GRAND VALLEY STATE UNIVERSITY®

GEOLOGY DEPARTMENT

Geology Newsletter - Fall 2025

Chair's Letter

By **Patrick (Pat) Colgan** colganp@gvsu.edu

Happy holidays students, alumni, and friends!
It has been some time since we put out a geology newsletter, but it's better late than never! I hope this newsletter will update you on our department and on new faces, recent accomplishments and current challenges. In the last few years, familiar faculty and staff have retired or moved within the university; and at the same time, we have welcomed new colleagues and look forward to the future.

Professors **Kevin Cole** and **Ginny Peterson** have retired and moved on to new lives, more time for fun, hobbies, and exploring new places. Kevin retired in 2024, and Ginny retired at the end of the 2024-2025 academic year. Kevin and Susie moved to Washington State, and Ginny and Jon have been travelling a bit. Ginny has also been in and out of the department over the past semester working on projects. **Greg Wilson** our long-serving geology lab coordinator retired at the end of the 2023-2024 academic year and alumna **Brittany Ward** took over the job starting in summer 2024. Professor **Figen Mekik** is currently on leave from geology and resides in physics to concentrate on the new B.S. Climate Science program while continuing her teaching in geology and climate science.

Our new geology faculty are Professors **Ian Winkelstern**, **Reece Elling**, **Heather Moody**, **Ally Brown**, **Carrie Menold**, and **Mick McRivette**. Ian moved from an affiliate to tenure track position in 2023, and then Reece was hired in 2023 as an affiliate faculty member to teach in geology. Heather is in geography but was hired as part of a cluster hire so has been teaching environmental geology in our unit since 2023. Ally started in fall 2025 as a new assistant professor teaching in both integrated science and geology programs. Carrie started in fall 2025 as a full professor to teach mineralogy & petrology, and other hard rock courses. Mick was hired this fall as an affiliate faculty focused on teaching geology classes, and remote sensing and geographic information systems in the future. There are now new faces and energy in geology!

We have two new exciting degree programs just approved by the university in 2025 and now offered in our department: **B.S. in Climate Science** (major and minor), and **B.S. in Environmental Science** (major and minor) offered in cooperation with the biology and chemistry departments. We continue to train students in traditional geology, environmental geology, and geochemistry, as well as science teaching in our **B.S. Geology**, **B.S. Geology & Chemistry**, and in our new science education courses (see inside).

Peter Riemersma was awarded the GVSU 2025 Outstanding Educator Award . "Prof. Riemersma has spent more than two decades sparking curiosity and connection in and beyond the classroom." See full article in link above.

A 2025 highlight was that Prof. **Peter Riemersma** was awarded the *Distinguished Teaching Award* by the GVSU Alumni Association! Prof. **Ian Winkelstern** has been nominated for a GVSU *Distinguished Early Career Award*; congrats to Peter and please keep your fingers crossed for Ian!

Field trips have always been a big part of all our programs. In summer of 2024, **Steve Mattox** led another trip to Iceland for geology students and non-majors. **Peter Wampler** and **Peter Riemersma** led a new trip called Water in the West in both 2024-25. See more inside for those trips.

We continue to offer field trips, both local and farther away in all our courses. Just this semester **Carrie Menold** and **Reece Elling** led students in GEO214- *Solid Earth Materials and Systems* on a trip to the Upper Peninsula of Michigan, John Weber once again led GEO311- *Structural Geology* students to the Baraboo Hills of Wisconsin, **Pat Colgan** led two GEO320-*Geomorphology* trips to local sites in Ottawa, Kent, and Montcalm counties. **Peter Riemersma** led a trip to the Ozarks of Missouri for GEO112-*Earth History*, and **Tara Kneeshaw** led a GEO440 - *Geohydrology* trip to eastern Michigan.

Finally, we thank Prof. **Merritt Delano-Taylor** of biomedical sciences for serving as interim unit head for the last three years. Merritt helped our unit as we transitioned to new leadership. After Merrit left us in June 2025 **Peter Riemersma** served as acting unit head in the summer, **Pat Colgan** served in fall 2025, and **Steve Mattox** is serving in the winter 2026. All three professors have worked together as a leadership team, and this semester we added **Carrie Menold** to the leadership team.

I hope you enjoy hearing about what students, staff, and faculty have been up to recently. Please stop in and visit anytime you can!

Best Wishes,

Pat

Pat Colgan and a large glacial erratic of ~2.7 Ga Archean gneiss located on the property of Whitehall Excavating just east of Whitehall at 2571 Holton-Whitehall Road, Whitehall, Michigan. Check it out if you are in the area! The glacial erratic was excavated from till in the Port Huron age Montague moraine a few miles to the west.

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Brandon Chiasera – Visiting Professor
Patrick Colgan – Professor & Unit Head
Reece Elling – Affiliate Faculty
Kelly Heid – Senior Affiliate Faculty
Tara Kneeshaw – Assistant Professor
Mitzi Loving – Department Coordinator
Steve Mattox –Professor
Figen Mekik – Professor (Physics)
Carrie Menold – Professor
Heather Moody – Professor (Geography)
Peter Riemersma – Associate Professor
Mick McRivette – Affiliate Faculty
Marie Solum – Visiting Professor
Peter Wampler – Professor (Honors College)
Brittany Ward – Laboratory Manager
John Weber – Professor
Dylan Wilmeth – Visiting Professor
Ian Winkelstern – Assistant Professor

Retired faculty
Kevin Cole – Associate Professor
Bill Neal – Emeritus Professor
Ginny Peterson - Emeritus Professor
Patricia Videtich – Emeritus Professor

New Degree Programs in Geology!

Climate Science – B.S. Degree

Text From B.S. Climate Science

Grand Valley's Bachelor of Science (B.S.) in Climate Science prepares students for careers in multiple sectors such as industry, agriculture, insurance, law, finance, education, science, and health. Students will learn to help other professionals communicate about climate change meaningfully and make informed decisions about the magnitude and impacts of expected climate change and its mitigation.

The well-rounded and interdisciplinary curriculum draws from the geosciences, physics, chemistry, mathematics, and statistics. Students explore a wide range of topics that help them understand the complexities of Earth's systems, including earth system science, geochemistry, oceanography, atmospheric science, and earth history.

What is Climate Science Literacy (NASA)

GVSU's climate science program is the only one of its kind in Michigan, offering students a unique and immersive educational experience. Whether it's conducting field studies, working with climate models, or diving into educational research, students get to apply what they learn in real-world settings. Undergraduate students also benefit from one-on-one mentoring in research, curriculum development, and other educational projects. The study of climate change is growing rapidly nationally. There are many avenues of employment for climate scientists in Michigan and across the country.

Program contact – **Figen Mekik**
(mekikf@gvsu.edu)

Environmental Science – B.S. Degree

Text from B.S. Environmental Science Program

Grand Valley's B.S. in Environmental Science is all about preparing students for the real world. The program blends hands-on, interdisciplinary learning with real projects and experiences that reflect what environmental scientists do. Whether students plan to enter the job market right after graduation or pursue advanced degrees, they'll build a strong, job-ready portfolio.

Environmental Science at GVSU

Students explore environmental issues through life, earth, physical, and chemical sciences—and learn how these fields work together to solve real problems. The program also offers a curated list of electives so students can focus on the areas they're most passionate about.

Grand Valley's program is unique in that it is built with input from professionals in the field, so students gain practical skills in fieldwork, lab techniques, data analysis, teamwork, and more. Plus, it's the only program in Michigan where students earn a certification that's required for many environmental science jobs. And with the field expected to grow 6% by 2032, GVSU graduates will be ready to take full advantage.

Program contact – **Tara Kneeshaw**
(kneeshaw@gvsu.edu)

2025 Department Graduates

B.S. Geology
Owen Alston*
Angela Castle*
Nadia Fuller*
Maya Giannecchini
Wyatt Larsen
Ella Puffer
Katelyn Smith*
Kristen Gretka (minor)
James Waibel
*Environmental geology emphasis

B.S. Geology-Chemistry
Ben Burroughs
Jacob Dunwoody

B.S. Integrated Science
Brielle Wigent (elementary education)

Current Majors Update

The number of majors in our department fell just before and during the 2020 pandemic as in most geology department nationwide. We are now slowly increasing and regrowing our majors with new programs and new options for students. This fall we saw record enrollments in 2025 general education courses (n = ~2160) and our major enrollments in our upper-level courses rise are almost back up to 2019 pre-pandemic levels.

Climate Science	majors = 5, minors = 3
Earth Science*	majors = 0, minors = 1
E.S. Teaching*	majors = 3, minors = 1
Env. Science	majors = 6, minors = 12
Geology	majors = 44, minors = 7
Geochemistry	majors = 6, minors = 3
PCKET** Sci pK-6	majors = 46, minors = 1
Total	majors = 110, minors = 28

*B.S. Earth Science & Earth Science Teaching have been discontinued.

Preservice content knowledge in elementary teaching (PCKET). **Our geoscience education faculty staff classes for more than 600 students in this program!

Geology Club News

President: **Andrew Neckerman**
Vice President: **Michael Baldus**
Financial Officer: **Audrey Kneal**
Membership Officer: **Delaney Novach**
Sales Officer: **Noah Valentine**

The Geology Club had a successful and exciting year of trips, sales, and engagement. During the winter semester, the club took a trip to Crystal Springs, Arkansas to hunt for quartz points and the elusive wavellite. In fall we traveled to Alpena in the Upper Peninsula to search for fossils and bask in the beautiful fall colors. During both trips, club members went hiking, sightseeing, and swimming! In terms of sales, the club surpassed their fall fundraising goal of $2000 through diligent rock and mineral sales. The club ran a table in Kirkoff both winter and fall semesters, as well as a booth at the Tulip City Gem & Mineral Show last September.

Hanging out in Crystal Springs, Arkansas, spring break trip, March 2025.

Hiking near Alpena, Michigan in fall 2025.

Student Awards in 2025

Excellence in Discipline Awards
Hugo Rainy – Geology
Ben Burroughs – Geology-Chemistry
Chase Groothuis – Earth Science

Edward L. Tremba Award
Nadia Fuller (B.S. Geology ’25)
Angela Castle (B.S. Geology ’25)
Hugo Rainey (B.S. Geology expected ’25)

Tulip City Rock & Mineral Club Award
Ben Burroughs (B.S. Geology-Chemistry ’25)
Courtney Mais (B.S. Geology expected ’26)
Andrew Neckerman (B.S. Geology, expected ’26)
James Waibel (B.S. Geology, expected ’25)

Indian Mounds Award
Ben Burroughs (B.S. Geology-Chemistry, ’25)

Norman & Helen Gibson Field Study Scholarship
Madeline Owen (B.S. Integrated Science ’25)
Michael Baldus (B.S. Geology expected ’26)
Jennifer Markel (B.S. Geology expected ’26)
Andrew Neckerman (B.S. Geology expected ’26)

Field Camp Scholarships
Nadia Fuller (B.S. Geology ’25)
Dylan Ruiter (B.S. Geology expected ’26)
Angela Castle (B.S. Geology ’25)
Wyatt Larsen (B.S. Geology ’25)
Abraham Parsons (B.S. Geology & Biology, expected ’26)
Ella Puffer (B.S. Geology ’25)


GVSU geology students on a break.

Thanks to our Alumni in 2025!

In 2025 and in the past few years we have invited GVSU geology alums to participate in our geology seminar course (GEO485-486) by serving on an alumni panel to share their career experiences and advice. This has been extremely useful to our students who are planning their careers and will soon be in the job market! Thanks to all alumni who have participated and if you are interested in helping in the future, please contact the unit head at: **GeologyUnitHead@gvsu.edu**

Fall 2025 alumni panel event was on December 1 from 3-4 p.m. in Loutit 103. Alumni answered questions and did practice interviews with geology students in GEO486-*Geology Reading Seminar*.

Brian Beach (BS ’06, MS WMU)
Terracon, Grand Rapids
Haley Elling (BS ’17, MS UNC Chapel Hill)
World Vision USA
Alexandra Horman -guest (Albion, MS Indiana U)
Geosyntec Consultants, Grand Rapids
Kirk Perschbacher (BS ’07)
Fishbeck, Grand Rapids
Brad Stevens (BS ’11, MS GVSU)
Zeeland Public Schools
Katy Reminga (BS ’17, MS Missouri State U)
Atwell LLC, Allendale
Molly Sherwood (B.S. ’94, MS WMU)
Fleis & VandenBrink, Grand Rapids
Kent Waters (BS ’11, MS Univ. of Cincinnati)
Michigan EGLE, Grand Rapids

Winter 2025 Poster event was April 21, 2024, from 3-4 p.m. in Padnos 308. Students presented their posters from their seminar projects and alumni answered questions and reviewed student’s posters in the GEO485 geology writing seminar. Thanks to Professor **Ginny Peterson** for organizing this event!

Thanks to all the alumni who helped with this event!

Water in the West 2025

Story by Sarah Dudinetz, photos BY Kendra Stanley-Mills
See full story and photos in **GVMagazine**

In a Zion National Park shuttle bus, GVSU students prepared for their next hike: Scout's Lookout via the West Rim Trail. During the 25-minute ride, a look out the window provided a breathtaking view of natural rock formations, the Virgin River, and lush, green plants on the riverbanks that almost feel out of place in the desert. A voice recording on the bus pointed out common plant life, like watercress and maidenhair ferns. "Even the plants in Zion tell the story of water," the narrator said.

The story of water is exactly what students explored. As part of the inaugural Water in the West program, they participated in a high-impact learning experience that offered a first-hand look into water issues facing the U.S.

The program satisfied curriculum requirements for Meijer Honors College students with two weeks of online coursework prior to and following a four-week trip to the southwestern U.S. With stops in Colorado, Utah, Arizona and New Mexico, the trip allowed students — many for the first time — to witness the delicate balance within the Colorado River's water system. It presented a very stark change to the predictable and abundant water system in Michigan.

Students shuffled off of the bus, applied another coat of sunscreen and awaited further instruction from the trip's geology professors, **Peter Wampler** and **Peter Riemersma** (referred to frequently by students as "The Peters"). Wampler quizzed them on the cross-bedding — the geological phenomenon where the movement of sediment by wind and water results in visible, angled lines in rock formations — on the mountains they would soon be hiking, asking which way the wind must have been blowing millions of years ago in order for the rocks to look that way. It was one of the things students learned before leaving on the trip.

Questions like that from the "Peters" became routine for students, prompting them to pay greater attention to the natural world around them. In fact, the crossbeds in Zion were one of Lillie Waldron's favorite memories.

"You can look at these crossbeds and see which way the wind was blowing and the water was moving millions of years ago," said Waldron, a junior studying biochemistry. "We have this connection to millions of years ago right in front of us. It's something I wouldn't even have thought about if [the Peters] weren't here with me."

It's just one example of the kind of learning that best takes place outside of the classroom. "It's one thing to go to a lecture and learn the facts. But it's another thing to spend hours hiking around Zion and Bryce Canyon and Arches," Peter Riemersma said. "It's the difference between learning something briefly and truly experiencing it."

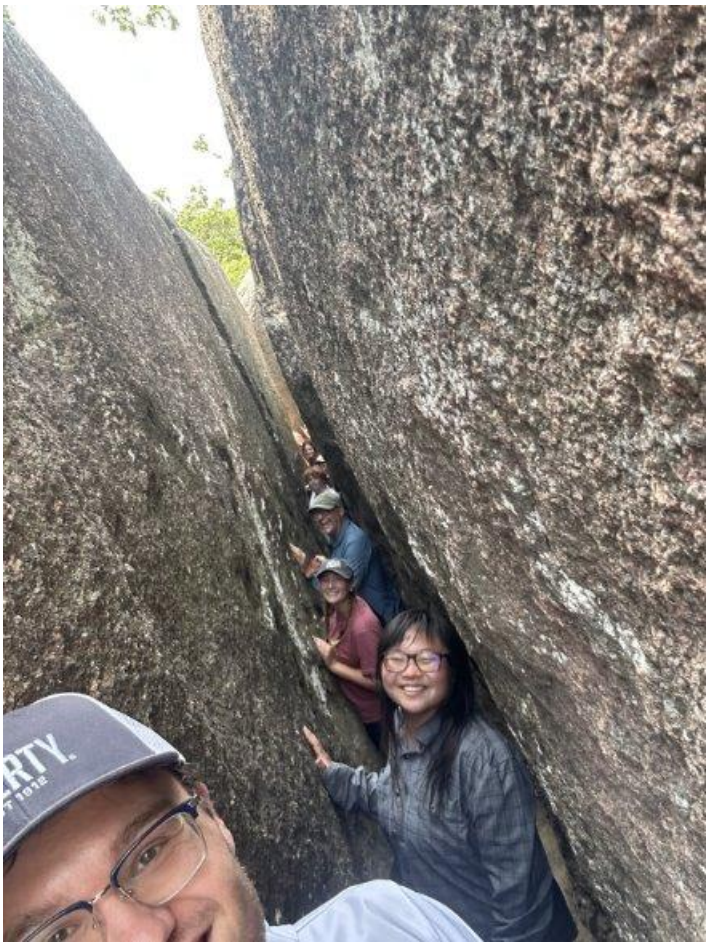
On a trip with two geology experts, a graduate assistant, two teaching assistants, and 21 students with majors ranging from legal studies to mechanical engineering to natural resource management, each member of the group contributed their own unique knowledge through car rides, long hikes and nightly group dinners…..see the full story in link above!

2025 Geology Courses & Trips

Students on the fall 2025 GEO112 – Earth History field trip to Missouri led by Prof. Riemersma.

Some things never change….it is still cold in Padnos 119 (old cartography lab). Geologist **Karen Fey** wraps up to survive another GEO320-*Geomorphology* lecture.

GEO312-Sed/Strat students on a field trip.



Students on the fall 2025 GEO112 – Earth History field trip to Missouri led by Prof. Riemersma.

Prof. Colgan and students examining an esker in Montcalm County in GEO480/580 - *Applied Glacial & Quaternary Geomorphology* offered in winter 2025 semester. The course was online asynchronous to allow EGLE professionals and GVSU undergraduates to take the course, while still having four one-day field trips.

GEO440-Hydrogeology students visiting active groundwater monitoring site with demo led by alum Madeline Mennenga (far right), now project manager at SES Environmental.

Prof. **Peter Riemersma** on the Hoffmaster field trip in early September for new geology majors and other interested students. Peter has been doing this trip for many years to introduce new students to each other and our department.

Students learn chemistry and mineralogy in GEO214 – *Solid Earth Materials and systems* laboratory.

More mineralogy via M&Ms in GEO214. Nice vest Delaney!

Students working on glacial correlations in GEO480-580 – Applied Glacial and Quaternary Geomorphology on a visit to the Michigan Repository for Research and Education in Kalamazoo. Students studied archived glacial cores and then correlated units based on their interpretations of the units.

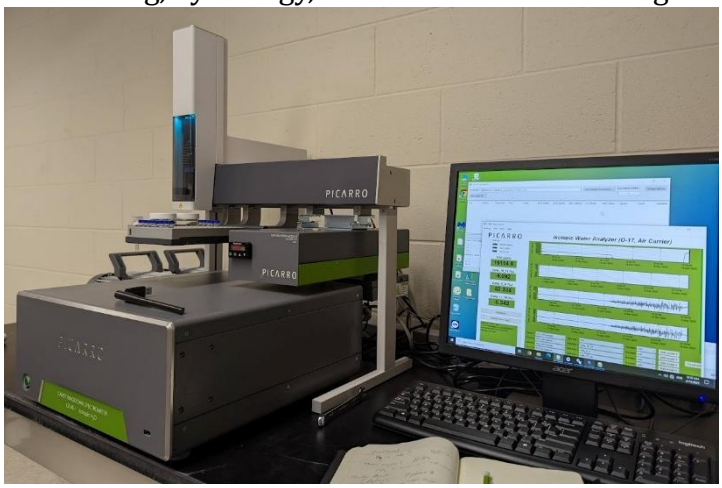
Measuring the section at Grand Ledge on the W2025 GEO-112-*Earth History* class trip to learn sedimentology & stratigraphy and collect fossils at the clay pits nearby.

New Equipment in the Department

Picarro water isotope analyzer

by Ian Winkelstern

Over spring break in March 2025 we had a state-of-the-art Picarro water isotope analyzer installed as part of the newly established Water Isotope Lab. The analyzer was funded by a $241k NSF grant written by an interdisciplinary Grand Valley team, including **Tara Kneeshaw** and PI **Ian Winkelstern**. The instrument measures oxygen and hydrogen isotopes in virtually any water sample, opening opportunities for research in paleoclimate, groundwater monitoring, hydrology, and environmental change.



New Picaro water isotope analyzer obtained by Professors **Winkelstern** and **Kneeshaw** via a National Science Foundation major research instrumentation grant. The machine can analyze dozens of water samples overnight for O & H isotopes.

Students are already putting the system to work. One project is conducting a comprehensive survey of waters across the Grand River watershed, including precipitation, rivers, and lakes, to build the first baseline isotope dataset for the region. Another student is using isotope data to refine a lake-scale hydrologic budget. The lab has also begun analyzing external samples for collaborators at other universities. The Water Isotope Lab is quickly becoming an important resource for both student training and regional water science.

Geology student **Michaela Brossman & Ian Winkelstern** completed a project in summer and presented her work at the 2025 GSA meeting in San Antonio. The poster was titled, *Stable Isotope Survey of the Lakes and Freshwater Carbonates of the Grand River, Michigan Watershed.*

Malvern Mastersizer 3000

By Pat Colgan

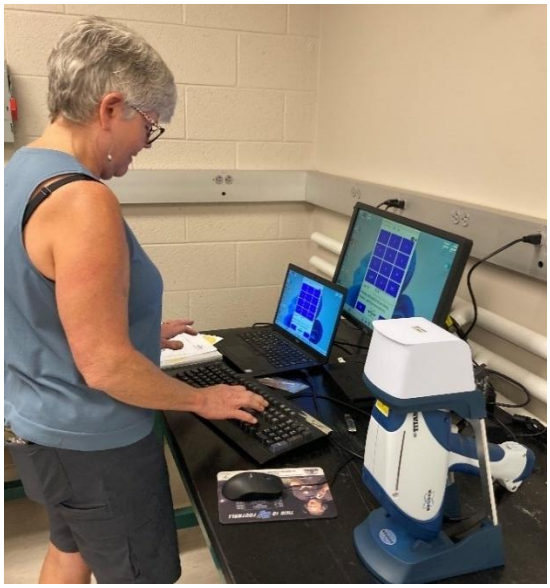
In July 2024 the Michigan Geological Survey purchased a Malvern Mastersizer 3000 and it is on loan to GVSU so that **Patrick Colgan** and students could analyze sediment grain size using state-of-the-art laser diffraction particle size methods. Since this time geology students working in the lab have analyzed more than 600 samples obtained during mapping and drilling in Muskegon, Kent, and Montcalm Counties. Unlike older methods such as pipette and hydrometer methods, the Mastersizer produces continuous grain size curves for particles ranging from 0.1 to 3000 microns. This includes the entire clay, silt, and sand fraction eliminating problems of the past of tying sieve data with pipette and hydrometer methods.

Ella Puffer (B.S. Geology 2025) and the Malvern Mastersizer 3000. Sediment samples (0.2 to 2 g in mass) are suspended in a water dispersant and then pumped through a chamber where laser light interacts with the particles and software iteratively determines the grain size based on the diffraction patterns produced. Once prepped a set of 3-4 sample replicates can be analyzed in 15-20 minutes producing continuous grain size curves, summary statistics, and uncertainty analyses.

Geology students working in the MGS Grain Size lab at GVSU since fall 2023 include **Ella Puffer** (2023-25), **Jonathan Santiago** (2023-24), **Evan Kosiorowski** (2024-25), **Michael Baldus** (2024), **Michaela Brossman** (2024-25), **Audrey Kneal** (2025), **Jennifer Jones** (2024-25), **Molly Strunk** (2025), and **Sofie Spitael** (2025).

Bruker S1 Titan Handheld XRF Analyzer

By Brittany Ward



Prof. **Ginny Peterson** using the new XRF analyzer.

The Geology Department acquired a new Bruker S1 Titan Handheld XRF Analyzer. This instrument uses non-destructive methods to analyze the elemental composition of solid and powdered rocks and minerals, soils, and liquids, analyzing elements from magnesium to uranium. This portable instrument can even be used in the field! The portable XRF is perfect for class demonstrations, and its ease of use makes it great for student research projects. Alumni Ben Burroughs made excellent use of the XRF for his research about Keweenaw rocks and presented results at GSA in San Antonio this fall.

A new home for the geology department's long-suffering fossil collection. We converted the old field equipment room (185 Padnos) into a permanent storage area for our collection and for future work in paleontology & sedimentary petrology.

Faculty and Staff News

Faculty and staff letters were edited to fit in the given space this year. Sorry, but this year's limit was ~350 words!

Ally Brown – Assistant Professor

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Assistant professor **Ally Brown**. Ally joined our department in fall 2025 and taught GEO203 – Weather & Climate for the first time!

Hello, everyone! I am delighted to join the Geology Department this fall as a new Assistant Professor. Having spent my undergraduate and graduate careers in the Southeast United States, I am excited for the experiences and beautiful nature that Michigan has to offer. Since moving, my partner and I have enjoyed many sunsets over Lake Michigan, and in November, we even caught a glimpse of the Northern Lights over southern Grand Rapids!

Northern Lights over Grand Rapids by Prof. Brown.

During my graduate work at Auburn University, I examined best practices for teaching climate science and how increased domain knowledge can shape climate perspectives and risk perceptions among college students in the polarized South. This semester, I enjoyed applying insights from my research in my GEO203-*Weather and Climate* course, which included a unique mix of future secondary teachers and climate science majors. Teaching such a diverse group has challenged me to design adaptable, engaging curriculum that resonates with students pursuing different paths. One highlight was a four-hour mock "Conference of the Parties" simulation in which students assumed the roles of global stakeholders and used knowledge they developed throughout the semester to negotiate climate-smart policies. Watching them synthesize and apply course concepts in this way was incredibly rewarding and a wonderful capstone to my first semester at GVSU.

Students participating in the Conference of the Parties simulation!

Beyond teaching, I have been working to advance my dissertation research and build collaborations on campus. My paper Eye Tracking EzGCM, an Online Climate Modeling Tool, to Evaluate Three Dimensions of Usability was published in Weather, Climate, and Society in November, and I am preparing two additional manuscripts that I hope to submit by the end of the academic year. I have also partnered with a faculty member in Biology to develop a field-based science course for future primary teachers at Pierce Cedar Creek. With support from an FTLC grant we were awarded this fall, we will offer the new course this summer.

Overall, I have been deeply impressed by my colleagues' dedication to creating meaningful, student-centered learning experiences. I look forward to contributing to the Geology Department, supporting the new B.S. Climate Science major, and helping prepare preservice teachers to feel confident teaching science in their future classrooms.

Caitlin Callahan – Associate Professor

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In 2025, a highlight for me was a new department routine of a Friday lunch conversation around teaching. The event was inspired by the book "A Curious Mind: The Secret to a Bigger Life" by the film producer, Brian Grazer. Early in his professional life, he adopted a practice of having short meetings with people whom he found interesting. Thus, the spirit of our lunch hour was to meet and talk over what we are doing in our classes. I delighted in getting to learn from the others who regularly joined the hour including Professors **Reece Elling**, **Marie Solum**, **Brandon Chiasera**, **Ally Brown**, and our lab manager, **Brittany Ward**. It was fun to hear about our mutual efforts, share teaching strategies or resources, and reflect on questions from our classes.

Otherwise, I continued to teach courses for future elementary teachers, including the capstone course which focuses on using education research as a way to learn about teaching. My academic home is geology, but I am a science education researcher. For me, the capstone course is therefore really a thrill—and also a challenge—because I get to work with students in the content area that I find so fascinating. The capstone course for preservice teachers is not like the geology capstone seminar, in which all the faculty are involved; in the education course, there is only one professor in the room for 20 students. I liken the experience to a bit of a tightrope walk: I am guide, editor, and supporter of a wide range of projects from English, Math, Social Studies, and Science elementary teaching. In scholarship, I published a paper with collaborators from Elon University (NC) on a project focused on the connections between how STEM faculty teach and how STEM faculty describe their roles and experiences in life. I also submitted another paper for publication; this one is about my perspective on field trips as a geologist with disabilities.

Brandon Chiasera – Visiting Professor

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Brandon has been a visiting professor since fall 2024 and is in his second year here at GVSU. Brandon has been teaching GenEd courses such as GEO100-Environemtal Geology.

Kevin Cole – retired Associate Professor

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Last May Susan and I sold our house, packed up my minerals and moved back to Washington with the help of my brothers, alum **Dave Trudeau** and many friends. Before we left, we bought a new Sprinter van which we are currently converting to a campervan. The van doubled as a moving van. We plan to continue traveling but now will skip the step of pitching a tent in the pouring rain! We did meet my dad and brother on the Oregon coast and spent some time camping and hiking. Later we had a pig roast to celebrate my dad's 94'th birthday-lots of guests and no leftovers from a 65lb pig!

We temporarily moved in with Kevin's father and brother in Keyport. Our travel plans were diminished by some serious health issues in the family. We finally found a house to buy, not with the amount of acreage we are used to, but close to family and friends in PNW. Our next big project is to build a shop; our new house needs furniture!

We got together with alums **Eli DenBesten** and **Jackie Bussey** and **baby Lucy** for a fun time on the Oregon coast. We also met up with **Bill** and **Mary Neal** as well as **Ginny** and **Jon** this summer. We hope that there will be an annual visit! Fortunately for us many of our friends have family out here.

I spend my free time hiking with my father and brother, collecting mushrooms for breakfast each day. Every day, I am in the shop working on assorted wood projects. Susan continues to weave and has joined a new weaving guild. This year she was the highest seller at their annual sale.

We lived in Michigan for 36 mostly good years and miss our friends and colleagues dearly. Now that we have a new home, we hope to have visits from our friends and share with them the great geology of Washington.

Pat Colgan – Professor & Unit head F25

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Teaching this year has been fun and challenging! In winter 2025 I taught a big section GEO112 - *Earth History* for the last time to excellent students (see below). Also taught a one-off online asynchronous GEO480/580–*Applied Glacial & Quaternary Geomorphology* to EGLE professionals and geology undergrads. In fall I taught geomorphology to 17 geology juniors and seniors. We had excellent weather for field trips. Three EGLE employees took the course for grad credit, so our department got some credit for that.

Winter 2025 GEO112 – Earth History students at the Lincoln Brick pit near Grand ledge, Michigan. They are all smiling so must be having a good time….

Since 2020 I have been working as a contract mapper with the Michigan Geological Survey (MGS) and managing and running a grain size lab at GVSU to analyze sediment from cores drilled and collected during our MGS county mapping projects. We have employed about 9 geology students to work in the last since fall 2023, and we have completed county

mapping projects in Ottawa (2021), Allegan (2022), Muskegon (2023-2025) and we are currently in year two of mapping Montcalm County (2025-2026). These projects are funded by USGS StateMap grants and MGS. Final geological maps are available online from MGS as pdfs and spatial data files (USGS GEMs format). I am now on a 2-year phased retirement and will not be teaching in winter 2026 but instead working on Montcalm County mapping project.

As the fall semester winds up, I am beginning to transition into retirement and looking forward to focusing on mapping projects, time for travel, spending more time reading, doing woodworking projects and tending the woods around our cabin. My last semester of teaching will be fall 2026 and in the winter 2027, I will continue working on MGS mapping projects and keeping the GVSU grain size lab running with some excellent geology undergrads. This work could go on at least until 2028 if our next grant to map Monroe County, Michigan is funded for 2026-2028. So, while I am retiring from teaching and service, I hope to continue working in geology and learning new things!

Reece Elling – Affiliate Faculty

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It's hard to believe this is already my third year here as a faculty member. However, since this is the first newsletter I've been a part of, here's a brief introduction as well! Since graduating from GVSU in 2016, I completed a PhD in geophysics at Northwestern University. While I explored other career paths, I kept being drawn back to my passion for teaching. I'm excited to be back here as a colleague and professor for some incredible students.

During the fall 2024 semester, my wife, Hayley, and I had our first daughter, and we've been loving every moment of parenthood. Despite the (amazing) distractions that having a baby in the middle of a semester brings, I was still able to lead two great field trips for courses I taught last year. In Structural Geology, I got to lead my first trip to Baraboo, Wisconsin. In Solid Earth Materials and Systems, Ginny Peterson helped lead a trip to the Appalachian Mountains, where we got to link up with fellow Alumnus Eric Baar for a mine tour.

Aside from those major courses, I've primarily been enjoying teaching intro courses like Living with the Great Lakes and Environmental Geology. I love seeing students get excited while learning about the geology of their homes in Living with the Great Lakes and have enjoyed participating in Angus Cruises each Fall semester. Next semester I get the opportunity to teach Geophysics, and I'm excited to be able to share a bit of my favorite topic in geology with the students in that course.

While I'm happy that I'm able to focus most of my energy on teaching as an Affiliate faculty member, I have been able to explore some interesting research opportunities with students as well. A couple students and I are investigating the "red beds" of Ionia, Michigan from a paleomagnetic perspective. With the help of John Weber, we found outcrops of these controversial "youngest rocks in Michigan" and took several samples to the Institute for Rock Magnetism at the University of Minnesota for analysis. Jennifer Jones and I are still interpreting the data and writing up what we've learned but we hope to share the results at the annual GSA conference next year. I've enjoyed returning to GVSU as a professor, and I'm looking forward to the new challenges that this next year will bring!

GVSU alum (BS Geology 2016) and affiliate faculty member **Reece Elling**. Reece joined our faculty in 2023. Reece received his Ph.D. in Earth & Planetary Sciences in 2022 from Northwestern University.

Kelly Heid – Senior Affiliate Faculty

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Time flies when you are having fun. I've been teaching for over 35 years, and I still feel lucky to be in the classroom. I'm still teaching GEO111-*Exploring the Earth* for incoming freshmen. The last few years I spent time getting a new course GEO109-*Natural Hazards and Disasters* thorough the curriculum committee. I'm happy to say it was approved for the Fall 2024 semester. The best part of the new course is I get to use my broad geoscience background to share information about both atmospheric and geologic hazards.

Last summer I visited family in Missouri for a wedding/reunion/dad's 90th birthday party at my brother's farm. I was so happy to be able to spend time visiting with my many nieces and nephews who are spread across the US. We have a new engagement in the fam and looking forward to the next wedding/reunion as soon as he gets it planned.

I have some trips in the planning stage for Pat and me between his work for the department and mapping. Sammy, our 18-year-old terrier keeps me busy. His eyesight isn't the greatest but otherwise he's still going strong. I have also been trying to do some gardening again. I planted another 200 daffodil bulbs this fall, and I plan to add more lavender and rosemary this summer. No deer salad plants. Have a great holiday break!

Students on a GEO111 – *Exploring the Earth* field trip to Aman Park led by Professor Heid.

Professor Tara Kneeshaw on the beach.

Tara Kneeshaw – Assistant Professor

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It's been a very busy and rewarding fall semester. I've had a lot of fun teaching our majors' courses and especially enjoying GEO440-*Geohydrology* again this year. The class included several field trips (some of which brought us back to sites now staffed by our own alumni) and a Saturday joint field experience with Eastern Michigan University's hydrogeology students. It's always energizing to see our students learning alongside peers from other programs.

Beyond campus, I continue to teach the WMU *Hydrogeology Field Course* each summer, which keeps me connected with a broad community of industry professionals and students from a wide range of backgrounds. I've also been deeply involved in developing and now directing our new **B.S. Environmental Science** major at GVSU. I'm excited about how this program will complement and support geology in the years ahead.

Research has taken some fun new turns as well. I've been working on soil carbon sequestration and monitoring in partnership with a local sheep-grazing operation - an unexpected but wonderful entry point into learning more about alternative land-management strategies and their biogeochemical impacts. This project has supported multiple student researchers and presentations and continues to grow. I also recently was co-author on a long-term study of Lake Michigan water isotopes

and hydrologic cycling, a collaborative effort involving several former students.

On the home front, Josh and I kept up our annual summer camping tradition with a trip through Utah, and we're now enjoying our small Christmas tree farm - our trees planted nearly a decade ago are finally ready for harvest. Life is full, good, and grounded, and I always love hearing updates from our alumni…hint, hint.

Prof. Steve Mattox in Iceland in summer 2024.

Steve Mattox –Professor & Unit Head W26

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A lot has happened during the COVID Era and since. I'll do my best to share a succent report.

The State of Michigan mandates and the universities respond. With great sadness we retired our excellent Integrated Science K-8 program for the new pK-6 Pedagogical Content Knowledge for Teaching major. Those ISCI students were terrific collaborators and are now leaders in their buildings. The State decided discipline-specific secondary science majors, like Earth science and biology, were no longer needed and that all students should be able to teach all sciences. I miss having students work with us to develop a deep understanding of geology.

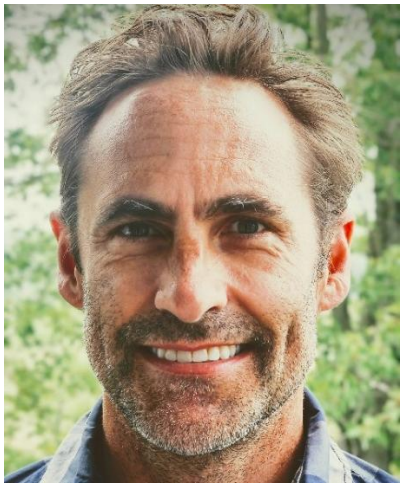
I ran two study abroad trips to Iceland with **Tari Mattox** of GRCC. Both groups benefited from the insights of **Thor Thordarson**, our University of Iceland colleague. In 2023, after a moderate hike, the students watched the eruption. In 2024, our return to Reykjavik was blocked by a jökulhlaup (glacier flood) that removed half of the highway. Fortunately, Thor provided access to the Nordic Volcanological Institute's field station where we managed to house all 18 of us under one roof. We enjoyed the group meal and making a full loop on the "ring road". In 2024, we were also blessed with an "All Star" team with **Dylan Wilmeth** and **A.K. Kotash** also helping with logistics and teaching. As always Tari and I stayed extra days after the students returned home, most recently in a small cabin at the south end of Þingvallavatn.

My Science secondary student collaborators have been doing good things. **Steven St. John** was co-author on a summary talk about the High School Advanced Geology program at the 2023 GSA meeting. **Erin Jacob** and **Brooke Ramsey** published an article that guided students to track ash clouds from large eruptions. **Kristen Gretka** presented a talk on the unequal distribution of gravel resources. **Chad Koenig** is completing a manuscript on feedback in Earth systems using Greenland as a case study. **Madelin Owen** received a Gibson Scholarship to develop a lesson on the tectonic assembly of North America.

The program to test high school students for college credit continued smoothly during COVID. I have a great group of high school teachers that stepped up as needed to make online tests or pick up or drop off crates of rocks, topo maps, or exams. The program has settled into a group of eight talented teachers that share geoscience with hundreds of students each year. Since 2020, at least 20 students have selected geology as a major.

On the personal front Tari and I have enjoyed watching lava fountains in Hawaii and visiting most of the UNESCO World Heritage sites in Newfoundland.

Students on Iceland trip led by Steve and Tari Mattox.



Professor Mick McRivette. Mick joined us in Fall 2025 and teaches geology like GEO111-Exploring Earth courses as an affiliate professor. We are so lucky to have Mick here again with us in Geology!

Mick McRivette – Affiliate Faculty

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I am thrilled to be wrapping up my first semester as a new Affiliate Professor here in the Geology Department at GVSU. Actually, it is really a reunion for me – I taught here as a Visiting Professor in 2010-11, so it has been extra exciting to come back to a place with which I have some familiarity. Prior to returning, I was a tenured professor at Albion College. After many rewarding years there, fellow new faculty member Carrie Menold (my wife) and I decided that we were ready for some different experiences, opportunities, and challenges, and are so happy to have found a new home here at GVSU.

I should probably (re)introduce myself. I was born and raised in northern California, where I was fortunate to have many amazing natural places to explore within easy reach (Yosemite and the Sierras, the Pacific coast, the redwoods, etc.). With those formative experiences, it's probably not a surprise that I ended up studying geology at UC San Diego. After working for a couple years as an environmental consultant, I earned my PhD at UCLA. There, I was advised by GSA Penrose Medalist An Yin while investigating the tectonic evolution of the northern Tibetan Plateau. More recently, my interest in large-scale orogenic systems has led me to work on the Scandinavian Caledonides. As I settle in here at GVSU and the disruption of relocating recedes, I plan to continue that project with field work in Sweden tentatively planned for 2027.

In the meantime, I will be teaching 100-level courses here in the Geology Department, and possibly a GIS course or two. This fall, I taught a large section of GEO 111 with all of the labs. This was a bit of a change after being accustomed to classes of about no more than 40 students over the last several years, but I had great support from department faculty and staff (big thanks to Brittany Ward and her student workers!), as well as my fantastic TA Raychel Fennell.

It's been a great start, and I look forward to many wonderful years ahead!

Figen Mekik – Professor

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The Mekik Climatology Lab (MCL) is celebrating 26 years! Several exceptionally talented undergraduate researchers are working at MCL and going places - like grad school and to present their research at AGU. **Hugo Rainey** has been at MCL for 3 years mastering the arts of data generation, experimentation, and statistical modeling. **Christian Cline** has been so tenacious and creative with his "impossible research project" on the age of the seafloor, he became the story behind my OpEd coming out in *Faculty Focus* in January titled "Teamwork in Learning is Passé." **Ian Winkelstern** has been co-advising Hugo and Christian. I am also fortunate to have developed a collaboration with **Ben Holder** (Physics) who is co-advising a third student at MCL - **Anna Pappas** - making magic with Python code and ice core data. And the most junior researcher in MCL is **Mary Konnie**, a climate science major like Christian. Gratefully, we are funded generously through NSF.

In addition to working on my paleoclimatology research, I have been expanding my professional profile and the scope of MCL. I am a geologist who grew into an oceanographer and climate scientist over the years. Recently, using my degrees in engineering and capitalizing on my long career in academia, I focused my efforts into community engagement in four ways: [1] joining national conversations through publishing OpEds on University leadership, importance of students on a

college campus, asynchronous teaching, advice for college first-years, developing cognitive reserve, and climate literacy; [2] submitting a "solar for low-income households" project proposal to EGLE in collaboration with colleagues in Engineering and the Provost's office; [3] educating high school students and teachers on climate physics with **Ben Holder** and **Sofia Karampagia** (Physics); and [4] developing a new course and participating in a panel discussion on AI and its impacts, see the video.

New faculty member Carrie Menold (full professor) joined us in Fall 2025.

Carrie Menold – Professor

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I am delighted to have joined GVSU Geology this fall. Everyone has given me a very warm welcome: students, faculty and staff. I am taking over the hard rock and high temperature geochemistry curriculum from **Ginny Peterson**, which means I have big shoes to fill! She has been gracious and generous getting me up and running. This fall I am teaching GEO214 – *Solid Earth Materials & Systems* and will be adding GEO314-*Petrography* in the Winter semester.

While new to GVSU I have been a professor for 18 years, spending the first part of my career at Albion College where I was recently department chair. I love teaching and doing research with undergraduates. I grew up in mid-Michigan (not very far from where Ian did coincidentally). I went to Michigan for my B.S. in Geology and UCLA for my Ph.D. I have one main theme and two very different threads to my research. I study fluid-rock interactions in two very different extreme environments: ultrahigh-pressure rocks in subduction zones and volcanic rocks from the Moon. The Moon work is funded by NASA, and I am part of a Solar System Exploration Research Virtual Institute (SSERVI) team called CASA Moon. My research is always collaborative and involves lots of students, I have four working with me already and my rocks are not even fully unpacked!

My partner, **Mick McRivette**, has also joined the department, and we with our son Milo made the big move to Grand Rapids this summer. We are settling in and currently looking for a house! Looking forward to meeting you all as you come back to campus or say hi at GSA.

Professor Heather Moody.

Heather Moody – Associate Professor

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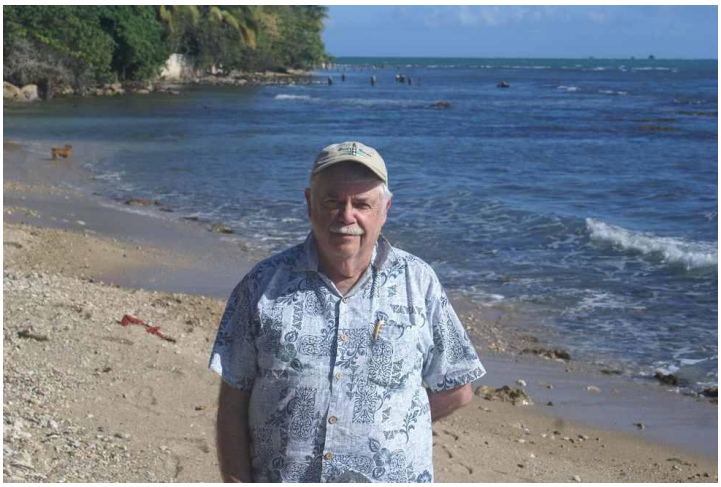
I began teaching in the geology and geography departments in 2023 and will also be teaching for the B.S. Environmental Science program beginning fall of 2026. My teaching and research interests include environmental justice and health disparities, environmental geology, water and food security, citizens science, climate change and sustainable energy, industrial ecology, biomimicry, ecological design, and collective community interdependence.

This fall and under GVSU's Environmental Climate Science Cluster funding, I was awarded an *EPA Region 5 Great Lakes Thriving Communities Grant* designed to coordinate with a community-based organization working on environmental justice issues. I worked with research assistants, **Lester Dominguez-Torres** (geography) and **Amanda Sexton** (geology) are measuring air pollution related to truck traffic in the Roosevelt Park neighborhoods. We also published *Environmental Indicators and Schools of Choice for Children Living in the Detroit Area* in the Journal of Urban Health with geography student **Lelia Sigmon**. She presented the research last year at GVSU's Student Scholars Day and at the international American Association of Geographers (AAG) Conference.

GVSU urban ecological design students planted raingardens, cleaned curb cut drainage systems, and calculated hydrologic absorption in Professor **Heather Moody's** class this fall.

This fall, I taught a new Voyage Community Based Learning course called Urban Ecological Design. This involved working with three community partners. The class planted raingardens, cleaned curb cut drainage systems, and calculated hydrologic absorption with LGROW. They surveyed native/invasive trees and calculated the overall tree benefits (carbon sequestration, rainwater interception, energy savings, property value increases etc.) for Millennium and Palmer Parks of the Kent County Parks Department. Finally, they met Alita Kelly, Founder + Alchemist of Jade Rabbit, to design the Garfield Park Community Garden using a 3D modeling program called SketchUp. The goal was to reduce food apartheid in the neighborhood. Presentations of this design will occur during finals week. I was also awarded a Catalyst Grant to work with another GVSU research assistant to study those impacted by air pollution emitted by the Grand Rapids Incinerator in addition to presenting a book chapter titled *Applied Scientific Research and Action in Experiential Learning: The Indian River Lagoon, Florida* and a paper entitled *Children's Blood Lead Levels in Detroit: A Medical Geography Assessment* at last winter's AAG Conference.



Bill Neal somewhere on a beach….

Bill Neal – Emeritus Professor

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In part, old age is a time for reflection, and I find myself reflecting often on the past. As varied as life has been, much of that reflection is tied to the Department and geology events, directly or indirectly. In 1971 I was the last hire into the "Johnny Lucke Era" and the beginning of the 4-man unit era with Lefebvre, Henderson, and TenBrink – when football was still a 'club sport' at GVSC, plate tectonics was the focus of our science, and global warming was yet to be noticed in spite of warnings as early as 1957. My professional and general life experience was very limited which was an advantage – I matured along with our majors, who then as now inspired my interests in geology and life as well. Thanks to every alum who came through our programs. Reflection tells me that I have lots of people to thank, and importantly my classmates and profs from undergraduate and graduate school days top the list. In short, I got to "run with the big dogs" and now model their continued "work" into "old

age" [like mentors Ray Gutschick, John Hubert, Tom Freeman, and Gerry Middleton]. I never worked at "networking" but that happened in spite of my lack of planning --- I went "with the flow" and probably had some heavenly oversight. So it was that I became associated with Orrin Pilkey for a span of 60 years, producing papers, books, and sharing field work on 4 continents and at sea. Orrin passed away in December 2024 at age 90 while he was beginning his 51st book, a sad loss but still an inspiration! I was a co-author of his next to last book "Vanishing Sands: Losing Beaches to Mining" (2022. Duke University Press).

An outcome of our published work in Colombia, I was contacted 6 years ago by Professor Nelson Rangel-Buitrago, Universidad del Atlántico, Barranquilla, asking if I was still interested in Colombia's coastal problems --- and a new era was born. Nelson is the type-section of networking, so I was adopted into his international group of coastal scientists. Numerous publications resulted and several more are in development. The studies foci have evolved from coastal hazards to litter on beaches, to plastics in coastal environments. We've also contributed articles to beach of the month (coastalcare.org). Continuing work into retirement has only been possible because our Dean and new-era geo-faculty tolerate my presence and provide office and computer support.

On the home front Mary and I now limit our travels, but we make an annual trip to Washington State's Puget Sound area [near where Susan and Kevin Cole now live] to visit family. And we continue a family tradition of spending a week on Beaver Island during the summer. In March a new addition is expected in our California branch bringing the number of great grandchildren to 11. Which of course triggers more lines of reflection --- but the word limit on reflections ends this one! Best to all of you --- Thanks for the inspiration you provide!

Ginny Peterson – Emeritus Professor

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This has been a year of major transition! In May I retired from GVSU and was awarded Emeritus Professor status. I took phased retirement last year, so I taught only in the Winter semester. The time away from teaching in the fall led to publication of a manuscript (with GV alum coauthors **DeYoung**, **Eyth**, **Mennenga**, and **Pummell**) in the AGU journal G3 using olivine microstructures and EBSD data to constrain mantle deformation conditions for emplacement of the Buck Creek Dunite in NC. We also took a bucket-list trip to the Galapagos Islands last fall; highlights were a hike up to the crater rim of Sierra Negra Volcano, snorkeling, and engaging with the unique wildlife, landscape and history. In March I co-led my final Southern Appalachians field trip with Reece Elling that included a great visit to the Albemarle Lithium mine in Kings Mountain, NC, led by alum Eric Baar.

GEO214-Solid Earth Materials & System students on their field trip to the Appalachians in winter 2025.

Since retiring I have been organizing my books and research and teaching samples to find appropriate homes. I am happy to report that my office is much less cluttered! I am also working on finishing a couple of other manuscripts based on work with former students. I was also asked to be the Technical Program Chair for the Denver GSA Connects meeting scheduled for October 2026. This means I will guide organization of the technical program from the submitted abstracts. I learned the ropes this past year as the Vice TPC for the meeting in San Antonio. I hope to see many of you in Denver next year!

Personal projects and travel have also filled my time since retiring. We spent significant time creating a new flower garden and building a new ground level deck to replace a failing concrete patio. I've been learning weaving with help from Susan Jansen and enjoy the challenge of a new creative endeavor. Jon and I also made several fun trips this year. The highlight was a 3-week tent camping trip

to destinations in Utah, Oregon, and Washington. We particularly loved Crater Lake, including a cold swim in the lake.

Prof. Peter Riemersma dressed as his favorite vegetable (sweet corn) for Halloween 2025.

Peter Riemersma – Associate Professor & Unit Head in summer 2025

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2025 was again a year of field excursions, to Kentucky with GEO312-*Sed-Strat*, out to the western U.S. for three weeks with Water in the West, to Missouri for GEO112-*Earth History*, overnight to Hoffmaster State Park for the Geology Department retreat, and overnight to Kirk Park with my GEO105-*Living with the Great Lakes* learning community. This was my last year teaching GEO312-*Sed/Strat* to a bumper crop of students (30) who enjoyed beach ball in the pool at the Maysville hotel, with one lucky and observant student finding an Indiana geode at the Bisher outcrop. Peter Wampler and I pulled off another *Water in the West* adventure for 20 students, improving an already great program with Airbnb accommodations, a cave tour, marble quarry tour, better hot springs and Zion Narrows. We are now soliciting applications for the 2026 WIWP.

Other highlights include the 20th Annual Chili Cook-Off. I gave a keynote lecture on Experiential Learning during lunch to the Alumni-in-Residence participants that involved a Raffle (polished Petosky stones, *Megaladon* teeth, geodes, geology bumper stickers). I was also honored with the 2025 *Outstanding Educator Award* by the GVSU Alumni Association. Thanks to the alumni who nominated me or wrote letters of support!

Geology major **Delaney Novach** presented a Student Scholars poster on her seminar project titled *Evaluating Surface-Groundwater Interactions in Constructed Wetlands: A South-Central Michigan Field Study*.

The BOY (Dakota) graduated from Stanford and is working for a geothermal company (FERVO) as an Energy and Marketing analyst (not as a geologist) while living in San Francisco. I am planning on retiring from GVSU at the end of Fall 2026 and am working my way through my "bucket list" of things to do. I got to mark one thing off my list by having the total points for GEO312 out of 10,000 (some labs were worth 150 points and exams were over 1000 points).


Visiting professor Marie Solum at Siccar Point Scotland in summer of 2025. Way to go Marie!

Marie Solum – Visiting Professor

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I began working as a GVSU Visiting Professor in August of 2024 and have enjoyed teaching introductory, general education courses including GEO100-*Environmental Geology*, GEO111-Exploring the Earth and GEO103-*Oceans*. I am a native Michigander who is so pleased to be teaching at GVSU! My background started in the environmental consulting world then moved into education. Over

the years, my family has lived in many places due to my husband's career in geology, including The Netherlands. I became a secondary education teacher in Texas and taught advanced high school geology, physical science and integrated science. After moving back to Michigan, I was the Director of Education Outreach for the Michigan Geological Survey where I enjoyed bringing outreach to students and the community. In the past few years, I have been involved in writing both regional and state-level Michigan Science Olympiad geology exams. I am a board member and president-elect for the Michigan Earth Science Teachers Association. I also spend my summers testing the water quality of Black Lake in Cheboygan County for the State of Michigan's MiCorp program. My husband and I have a son and daughter who are both in high school and we also have a Swedish foreign exchange student this year.

Brittany on the 2025 Water in the West trip.

Brittany Ward – laboratory coordinator
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2025 has been quite the year, and my first full year at GVSU as Lab Manager for the Geology department! My highlight was joining Peter Wampler and Peter Riemersma for their second iteration of the Water in the West program. We spent 3 weeks traveling from Michigan to the US West with students from various majors, including Geology's own Audrey Kneal. I learned a lot about the geology of the West and how to run a successful field trip from two seasoned field trip leaders. I gained two core memories this trip—viewing the sunrise at the Grand Canyon (don't ask me how early we had to get up for that though) and seeing Lucy Dacus at Red Rocks (my second time seeing Lucy this year).

This year I completed several organizational projects with student workers **Mollie Strunk**, **Jennifer Jones**, **Abraham Parsons**, **Ben Burroughs**, and **Andrew Neckermann**. Our highlight was folding rocks and minerals from retired faculty's personal collections into our department collection. So many interesting and special samples. Thank you, **Ginny Peterson**, **Kevin Cole**, and **Patty Videtich**!

Personally, this year I spent time camping with my partner, Anthony, and my dog JoJo. Nordhouse Dunes continues to be my favorite nearby getaway. Share your favorite spots with me! I also had the privilege of traveling around the US Midwest with Northern Lights Drum and Bugle Corps as their media person and a member of their board. Ask me about drum corps! Wishing you all a joyous 2026.

Peter and Leslie Wampler kayaking in the Canadian Rockies.

Peter Wampler – Professor (Honors College)
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As I look back on the last few years, the theme has undoubtedly been "flow"—much like the waters I've spent so much time studying. Life has been moving steadily forward, bringing with it a convergence of professional milestones and personal joys of growing families. On the research front, my work on the Grand River remains a primary passion. We have continued our ongoing monitoring of water quality parameters, tracking long-term trends that are vital for understanding the river's ecological health. I have also helped organize volunteers to remove over 4 ½ tons of garbage from the river. It is rewarding

(and occasionally muddy) work, but seeing a bit less garbage each year keeps me going back to make the Grand River more grand.

Closer to home, the current is even livelier. We are absolutely smitten with our two granddaughters, Rosie and Hazel who just turned 2 and 4 years old. They are a whirlwind of energy and imagination, and "Papi" (Haitian Creole for Grandpa) has fast become my favorite title. My youngest daughter, Katie, defended her PhD research dissertation in June, 2025. We are incredibly proud of her hard work and can officially call her "Dr. Katie." as little Rosie refers to her aunt.

Finally, the biggest shift of all: retirement. My wife, Leslie, has now entered full retirement from her 4th grade teaching position and is enjoying her well-earned freedom. As for me, I'm taking a slightly slower route. I have entered a period of phased retirement, allowing me to focus on my research while gradually stepping back. This "best of both worlds" approach will carry me through until December 2026, when I will join Leslie in full retirement. I am looking forward to many new chapters, both professional and personal, as I enter this phase of life.

Patty Videtich – Professor Emeritus

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Hello everybody! I hope all of you are doing well. I am still greatly enjoying retirement and am keeping very busy. As many retirees say, I don't know when I ever had time to work! It's true! I am still very much enjoying being part of a condo association located just north of Muskegon - lots of great neighbors. I have a rescue cockapoo, a twenty-pounder named **Piper**. She's a great buddy, has lots of doggie friends, and is very spoiled by her human neighbors. In the spring I bought a Chevy Equinox EV and love it. No more gas stations, oil changes, etc. I just plug it in in my garage and I'm ready to go! The next time you are looking for a new car, I highly recommend checking out an EV. For those like me from the Paleozoic Era . . . earlier this year I spoke to **Ed Tremba.** He seems to be doing pretty well and still lives in Albuquerque with his wife, Rose. I enjoyed seeing a bunch of you at Ginny's retirement picnic. Congrats, Ginny! I hope to see more of you at the next picnic. Until then, all the best, Patty and Piper too.

John Weber – Professor

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I took my 3rd sabbatical leave from GVSU last year. Its purpose was to complete the writing portion on a number of projects, to travel a bit, and to start some new work. Some of the highlights include: a few weeks of adventure and fieldwork in Trinidad with GV student, a combined family/geology trip to Newfoundland, a conference in Jamaica, research stays at the University of Ljubljana and Korea University each for 1 month, one paper published and five more submitted, in-revision, and in-progress. All in all, productive, invigorating, and fun!

Dylan Wilmeth – Visiting Professor

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This is my fourth year as a visiting professor. For three years, I mentored two **Maya Giannecchini** (B.S. Geology '25) and **Garrett Brown** (B.S. Biology '25). Our team investigated Michigan's oldest fossils: microbial stromatolites, 2.2 billion years old. Combined, Maya and Garrett received $14,000 of GVSU funding and each have a first-author publication in Precambrian Research (Brown et al., 2025; Giannecchini et al., accepted). Both students graduated in Spring 2025: Garrett is a PhD student at MSU (Plant Biology,) and Maya is a paleontology mitigator in the Southwest. I am extremely grateful to have such excellent students for first mentees.

This year, I was a co-author on a high-impact paper: a *Nature* article on early oxygen production

2.9 billion years ago in northern Canada (Patry et al., 2025). The article confirms photosynthesis evolved well before the Great Oxidation Event and is the culmination of my second postdoctoral position in Brest, France. I also authored a book chapter in *The Archean Earth*, out in December. The chapter covers life's evolution between 3.2 and 2.5 billion years ago.

Finally, I host *Bedrock: Earth's Earliest History*, the world's most popular geology podcast. The show has 30,000 monthly listens, over 1,000 reviews, and a 5-star rating. Bedrock starts at Earth's formation and works forward through time. After 50 episodes, the show is finally wrapping up the Eoarchean, 3.6 billion years ago. This is likely my last year at GVSU, so I am looking for my next job as a professor or a science communicator. I have had a great time at GVSU and will always look back fondly on my days here.

Ian Winkelstern – Assistant Professor

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This past year was my second year on the tenure track and full of new projects taking shape. This Fall I taught a course I designed for the first time, GEO 330-*Data Analysis for Earth Scientists*. It has been fun watching students get comfortable working with real data and new analytical tools. A big part of my summer was spent in the lab getting our new water isotope analyzer fully up and running, which has already started supporting several student projects.

I have also been preparing for the launch of a new field course on carbonate geology in the Bahamas. This upcoming spring break we will spend eight days at the Gerace Research Centre on San Salvador exploring the island's modern and ancient carbonate environments. I am co-teaching the course with Tim Evans from Biology, who has been taking students there for many years. I also published a paper in *Depositional Record* on the paleoclimate of San Salvador this year, which ties in nicely.

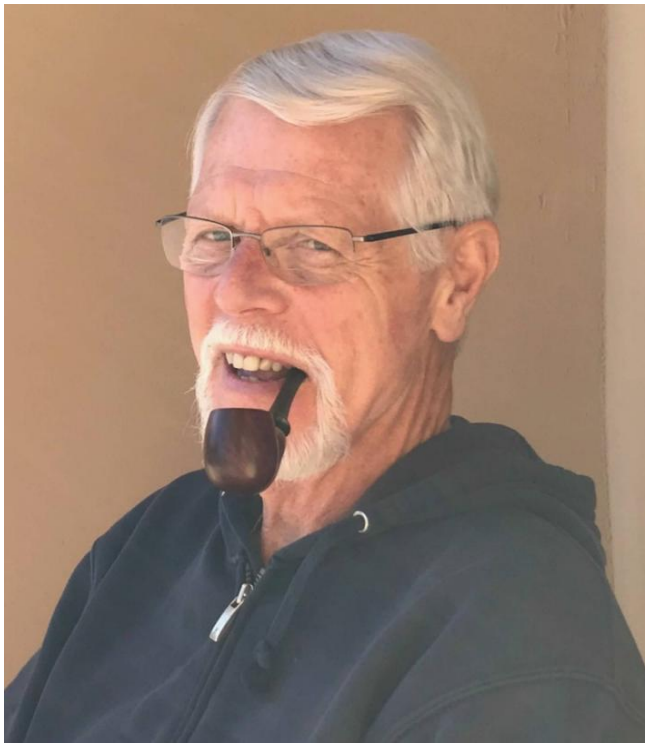
Another highlight of the summer was participating in "Science Saturdays" at Meijer Gardens, where I did a Michigan geology show-and-tell for families. Outside of work, my wife Colleen and I enjoyed several low-key adventures around Michigan with Paige (7) and Evan (4). We camped at Ludington State Park, fully used our John Ball Zoo membership, and spent a week Up North on Torch Lake. Wishing everyone a great start to the year and only the best rocks.

Prof. Winkelstern trains future geoscientists at an event at Meijer Park.

GEO214 students on a trip to the U.P. with Professors Carrie Menold and Reece Elling in fall 2025.

Faculty Remembrance

Norman W. TenBrink (1943-2023)



Norman W. TenBrink (1943-2023).

Professor Norm Tenbrink passed in March 2023. His many students and faculty colleagues remember Norm and his numerous contributions to Grand Valley and the geology department. See obituary below and a remembrance written by Bill Neal.

Norm TenBrink Obituary

Tribute to Norm TenBrink Published in *Arctic, Antarctic, and Alpine Research* by Bill Neal, alum Al Werner and Chris Waythomas.

Full article: Memorial to Norman W. Ten Brink (1943–2023)

When I first arrived at GVSU in Fall 2003 to replace Norm as the geomorphologist in geology, I managed to get extremely ill over the holiday break and Professor TenBrink came back out of retirement to take over our GEO320-*Geomorphology* course for the beginning of the winter semester. I will always appreciate this extremely kind and caring thing he did for our students and our unit – Pat Colgan.

Thomas Hendricks (1933-2023)

Thomas Hendrix (1933-2023).

In October 2023 Professor Tom Hendrix passed away, and the GVSU Geology Department lost one of its most distinguished faculty members in the unit's history. Read the full memoir by Bill Neal here.

Johnny Lucke and Dick Page doing plane table and alidade mapping (source Bill Neal?)

Guest Speakers in 2024-2025

We thank speakers for their time and for sharing their scientific insights!

Dr. James Ashley – November 2024
Formerly of NASA and the Jet Propulsion Laboratory.

The Geology of King Crater and Possible Future Role of Cavernous Environments in Lunar Melt Deposits for Supporting Long Term Exploration of the Moon

Dr. Ashley graduated from GVSU Geology in 1987. He earned a master's at MSU and then a PhD in planetary remote sensing from Arizona State in 2011. His background and experiences are diverse and exciting. He has served on numerous teams exploring Mars with fly-bys, landers, rovers, and helicopters. Recently, he was a team selecting possible sites for human habitation on the Moon. Dr. Ashley started his career with more than a decade of experience in hydrogeology and environmental engineering in Michigan and Arizona. Dr. Ashley recently started on a new career path as a senior hydrogeologist supporting environmental restoration efforts for the Cherokee Nation.

Fall 2025

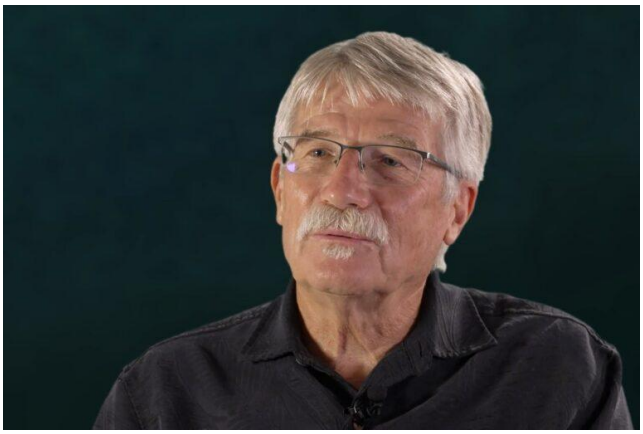
This fall we were fortunate to host two outside invited speakers who shared their expertise with faculty and students. Both gave impressive, engaging presentations.

Alex Quizon – University of Michigan
Tracking ocean currents in the past and present – the utility of stable oxygen isotopes in seawater

Alex Quizon, PhD Candidate at the University of Michigan, presented on October 27. His talk introduced how seawater isotope ratios can be used to reconstruct circulation patterns across geologic time, bridging modern oceanography with paleoceanographic reconstruction. Professor Winkelstern also serves on Alex's PhD committee, and Alex's research was particularly relevant for students working on water isotope projects.

Lydia Tackett – *Missouri State University*
The Biosedimentary Record for Marine Vertebrates.

On November 10, we welcomed **Dr. Lydia Tackett**, Assistant Professor at Missouri State University. Her seminar highlighted how vertebrate remains preserved in sedimentary contexts can be used to interpret ancient ecosystems, biodiversity shifts, and large-scale environmental changes. Dr. Tackett also put together a fantastic session for students on graduate school, including opportunities at MSU. Several excellent GVSU students have attended Missouri State for graduate school in the past and we hope Dr. Tackett's visit will help foster more opportunities.



Ron Green – *hydrologist, GVSU Class of 1978*
Current and Future Challenges of Legacy Oil/Gas Wells

Formerly with the Southwest Research Institute and the consulting firm, Fishbeck, Thompson, Carr & Huber, Ron presented an engaging story of how wastewater from oil and gas wells pose several environmental challenges to clean drinking water and aquifers in West Texas.

Some Recent Geology Publications

Publications were limited to journal articles, book chapters, and books. These were submitted by some faculty and don't include all recent publications. We did not include conference abstracts due to space constraints. **GVSU student authors are indicated with an asterisk.**

Bill Neal is the energizer bunny of faculty publications in retirement. In 2023, Bill was a co-author on a perspective-letter published in *Science* (see reference below), and he is the top cited geology professor in the department according to Google Scholar.

Buitrago, N & **Neal, W,** (2023), The unsustainable harvest of coastal sands, *Science*, v. 382 (6675). **Pdf**

Brown, G.D., **Giannecchini*, M.L.**, Redman, C.M., **Winkelstern, I.Z.**, & **Wilmeth, D.T.** (2025). Sedimentology, petrography, and carbon isotopes of the ~2.2 Ga Randville Dolomite, Upper Peninsula of Michigan. *Precambrian Research*, 430.

Cole*, S, Mattox, S., Murphy*, P., and **Giovanni, C**. (2022). Using Michigan Geology to Teach Metamorphic Rocks, *MSTA Journal,* p. 24-30.

Colgan, P.M., Erber, N., Esch, J.M., Yellich, J.A., and Anderson, G.P, 2023, Technical Report for Surficial Geology of Allegan County, Michigan, Michigan Geological Survey - Western Michigan University, Surficial Geologic Map Series SGM-23-01, 34 p. Pdf

Colgan, P.M., (2025). Glacier Systems, In Schaetzl, R.S. and Marston R.A. (eds.). *Essentials of Geomorphology*, Cambridge University Press, New York. **Link to Book**

Colgan, P.M., Erber, N., Ringle, G., & Anderson, G.P, (2025). Surficial Geology of Muskegon County, Michigan, Michigan Geological Survey, Western Michigan University, Surficial Geologic Map Series SGM-25-01, 1:62,500 scale. **Pdf**

Colgan, P.M., Larson*, E.A., Riemersma, P.E., Sydlowski*, H.V., & **Baker*, T.** (2024). Spring erosional processes and small sapping valleys in southwestern Michigan, USA. Earth Surface Processes and Landforms, v. p. 1-20. **Pdf**

Fralick, P., Davis, D.W., Afroz, M., Ramsay, B., Patry, L., **Wilmeth, D.T.,** Homann, M., Sansjofre, P., Riding, R. & Lalonde, S.V., (2025). New Age Constraints Establish the Existence of Earth's Earliest Known Extensive, Thick Carbonate Platform: *EPSL* v. 656, 119273

Giannecchini*, *M.L.*, Brown*, *G.D.*, Redman, C.M., **Winkelstern, I.Z.** & **Wilmeth, D.T**., (accepted). Sedimentology, petrography, and carbon isotopes of the~ 2.2 Ga Kona Dolomite, Upper Peninsula of Michigan. *Precambrian Research.*

Huth, T. E., Konecky, B. L., Hutchings, J. A., Deuerling, K. M., **Kneeshaw, T. A**., Peschman, J., Wilke, T.L., **Winkelstern, I.Z**., & Xu, S. (2025). Constraints on evaporation and associated kinetic isotope fractionation from Lake Michigan, USA using dual hydrogen and triple oxygen isotopes. Journal of Hydrology, 134002.

Johnson, A., Scöne, B., Petersen, S., de Winter, N., Dowsett, H., Cudennec, J-F., Harper, E., & **Winkelstern, I.** (2024). Molluscan sclerochronology in marine palaeoclimatology: taxa, technique and timespan issues. *Quaternary Science Reviews*, 350, 109068.

Longo, N., **Neal, W.**, & Rangel-Buitrago, N., (2025). Prof. Orrin Pilkey: A Coastal Visionary Remembered. *Ocean and Coastal Management*, 262, 107594, 2p. **Pdf**

MacDonald, J., Van Der Wal, J., Roberts, N., **Winkelstern, I. F**aithful, J. & Boyce, A., (2024). Fingerprinting fluid source in calcite veins: combining LA-ICP-MS U-Pb calcite dating with trace elements and clumped isotope palaeo-thermometry. *Tektonica* v. 2. **Pdf**

Minnebo*, L., **Winkelstern, I.,** Zhang, J., & Petersen, S. (2024). Last Interglacial coastal hydroclimate variability in Bermuda revealed by clumped isotope oyster sclero-chronology. *Palaeogeography, Palaeoclimatology, Palaeo-ecology* v. 643. **Pdf**

Mattox, S. & **Duda*, S.,** (2022), Modeling the Melting of Permafrost, *The Science Teacher*, p. 30-37.

Patry, L.A., Bonnand, P., Boyet, M., Afroz, M., **Wilmeth, D.T.,** Ramsay, B., Nonnotte, P., Homann, M., Sansjofre, P., Fralick, P.W. & Lalonde, S.V., (2025). Dating the evolution of oxygenic photosynthesis using La-Ce geochronology. *Nature* 642, 99-104 **Ramsey*, B., Jacob*, E.** & **Mattox, S.** (2025), Small Eruptions with Big Impacts, *ScienceScope.* , v. 48, no. 1, p.

Rangel-Buitrago, N., Ben-Haddad, M., Galgani, F., **Neal, W.J.,** and Gracia C., A., 2025, The Blue Carbon Potential of Coastal Driftwood: Evidence from the Caribbean Coast of Colombia. Catena, v. 261, 109506, 19 p. **Pdf**

Rangel-Buitrago, N., Paternina-Ramos, A., & **Neal, W.J.,** 2025, Environmental Typology of Caribbean Beaches in Colombia Based on Sedimentological and Colorimetric Signatures.RSMA-

D-25-01564 Regional Studies in Marine Science, v. 90, 104462, 16p. **Pdf**

Rangel-Buitrago, N., Gracia C., A., Galgani, F., & **Neal, W.J.,** 2025, The Environmental Legacy of Coastal Sandbags. Marine Pollution Bulletin, v. 220, 118440, 7p. **Pdf**

Rangel-Buitrago, N., Ben-Haddad, M., Galgani, F., & **Neal, W.J.,** (2025). Beach evaluations for management, not for rankings. Ocean and Coastal Management, v. 269, 107852, 4p. **Pdf**

Rangel-Buitrago, N., Rangel, J., Ben-Haddad, M., Galgani, F., **Neal, W.J.**, and Gracia C., A., (2025). Driftwood as a Passive Retention Structure for Marine Litter. Marine Pollution Bulletin, v. 220, 118394, 16p.

Rangel-Buitrago, N., Gracia C., A., Rangel, J., Ben-Haddad, M., and **Neal, W.J.**, 2025, The Role of Driftwood in the Trapping of Plastics in Beach Environments. Chapter 5, p.104-121, in Molina, J.M., and Blasina, G.E., (eds.), Volume 2: Marine Ecology: An Ecosystemic View of Anthropogenic Impacts (Series: Marine Science), CRC Press, Routledge, Taylor &Francis Group, Boca Raton, FL, 318p. ISBN 9780367456603 **Pdf**

Rangel-Buitrago, N., **Neal, W.**, and Nicoll, K., 2024, Plastics in Sedimentary Processes and Rocks: The Fossilization of the Plastic Age. Chapter 4, p. 69-88, in Godin, G., Pétursdóttir, Þ., Praet, E., and Schofield, J. (Editors), The Routledge Handbook of Archaeology and Plastics, 604p. **Pdf**

Schaetzl, R.J. & **Colgan, P.M.**, 2025, Glacial Sediments and Landforms, In Schaetzl, R.J, & Marston R.A. (eds.) Essentials of Geomorphology, Cambridge University Press, New York**. Link to Book**

VanderVeer*, K., Zwart*, A., Mattox, S., & Voice, P. (2022), Interpreting the Geologic History of Michigan Using Cross-sections, *MSTA Journal,* p. 31-33.

Weber, J., Arkle, J., de Verteuil, L., Murphy, J., Noriega, N., Reznick, D., & Jowers, M. (2025). Trinidad and Tobago geogenomics: Exploring connections between geology and vicariance and dispersal biogeography — a review and synthesis*, Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 662, 15 March 2025, 112682. Pdf

Wilmeth,D.T. (2026). Occurrence and biogenicity of Meso-archean and Neoarchean microbialites. *The Archean Earth: 2nd Edition*, 19 pp.

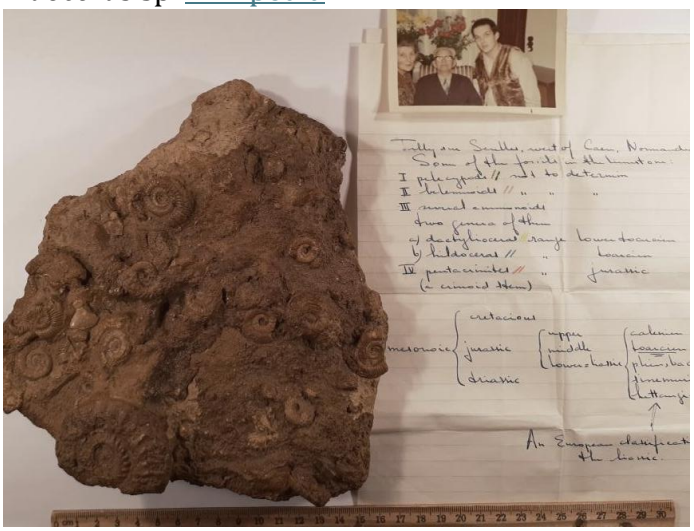
Winkelstern, I., Petersen, S., Curran, H.A., Phillips, C., Quizon, A., Glumac, B., & Griffing, D. (2025). Cooling Climate Across Last Interglacial High Stands on San Salvador and Great Inagua, The Bahamas. *Depositional Record*. **Pdf**

Donations to our collections

By Pat Colgan

Christine and Jack Fryling donated a beautiful slab of Jurassic ammonites from Tilly-sur-Seulle, west of Caen, Normandy France. The fossil is unique because of the detailed provenance for the fossil (see full description below).

The slab of sandstone contains fossils of unidentified crinoids, bivalves, belemnites, and two genera of ammonoids that are key Early Jurassic index fossils.
Dactylioceras sp. Wikipedia
Hildoceras sp. Wikipedia



Based on the locality and the index fossils we can date the rock as Early Jurassic Epoch, Age: Toarcian (~182.7 to 174.1 Ma). It was fascinating to me that the handwritten and detailed notes made by the person who collected the specimen were preserved for so many years. Even paleontologists have a hard time doing this. Most fossils in our collection have little to no information on provenance when that is the most important information needed for a fossil specimen: location…location…location. Otherwise, it is just another rock….

20th Annual Geology Chili Contest

By Prof. Peter Riemersma

Thanks to all who attended and especially to those that contributed chili, a side dish or a dessert. This year, for the first time, the event was in the evening and in a larger room. We had a competitive contest with 16 chilis submitted! This year was a year for vegetarians as we had four vegetarian entries with **Ian Winkelstern's** chili slipping past **Ginny Peterson's** by one vote. Our geology student chili also garnered the best overall and most geological categories. In the attachment version of this summary, I share the recipes for best overall chili (Owen Alston), most geological chili (Jennifer Jones) and best student chili (Andrew Neckerman)! Note that Andrew Neckerman won a trophy last year with the same recipe.

I still don't know who the Best Dessert winner was (Dessert #2, a fruit Danish) if you could contact me…your trophy is in my office.

I appreciate all the judges who helped make the event a success. We benefitted from having 3 official GVSU Chefs as judges this year. As always, thanks to **Professor Kevin Cole** for the fantastic trophies.

Historical Note -Over 1 Ton of Chili Served

To help celebrate the 20th anniversary, I created a winner summary binder and tabulated some numbers. Over 20 years, we have had approximately 1,300 participants and 246 chilis served at the Geology Chili Cook-Off. I estimate that represents about 2,100 pounds of chili, or over 1 ton of chili served.

Start planning to submit a chili, dessert or side dish for next year's 21st Contest on Monday Feb 16th, in the evening (given this year's success). We would like to see even more alumni attending next year. Email riemersp@gvsu.edu with your current email address to ensure an email invite.

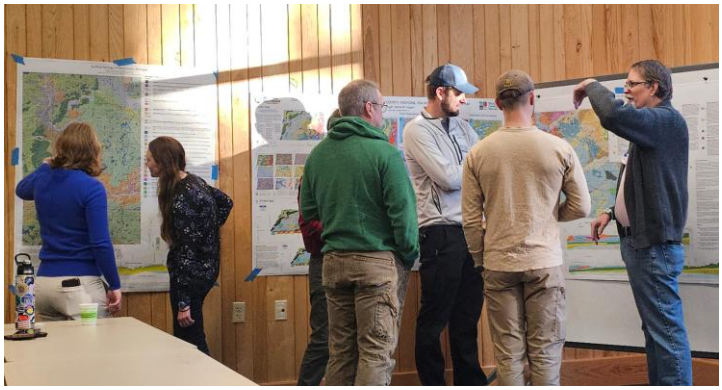
Until Next Year!

2025 Chili Contest - Award Winners

Best Overall Chili	**Owen Alston**
Best Student Chili	**Andrew Neckerman**
Most Popular Chili	**Brandon Chiasera**
Best Vegetarian Chili	**Ian Winkelstern**
Hottest Chili	**Kevin Cole**
Most Geological Chili	**Jennifer Jones**
Most Geological Dessert	**Kathy Agee**
Best Dessert	**anonymous?**
Best Side Dish	**Mollie Strunk**

Please email Prof. Riemersma for chili recipes!
riemersp@GVSU.edu

GVSU geology faculty and students at the 2025 GSA Connects meeting in San Antonio, Texas.



Prof. Colgan and alum **Kent Walters** talking geological mapping at EGLE training session.

Founding Father of GV Geology: Johnny Lucke

By Bill Neal
Professor Emeritus of Geology

In the early days of the Geology Department, students were encouraged to read "Giants of Geology" (Fenton & Fenton, 1952) to gain inspiration from the "Great Geologists" of the past. But, as in all times, there were unrecognized "giants" currently walking among them. For the Grand Valley State College Geology Department, the two "giants" were Jim Zumberge and John Lucke. GVSC's first president and professor of geology, Zumberge had built a reputation in glacial geology, polar studies, and as a lab manual author. But Johnny Lucke was the founding father of the department. The 1976 department newsletter included Johnny's reflections on his GVSC appointment, and portions of that article are excerpted here, along with a brief review of his excellent pre-GVSC professional history.

John Lucke was born in 1908 and grew up in New York City. His geology career began at Princeton University, where he earned a B.S. in Geology (magna cum laude) in 1929. The quality and originality of his undergraduate thesis "The Shore of New Jersey" exceeds many modern master's theses. The thesis reflects his early utilization of photography, a talent he would draw on throughout his teaching career. He documented damage from the April 1929 northeaster that struck the New Jersey coast, collapsing buildings and undermining the wooden bulkhead seawall near Point Pleasant. Other damage included failed groins and beach loss due to a stone jetty near Long Branch. An early aerial photo is among the thesis illustrations, foreshadowing the expertise Johnny would develop in later air-photo studies. His use of sequential "time" comparisons of shoreline changes also portended the same procedures used today based on aerial photos and satellite imagery.

Even as an undergraduate, Johnny was clearly influenced by Douglas W. Johnson, a disciple of William M. Davis, and he included Johnson's map of Sandy Hook Spit's evolution at the north tip of the Jersey coast in his thesis. Johnson is the 'father' of modern American coastal geology, and it was during this time (1929) that Johnson and others, including Johnny, formed the American Shore and Beach Preservation Association. The die was cast --- Johnny was on his way to becoming a geomorphologist. He went to work for a consulting geology firm out of Bradford, Pennsylvania, but his career was interrupted by the Great Depression, which turned out to be a good time to go back to graduate school. At age 22 he was back at Princeton (September 1930, as a graduate assistant, the beginning of his teaching career) and would complete his Ph. D. in just three years (May 1933). His Ph. D. thesis, "A Study of Barnegat Inlet, New Jersey and Related Phenomena," sounds mundane, but built on Johnson's work and his own undergraduate thesis it became an early classic for theories on barrier island processes/evolution. This study was one of the earliest to focus on the origin/evolution of a flood-tidal delta and was typical of a thesis of the time in that the study included as many other aspects of geology as possible (e.g., heavy mineral analyses, sediment textures, foraminiferal content, etc. to determine provenance and processes).

Post-Ph.D., Johnny taught briefly at John Marshall College, then was a geologist for the Texas Company at Pampa, Texas for a year, before returning to New Jersey in 1935 for a year as soil surveyor with the U.S.D.A. Soil Conservation Service. In 1936 he took a split appointment as Assistant Prof., West Virginia Univ., and assistant geologist with the West Virginia Geological Survey. Then from 1938 to 1940 the half-time teaching job became full-time, including directing their first summer field camp in 1939. In 1940 Johnny was recruited by University of Connecticut and founded their Department of Geology and Geography. He became its' first Head and continued his long professorial career there until his retirement in 1963.

During his Connecticut tenure Johnny 'wore many hats' including an interruption of his appointment from 1943 to 1946 in the U.S. Naval Reserve. As a photo interpretation officer, he was in charge of terrain and beach studies at the Joint Intelligence Center – Pacific Ocean Areas, Pearl Harbor Hawaii. Clearly, his theses' work utilizing air photos/map interpretation and analyses of coastal sands gave him valuable expertise for the times. He was awarded the Naval Commendation Ribbon by Fleet Admiral C. W. Nimitz, and retired as a Lieutenant Commander,

USNR. After the war and his return to U. Conn., he served several roles in the Connecticut Geological and Natural History Survey including its directorship (State Geologist) from 1954 to 1960. Johnny's early oceanographic experience led to his selection by Bruce Heezen for the 1948 National Geographic Society & Woods Hole Oceanographic Institution's Mid-Atlantic Ridge Expedition (National Geographic Magazine, Nov. 194x, v. ##) abroad the R. V. Atlantis. This was one of many cruises that accumulated the data for the (later) famous Heezen and Tharp map of the Atlantic Ocean seafloor (1959). Heezen criticized some of his fellow scientists during the cruise for taking photos when they were supposed to be working. The following February, Heezen wrote to Lucke for photos – *"I would like 20 to 40 shots showing various phases of the work plus a few human-interest shots."* Johnny, of course, complied, but not without a gentle acerbic remark or two to Heezen: *"If your memory is good you can recall making cracks – like 'Photography is not important, interferes with the ship's work;' or 'Why in H___ don't they put away those d____ cameras and lend a hand.'"* Heezen later would be better at making sure to have photos for PR purposes!

John Lucke (First Geology professor at GV), and his wife Virginia at his retirement party. Clare DenBesten is on the left (Photo and caption sent by **Doug Thorpe 1974**).

Johnny also established co-operative work with scientists studying volcanoes in the Azores as a result of the cruise. Later in 1953, he was a geologist on the National Park Service's Katmai Expedition, Alaska, again as a coastal specialist, but gaining more experience in glacial and volcanic geology. Always the field man, Johnny was the sole officer (Secretary) of the New England Intercollegiate Geological Conference from 1951 to 1960 – probably the best known "unofficial" geological organization in the U.S. that sponsors annual regional field trips.

On his retirement from U. Conn., Johnny's faculty colleagues read a long tribute into the minutes of a College of Liberal Arts and Science lauding his accomplishments as a teacher, researcher, and leader within the college community (e.g., Senate, Sigma Xi, community service groups). Johnny could have sailed off into the sunset with his wife Virginia aboard their 33-foot auxiliary sloop, MOHINI, but vocations are stronger than amusements and his retirement short lived! Jim Zumberge sought him out to start another geology department.

In Johnny's *Own Words:*

"I had met Jim Zumberge at GSA meetings and exchanged notes on geomorphology with him by correspondence through the 1950s. … At the 1963 GSA meeting in New York City (when Grand Valley was only a few months old), he invited me to apply for the post of professor of geology in order to 'begin' to build 'the best small geology department in the country.' I flew out for a visitation in December, meeting especially George Potter, Art Hills, Harry Jellema and the Zumberges, both on and off campus. I recall our luncheon at Schulers in Grand Haven, there were over 30 inches of snow at the lake shore but only 5-6 inches at Grand Rapids. There were several other candidates considered that winter, one of which was the Pennsylvania State Geologist. I was strongly backed by John Frye and George Maxey of Urbana. On 24 April [1964] *I received notification that the Board of Control had approved my appointment ($12,000 for nine months)* [Full Professor]. *I was immediately asked to submit a list of bare minimal lab equipment for Geology I (Physical and Historical) so as to be "ready" next September, 1964. The 'geology baby' was housed in the middle of Lake Superior Hall, as part of the Science Division, whose secretary and sparkplug was Mrs. Marie Klotz. I've never has a better one anywhere full or part-time.*

Partly to keep me "busy" and partly ….. to "sell" Grand Valley to southwestern Michigan, I was asked to present a TV series as part of an established local feature – TEN O'CLOCK SCHOLAR. The logistics and moral support were supplied by Nancy (Seidman)

Dempsey, then in charge of what is now called College Relations. This series ran for thirty minutes per week, for twelve weeks. I believe I got Jim Zumberge to take one, but I had all the others, including all the props. I called my series…..– CONVERSATIONS WITH THE EARTH. ….. It was a chore especially culling the props, maps, slides, and the specimens to be used (mostly from my own personal collections). [Even in retirement, Johnny provided his community with a list of 19 slide shows – INPRESSIONS OF A NATURALIST that he could give to interested organizations.] *……. In May of 1966, an all-college holiday was declared to dedicate the Loutit Hall of Science, I was privileged to introduce the guest speaker (fellow shipmate on the RV Atlantis in 1948), Dr. Frank Press, Chairman, Department of Earth and Planetary Sciences, Massachusetts Institute of Technology, in the largest lecture room then available on campus, 132 Lake Huron.* [September, 1966, John was appointed Chairman of the Geology Department.] *In the next academic year, Grand Valley College was formally granted a club charter in the Society of the Sigma Xi, at ceremonies in the Peninsular Club. As instigator and ramrod of the application, I was elected president in the charter year of the club. On a visit to Michigan State early in 1966, Dr. Zumberge met Norbert O'Hara, a graduate student in geophysics, who was just beginning his dissertation on the geology of the bottom of Lake Superior. He was quite impressed with O'Hara, an Air Force Reserve pilot, and hired him to go to the Antarctic to assist in one of his ongoing research projects, and thereafter, to assume duties as Instructor of Geology for the 1966-67 academic year, Norbert O'Hara was with Grand Valley only one year. I pursued the search for a new number 2 personally at the 1966 GSA meeting in Atlantic City, as well as by mail to trusted opposite numbers…….Dr. Arthur Howland of Northwestern University, suggested Dr. Richard Lefebvre, then Assistant Professor at the University of Georgia. He accepted the post of Assistant Professor after the usual visitation and paperwork. The modern Grand Valley State College Geology Department began with his arrival in September 1967. Almost immediately we began a search for number 3, preferably a paleontolgist-stratigrapher, to complete a minimum solid nucleus for a geology major. In September of 1968 John MacTavish arrived from Case Western Reserve University as Assistant Professor, with paleontology and stratigraphy as specialties. In 1971, John moved to the then new WJC. From January 1 to 15 June, 1969, I requested and was granted a leave-of-absence to take a South Pacific cruise on the 200th anniversary of Captain Cook's first voyage in the Pacific on the ENDEAVOUR. The college granted me $500 carte blanche to cover the costs of collecting suites of rocks, corals, shells, etc.* [The shell collection was on display for many years and remains in the department collections. The giant clam is the most impressive.] Dick Lefebvre moved to the Chair, but Johnny was still here for the hires of Jack Henderson and Bill Neal, and for the recruitment year of his replacement, Norm TenBrink. Patricia Videtich was Johnny's last major advisee and later joined the faculty and chaired the department!

In retrospect, at GVSC John Lucke always moved in the direction of Zumberge's goal 'to build the best small geology department possible.' The department followed the directions John set – focus on teaching and student advising; build a faculty with research specialties but breadth of geologic knowledge; emphasize field studies; and promote professionalism within geology and the collegiate community. Decades later the department is no longer small in faculty size, enrollment, or curricula, but Johnny's guiding principles remain valid.

Alumni News

Please send the following about yourself:

Email to the unit head at:
geologyunithead@gvsu.edu
OR
Mail it to us at:
Geology Department Unit Head
Padnos Hall of Science GVSU, Allendale, MI 49401

Name: (If your name has changed since you were a student here, let us know your previous name also)
Graduation year: _____
Employment/Life status or changes:
Contact information* (address, email, phone)
*Note that we will not post contact information on the web site apart from your city of residence – please let us know if you do not want us to share your contact information with alumni or friends who request it.

Department Challenges - Opinion

By Pat Colgan

According to American Geosciences Institute (AGI), "geoscience is the study of Earth and its systems, including the geosphere, hydrosphere, atmosphere, and biosphere. It encompasses understanding Earth's past, present, and future by investigating the planet's physical processes, natural resources, and interactions with life and society".

The geosciences in university degree programs, and as a set of professions have always faced challenges such as 1). a lack of public awareness of the importance of geosciences in our society, 2). difficulty in recruiting top students into geosciences since it is not commonly taught in K-12, and 3). Sometimes a lack of support of science programs in general at both the K-12 and university levels.

GVSU Geology faculty, staff, and students are working hard to meet these challenges! Some of our department's current and future concerns primarily consist of 1) remaining relevant in society and university 2) student recruitment and retention, 3) replacing retiring faculty, and 4) staffing courses for existing degree programs while at the same time creating new programs and staffing those courses.

The number of new majors in our traditional geology programs declined in the past 7 years, and especially during and after the pandemic. In 2026, three GVSU faculty who have taught geoscience courses in our department for 20-plus years will be retiring (Colgan, Riemersma, and Wampler). At this point we have no guarantee any of these faculty will be replaced. At the same time, we now have new programs and courses that we will struggle to staff, but these programs will bring us new students for all our degree programs. These are our challenges.

Please help us by continuing to make geology and geosciences known to our communities, university leadership and board members, and citizens. Please help us spread the word that GVSU Geology is a great place to learn from dedicated faculty about geoscience!

Please Give to Support GVSU Geology

Please Support Geology Funding

Years ago, **Ed Tremba** had the foresight to suggest we start an endowment fund for student scholarships within the department. Sometime later that program was named in Ed's honor. Alumni and friends of the department also made the Tremba Scholarship Development Fund a reality, and the success of that program led to two additional endowment funds in support of students and the department's growth: the Geology Student Field Endowment Fund, and the Geology Endowment Development Fund. Since then, three additional memorial funds have been initiated from family gifts: the Paul C. & Florence Miller Mineral Collection Endowment (funds allow additions of minerals, rocks, and fossils to the Department collection) and the Norman Gibson Geology Field Study Program (student support), and finally the Jory VanEss memorial scholarship, our newest fund.

Student Scholarships & Endowments

Edward Tremba Geology Scholarship - The Edward Tremba Geology Scholarship Fund is supported by your donations and goes to our outstanding Geology and Earth Science majors each year. Students must have a GPA of 3.00 or higher to be eligible for the award.

Tulip City Gem and Mineral Club Award - The Tulip City Award is provided by the Tulip City Gem and Mineral Club and goes to majors who make significant contributions to the Geology Department.

Gibson Geology Field Studies Scholarship – This fund helps students complete summer research by providing funds for travel, sample analysis, and field work.

Jory VanEss '18 Memorial Endowed Scholarship – This scholarship was set up to support students doing field camp in the summer. This fund has not reached the $30,000 minimum to disperse funds. Please consider helping us get to this number!

Geology Student Field Camp Endowment

Richard H. Lefebvre Geology Field Education Endowment

Please consider a gift to one of these departmental scholarship funds. When giving to GVSU, please specify one of these funds or give to the Geology Development Endowment Fund which is used for special needs in the department such as matching funds for equipment or field trips.