Meagen Pollock (College of Wooster) and Dickinson students Ellie Was and Aleks Perpalaj, and an already well-read paper with long-time collaborators summarizing the Pleistocene to Recent volcanism in Canada for a special issue of Canadian Journal of Earth Sciences. I'm in the midst of helping to lead an international group in the writing of the Glaciovolcanism chapter for the 3rd edition of the Encyclopedia of Volcanoes, and I've also been involved with a group trying to use glaciers as 'early warning indicators' of future volcanic activity, but those are all still in the review stage...as I write this and reflect on the past two years, we're not really slowing down 22 years into my Dickinson geology/earth sciences/geosciences career!

Kim, Teagan and Kaelan are all doing well but the girls are far-flung. Teagan is an executive analyst for the California Conservation Core, and Kaelan will soon start a masters program focused on migration studies in Italy. Kim as usual tries to help me say 'no' more frequently (it is slowly working) when she isn't teaching maths at Carlisle High School. Hope you are all well and please let us know when you are close to Carlisle and can stop by for a coffee!

Ben

FACULTY UPDATES

Professor Peter Sak

Hello Everyone!

It has been a long time since my last update, and with Aly and Kerri's encouragement, it's high time I get back into the swing of writing them.

I'll start by saying that the last couple of years have flown by, with lots of changes, some tweaks, and many things staying the same. In the realm of teaching, the last two years have seen a mix of old and new. On one hand, it has been great to get back into the classroom, and it has been particularly great to back to teaching and learning on the outcrop. I will not miss teaching Field Methods via Zoom and have been enjoying teaching my usual upper level courses (Structural Geology, Surface Processes) and a pair of new courses (Introduction to GIS and Introduction to GIS for Field Scientists, see the detailed description of the new GIS course on page 14). Other teaching highlights include infusing elements of geographical information systems (GIS) into all of my courses which I am truly excited about (it only took my about 18 years...).

On the research side of things, I have remained engaged in the study of both the critical zone (with an emphasis on tropical weathering) and on the structural evolution of the central Appalachian mountains. New and ongoing collaborations are focused on: i) drainage basin-scale chemical weathering (do chemical weathering rates vary as function of landscape position?? I think so!), ii) factors controlling weathering rind formation in tropical settings, and iii) the three-dimensional structure of the central Appalachian mountains. Much of the heavy lifting (i.e., proposal and manuscript writing) is done by students and colleagues who suffer the wrath of my Red Pen, as I still struggle to find and dedicate time to writing manuscripts of my own. Instead, I have dedicated much of my time and energies to service to the College. Since December I have been serving as the chair of the Department of International Business and Management (INBM). After nearly twenty years on campus and a stint on the personnel committee, I thought that I had a handle of how things worked around here. Chairing the largest major (in terms of majors) has been an eye-opening experience and has really given me a more nuanced understanding of the breadth and value of a Dickinson education.

Away from campus, Maya continues to keep Linda and me busy. Maya is wrapping up her sophomore year in high school and be become more selective in her activities. This year marked her first year not playing ice hockey since 2nd grade. She has been keeping herself (and her parents) occupied running cross-country and track. It has been wonderful to watch her set (and achieve) goals for herself. Now that we are not tied to the insane schedule of travel ice hockey, we have been doing more traveling both near (e.g. southern Ontario, New York, Philadelphia) and far (e.g., Costa Rica, Colorado, and Scotland). I hope that you are happy and well, and I look forward to seeing you next time our paths cross! Take care, Pete.

FACULTY UPDATES

Associate Professor Jorden Hayes

Greetings to our friends and alumni!

I'm thrilled to share that I received tenure this past spring! My heartfelt thank you to my amazing students (past and present) and colleagues for making this journey wonderful. I've developed a real love for the people and landscapes in this corner of the globe and I'm excited to continue developing critical zone geophysics here at Dickinson.

I write this while taking a break from packing for the final iteration of our NSF-funded GNOMES program (Geophysics of the Near-surface: an Outdoor Motivational Experience for Students) in Baltimore County. GNOMES has been integral to my time at Dickinson and I'm proud of our accomplishments. You can read more about GNOMES in this newsletter.

Also on the research front, I'm in the second half of a five-year NSF CZNet (Critical Zone Collaborative Network) project examining how bedrock at depth shapes life-sustaining processes at the surface. After >16 weeks of fieldwork in the first half of the project, we're now synthesizing data for publication. I'm currently working on a manuscript about the relationship between bedrock composition and weathered thickness at a site near Atlanta, GA. Last summer, Kate Wilcox ('26), researched methods for collecting weathered samples and presented their results at the AGU Fall Meeting in December. This summer, Maryann Huffman ('27) joins me to study clay composition in weathered fractures.

As a part of "Team Bedrock" I co-lead outreach with our E&O coordinator, Lily Eligator. We piloted a successful K-12 educator workshop here at Dickinson last summer and will launch three more workshops around the country this summer and next. These workshops have been so successful and enjoyable. We plan to be in LA, Denver, Carlisle, and online next year (let me know if you're interested!).

I still find teaching to be incredibly energizing and I continue to teach Earth's Hazards, Environmental Geophysics, and Oceanography. Last year I introduced a new course, Treetop to Bedrock: An Introduction to the Critical Zone and this fall, I am revamping Global Geophysics to include coding skills and foundational physics.

At home, Noelle (7) and River (2) keep Isaac and me on our toes. We recently enjoyed the eclipse from the shores of Lake Erie and are looking forward to many camping trips this summer.

Please stay in touch, and if you're attending AGU in DC this fall, let us know! Also check out the alumni trip to Yellowstone and Grand Teton National Parks next summer as I would love to see you there!

Best regards, Jorden

STAFF UPDATES

Robert Dean, Department Technician

Hello all from Kaufman Hall!

It's hard to believe, but I just celebrated 17 years at Dickinson! I've been witness to quite a few changes around the department and look forward to our direction as we continue to evolve.

My sidekick The Colonel (see picture) is doing well however he's more interested in splashing in the creek than letting his papa fish. All is well here so please stop by if you are in town or say "Hi" if you run into me on the stream.

Kerri Thauby, Academic Department Coordinator

Hello! I wanted to take this opportunity to introduce myself after completing my first year as the Academic Department Coordinator for the Geosciences and Environmental Studies departments. It was a busy, exciting and successful first year for me and I look forward to many more with the GEOS department. Although I am new to Dickinson, I was born and raised in Carlisle and graduated from Millersville University with a B.A. in International Studies and a minor in Spanish. Since then, I have lived and worked in a variety of U.S. cities including Pittsburgh, Santa Barbara, San Francisco, and Washington, D.C. Most recently, my family of four moved to Vina del Mar, Chile in 2019 and unexpectedly ended up navigating pandemic life from a small cabin in the Chilean countryside. My husband, 2 boys and I moved to Boiling Springs in 2021 and have added a dog and a cat to our ranks. Outside of K103, I enjoy spending time with my family, tending to my native plant garden, and illustrating local flora, fauna and fungi.

RETIRED FACULTY & STAFF UPDATES

Noel Potter

Noel, Noel Lewis, and Helen in front of one of the trolls at the Coastal Maine Botanical Gardens near Boothbay. It is well worth a visit mid-summer.

Family and I are well, though the older of us are moving more slowly. In early June we had the pleasure of joining the class of '74 for their 50th reunion dinner at Alumni Weekend. Eight former majors showed up and joined some from other classes and the department for a reception and a slide show of old photos. I was delighted to connect with people I hadn't seen for a very long time—in one case for 50 years.

The Potter Lectureship continues with the 20th this past Spring. I get to do nothing but meet with the guest, go to a dinner, and show up for the lecture. I'm happy that I'm still alive to attend, and am delighted when I hear that someone has contributed to the lecture endowment fund.

The older of you will remember that Henry and Jan Hanson had two boys, Henry (known as Cy) and William (known as Billy). I am sad to report that Henry died a year or so ago, and I could not find any information about Billy. Then at a reunion reception I was chatting with Joe Gaskin '74 and asked about Bill. Joe said Bill is fine and in the Carlisle area still working on quartz crystals. Joe then said it was Bill's birthday and that he should call him. Joe did, and I got to wish Bill a happy birthday.

My wife Helen Delano retired a year ago this past Spring from the Pennsylvania Geological Survey. Our son Noel Lewis works for a non-profit in Portland, Maine called Rippleffect that does outdoor education for middle and high school students. In winter he teaches about camping and mountain climbing, even taking kids camping in the snow in the White Mountains. In summer his thing is teaching about sea kayaks, and he takes kids on week-long trips island hopping along the Maine coast.

Jeff Niemitz

It is hard to believe that I have been retired from Dickinson for 9 years. We spend much of our time now visiting (read 'babysitting) our 9 grandchildren who now range from 14 to 5 living in Indiana, Alabama, and Georgia. Our summers find us at the family cottage in NE PA. Otherwise we are volunteering at various nonprofit organizations in Carlisle or traveling abroad. In October 2022 we did fabulous safari in Tanzania. Last year our daughter and family were on sabbatical in Cambridge England for the year so we got to visit at Christmas and in April including getting back to see old friends in Norwich.

We have been a bit closer to home this year as Trish had her second knee done in October but we are off to Iceland in September and hope to get to Sicily, S. Italy and the Dalmatian Coast next

Jeff Niemitz (continued)

Spring. The bucket list is getting shorter but so far, we have kept the wheels from falling off completely.

We still hear from former students. To those who might be coming through Carlisle, the light is still on at 230 Conway St. for the foreseeable future.

Finally, it is very gratifying to see that my two replacements, Aly and Jorden, have received tenure and are doing great things for the college and the department.

Cheers,
Jeff Niemitz

Deb Peters, Academic Department Coordinator

Greetings,

It's hard to believe that it's been two years since my newsletter submission where I mentioned the "R" word.... (retirement) and even more difficult for me to believe that it's been a full year since I did. What have I been doing that makes the time fly?

Wayne and I have had some exciting first year of retirement travel experiences. After hearing of the many adventures that the faculty had taken you on as students, our first trip had to be west. We spent five weeks with our toy hauler camper and motorcycles in beautiful and incredible geological areas. We were in South Dakota, Montana, Wyoming, Utah, and Arizona. Each place offering unique opportunities for riding, hiking and photography. So much to see and so little time. We are definitely planning on another trip west next year. After the holidays, we spent a month in sunny Florida and as we speak, I'm writing from St. Croix. No wonder the time flies!
On the family front, everyone is healthy and happy. I still spend as much time as possible with my grandsons...who have grown up so quickly. The oldest just finished his sophomore year in college and the youngest is a high school junior. Dang, how did that happen? I love that they still make time for us.

The only downside to retirement is that I miss my faculty and interacting with the students. I do look for occasions to come to campus and catch a seminar or lunch with someone from time to time. It's not the same as working with them though.

Who knows, maybe I'll see you around Kaufman sometime. For now, be well and take good care!

Best,
Deb

ALUMNI UPDATES

Class of 1964

Jim Aldrich

After graduating from Dickinson in 1964 I married Linda Harvey (class of 65) 6 months later. I spent 10 years in academia (3 at Allegheny College and 7 at North Carolina State University) followed by 26 years at Los Alamos National Laboratory where I did basic geologic research in the Southwest with special focus on the Rio Grande rift, geothermal investigations in Central America and on Indican reservations in New Mexico and Arizona, and environmental investigations in Los Alamos County. I retired in 2004 and Linda and I moved to the Olympic Peninsula in Washington. For enjoyment I spent the next 14 years doing geologic mapping in the Olympic Mountains. We now enjoy living in Santa Fe at El Castillo, an old people retirement facility a block and a half from the plaza. I'm leading field trips for the El Castillo residents. I prepare guidebooks for these trips.

This photo was taken on one of the Valles Caldera trips. I'm the guy in the back wearing the orange hat.

Class of 1972

Heath "Ted" Warren

I retired 10 years ago from the Naval Air Systems Command at Patuxent River NAS in St. Mary's County, MD, where I was the Senior Systems Engineer for the Atlantic Test Range. Most of my career there was spent working on avionics systems for the Presidential Helicopters Program, as the Risk Manager for Inservice Engineering for the VH3D and VH-60N Presidential helicopters. I got my Master's degree in Systems Engineering from Johns Hopkins, where I was an Adjunct Instructor for 12 years, teaching Systems Design and Integration. I don't miss the "working" career one bit.
In retirement, I am on the Board of Directors of the Southern Maryland Sailing Foundation, which oversees the Sailing Center Chesapeake, a community sailing program that sponsors varsity high school sailing and a middle school STEM program developed by US Sailing that uses sailing to teach STEM topics. I also am the USCG-licensed Captain of the Dee of St. Mary's – an 84' long historic Chesapeake Bay skipjack which is owned by Calvert Marine Museum in Solomons Island, MD. My wife's family has a wedding venue site on the waterfront farm on which we live, and I have found myself deeply involved as the President of the county farm wedding venue association as we try to tread carefully in the business, governmental and agri-tourism arenas, all the while maintaining a family homestead. Mowing 30 acres of grass takes up a lot of my time, too. Retirement is actually busier than "work" – and there are no weekends!

Heath "Ted" Warren (continued)
Reprising my project from my Senior year (Sedimentation in the Letort Creek), I am involved with water quality monitoring of the St. Mary's River for the St. Mary's River Watershed Association, where we sample and track dissolved oxygen from several surveyed (GPS) monitoring sites on the River and its tributaries. I do remember a few things about the process of gathering and analyzing data, and fusing that into meaningful and relatable information.

Dickinson and geology gave me the background and breadth to do much of what I have done and now do – I feel comfortable and confident in my abilities to tackle any challenge. In systems engineering especially, the liberal arts education allowed me to easily recognize and apply the primary directives of systems engineering – interface with the user, elicit and define their needs, then design, specify, manage and own their requirements throughout the system life cycle. The science and discipline of Geology formed that mental structure and methodology/discipline for me.

Henry Hanson was the person who made a hard science fun and interesting, and human. I have a lot of great stories from classes and field trips with PH. One involves a field trip final make-up that includes hard crabs and beer. Noel Potter was inspiring and readily available, William Vernon was somewhat intimidating but still engaging. There was a lot of caring in the D'son Geo dept. I still love Geology. Most of my travel plans include a Geology interest – volcanoes and glaciers in Iceland (and plate tectonics!), volcanoes in Italy and the Azores, volcanoes in Hawaii. I see (and point out) geomorphology in everything – drives my wife nuts.

Class of 1974 Geology Majors & Friends Gathering

Front row: Lise Blumberg Ragan ('74 French Lucy's roommate freshman year), Lucy McCrea Jansema, Paula Balcom Ballaron, Noel Potter, Jean Colby, Geoff Coe, Sue Duffield, Dave Desenberg. Back row: Barb Faulkner, Russ Pfeil, George Lee '71.

Dickinson geology alumni from the classes of 1973 -1975 gathered for a special celebration during Alumni Weekend in June. Emeritus professor Noel Potter gave his slide presentation "History of the First 50 Years of the Geology Department, with Copious Illustrations" and Professors Marcus Key, Ben Edwards, and Aly Thibodeau gave updates on the department. It was a treat to see everyone!

ALUMNI UPDATES

Class of 1974

Susan Duffield
For the last 20-plus years, I have worked as a contract technical writer/editor, and I plan to retire this year. I attended the class of 1974's 50th reunion and had a great time catching up with Noel Potter and with geology graduates from several years. I also enjoyed hearing about ongoing programs in the geosciences department from current faculty, staff, and students.

On the right is a photo showing that Geology was considered important enough to be pictured on the ceiling of the Library of Congress in DC.

Barb Faulkner
During my 38-year career as a petroleum geoscientist, I enjoyed a wide variety of assignments in exploration, production, and research. Favorite memories include teaching stratigraphy field courses for professional geoscientists and engineers, mostly in the Book Cliffs of Utah and Colorado. I took numerous international business trips and enjoyed geology field trips on four continents–from the lowlands of Venezuela and Borneo to the mountains of western North America and Europe.

I was an expat from 2012-2014 in Moscow, Russia, where I worked on a West Siberia joint venture geoscience team. My two years in Russia were a much richer life experience than I had anticipated, and the geology of West Siberia was fascinating. I retired in Houston, Texas, in late 2020, during the height of the Covid-19 pandemic.

Eager to continue learning, I enrolled in Dickinson's remote-learning Arctic Studies course, which Ben Edwards taught for undergrads and five alumni during spring semester 2021. The course focused on the geology, natural history, and geopolitics of the Arctic and included QGIS mapping projects. It was fun to participate as a student again, and I loved the course! It was one of the silver linings of the dark clouds of the pandemic.

I continue to keep my eyes on geoscience, technology, and business developments for the global energy transition. I hope the world has, and will have, enough well-trained geoscientists to help guide the energy transition innovatively and wisely.

Highlights of my travels in the past couple of years include watching whooping cranes on the Texas Gulf Coast, a 10-day sailboat trip on Glacier Bay in Alaska, and two wonderful trips to Iceland. I enjoy visiting friends and family in the northeast, including two nieces, who graduated from Dickinson in 2020 and 2023.

I'm very grateful for my geology major and liberal arts education at Dickinson. I appreciate the strong academic foundation that my geology professors provided. Special thanks to Noel Potter and the late Henry Hanson and Dr. V.

ALUMNI UPDATES

Class of 1974

Russell Pfeil

I was recruited by Chevron Oil out of graduate school and started work for Chevron USA, Inc in New Orleans in 1977. In 1979, I transferred to their international group, Chevron Overseas Petroleum, Inc in San Francisco, CA to work on the Offshore China project in the Pearl River Mouth basin when China opened their offshore to foreign exploration.

I took an overseas assignment with Chevron Oil Company of Sudan in Khartoum, Sudan, in 1981. Over my 16 years working for Chevron Overseas Petroleum, I worked on projects all over the globe including Angola, Zaire, Egypt, Argentina, Bolivia, Columbia, and former Soviet Union.

When Chevron shut down the CIS Business Unit and no longer pursued opportunities in the former Soviet Union, I ended up landing in the environmental consulting arena for several years before transitioning into the IT arena and joining Wells Fargo's wholesale banking group managing software development team supporting internet banking applications.

I worked for Wells Fargo in various capacities from 1999 through 2018 and then got caught up in another corporate downsizing event and was engaged in the IT consulting arena through 2022 when I turned 70 and retired from the full-time employment arena.

Over the past few years, I have been trying to move back in geology based consulting dealing with the Sustainable Groundwater Management initiative in California and volunteering with the Red Cross and California State Parks.

Class of 1982

Betsy Strachan Suppes

Conrad, my oldest son, graduated from Penn State and has entered the work force as a financial advisor for Northwestern Mutual in their Murrysville office. Sam, my younger son, a mechanical engineering major, will be entering his fourth year at the University of Virginia. Greg, my beloved husband, who "keeps all the plates spinning" at the Suppes household, including my books for "Forgedale Consulting," is the Vice President of Operations at GAPVAX, a Johnstown based manufacturer of vacuum trucks.

It has been a while since I have "sat a well" however, I received a call from a client who was being taken to court on mineral trespass. Later, when I was testifying in court on behalf of the client, the opposing council did not want to declare me an expert. I highlighted my 35-year career as a geoscientist; fieldwork and previous wells sat; the judge paused, and then said, "as a judge, we have latitude on experts, and I deem you to be an expert." With the help of a Dickinson education in geology, my client prevailed in court.

Last September I joined the Dickinson Alumni travels group with dormmate (but not geology major) Dawn Truax on the hiking trip through Scotland. It was an excellent opportunity to see where this august science got its start (although I suppose the real start was the formation of the planet.) A few

Betsy Strachan Suppes (continued)
more rocks entered my collection. A shout-out to Liz Toth (a D'son grad, but also not a geology major) who ventured along to the shuttered marble mine on the Isle of Iona.

In February of 2024, I was elected to a two-year term as the Vice President of the International Institute of Minerals Appraisers (IIMA) at the annual meeting in Phoenix. There I also gave a presentation on how a few months can make a big difference the value of one's oil and gas interests. Usually, the value increases with oil and gas prices, but sometimes the value increases when the oil and gas interest holder is a better negotiator.

On October 16 of 2024, the IIMA's Fall Conference will be held at the Southpointe Golf Club in Canonsburg, PA. This is a workshop for mineral appraisers. If minerals appraising is your next career, or you wonder about your mineral estate, please come and join us. Contact me at bsuppes@atlanticbb.net for more details.

Class of 1985

Douglas Bitterman
Just passed the 35-year mark working for CH2M HILL (now Jacobs), primarily as an engineer and hydrogeologist working on and managing environmental restoration and compliance projects. I am currently the Program Manager for a large task order contract supporting environmental compliance for the US Navy worldwide, among other roles.

Geologic highlight of the past year was witnessing a decently large eruption of Mt. Etna in Sicily while overseas on a project assignment. On an earlier trip a couple of years back, I was able to climb to within about 1,000 feet of the summit (highest you could go legally).

Class of 2002

Megan Gerseny
I haven't written in for years so here is a basic update on the last 20 years! I spent 5 years in Oil & Gas in Denver and a year in environmental consulting in Albuquerque to realize that geology jobs aren't as fun as just learning geology. I took two sabbatical stints to Central America where I guided volcano hikes in Nicaragua, hung out in Colombia and attempted to move to Panama. Alas, pre-Covid I couldn't find enough remote work opportunities and I didn't like teaching English As a Second Language, so I returned to the states and moved to California. In Paso Robles I worked for a winery and earned my Level 1 Sommelier Certificate. There is a ton of cool geology in wine, but limited career options. I found my way into municipal work for the City of Paso Robles in their Building & Planning Department. THIS I loved - learning and communicating technical information and interacting with the public. I then worked in the Water Department for the District of Cambria primarily in the water use efficiency and permitting space. However, Paso Robles was just too small for me so last summer I moved to LA. I am now living in Marina Del Rey and working for the City of Long Beach. I hope to move to Long Beach at the end of the year but after that I want no more transition for a while! I also obtained my Life Coach Certification and am loving meeting with clients, helping them see where they have agency in their life and creating lasting change.

ALUMNI UPDATES

Class of 2013

Julia Rasamny Feeney
After having my daughter in 2021, I had a job shift in order to see her more often. After 8.5 years of teaching Earth Science (and a few other sciences) at a charter school in West Philadelphia, I became the Director of Operations at the school my daughter attended. It has been an amazing adventure! We welcomed our son, William, last August and he has started at the school as well! I am very thankful to have stayed in education, and of course I bring out my rock collection every Earth Day to share with the kids!

Marc W. Baumann
Ashley '13 and I welcomed our fourth child, Landen Vito Baumann on April 28, 2024. Our family is now complete and Landen's siblings (Grayson - 6, Hadley - 4, Peyton - 3) are very excited to have a younger brother. We continue to live in Basking Ridge, NJ and I continue working at Claremont Development as Vice President of Development & Construction focusing on our industrial portfolio. We brought the kids to Carlisle last fall for the first time and they loved being on campus and seeing everything Dickinson has to offer. My son enjoyed walking through Kaufman Hall so much that he now tells everyone he wants to attend Dickinson and study Geology, like his dad!

Class of 2016

Will H. Kochtitzky
Will '16 and Anna McGinn '14 enjoy living in Biddeford, Maine where Will works at the University of New England. Geologically, it is a wonderful place to live and work, stop by next time you are in Maine!

Class of 2019

Katherine Manges Lodge
I just finished my last year teaching middle school Earth Science, which I've been doing for the past 2 years. Before that I worked for an Environmental Testing company and was monitoring certain sites with groundwater sampling, soil vapor probe sampling, and LNAPL and DNAPL recovery. I am moving up to the High School in my district this coming school year and will be teaching Earth and Space Science to high school seniors! I intend to start my masters in ESS at West Chester University in the Spring. I miss you all at the department!

ALUMNI UPDATES

Allison Curley
After nearly five years in the graduate program at the University of Michigan Department of Earth and Environmental Sciences, I successfully defended my dissertation and earned my PhD in March of 2024. I was working in Sierra Petersen's lab figuring out how to repurpose bulk stable and clumped isotope measurements to learn about the biology of how bivalve mollusks (clams, scallops, etc) make their shells and survive in harsh environments. The lofty dream is to develop these isotopic systems as proxies to study biology and extinction dynamics in extreme and changing climatic contexts. I also did some straight-up Cretaceous paleoclimate and paleohydrology reconstruction for good measure during my PhD. Shoutout to my liberal arts education preparing me to do a very cross-disciplinary PhD!

Between 2023 and 2024, I was a predoctoral research fellow at the Smithsonian National Museum of Natural History Division of Paleobiology (also supported by the Division of Mineral Sciences). It was such an amazing experience to live in Washington D.C. and go to work every day in the beautiful Natural History Building. I was advised by Stewart Edie, the curator of fossil bivalvia, who has been instrumental in my growth as a paleobiologist. We are working on a project applying the isotopic proxies of my PhD to study changing mollusk communities across the End-Cretaceous mass extinction in North America.

Now, I get to continue doing exciting isotope geochemistry at the Goethe University Institute for Geosciences as a postdoctoral researcher. I moved to Frankfurt, Germany in June and will be living and working here until 2026 in this position. I am being supervised by Jens Fiebig, whose lab has produced the first high-precision analyses of a new clumped isotope parameter. I'm going to be working with a multinational team of scientists to apply these powerful new techniques to bivalve shells. I'll be occupied with a mixture of paleoclimatology, methods development, and continuing to advance my personal paleobiology interests.

I was sorry to miss the 5 year class of 2019 reunion, which unfortunately fell right around the time of my transatlantic move. But I was so glad to return to Carlisle in September 2023 to give a Lunch & Learn seminar and connect with Dickinson students! So much nostalgia. Looking forward to reading everyone's updates and wishing everyone the best.

Class of 2022

Elizabeth McCreary
I recently graduated with my MA in applied archaeology from Indiana University of Pennsylvania (IUP). I continued to use my earth sciences background while there and wrote my masters thesis about a geophysical survey of a French and Indiana War Friendly Fire Incident site.

On June 2, 2024 I completed my first official day at the Statue of Liberty National Monument in New York as a seasonal park ranger! I am very excited and ready to see what the rest of the season brings!

KEEP IN TOUCH *Geosciences*

FOLLOW US ON SOCIAL MEDIA!

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UPDATE YOUR CONTACT INFORMATION

If you are a recent graduate and haven't provided an updated email address, or if your contact information has changed, please let us know by clicking here.

We are often forwarded job, internship and research opportunities that are appropriate for recent grads. Don't miss out!

Previous editions of the Alumni Newsletter can be found on our website here.

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