December 2017 Newsletter

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Greetings! Our department is flourishing, our students are graduating and winning awards along the way, most of our alumni are gainfully employed in their careers, and our faculty are producing excellent teaching and research, and excellent researchers and teachers. It's great to be leading such a venerable department. We certainly make a great team!

So what's new in Geology? Well, **Professor Wampler** has been promoted to Professor. While **Dr. Ryan Vannier** left us, we have a new visiting professor, **John VanRegenmorter** (2005) who is really big on dinosaurs and can be spotted carrying around skulls from ancestors of *Homo sapiens*! Our field trips are going strong. Our alums tell us that it was the field trips that became the most memorable parts of their experiences with us. **Greg Wilson** has been working hard organizing our spaces, teaching in the Honors College, and keeping us in line with regard to field trips. And of course, our department would not work without **Janet Potgeter** who is always there for both our students and faculty, cheerfully helping us with everything. Thanks Janet!

Our students are also doing well! We have some new faces in our program who are too numerous to list individually but you can see a group of liquid Earth enthusiasts on a field trip to Grand Ledge on page 27. And of course, **Diana Bullen, Ella Larsen** and **Kelly Jardine** working hard on the beach trying to trace where the current took their sand! (right).

Among more seasoned majors who attended national meetings to present their research, **Conner Cain** won the best student poster award in the Environmental and Engineering Division at the annual meeting of the Geological Society of America (GSA)! Both **Amy Tiemeyer** and **Danielle DeWeerd** received honorable mentions in the Hydrogeology Division. Other students that attended and presented at GSA were **Daniel Tjapkes, Lindsey Wiley and Tim Suess**. We either visited with or spotted a long list of alumni at the GSA meeting this year: **Kayla Lockmiller, Kory Konsoer, Ken Bevis, Reece Elling, Tiffany Gentner, Ron Greene, David Trudeau** and **Jim Walters**. Alumna **Kayla Lockmiller** presented her work with Dr. **Tara Kneeshaw** at GSA as well.

As for the annual meeting of the American Geophysical Union (AGU) in December, **Matthew Collins** will be presenting his research there. Also at AGU I will have the opportunity to visit with alumni **Brittany Ward** and **Cole Vickers** both of whom are graduate students at Boston College. And lastly at AGU, I will be at the end of my first year as the President of the Paloceanography/Paleoclimatology Focus Group. This is just to name a few student accomplishments.

Among our alums, we selected **Robert Bodziak** as our Alumni-in-Residence this year. Bob gave an excellent talk and inspired many of our current majors with his passion for geology. Our alumna **Jody Wycech** visited us on November 27th and gave a talk on her research on foraminifera in Seminar. Three other geology alumni were invited to visit us in early November during our recognition of Earth Science Week and gave presentations: **Joshua Ehlich, Colin Plank** and **Richard Christensen**.

Personally, I am excited to report that many former students of the Mekik Lab have gone on to start their successful careers, In addition to Brittany and Cole whose accomplishments I mentioned above, **Cody Garnsey** is now a graduate student at Western Michigan University and **Valerie Voisin** who is now a graduate student at Northern Illinois University. The current member of the Mekik Lab is **Matthew Collins.** I am very proud of all Mekik Lab researchers and all of our students and alumni.

Our faculty have been busy as well. We have been hard at work implementing our new curriculum. **John Weber** is enjoying a productive sabbatical. **Patricia Videtich** is inching closer and closer toward retirement. We will sorely miss her leadership and smiley face, but we are comforted a little knowing that she still has one more year with us. **Patrick Colgan** is busy with lots of geophysics research and he can be easily spotted most of the time showing students and faculty how to use a variety of equipment both in the lab and out in the field. **Ginny Peterson** co-led a 2-day department workshop for Northern Illinois University in her role as workshop facilitator for the NAGT/Building Strong Geosciences Department Travelling Workshops Program. **Caitlin Callahan** is serving as an external evaluator for a funded National Science Foundation proposal called GENIUS (Geo-Engineering Innovations from Underrepresented Scholars) which seeks to increase retention and completion of academically talented low income students majoring in engineering and the geosciences. **Tara Kneeshaw** was invited to participate in Pearson's Teaching with Technology Summit in Miami. **Bill Neal** is still leading us all intellectually by continuing to publish his coastal research. **Kelly Heid** received internal funding to chase and record storms and major weather events. Our veteran visitors, **Jeremy Gouldey** and **Kevin Thaisen**, have been wowing our students by bringing their research into the classroom and inspiring new geology majors.

Peter Wampler, **Ginny Peterson, Tara Kneeshaw, Peter Riemersma, Caitlin Callahan** and **Steve Mattox** all presented their research at the GSA annual meeting in Seattle. I will be presenting my work with sea surface temperature change in the eastern equatorial Pacific at AGU later this fall. **Kevin Cole, Susan Jansen** and **Greg Wilson** flew to Tucson to procure fossil and mineral samples for our displays.

Thank you to the Miller family and contributors to the **Paul C. and Florence Miller Mineral Collection Endowment** who help us maintain and enrich a beautiful mineral display in our Department. We are also grateful to **Indian Mounds Rock and Mineral Club and Tulip City Gem and Mineral Club** for providing our students with scholarships and awards. The **Norman and Helen Gibson Geology Field Study Scholarship, Edward Tremba Geology Scholarship, Richard H. Lefebvre Geology Field Education Fund, and Geology Student Field Camp Endowment** offer tremendous possibilities for our majors. Thank you for your continued support for these student opportunities.

We are always grateful to our alumni who send us job and internship announcements for our current majors; and appreciate the willingness of our alums to come speak to our current students. These gestures are a valuable resource for current students as well as alumni, creating opportunity and building community. As always, Geology is a happening department and will continue to be so. Please send us your stories, tell us of your accomplishments, and keep us close to your hearts! Your Geology professors miss you and wish you the very best! -Figen Mekik

This newsletter is published by the GVSU Geology Department. The deadline for submissions, November 1, is not strictly adhered to, but we have to draw the line somewhere. Retired and current Geology faculty and staff members participate in editing, while Janet Potgeter does the layout. Contributions are most welcome from everyone associated with the GVSU Geology Department now and forever.

Faculty and Staff Updates

Caitlin Callahan (callahca@gvsu.edu) This past summer, I had the chance to return to Albuquerque, New Mexico to attend the Earth Educators' Rendezvous. The Rendezvous is a five-day national conference hosted by the National Association of Geoscience Teachers and is intended for any and all who are interested in teaching and learning in the geosciences. This year the conference was held at the University of New Mexico, where I completed a portion of my graduate study. I went a few days early in order to revisit some favorite haunts and even explore some areas I had never managed to see when I lived there; in particular, I took a drive to Abiquiu and Ghost Ranch to see where the painter Georgia O'Keeffe lived and worked (see picture below). While at the Rendezvous, I presented some of the work I completed with **Andy Sparks** (ES, 2017). In addition, I was offered and accepted the position of co-chair of the 2018 and 2019 Rendezvous meetings. We are already hard at work planning for next year.

Also this past summer, **Lindsey Wiley** (current GVSU Geology Major) joined me and my collaborators as a research assistant on our NSF-funded project related to recruitment and retention of underrepresented groups in the Earth System Sciences. In the spring, we disseminated an online survey to collect data from students and professionals regarding their career development satisfaction, sense of belonging, and trust in mentors (past or present). Thus far, we have collected more than 600 surveys. Lindsey and I are looking at a subset of the data, focusing on scientists (including students and professionals) who identify themselves as having cognitive disabilities such as learning disabilities or ADD/ADHD; this is a group who has not yet received much attention in the literature related to diversity in STEM. Lindsey presented some of the preliminary findings as part of a poster presentation at GSA in Seattle in October. One of our early findings is that those with cognitive disabilities report statistically higher sense of belonging than those with physical, sensory, or other kinds of disabilities. We intend to explore this finding further through survey work and interviews.

Lindsey and Caitlin at GSA, Seattle

Here at home at GVSU, I continue to teach courses for preservice teachers. Each new semester brings opportunities to implement and refine different approaches to developing students' thinking. The challenge is both fascinating and rewarding.

Kevin Cole (colek@gvsu.edu) Another year has flown by. On spring break 2017 we joined the geology club students for a trip to Big Bend NP. It is a long drive but worth the opportunity to hike and camp and avoid the cold weather in Michigan. We met with the park geologist. He gave a presentation about the geology and history of the Big Bend area. We took a row boat to Mexico, hopped on burros and visited the town of Boquilles for some international culture and food. We also visited the historic mining district-Terlingua-with Mercury mining between 1880 and 1943. We did many hikes and students gave presentations on the local geology.

On the day of the biannual Geology department picnic it rained several inches and was a toasty 40°. We had to put up a large tent and fire up a propane heater. Despite the weather we had a good turnout but, sadly, no volleyball!

In June we headed west. Our first stop was in Colorado where we met up with alums **Eli DenBesten** (GEO, 2013) and **Jackie Bussey** (GEO, 2013) for some camping and hiking. Lots of snow which limited our hiking choices. We also met up with **Mike Stockoski** (GEO, 2012) in Glenwood Springs. It was nice to see alums doing well. Leaving Colorado, we headed further west to California and did some hiking around Bishop, CA but our adventures were limited by the amount of snow in the Sierras. That was a good thing – more water than I have seen in years. But not so great for the Pacific Coast Trail hikers-many were thwarted by the daunting snow pack and the high rivers. We met up with my daughter Rachel in Oakland for a couple days and did some short hikes. In the Seattle area we spent some time with our son Sean who had started an engineering job. I spent the last 2 weeks of my vacation on my dad's sailboat sailing in British Columbia. I did a lot of fishing.
This was the first year of the new curriculum. Mineralogy and Petrology has been replaced with Earth Materials, a series of three classes. Ginny and I are co-teaching the first of this series. We went to Bancroft for our field trip. We incorporated mineral and rock stops into the trip. Weather was unusually warm, and we had a great time camping. We met up with alum **Curran Kemp** (GEO, 2005). He was a great help on the field trip!

Patrick Colgan (colganp@gvsu.edu) Hope everyone is happy and healthy! This year was excellent with interesting research with students, exciting teaching, and a small bit of travel. **Sara Thurkettle** (GEO, 2017)**,** Will Amidon (of Middlebury College), and I had our inland dune paper published in *Quaternary Research* (January v. 87, p. 66-81). In it, we determine the age of inland dunes in Ottawa County using geomorphology, sedimentology, and optically stimulated luminescence dating methods. We show that these dunes are older than Michigan's coastal dunes, which are less than 6,000 years old. The inland dunes formed earlier between ~13,600 and ~11,300 years ago during the transition from the Pleistocene to Holocene Epochs. Inland dunes formed after Glacial Lake Chicago drained and sandy lake sediments were exposed and deflated by northwesterly and westerly winds. **Sara Thurkettle** (GEO, 2017) is now in grad school at Ohio University studying geomorphology. **Tom Valachovics** (GEO, 2017), my other recent research student, is at the University of Toledo studying sed/strat and geophysics. Both are working on M.S. degrees so I am very happy for them!
During the winter semester, I taught GEO175 – Research Methods for the first time and hope I get to do it again as it took some work, and I really enjoyed working with our new majors. I also taught GEO420 - Glacial and Quaternary Geology to some very good Geology and Earth Science majors. In spring and summer, I worked in the field with geology majors **Taylor Weeden, Allison Harker**, and **Ella Larson** sampling inland dunes, and examining groundwater springs. I also worked with them on grain size analysis in the newly renovated sediment labs. I am working now with **Ella** and **Taylor** on grant proposals for research next summer examining inland dunes in western Michigan (Taylor) and groundwater sapping processes (Ella).
In July, Kelly and I travelled to north shore of Lake Superior and Upper Michigan. We had a good time seeing some areas I haven't been to in a long time. The end of summer once again found Kelly and I at the cabin at Seul Choix Point in Upper Michigan for our week of relaxation.
The fall brought an abrupt end to summer and I jumped back into to teaching GEO111 – Exploring Earth to 86 mostly freshman, and GEO470 – Geophysics to 12 geology majors. Both classes keep me jumping. The geophysics students especially keep me working hard, and challenge me to dust off both my math and physics knowledge, since I only teach geophysics every other year. It is also a big challenge getting our aging geophysics equipment working, and the software working with the new Windows 10 operating system! If there are alumni out there who have geophysical equipment that their company would like to retire and donate, we would be interested hearing from you! Your old equipment might be an upgrade for us! We could especially use a modern gravity meter (we have a 1960s Worden antique) and an electrical resistivity system (on our wish list). Best wishes in the New Year and it is always good to hear from alumni!

Jeremy Gouldey (gouldjer@gvsu.edu) I am happy to have one full year of GVSU under my belt as a visiting assistant professor, and am very excited by the new crop of students I've been working with this second year so far. This summer was an exciting one for me, I traveled to Iceland and got to explore all of the geologic wonders contained within, from volcanoes to glaciers to fjords to geothermal pools to tectonic plate boundaries and so much more (including a whale watching trip where 9 whales graced us with their presence)! When not traveling, I spent the summer working on developing online courses in climate science and

environmental science, and taught a few of these online courses for Loyola University – Chicago. This year at GVSU I am teaching 4 sections of Geo 100 in the fall and 3 in the winter, which is something I do very much enjoy, having the opportunity to introduce brand new scientific concepts to young students who have never thought of the world that way before. I am also continuing to refine and further develop my online courses as well. Looking forward to another successful academic year!

Kelly Heid (heidke@gvsu.edu) Time has flown by this year. My Geo111 introductory geology lab students are keeping me hopping this semester. I'm having fun teaching both a lecture section along with the labs. The GEO203 Weather and Climate course had a curriculum change this year and now serves both the elementary K-8 Preservice teachers and the secondary Earth Science Education Majors.

I spent part of the summer working on the curriculum for GEO203 which included a PEW Innovation Grant to attend a Storm Chase course. I spent 10 days with several other educators in our trusty van traveling from Texas to Nebraska on a hunt for severe weather. Along the way we learned how to better read forecasts and to predict where the best storm conditions would hopefully be located. Our best storm event was located near Goodland Kansas, it had a beautiful low rotating wall cloud with plenty of wind, rain and lightning. A second storm brought us some hail but unfortunately no tornadoes. The weather was just too nice that week. We were able to spend some of those pretty days checking out the local geology and luckily there were a couple of bowling alleys open were we could play a few games to pass the time. For the second part of the grant I am in the process of creating several tutorials using the storm chase materials I taped this summer to be used during the fall of 2018.

This November I will be attending a weeklong NSF-funded GLOBE STEM Equity Bootcamp workshop to become a trainer for the Atmosphere, Biosphere, & Hydrosphere protocols. These protocols are used to collect data that can be uploaded onto the GLOBE Partner network website for scientists to use to compare ground collected weather data with satellite imagery. As a trainer I plan to integrate the atmosphere protocols into the GEO203 course and hope to have an option available for the students to be certified as future GLOBE teachers once they have their own classrooms.

Tara Kneeshaw (kneeshta@gvsu.edu) Greetings Everyone! It's hard to believe another exciting year has passed by. The Spring of 2017 was busy with student research projects and presentations. I chaired a session (Sources, Transport and Fate of Trace Elements and Organics in the Environment) and gave a talk at the 2017 GSA North-Central Section Meeting in Pittsburgh, PA. I spent most of the summer writing and doing lab work with microcosms. I again taught the Groundwater Sampling and Monitoring portion of WMU's Hydrogeology Field Camp. This past summer we ran the camp twice! I could not help but to be proud of how well our GVSU geology students performed, they really stand out. In August, Josh and I went off on our annual adventure, this time we headed to the Boundary Waters of Minnesota. We spent a little over a week canoeing and exploring the vast wilderness and I did a lot of fishing for the first time in my life. One of the highlights of the trip for me was (finally!) making it to Isle Royale. I have been including pictures and stories about the trip into my Great Lakes class. On the home front we planted even more Fraser fir Christmas trees, I think we are up to 850 or so. I continue to enjoy my chickens but we had a run of bad luck losing 9 to fox and the neighbor's dog, the egg supply is looking light for this winter.

Most recently was the annual GSA meeting in Seattle, WA where I gave a talk and a poster (co-authored by recent graduate **Kayla Lockmiller** (GEO, 2016). Current student, **Amy Tiemeyer**, presented our microcosm research and won an honorable mention for her poster in the Hydrogeology Division. Life is busy but good.

Geohydrology (GEO 440) students learning the art of low flow sampling and monitoring of groundwater.

Middle school students learning about hydropower by blasting dinosaurs with water during the GVSU's Energizing Our World event.

Geo 440 students observing mud rotary drilling for the installation of a drinking water well.

Steve Mattox (mattoxs@gvsu.edu) The greatest reward this year was seeing the Earth Science and Integrated Science majors graduate and start their careers. At least three were hired in Grand Rapids and the Integrated Science students have established a beachhead along the mountain front in Weber, Utah. I tested 250 high schools students in the spring for college physical geology credit. About sixty percent passed and seven will start as Geology or Earth science majors at GVSU, Michigan Tech, or NMU. The project is turning full circle. Three GVSU grads are currently navigating their buildings and districts to add a course next year. My summer work with Michigan Tech continues. Under the auspices of the Dow Education Foundation we are writing Michigan-centric middle school science curriculum aligned to the Next Generation Science Standards. Seems we have passed the half-way point.

Family vacation was in Hawaii where we visited the ocean entry and hiked up slope to flowing pahoehoe. In August I spent a week in central Utah on the Sevier Plateau, just high enough and far enough south to see the brightly colored Claron Formation of Bryce Canyon on the horizon. I was assessing the logistics of starting a new mapping project. Colleagues to the west have mapped what might be the largest landslide on Earth. In my area the base of the slide shows some amazing fluidization structures. I hope to return next summer. August also provided the total eclipse which I watched with my family in Kentucky. As this semester started I work with Tari Mattox at GRCC to write and submit a NSF grant to benefit students in both of our programs. In November I travelled with about 11 students to the National Science Teachers Association meeting in Milwaukee. Earth Science student **Emily Siriano** presented on the rates of geologic processes.
Over the last year I have enjoyed working on the GSA Policy Committee. In the spring we visited staffers on Capitol Hill. We also assisted a panel of experts in writing a position statement on "Removing Barriers to the Career Progression of Women in the Geosciences" that should be posted by early 2018 at: http://www.geosociety.org/GSA/Science_Policy/Position_Statements/GSA/Positions/home.aspx
Please take time to read this document.

Bill Neal (nealw@gvsu.edu) 2017 has been a year for renewal of travels and productive writing, the latter aimed mainly at beach conservation and coastal management. In January, with some of my coastal-geology colleagues, we wrote Clare Co., Ireland officials and the Clare County Champion newspaper about why the Great Wall-Builder's golf links corporation should not build a sea-wall to 'protect' the Doonbeg golf links at the expense of losing the public beach [Letter to the Editor: Doonbeg beach system 'still under threat' The Claire Champion newspaper (Ireland), Jan. 27, 2017]. The now scaled-down project is still on hold (see also: http://www.thejournal.ie/trump-wall-clare-2-3206297-Jan2017/). Closer to home, good coastal management regulations are being undercut by state politicians, and I weighed-in with an interview with the Savannah Morning News (http://savannahnow.com/news/2017-03-04/coastal-scientists-draw-line-sand-after-new-shore-protection-act-passes-house), and a Coastal Care beach-of-the-month article on North Carolina coastal sandbagging in March. In April I did an Op-Ed on sand bagging with Orrin Pilkey in a North Carolina paper but my name was left off when it was published (I can still

travel the North Carolina coast *incognito*). In September-October another beach-of-the-month focused on an example of good coastal management in one of Colombia's Natural Parks. Throughout the year, I was working on drafts of papers, two of which were published as e-papers, and should be in hard copy soon ("Why Coastal Regulations Fail" and "Managed Retreat"), plus a book review of "The Geology of Virginia" that is in press in *Southeastern Geology*. This reference proved useful in co-mentoring seminar student **Nick Vlietstra** who did his paper on the Chesapeake Bay Impact Structure.
Family travels were challenging, but I relished a week in Paris, saturating in art, history, and culture, and noting all of the buildings are constructed of the Eocene Lutetian (type section) limestones, often full of turitellid gastropods. Then made a May trip to Texas for a Kentucky Derby party and a visit to Lone Star Park race track. July was the perfect time for two weeks in Newfoundland [a region that should be on every geologist's bucket list], and in August a week on Beaver Island to beat the heat before going to California for a grandson's wedding. Not all of our travels were happy occasions as we made several trips to Indiana for last visits with two of Mary's siblings and then their memorial services, as well as the same for my last uncle, one of my childhood idols. I continue to enjoy visiting with alums who come back to campus, sometimes after a couple of decades to see a much different campus, but a Geology Department that still has a pleasant familiarity. Just think – if fossils could now see into the future, they'd take a lot of satisfaction in their evolved legacy.

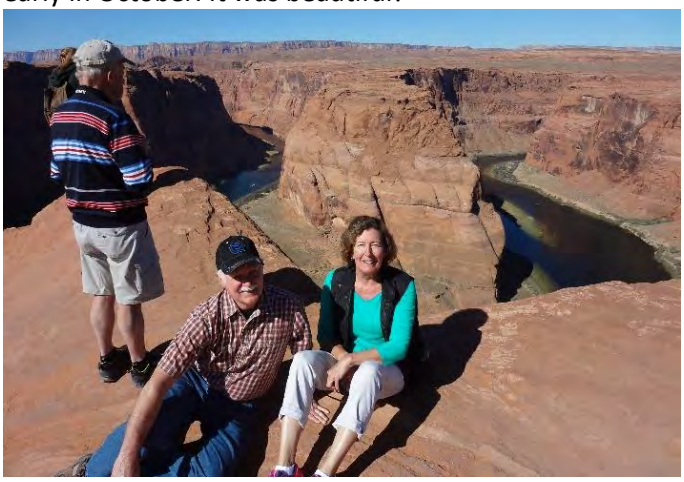
Ginny Peterson (petersvi@gvsu.edu) The last year has been eventful for me with a lot of interesting travel and activities. I was on sabbatical during the winter semester, which provided me with the opportunity to do field work in western North Carolina in the winter when the poison ivy is at its lowest ebb. The main focus of my sabbatical research was to continue my work using EBSD (Electron Backscatter Diffraction) with an emphasis on evaluating the conditions of deformation of olivine from the Buck Creek ultramafic complex as well as other dunite bodies in the region. I also advanced my work to characterize both deformation and metamorphic conditions related to movement of the Chunky Gal Mountain fault. My opportunities to do field work, collect analytical data and interact with colleagues was very productive and helped resolve some questions. I am now working to move 3 manuscripts toward publication. **Sam DeYoung** (GEO, 2017) worked with me on the olivine EBSD research, which we presented at SEGSA in March. Current student, **Dan Tjapkes**, has been working with me on thermodynamic modeling to determine pressure-temperature conditions associated with movement of the Chunky Gal Mountain Fault – some new samples have been critical to our understanding. We presented this research at GSA in Seattle and we hope to write up results in the next few months. I am also working with current student, **Jory VanEss**, to use strain analysis techniques to better constrain the strain fabrics in the dunites to better evaluate the EBSD data. Teaching this fall has been an adventure. We have embarked on our new curriculum and Kevin Cole and I are teaching the inaugural min-pet sequence course together this fall. I am also enjoying the opportunity to teach structure this fall. This means that I made trips to Bancroft and Baraboo within a couple of weeks of each other this fall – I sometimes had trouble keeping track of which field trip I was referencing.
Beyond Grand Valley, I continue to serve as a facilitator for departmental workshops as part of the NAGT Building Strong Geosciences Departments program and I was recently installed as the Chair of the Geosciences Division of the Council on Undergraduate Research (CUR) – a 3 year term.
I made a couple of interesting international trips this year as well. Early in the year, Jon and I joined my brother and his family for a week in Costa Rica – mostly in the tropical rain forests of Monteverde. We enjoyed exploring the forests and wildlife and volcanoes.

Jon on the coast of Ireland near Ballycotton.

Our daughter, Casie, worked last year as an au pair for a family in Ireland and so we visited her in the spring near the end of her time there and got to explore the country with her, including visits to Giant's Causeway

and the Cliffs of Moher. She lived in a tiny fishing village along the coast near Cork and the rocks along the coast exhibited spectacular plunging folds in Old Red Sandstone (see photo with Jon for scale). She just started a physical therapy program in Washington DC so we are looking forward to visits to the capital.

Janet Potgeter (potgetej@gvsu.edu) 2017 is a great year! Events happened in dithers and fits until April, when our larger than normal cadre of students graduated from the Geology department. What a great group of young geologists! I wish them all well.
Life hit the ground running in May with the marriage of daughter Molly to Ghazey Aleck. It was a happy and fun day and it is a blessing to have Ghazey and his family in our family circle. Molly also finished her BIO-MED program at GVSU and is now working in an emergency room in Grand Rapids. It's what she has always wanted to do, and a perfect place to gain experience before deciding to continue her education.
Son, Troy is enjoying Arizona and continues his motorcycle mechanics program and working. He gave Merle and I the perfect reason to make a trip out West early in October. It was beautiful!



Not too close to edge at Horseshoe Bend.

We visited Troy for a couple of days, explored the desert north of Phoenix, took a train to the south rim of the Grand Canyon, and then made our way to Page, AZ, Zion, Bryce and Yellowstone National Parks. It was >90 degrees in Arizona and snowing in Wyoming. Having done this in just a week, and this having been Merle's first up-close-and-personal visit to the Parks, we left out a lot of territory for future trips. Best wishes to all – we hope to hear from you again soon!

Peter Riemersma (riemersp@gvsu.edu) **Tim Suess** presented a poster of our research at the annual GSA conference in Seattle Washington.
After a mild winter characterized by numerous melt off events. I led field trips to Kentucky with Geo 312, a four day field trip to Missouri for Geo 112, and organized a mock trial as the grand finale in Geo 300. Colleague Keith Piccard and I collected macroinvertebrates in a Los Angeles stream for our NSTA workshop and we also walked across the Pacific and North American plate boundary at Wallace Creek. I chaired a session at GSA titled "Lead Them To Water: Innovative Teaching of Hydrogeology" where I presented a talk that included a photograph of **Amy Tiemeyer's** infant son Cliff as scale in a photograph. **Nick Brown** and I are studying carbonate nodules that are actively forming in Fish Lake in southwestern Michigan with the assistance of geochemist Tara Kneeshaw and microbial ecologist Bopi Biddanda. Pat Colgan and I are starting **Ella Larson** on a project investigating sapping valley formation at Ottawa County's Hemlock Crossing Park.
I coached the Allendale Middle School Science Olympiad team in the Rocks and Minerals event to a first place finish at regionals and a 4th place finish at state. I helped to sign up **Andrew Alder** (GEO, 2017), **Sara Thurkettle** (GEO, 2017), **Matt Collins**, and **Shelby Baylis** as Science Olympiad coaches. This summer I organized the Sixth Annual Allendale Community Field Day, "Things That Happen". I prepared two stations looking at the geological history and land use changes that have happened at the Allendale K-8 school grounds. One station examined a series of historical aerial photographs while a soil core on display was used to highlight the glacial environments and sediment types. This year my annual rock adventure with son Dakota (now 15 and taller than his mother) was to the U.P. of Michigan and involved snorkeling in wetsuits for agates and metal detecting for copper. For our rock adventure this summer (2018) we plan to drive across the U.S. and end up in Oregon and Washington. Let us know if you have a favorite mineral/rock location on the way to share or a place to stay!

Kevin Thaisen (thaisenk@gvsu.edu) This is my last year here as a visiting assistant professor and last summer and this fall has been busy with field trips. I taught GEO 315 Geologic Field Methods for the first time in the spring and we took a trip up the U.P. to get some practice in the field using and making maps, identifying structural features, and identifying rock units. It was a great camping trip, everyone learned a lot, and we had fun.

Robert Allor, Lindsey Wiley, Grace Robinson & Kera Noe and the rest of the Geological Field Methods (GEO 315) summer class made a trip to the Marquette area in Michigan's U.P.

Another trip this summer was down to southern Illinois to view the total eclipse. A small group of students joined me to see this event first-hand and everyone agreed that it was well worth the nine-hour drive. If you ever get the chance, I strongly encourage you to make the trip to see one. Here is a picture that was taken by **Thomas Byars** during totality.

My last, and most recent trip, was with my Planetary Geology class to the Sudbury impact in Ontario Canada. While we did get a little rain, nobody was washed away and our tents and sleeping bags eventually dried out. And it turned out to be an excellent example of how to pick the best and worst locations to put up a tent. But it was a great trip to see the rocks associated with the impact structure and everyone found a few shatter cones to add to their rock collections.

Sudbury, ON

John VanRegenmorter (vanregjo@gvsu.edu) That's right folks,….I'm back!… and I couldn't be happier! I am well into my first semester here as a visiting professor, and I'm having a blast! Coming back to teach in the department has been like a homecoming. My time spent as a student at GVSU was the best educational environment I have experienced, and I am incredibly proud to be a part of this wonderful department once again!

Since graduating from GVSU in 2005 I attended both Western Michigan University and University of Colorado at Boulder, acquiring a small collection of master's degrees along the way (Biological Anthropology, GIS, and Geology). I still love everything fossil, especially mammals. My research is focused on high-resolution inter and intra-basin correlations of Early Tertiary mammalian fossil localities, as well as the incorporation of GIS and remote sensing applications to vertebrate paleontology. Just prior to my appointment here at GVSU, I spent a brief but happy time as an adjunct instructor at GRCC.

Somewhere along the way I also gained a wife and son. We are currently living in Rockford, MI (drinking city water, thankfully). My wonderful wife Erin is also a GVSU graduate (Anthropology) and is currently teaching in the Rockford school system. My son, Bryce (yes, named after the national park) is eight years old, and in third grade. He's a brilliant little guy. He found his first dinosaur bone when he was one year old, and his first

Native American artifact when he was four. I'm proud to say he is well on his way to becoming a great scientist!

John, Bryce and Erin VanRegenmorter

Patricia Videtich (videticp@gvsu.edu) Hello everyone! I am still here! Two more winter semesters to go! Again this year I took advantage of my fall off and did some traveling. In September I went to Croatia, Bosnia and Herzegovina, and Montenegro. Besides seeing lots of beautiful country and cool castles and learning about the long and complex history of the region along with the way-too-recent 1990's war, I did notice some beautiful carbonates making up the mountain sides! We also saw a number of places important to "Game of Thrones" fans including THE throne in a souvenir store in Dubrovnik, Croatia. I, having never watched the show, could not fully appreciate the significance of these sites, but I did touch THE throne just in case it was important. In November I am going to Thailand, Cambodia, and Laos. I am especially looking forward to seeing Angkor Wat in Cambodia as it has been on my "bucket list" for a long time. As usual, I am looking forward to seeing some of you at GSA in Seattle. I also always enjoy chatting with those of you who have an opportunity to stop by the department. It's always great to catch up on what you all have been up to!

Peter Wampler (wamplerp@gvsu.edu) I successfully led another group of intrepid students on a study abroad to Haiti in 2018 in addition to a trip in December with the Students for Haiti club which included my wife and daughter. I am planning to lead the trip this summer then take a break while I am on sabbatical next year. I continue to learn and contribute to honors classes and service through my appointment as a Faculty in Residence position in the Frederick Meijer Honors College. I also cleared the last academic hurdle and was appointed full professor in 2017.
The focus of the service learning during the 2017 Haiti study abroad was distributing about 150 Sawyer water filters to families, community health workers, teachers, and school administrators. The students and I led three workshops on such diverse topics as building musical instruments, learning about the human body, and water treatment. It was a very good trip and all the students were patient and courageous. The Sawyer filter research was presented by **Danielle DeWeerd** at the Geological Society of America (GSA) meeting in Seattle in October.

Bay of Fundy, low tide.

One of the highlights of my year was taking a trip to Nova Scotia for my 30th wedding anniversary with my wife Leslie. We drove across upstate New York, the Adirondacks, Maine, New Brunswick, and finally Nova Scotia. We had the "bucket list" fulfilling experience of walking on the sea floor at low tide in the Bay of Fundy, then 6 hours and 36 feet of sea level change later kayaked over the same places in our kayaks. We also

got to kayak up to the base of a waterfall on Lake Seneca which was pretty cool.

Bay of Fundy, high tide.

I am currently working with students on a diverse set of environmental geology topics including household radon in Michigan (**Connor Cain**), geomorphology of the lower Grand River (**Adam Canute**), permeable concrete (**Grace Robinson**), and Little Mac ravines restoration (**Michaela Fischer**). GVSU alum **Kory Konsoer** (GEO, 2006) invited me to give a talk at Louisiana State University in the January which sparked more recent collaborations surveying the Grand River with students.

John Weber (weberj@gvsu.edu) John is on sabbatical for the 2017-18 academic year.

Greg Wilson (wilsong@gvsu.edu) Most of the remodeling of our spaces here in Padnos have been completed and we are now working on organizing the use of those spaces including the new Rock Prep area and adjoining Geology Storage (the old Greenhouse) as well as a variety of research spaces. We are also busy reorganizing the department collections of rocks, minerals, fossils, and maps as all of these collections have been shuffled around for the last 2-3 years during the remodeling. In addition to the building remodel we are also adjusting to reorganization of the curriculum. We have some new courses this year for the first time and are excited about these changes and the improved opportunities for our majors. This Fall I was able to attend the GSA meeting in Seattle, and along with Peter Riemersma and Peter Wampler spent a couple of rainy days in the rain forest in the Olympics. I am looking forward to teaching the Honors Geology course again this coming Winter.

Last Winter (Jan.) I was able to visit the Tucson Gem and Mineral Show for the first time. I traveled with Kevin Cole and Susan Jansen. We were able to purchase some new items for the Miller Collection as well as pick up some items for the Geology Club to use in their sales. We also had a great visit with Norm TenBrink while in Tucson. In early May, I visited my son Cooper in Madrid for a couple of weeks and got an excellent guided tour of Spain. I saw lots of geology in Spain, but mostly in the form of building stone. Cooper is now in his second year of a Master's in Education program at NYU. Luke started a new job this year, assisting the instructors in the aviation program at the Kent Career Tech Center. He is helping to train students who are interested in pursuing careers in aviation maintenance.

2017-18 Faculty and Staff

Caitlin Callahan – Assistant Professor
Kevin Cole - Associate Professor
Patrick Colgan – Professor
Jeremy Gouldey – Visiting Instructor
Kelly Heid - Affiliate Faculty
Tom Hendrix - Emeritus Professor
Tara Kneeshaw - Assistant Professor
Stephen Mattox – Professor
Figen Mekik – Professor & Unit Head
Bill Neal - Emeritus Professor
Ginny Peterson - Professor
Janet Potgeter - Department Coordinator
Peter Riemersma - Associate Professor
Mary (Molly) Sherwood - Adjunct Faculty
Norm TenBrink - Emeritus Professor
Kevin Thaisen - Visiting Instructor
John VanRegenmorter – Visiting Instructor
Patricia Videtich - Professor
Peter Wampler - Professor
John Weber - Professor
Greg Wilson - Instructor & Lab Coordinator

Currently there are 109 Geology majors, with 15 students having an Environmental emphasis; 6 Geochemistry; 7 Earth Science majors; and 8 Geology minors. There are 120 students in the Integrated Science program (pre-service teachers served by our faculty).

"Grand Valley State University educates students to shape their lives, their professions, and their societies. The university contributes to the enrichment of society through excellent teaching, active scholarship, and public service."

Degrees were awarded December 2016 through August 2017 to these deserving advisees of Geology faculty.

B.S. in Geology	
Andrew D. Alder	Chelsey L. Roth
Michael J. Bair	Haley E. Schram
Spencer C. Brower	Sara A. Thurkettle
Samuel G. DeYoung	Thomas R. Valachovics
Isaac D. Entz	Alex E. VanderVere
Waverly K. Ferguson	Valerie N Voisin
Cody H. Garnsey	Danielle J. Wilcox
Gabrielle N. Lafayette	
Jessika A. Lynn	**B.S. in Earth Science**
Charles M. Moon	Sarah A. Cole
Jonathan A. Parker	Emily P. Siriano
Brooke A Portwood	Andrew R. Sparks
Alexander J. Rarick	Christopher T. Zitka
Katy N. Reminga	

Geology Club Officers For 2017-18:

Join us on Facebook!
President: Nicholas Brown, brownnc@mail.gvsu.edu
Vice President: Danielle DeWeerd
Secretary: Adam Canute
Treasurer: Matt Collins
Faculty Advisor: Kevin Cole

Geology Club at Big Bend in March

GVSU AAPG Student Chapter 2017-18 Officers:

President: Danielle DeWeerd
Vice President: Nick Brown
Treasurer: Nick Priehs
Secretary: Parker Sutton
Current Membership: ~14
John Weber/Bill Neal - Faculty Advisors

The AAPG Student Chapter went on a field trip to local Kent County Christian Oil Co. (Linacre #1) oil well. On the excursion, the students learned about the equipment used by local drillers, the maintenance required to drill, and the history of petroleum drilling in the region. The group viewed Michigan bedrock maps and stratigraphic columns of the area along with the drillers' logs of the well from when it was drilled many decades ago. This trip was a great way for student to learn about the local oil industry and connect classroom concepts to real world applications.

2017 Student Awards and Scholarships

Edward L. Tremba Geology Scholarship is awarded on the basis of merit to upper class students who have demonstrated excellence in academic performance, intellectual ability, and potential for significantly contributing to the geosciences program.

Spencer Brower	*Joseph Nichols*
Adam Canute	*Katy Reminga*
Matthew Collins	*Daniel Tjapkas*
Samuel DeYoung	*Thomas Valachovics*
Gabrielle Lafayette	*Valerie Voisin*

The Norman and Helen Gibson Geology Field Study Scholarship is awarded to support undergraduate geology students in conducting scientific research.

Nicholas Brown *Montana Hauke*
Daniel Tjapkas

Geology Student Field Camp Fund provides support to students who will attend field camp.

Andrew D. Alder
Nathan J. Allen
Spencer C. Brower
Connor J. Cain
Matthew S. Collins
Samuel G. DeYoung
Isaac D. Entz
Cody H. Garnsey
Cory L. Hughey
Max R. Kordorfer
Madison V. Koth
Gabrielle N. Lafayette
Jaren D. Miller
Charles M. Moon
Joseph A. Nichols
Jonathan E. Ouellette
Jonathan A. Parker
Brooke A. Portwood
Alexander J. Rarick
Katy N. Reminga
Grace J. Robinson
Haley E. Schram
Timothy G. Suess
Claire E. Thomassen
Sara A. Thurkettle
Thomas R. Valachovics
Valerie N. Voisin
Danielle J. Wilcox

Geology Department Scholarships

Ian Beek
Marissa Buehler
Adam Canute
Matthew Collins
Samuel DeYoung
Kelly Jardine
Claire Kinne
Eleanor Larson
Eric Schuemann
Daniel Tjapkas
Jory VanEss

Tulip City Gem & Mineral Club Scholarship is awarded to students chosen by the Geology faculty, and who have shown significant leadership and service.

Cody Garnsey *Haley Schram*
Jory VanEss

Michigan Space Grant Fellowship:

Montana Hauke (Mentor: John Weber)
Joseph Nichols (Mentor: John Weber)
Daniel Tjapkas (Mentor: Virginia Peterson)

Outstanding Geology Major

Thomas Valachovics

Tom with his parents, Mr. and Mrs. Valachovics

Guest Speakers in 2017

Blaine M. Campbell (GEO, 1986), Trans Canada, Principal Geoscientist

3D Seismic Program at the Crossfield Gas Storage Field: Alberta, Canada.

Ed Harvey, Ph.D. Chief, U.S, National Park Service Water Resources Division, 2017 Birdsall-Dreiss Distinguished Lecturer

Water Resource Management in the U.S. National Park Service

Justin P. Dodd, Ph.D. Department of Geology & Environmental Geosciences, Northern Illinois University

Oxygen Isotopes in Biogenic Silica: A Record of Cryogenic Brine Formation in the Pliocene Ross Sea, Antarctica

Sarah VanderMeer, Ph.D. Candidate, Department of Geosciences, Western Michigan University

When Geomorphology meets Geophysics: Discovering glacial tunnel valleys in Michigan's Upper Peninsula using the HVSR passive seismic method.

Chad Kotke, Non-point Source Pollution Unit, Department of Environmental Quality, Michigan

Life after school: Balancing ethics, family, finances, and your sanity with your passion for the Geological Sciences.

Robert Bodziak (GEO, 1997), 2017 Alumni in Residence, Staff Geophysicist at Pioneer Natural Resources, Irving, TX

Permian Basin Geology and Geophysics, Onshore West Texas.

Robert Bodziak

Jody Wycech, Ph.D. (CHM, 2012), University of Colorado, Boulder.

Reconstructing Pliocene Equatorial Hydroclimate using In Situ Micro-Analytical Techniques on Planktic Foraminifera.

Earth Science Week Lecture Series: November 6 - 10

Peter Riemersma once again organized a top notch series of lectures to celebrate a belated Earth Science Week. Invited guest speakers, including three alumni, gave talks with a strong environmental angle. Student attendance was exceptional this year with over 90 students, plus faculty and community members at each event. These lectures will help give our geology and gen-ed students a feel for what geologists do, and might attract some introductory students to declare geology. The geology department deeply appreciates the experiences our alumni and colleagues share with our students.

Joshua Ehlich (GEO 2017), Ph.D. Candidate
Department of Geology and Environmental Geosciences
Northern Illinois University, DeKalb, Illinois

Using Fluid Inclusions to Understand Copper and Gold Transport in Magmatic-Hydrothermal Ore Deposits.

Mr. Colin Plank, CPG (GEO, 1997), Senior Geologist
Burns and McDonnell, Lowell, Michigan

Geology Rising- The Environmental Remediation Industry's Renewed Emphasis on Sound Geological Practices.

Dr. Richard Christensen Jr. (1984)
Principal Hydrogeologist, ACUITY Environmental Solutions, Fishers, Indiana

Environmental Sleuthing using Petroleum Fingerprinting Identifies Archeological Contamination at Site.

Matt Reeves, Ph.D. Department of Geology
Western Michigan University, Kalamazoo, Michigan

Fracture Networks: The Internal Plumbing of Bedrock.

Bopaiah Biddanda, Ph.D. Annis Water Resources Institute, Grand Valley State University

Time and Space Traveling with Microbes of Lake Huron's Sinkholes.

Important Changes Coming for Licensed Geologists

Larry Austin (GEO, 1974), although retired, notes that he now works 3 times as hard. He continues his outstanding professional service, now having served for nearly a decade as American Institute of Professional Geologists (AIPG) National Screening Committee Chairman. He represented the Michigan Section at the 54th AIPG annual meeting in Nashville, TN, in September, and with Mary and Rob, attended meeting field trips to the Mammoth Cave & Karst region as well as the Lookout Mtn./Raccoon Mtn. trip to Chattanooga. Larry's Notes from the 2017 meeting, are printed in their entirety in the October issue of the Michigan Section AIPG Newsletter (http://mi.aipg.org/newsletters/pdf/2017%20October%20MI%20Newsletter.pdf), and include his comments about the new National Licensed Geologist (NLG) classification of membership. Larry offered his summary and comments for this newsletter.

AIPG is in the process of presenting a new membership option in conjunction with AGI and ASBOG that should be of interest to geologists nationwide including many of our alums that practice in the private sector or just wish to have their qualifications uniformly recognized across the country.

"The attitude toward professional regulation has changed from the 80's and 90's. No longer are state governments pursuing regulation but rather deregulation is the current emphasis. At least three states have ended regulation of geologists while deregulation is under consideration in several more,

notably Arizona and Florida."
"The NLG is intended to provide a vehicle by which a geologist can document qualifications that equal or exceed the requirements of ASBOG and hopefully ease licensing where required and provide proof of qualifications where not. Key requirements of the NLG are holding a CPG, passing both the fundamentals and professional practice portions of the ASBOG exam, and maintaining an annual Continuing Professional Development (CPD) commitment of 16 hours, including one hour of professional ethics documented through AIPG's CPD program. Below are my comments to incoming AIPG National President Doug Bartlett when asked what I thought of the NLG proposal:
'Wow! Deja vu! The NLG program brings back a lot of memories in AIPG history. Hopefully now is the moment it can bring much of that history back together and into fruition.
Ok, let me step back in time a bit and provide some background to my comments. Back in the late Holocene (as opposed to whatever we've decided to call today, something about Anthropocene that doesn't quite pass muster in my spell checker) when AIPG was quite a bit younger than today, much of the talk was of AIPG's CPG having sufficient stature to avert the need for a patchwork quilt of state licensing. I even ran for National President twice on a platform supporting CPG in the role now targeted for NLG. Apparently my timing wasn't quite right as I was defeated both times.
At the same time some Sections were pushing for licensing while the Professional Engineers were fighting it tooth and nail. Initially, National opposed such action and withheld their support. Eventually, however, the path became clear and several years later National began working to try to achieve some level of consistency between states. Michigan alone made 7 or 8 attempts and still doesn't have licensing, possibly never will unless there's quite a change in attitude in Lansing. Be that as it may, at one point I think the tally was 34 states had regulation in one form or another and I see from your table a couple have dropped off the list.
That said, I strongly support the concept. Hopefully the timing is more conducive for success and recognition of the NLG now than it was years ago for the CPG. And although I'd prefer it were the CPG getting the recognition, I understand AIPG isn't going to get a bunch of old retired geezers like me to sit for the ASBOG exams just to say we did."
[Thanks Larry for sharing this information, and our majors should pay attention to AIPG's role in promoting professionalism in our discipline, and stay informed as to what sorts of professional regulations exist regionally for geoscientists.]

Alumnus is up to something fishy

GVNow, March 14, 2017, by Lucas Escalada
Throughout his career as a science teacher, Jeff Bouwman, '03, has continuously looked for ways to involve his students in science. After going through textbooks, lectures and projects, he decided to try something different — he brought a sturgeon into the classroom.

"The best way for students to learn is by doing the science," said Bouwman, who majored in geology. "The more opportunities we provide in the classroom, the more excited they will be to learn." Shumate Middle School in Gibraltar, Michigan, where Bouwman teaches, is one of eight schools selected to participate in the "Sturgeon in the Classroom" program. The program is offered through the Michigan Department of Natural Resources Fisheries Division to increase awareness and appreciation of the threatened lake sturgeon. After a three-year wait, Bouwman's class was approved to participate in the program. The class was able to work with a six-inch sturgeon. Every day, two or three students would track specific data about the sturgeon and send it back to the DNR.
"Having a threatened species in the class changes everyone's perspective," Bouwman said. "We get to learn about the sturgeon, but we also raise awareness about endangered species in general." Students participate in research and data tracking in the program. Representatives from Sturgeons of Tomorrow, an organization associated with the

program, visit the classroom and help facilitate the process.
While raising a threatened species is a new experience for Bouwman, fish have become a regular aspect of his classroom.
“Students love getting these unique opportunities at school,” he said. “They know that when you get to Mr. Bouwman’s room, you’re going to be raising fish.”

Bouwman’s classroom has also participated in the Michigan DNR “Salmon in the Classroom” program for eight years. Through this program, students help raise salmon from eggs until they are fully grown.
Over the last eight years, Bouwman’s students have released more than 700 salmon in the Huron River. For Bouwman, the more important number is the 250 students who were able to participate in real-world science.
“We are making a real-world impact. Students get to see the importance of monitoring the tanks and creating a nice ecosystem; they get real responsibilities,” he said. “This is all part of what the DNR does, it is all real, actual science.”
Providing students with science opportunities is important for Bouwman. While textbooks and lessons can be helpful, Bouwman said he wants students to see that there are plenty of opportunities for science work.
One of those opportunities is getting the first WeatherSTEM system in Michigan. The system, which was obtained after Bouwman wrote a grant, tracks temperature, wind speed and other weather data.
Bouwman said the WeatherSTEM is the “coolest tool” he has ever worked with. The system can provide continuous weather updates to the community and show students interactive data they can learn from.
“Everything we do is about helping the students learn more,” Bouwman said. “I love that we can give them these opportunities where they get to learn by doing science.”
Visit the Sturgeon in the Classroom and Salmon in the Classroom websites to learn more. Follow updates from the WeatherSTEM system at wayne.weatherstem.com/gibraltar

Alumni News and Updates

Larry Austin (GEO, 1974) Life goes on, retirement treats me well although I went from 40 hrs a week to 120 and took a cut in pay. After all, it just means tired again doesn't it?
I continue as the chairman of the American Institute of Professional Geologists (AIPG) - National Screening Committee. I've held this position for about a decade now and enjoy the challenges.
Mary, Rob and I just returned from AIPG's annual meeting. This year it was held in Nashville, TN with field trips in surrounding TN and KY. We chose the Mammoth Cave and related Karst features trip and also the Lookout Mountain/Raccoon Mountain trip to Chattanooga. Highly enjoyable trips, meetings, presentations and gatherings.

Jeff Spruit (GEO, 1975) 2016/2017 has certainly been an eventful time in my life. In early December, I slid off the roof of my home, fracturing my foot and causing compression fractures to two vertebrae. Fortunately two deft orthopedic surgeons were able to put me back together again. I’m still on the DEQ Technical Team working on the Enbridge Kalamazoo River Oil Spill Cleanup in addition to a number of other projects and my duties as District Geologist. The River looks great! Come on down and check it out. This spring our daughter Carrie wed her high School sweetheart in Chicago. We all had a good time celebrating the event in the City. In May, Diane and I adopted a couple of special needs dogs: a full bred German Shepherd and full bred Golden Retriever. They were both puppy mill breeders and were rescued from an undeserving fate. They were both very timid at first, but finally opened up and began trusting us with lots of love and patience from us. We are slowly exposing them to new experiences and people to get them more socialized. In June, Carrie found out she was pregnant and let us know that we are becoming grandparents. In August, Carrie got a new job with Bronson Hospital as their

Facilities Design Coordinator and will be moving back to the Kalamazoo area. That gal is a go-getter. Yay, closer to mom and dad. Recently, Diane had hip replacement surgery and I'd been taking some time from work helping her get back on her feet. She's now back at work and getting around quite well. My son, Aaron is still working with the State as a child protection investigator in Cass County. This is his fourth year at a very difficult and stressful job. I don't know how he does it.- Whew! What a year. My roof accident caused me to contemplate where I'm at in life, both personally and professionally. I decided to retire next autumn. Life is too short and there are many things Diane and I want to do and see. In the meantime, I wonder what this next year will bring. I'll try to make it to campus and visit. Until next time, Go Lakers!!

Ingrid VerHagen (GEO, 1982) I was promoted in January 2016 to a position that involves among other things maintaining the MPCA's data system called Tempo. My job includes developing training content for the data system (presentation, wiki, Skype for Business video), training large groups or providing one-on-one tutorials and business readiness. The business readiness includes meeting about processes of different programs and what software tools can be used to improve and make their process more efficient, transparent and standardized. My daughter Anna started Medical School at the University of Minnesota this fall while my son Isaac is pursuing a Geography degree at the University of Minnesota. My husband and I like to hike and cross country ski in the UP and I like going on long bicycle rides.

Blaine Campbell (GEO, 1986) Still working at TransCanada and living in Elk Rapids, MI. Spent my 55th

birthday this year single track mountain biking across the Scottish Highlands (Cairngorms National Park) with my oldest daughter (below) and son in-law. What a memorable experience!

Adam Wygant (GEO, 1993) Vice president of the Michigan Basin Geological Society, 2017-2018. Please visit us at www.mbgs.org.

Brian Workman (GEO, 1997) 5 espressos (5espressos.com), Website Management and Development Services, Grand Rapids, MI

Nicole (Heller) Rottet, P.G. (GEO, 1998) Project Manager, Geologist, For Wood PLC in Novi, Michigan. Assistant Program Manager for the Due Diligence Program for an international Financial Institution. Nicole evaluates Phase I Environmental Site Assessments (ESAs) from another vendor for the purpose of evaluating risk to the Bank during disposition and acquisitions. Nicole coordinates vendors performing Phase II ESAs for the Bank providing updates to the Bank and their Property Management Firms.

Jason Conant (GEO, 1999) Project Manager at ATC Group Services LLC., Grand Rapids, MI

Eric Hanis (ESCI, 2000) I started my own environmental consulting firm in November 2016, Hanis Consulting, Inc., Illinois, and married Anna Krolikowska on August 26, 2017.

Jonathon Miller (ESCI, 2001) (photo below) I have been teaching geoscience courses for Mid Michigan Community College and the Saginaw Chippewa Tribal College since 2004. I completed an online graduate program at Mississippi State in 2016 and am now a full-time instructor at SCTC.

Michael Shelton (GEO, 2004) Recently hit a decade at the DEQ's - Oil, Gas and Mineral Division as a Senior Geologist. Overseeing the exploration, drilling, development, production and occasional remediation of oil and natural gas in many differing Michigan regions has been a great opportunity to use the extensive knowledge gained from my GVSU degree. I've been dipping my toes in geological GIS mapping and Michigan's Karst systems/features recently too. My phenomenal wife and I had a beautiful daughter (Ava) in 2016. Our super son (Ethan-2010) couldn't be a more amazing big brother too!

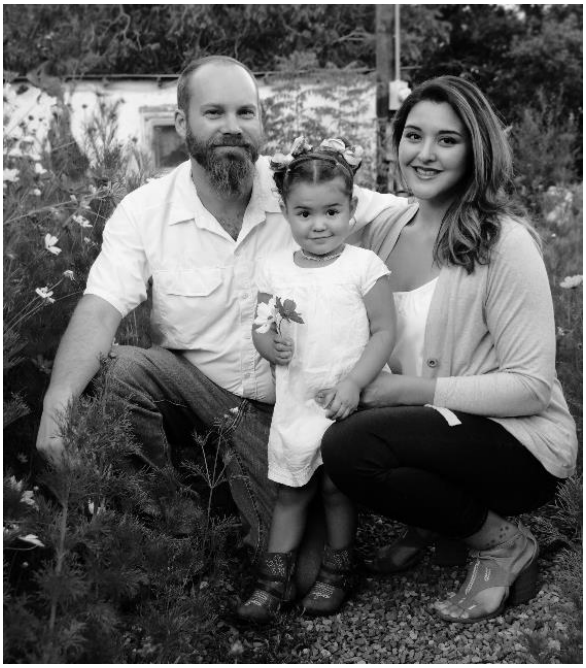
Frances (Haarsma) Vugteveen (GSCI-GEO, 2004) Steve Mattox is probably the only one who does remember me - loved his classes, and especially the field trips. My other favorite professors, back in the early '00's, were Ben Edwards and Bill Neal. Greg Wilson was very helpful as well, although I never took a class with him.
I was not able to use my degree; life punched me down repeatedly for a few years. 12 long years... but other than needing to be careful with my health, life is good again. I volunteer as a mentor in a local school, work as an executive secretary/office manager/art department (read, the only office employee) at my church, and am an avid photography enthusiast. I noticed you may need a photographer from time to time; feel free to call on me. :-)

Rick Ruel (ESCI, 2005) I am currently teaching AP Environmental Science, Geology and Biology at Oakridge High School in Muskegon, MI. I taught Earth Science for 7 years in a high school just outside Chicago and I have been at Oakridge for 5 years now.

James Rinke (GEO, 2006) Lead Brewer, Backcountry Brewery, Central Washington University, Dillon, CO.

Jillian Kurek (GEO, 2006) I now live in the Houston area and work for Weatherford Labs (an oil and gas service company) as a technical advisor, focusing on geochemistry analyses in order to assist with things like production allocation, flow assurance, and time lapse studies. It is a really fun job and it would be great to know if other alumni in the Houston area are looking to connect.

Carson Klemp (GEO, 2007) My wife Brooklyn, and our daughter Dakota are all still living in Silver City, New Mexico. I continue to work for Freeport McMorRan at the Chino Mine as a Senior Geologist. I was able to make it out to the Lake Tahoe and Reno Nevada area this spring to dig pegmatites with an old friend (Tyler Minnick a Michigan Native as well). Spent a day on world famous Peterson Mountain digging giant Amethyst Scepters with Tyler as well. Dakota has already gotten the geology bug and loves looking for rocks and minerals, as well as helping me clean my finds.



Carson, Dakota and Brooklyn Klemp

Heather (Brusnahan) Skidmore (GEO, 2009) GIS Specialist, Jackson County, Iowa.

Elizabeth Carr (GEO, 2010) Geologist at Terra Guidance, LLC.

Mallory Morell (GEO, 2010) We are now living in PA because my husband was hired as a professor of Geology at Allegheny College. We had our first baby on Feb 14th, a baby boy named Finn. We are all doing well!

There are not a lot of geo jobs here at the moment so I am currently working in aerospace manufacturing in quality analysis but hope to get back into geo when the opportunity presents itself.

Christie Kroski (GEO, 2011) Staff Geologist at Hart Crowser, Seattle, WA.

Stephen Shields (GEO, 2011) Geologist/Environmental Scientist, WSP U.S.A. – Missouri State University.

Kent Walters (GEO, 2011) Geologist for the Waste Management and Radiological Protection division for the Michigan DEQ He and wife, Kalan, live in Cascade. From Pat Colgan, Kent was also one of our students that did a non-traditional field camp (Juneau Ice Field Program in AK). He really likes what he is doing, which is mainly environmental/hydrological oversight and permitting on area landfills. He enjoys the work because he gets to use his glacial geology and engineering geology as well as his experience working as an environmental consultant.

Clayton Lipski (GEO, 2012) Supervisor at M@W/Owner. Flowhand at Lipski Oilfield Services. We have a transload here in Elk City, OK, where we mostly load sand from rail to truck. I oversee all the operations from loading to billing to maintenance. I schedule workers, conduct interviews, operate machinery, and operate the scale house. Monitor fluids that are produced, and act as mechanic and site manager.

Jody Wycech (GEO, 2012) Jody recently graduated with a PhD in Geoscience from the University of Wisconsin-Madison. Her dissertation was entitled "Novel techniques and approaches to enhance the fidelity of foraminiferal paleoclimate records." Jody now lives with Andrew Heyboer (GEO, 2011) in Boulder, Colorado where she is completing a post-doctoral fellowship through the Cooperative Institute for Research in Environmental Science (CIRES).

David Trudeau (GEO, 2013) Hydrogeologist at GHD, Lynwood, Washington.

Karl Campbell (GEO, 2014) I've been pretty busy since finishing up GVSU in 2014. 2016 consisted of me getting married to my high school sweetheart, I received a MS in Geophysics at Michigan Tech in November of 2016, and started working at Apache Corporation as a Geophysicist in December of 2016. I spent 2017 in the Houston office, but will be transferring to our Midland office in January of 2018. I've been able to keep busy during the low price environment and continue to generate leads and prospects to add to our company portfolio! I continue to use all the geologic knowledge I obtained from my time at GVSU every day.

Joseph Cherluck (GEO, 2014) I continue to work at Mersino Dewatering, Inc. as Director of Inside Sales and Engineering, we've just completed work on the Fraser, MI Sinkhole project after 11 months of critical work (https://spark.adobe.com/page/5hfD8aczoZ4hd).
I am continuing to search for entry-level and above self-driven geoscientists and engineers (civil, mechanical, environmental) for positions at Mersino Dewatering as estimating engineers/project managers. We are a Michigan based construction dewatering company and centrifugal pump manufacturer (with 5 other US branch locations), this is a salaried position with potential for travel and a position in which individuals will learn and gain experience in the construction/environmental field as well as pump application and fluid systems engineering. Below is the link to the job posting/description. Please share this with alumni, and graduating students. Familiarity of Hydrogeology and sedimentology/stratigraphy is valuable.
Job Posting:
https://www.ziprecruiter.com/jobs/mersino-dewatering-inc-ec2af326/project-estimator-construction-req-1122-53ffddaf

Devin Gerzich (GEO, 2014) Geospatial Analyst 1 at Radiant Solutions, Carleton, MI.

Joseph Spadafore (ESCX, 2014) Geology Teacher at Forest Hills Central High School, Grand Rapids, MI

A. J. Barrette (GEO, 2015) Geologist, Wolverine Gas and Oil Corp, Grand Rapids, MI.

Zachary Curry (GEO, 2015) Project Scientist at Envirologic Technologies, Inc., Kalamazoo, MI.

Evan Lavery (GEO, 2015) Field Geophysicist at Southwest Geophysics, Inc., San Diego, CA.

Mike Bair (GEO, 2016) Project Geologist, Envirologic Technologies, Inc., Kalamazoo, MI.

Reece Elling (GEO, 2016) Geophysics Doctoral student at Northwestern University.

Logan Knoper (GEO, 2016) Research Assistant at University of Michigan College of Literature, Science, and the Arts, and doing low flow sampling at Sample Serve, Michigan.

Kayla Lockmiller (GEO, 2016) Pursuing a M.S. in Geosciences at St. Louis University, MO.

Karen Musser (GEO, 2016) Working at Mersino Dewatering, Inc.

Natalie Renkes (GEO, 2016) Graduate Program, UNLV

Christina Sobolak (ESCX, 2016) Middle School Science Teacher at St. Fabian Catholic School, Michigan.

Andrew Alder (GEO 2017) Attending graduate program at Ohio University. Engaged to Sara Thurkettle!

Sam DeYoung (GEO, 2017) Lab instructor and M.S. student at Missouri State University.

Isaac Entz (GEO 2017) Appraisal Technician at Muskegon County Equalization, Michigan.

Hayley Schram (GEO, 2017) Project Geologist at Westshore Consulting, Michigan.

Sara Thurkettle (GEO, 2017) Attending graduate program at Ohio University. Engaged to Andrew Alder!

Valerie Voisin (GEO, 2017) Just wanted to let you know I started my masters at NIU and so far it is going well! I work as a research assistant for Dr. Dodd. Right now I'm honing my skills in isolating the diatoms from the ocean sediment. I'm still getting used to the area and DeKalb is a nice small town. I live only 1.5 miles away from campus so the short commute is new but welcome for me. I even have an office on campus and the lab I work in is right down the hall!

Eclipsing Our Expectations

America was treated to a great solar eclipse on August 21. A few geology faculty traveled to the mid-west eclipse path to get a better view. On the whole, the event was visible to everyone across the country to some degree. The Allendale campus could see a nearly 85% eclipse. Janet, Greg and Caitlin, equipped with solar viewing glasses, spent some time just outside the department office and had a good look.

Hosts across campus made the most of the day by providing proper viewing glasses to students and visitors, and creating other ingenious devices to see the effects of the eclipse. Our sidewalk was the perfect background to see the special effect the eclipse had on the shadows cast by trees. It was a perfect summer day and campus was teeming with new and returning students (classes would start a week later) so the opportunity to share glasses and hear choruses of "WOW!" filled the few hours of the event. Save your glasses for April 8, 2024!

Thirteenth Annual Geology Chili Contest 2017 Summary

Thanks to all who attended and especially to those that contributed a chili, side dish or dessert. I was very pleased by the enthusiastic student participation with 6 chilis. Two chefs' chilis really dominated this year: Connor Cain and Kevin Thaisen. I also appreciate all the judges who helped make the event a success. As always, thanks to Kevin Cole for the fantastic trophies!
Start planning to submit a chili, dessert or side dish for next year's 14th Contest. Next year we will have two awards for desserts, most geological and best dessert.

If you really want a trophy, consider that the vegetarian chili contest was not as competitive this year as in previous years.
Not that we needed reminding but we proved once again that Geology Rules! At the end of the email are two of the award winning recipes - so we can relive and reminisce at home!
Until Next Year!
Peter Riemersma, Chili Coordinator

The Numbers
14 Chilis submitted (6 student chilis)
4 desserts
4 side dishes
65 Participants (name tag count)
~9 Judges

2017 Award Winners * Recipes below
Best Overall Chili*: Kevin Thaisen
Best Student Chili*: Connor Cain
Silver Certificate Student Chili: Adam Canute
Most Popular Chili: Connor Cain
Best Vegetarian Chili: Kevin Cole
Hottest Chili: Kreigh Tomaszewski (Indian Mounds)
Most Geological Chili: Greg Wilson
Most Geological Dessert: Rebecca Soll Cupcakes
Best Side Dish: Kelly Heid

Connor Cain's Turkey Chili

2 Turkey Legs
2 large onion, chopped
4 Ribs celery, chopped
3 Cans northern beans, drained
3 Cans pinto beans, drained
1 Can cream of chicken soup
1 Can diced tomato, chopped
1 Green pepper
1 Red pepper
2 Jalapeno peppers, chopped
2 Banana peppers, chopped
1/4 Cup fresh cilantro, chopped
2 Teaspoons chili powder
1 Teaspoon cayenne pepper
1 Teaspoon cumin powder
1 Teaspoon black pepper
1 1/2 Teaspoon salt
2 Cloves garlic
1 Teaspoon parsley flakes
1 Teaspoon paprika
1 Teaspoon oregano

Place all ingredients in crock pot. Cook on low heat 8-10 hours. Remove turkey legs and shred meat. Return meat to crock pot. Serve with shredded cheddar cheese, sliced jalapenos, diced tomato, and onion

Kevin Thaisen's Steak Fajita Chili

1 ½ to 2 lbs. fajita steak meat (precooked/seasoned meat works well too)
3 – 10 oz. cans of Rotel fire roasted diced tomatoes and chilis
2 cans of Bush's black beans in chili sauce
1 ½ to 2 green bell peppers, diced
1 ½ to 2 red bell peppers, diced
1 medium-sized red onion, diced
32 oz. of tomato juice
1 cup of brown rice
1 lime
2 cloves of garlic (chopped)
2 tbsp. chili powder
2 tsp cumin
Oregano (to taste)
Tabasco chipotle pepper sauce (to taste)
Fajita seasonings (to taste)
2 tbsp olive oil
Instructions:
Cut meat into small pieces or strips, brown and season meat with fajita seasonings.
Add meat, Rotel, beans and sauce, garlic, and tomato sauce to pot and heat over medium heat.
Sauté diced bell peppers and onion in olive oil until heated through, add oregano, fajita seasoning, and tabasco chipotle sauce to your personal taste. When finished, add everything to the pot and mix well.
Add chili powder, cumin, garlic, and the fresh squeezed juice of the lime and any pulp to the pot and mix well.
Bring to a boil, and then reduce heat to just above a simmer for an hour or so. 30 minutes before serving (or finishing cooking if it is for later) add brown rice to soak up the remaining liquid.
Serve with cheese and sour cream and enjoy.

Visit www.gvsu.edu/geology to see earlier editions of this newsletter and chili recipes.

Student Scholars Day, April 2017

Student Scholars Day (SSD) is held once each year to celebrate the scholarship and creative work performed by GVSU students. The day showcases faculty-mentored student work, shared through many venues, including (but not limited to) oral presentations, discussion and panel sessions, fine arts exhibits and performances, and poster presentations. SSD is not a scholarship competition and does not offer monetary awards. The geology department is deservedly proud of our industrious majors who had a remarkable presence with 23 separate presentations.

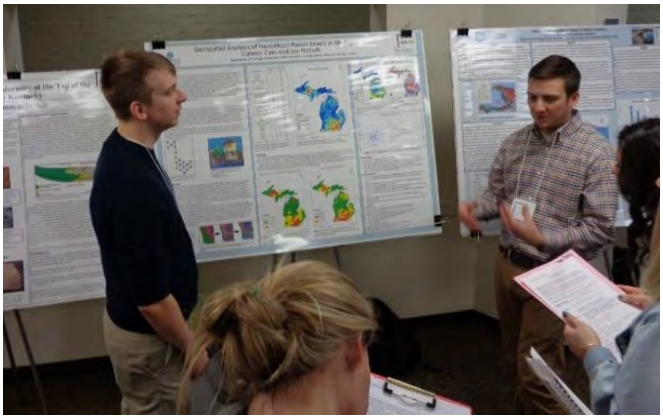
A Stratigraphic and Petrologic Study of the Unconformity at the Top of the Middle Silurian Bisher Formation in Kentucky
Olivia Jamrose, Bryce Thiel, Daniel Tjapkes, Lindsey Wiley

Ball and Pillow Structures of the Upper Ordovician Fairview Formation in Maysville, Kentucky
Megan Haessly, Megan Heath, John Ouellette, Zachary Stuart

Causes of Meter-Scale Cyclicity in the Upper Ordovician Fairview Formation, Kentucky
Matthew Della Mora, Max Korndorfer, Madison Koth, Benjamin Pummell

Cyclical Deposition in the Late Ordovician Kope Formation in Kentucky, U.S.A.
Nicholas Brown, Adam Canute, Jory VanEss

Geospatial Analysis of Household Radon levels in Michigan
Connor Cain, Joseph Nichols (below)



Exploring the Potential for Fluvial Processes on Mars using Geospatial Analysis
Matthew Collins

Relative Timing of the Chertification and Dolomitization in Facies of the Lower Silurian Brassfield Formation in Northern Kentucky
Nathan Allen, Gavin Balcom, Isaac Entz, Micaela Fischer

Using ArcGIS and Remote Sensing Data to Examine Precipitation and Vegetation Patterns on Hispaniola in the Caribbean
Hayley Schram, Valerie Voisin

Using Building Stones on the GVSU Campus to Educate the General Populace about the History of the Earth
Isaac Entz

Geological Mapping, Kinematic, Fault-slip, and Gigapan Image Analysis, Kentland Impact Structure, IN
Andrew Alder

Sediments of a Pitted Lacustrine Plain and their Implications for Paleolake Level of Glacial Lake Chicago, Cedar Creek Township, Muskegon County, Michigan, U.S.A.
Thomas Valachovics

Using Geographic Information Systems (GIS) to Quantitatively Determine Paleowind Directions of Inland Eolian Dunes Found in Western Lower Michigan, U.S.A.
Sara Thurkettle

Olivine EBSD and Equilibrium Assemblage Constraints on Conditions of Formation and Emplacement of the Buck Creek Ultramafic Complex, North Carolina
Samuel DeYoung

Variability in the Yield of Groundwater in Haitian Aquifers
Spencer Brower, Gabrielle LaFayette

A Geospatial Investigation of Conductivity Levels and Temperature of Surface Waters in the State of Georgia
Nathan Allen, Isaac Entz

Evaluation of DNA Preservation in Water Samples from Rural Haiti Using PCR
Melanie Edwards, CMB Major

Using GIS and Historic Mapping to Analyze Grand River Changes Over the Past 100 Years.
Adam Canute, Samuel DeYoung, Jaren Miller

The Cause of Deformation in the Point Pleasant Formation, Northern Kentucky
Connor Cain, Michael Cleve, Sierra Nakano, Amy Tiemeyer

A Data Driven Analysis into the Consequences of Permafrost Melt in Northern Alaska
Joshua Catalano, Matthew Della Mora, Daniel Tjapkes

Analysis of Sinkhole Development in the Floridan Aquifer System
Isaac Entz, Neson Nesmith

Mackinac Breccia, Diagenesis and Geologic History
Kyle Gregory

Reconstructing Deep Sea Calcite Dissolution Patterns Using the Size Normalized Shell Weights of *Neogloboquadrina dutertrei*
Cody Garnsey

Structural Analyses of Overturned and Sheared Rocks in the Caribbean Orogen Hinterland
Joseph Nichols

GEOs @ GSA 2017

Collaborations:	
Faculty Attending Mentors/Presenters *	**GVSU Students and Alumni**
Caitlin Callahan *	Maria Beelen
Kevin Cole	Nick Brown
Tara Kneeshaw *	Connor Cain
Steve Mattox *	Danielle DeWeerd
Ginny Peterson *	Kayla Lockmiller (2006)
Peter Riemersma *	Kory Konsoer (2006)
Patty Videtich	Sarah Nagorsen (2008)
Peter Wampler *	Tim Suess
Greg Wilson	Amy E. Tiemeyer
	Daniel J. Tjapkes
	Lindsey Wiley

More alums were spotted in Seattle: Dr. Ken Bevis (GEO, 1987); Reece Elling (GEO, 2016); Tiffany Gentner (GEO, 2016); Dr. Ron Green (GEO, 1978); David Trudeau (GEO, 2013); and Dr. Jim Walters (GEO, 1970)

Notable: Peter Wampler had two students presenting posters about their research, Connor Cain and Danielle DeWeerd. Connor took first prize for his poster on Radon in Michigan and Danielle received honorable mention out of about 35 posters for her research on water treatment in Haiti (from the study abroad program). Tara Kneeshaw's mentee, Amy Tiemeyer also received honorable mention for her poster. Way to go students!

Connor Cain, Peter Wampler and Danielle DeWeerd.

Caitlin Callahan
363-2: EXPLORING THE IMPORTANCE OF SOCIAL CAPITAL FOR GEOSCIENTISTS WITH COGNITIVE DISABILITIES; **Lindsey Wiley**, Caitlin N. Callahan, Grand Valley State University

336-2: SHARING THE IDEA OF ADAPTATIONS WITH PRE-SERVICE TEACHERS: REFLECTIONS ON A PROFESSIONAL DEVELOPMENT WORKSHOP RELATED TO INCLUSIVE EDUCATION; Caitlin N. Callahan, Grand Valley State University.

I am co-author on another two talks; the first is an invited talk based on the paper is to be published in JGE next month.
137-14: APPLYING THEORETICAL FRAMEWORKS TO THE RECRUITMENT AND RETENTION OF UNDERREPRESENTED STUDENTS IN THE GEOSCIENCES

(Invited Presentation); Nicole LaDue, Northern Illinois University; Caitlin N. Callahan, Grand Valley State University; Lorenzo Baber, Iowa State University; Julie M. Sexton, University of Northern Colorado; Katrien J. van der Hoeven Kraft, Whatcom Community College; Eboni M. Zamani-Gallaher, University of Illinois at Urbana-Champaign

205-6: HOW DO THEY KNOW WHERE TO GO? EXPERT VERSUS NOVICE REASONING AND NAVIGATION DURING BEDROCK GEOLOGIC MAPPING; Heather L. Petcovic, Kathleen M. Baker, Western Michigan University; Caitlin N. Callahan, Grand Valley State University

Tara Kneeshaw

6-11 AN ALL-INCLUSIVE FIELD-BASED APPROACH TO TEACHING GROUNDWATER SAMPLING AND MONITORING; Tara Kneeshaw, Grand Valley State University; Thomas Howe, Western Michigan University

170-3 EVALUATION OF RESIDUAL POLYCYCLIC AROMATIC HYDROCARBONS IN SEDIMENTS FOLLOWING A SPILL OF DILUTED BITUMEN; Tara Kneeshaw, Grand Valley State University; Kayla A. Lockmiller, Saint Louis University

Amy Tiemeyer and Tim Suess presenting posters at GSA in Seattle, WA.

82-10 USING MICROCOSMS TO EVALUATE IRON AND SULFATE REDUCTION RATES UNDER VARYING BIOGEOCHEMICAL CONDITIONS

Amy E. Tiemeyer, Tara A. Kneeshaw, Grand Valley State University; Erin M. Driver, The Biodesign Institute and Global Security Initiative

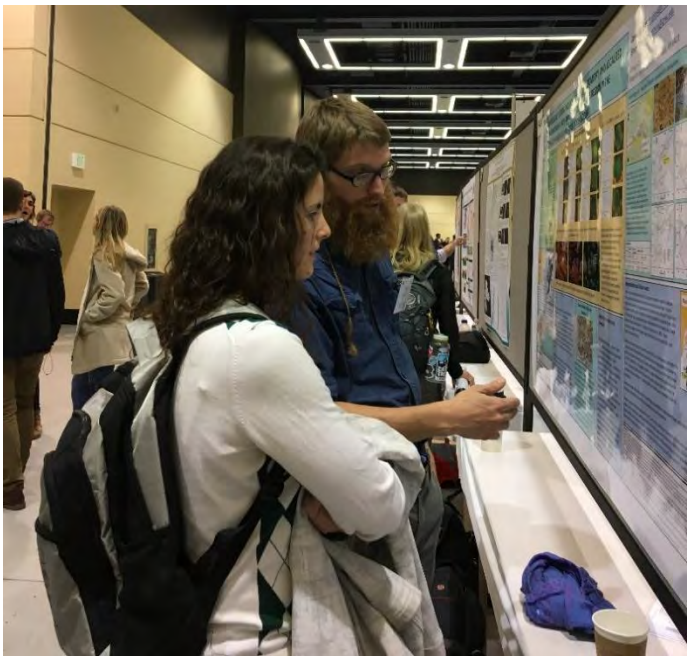
Stephen Mattox

235-4: MI-STAR: IMPLEMENTING THE FRAMEWORK AND NGSS IN MIDDLE SCHOOLS IN MICHIGAN (Invited Presentation); **Jacqueline E. Huntoon**, Doug Oppliger, Emily E. Gochis, Stephanie Tubman, Christopher L. Wojick, *Michigan Technological University;* Ed C. Robeck, *American Geosciences Institute;* Stephen R. Mattox, *Grand Valley State Univ*

Virginia Peterson

85-5: PRESERVED LARGE GARNET ZONING, PSEUDOSECTION THERMOBAROMETRY, AND LOCALIZED DEFORMATION CONSTRAIN P-T PATH AND EXTEND GRANULITE FACIES REGION IN THE SOUTHERN APPALACHIAN CENTRAL BLUE RIDGE, NORTH CAROLINA

Daniel J. Tjapkes, Virginia L. Peterson, Grand Valley State University



Daniel J. Tjapkas

Peter Riemersma

6: T14. Lead Them to Water: Teaching Innovative Hydrogeology; Session Chairs: Peter E. Riemersma, Laura S. Ruhl, Thomas Darrah

82-9: THE EFFECT OF ROAD SALT ON THE HYDROLOGIC SYSTEM IN 2017 AT ALLENDALE MIDDLE SCHOOL, MICHIGAN; **Timothy G. Suess**, Peter E. Riemersma, Grand Valley State University

6-5 EXPLORING HYDROGEOLOGICAL ENVIRONMENTSUSING THE UNITED STATES GEOLOGICAL SURVEY'S HYDROLOGIC INVESTIGATIONS ATLASES; Peter E. Riemersma, Grand Valley State University

Peter Wampler
93 T6. Cross-Border Community Engagement Using Geoscience Research, Education, and Outreach
Session Chairs: Peter S.K. Knappett, Texas A&M University; **Kory Konsoer**, Louisiana State University; **Sarah Nagorsen**, Menlo Park Publishing Service Center; Peter J. Wampler, Grand Valley State University

93-4 POTHOLES AND PITFALLS ALONG THE ROAD TO RESEARCH AND STUDYING ABROAD IN HAITI; Peter J. Wampler, Geology Department, Grand Valley State University, 1 Campus Drive, Allendale, MI 49401, wamplerp@gvsu.edu

68-1 GEOSPATIAL ANALYSIS OF HOUSEHOLD RADON LEVELS, BEDROCK, AND SURFICIAL GEOLOGY IN MICHIGAN; **Connor J. Cain**, Peter J. Wampler, Azizur R. Molla, Grand Valley State University

82-6: COMMUNITY OUTREACH, WATER RESOURCES ASSESSMENT, AND SAWYER FILTER EVALUATION NEAR DESCHAPELLES, HAITI; **Danielle J. DeWeerd**, Peter J. Wampler, Ryan G. Vannier, **Maria P. Beelen**, Mackenzie Kraft, Grand Valley State University

Geology Students Get Around

Peter Wampler and Earth Resources in Transition: Conventional to Sustainable (GEO 360) GVSU students in Haiti, summer of 2017.

Jaren Miller works at the XRF at Michigan State University

Valarie Voisin (left) at ILSU field camp summer 2017

Please Support Geology & Earth Science Funding

Thanks to the continued generosity of alums, friends, and faculty of the Geology Department we have several endowed funds that help to support our students and further the mission of the department. Once an endowed fund exceeds the $30,000 level the department can spend up to 5% of the fund each year. All of the funds listed below have exceeded the $30,000 mark and are being used to support out students and department!

Information about each fund and guidelines for contributing are provided below. Information on how to donate can be found at: https://secure.gvsu.edu/giving/index.cfm?sb_ path=giveonline1.

If you have questions about the process of giving, please contact University Development at 616-331-6000 or **universitydevelopment@gvsu.edu**.

Funds that directly support students:

Edward Tremba Geology Scholarship - This scholarship is awarded on the basis of merit to upper level students who have demonstrated excellence in academic performance, intellectual ability, and potential for significantly contributing to the geosciences profession. Students must have a GPA of 3.0 or better.

Norman and Helen Gibson Geology Field Study Scholarship - This scholarship honors long-time Tulip City Gem and Mineral Club member, Norman Gibson and his wife Helen. It supports students pursuing geosciences or geoscience education research.

Geology Student Field Camp Fund - This fund provides support to all of our students who are attending field camp.

Funds that support the department mission:

Richard H. Lefebvre Geology Field Education Fund - This new scholarship will help to support department field trips. The cost of field trips has gone up significantly without an increase in our budget and we have had to resort to passing along those expenses to students. This fund will help us maintain a strong field-based focus to education in the department.

Geology Development Endowment - This fund helps with special needs in the department such as matching funds for equipment or outside speakers.

Paul & Florence Miller Mineral Collection - This fund was started by Paul Miller, who made a significant donation of minerals to the department. The fund supports additions to the collection as well as displays.

Thank You 2017 Donors!

November 2016 – October 2017

Larry M. and Mary E. Austin
Thomas A. Baldwin
Robert M. Bodziak, with a matching gift from Pioneer Natural Resources
Caryl L. Brintnall
Michael J. Buboltz
Julie A. Carbine
Kevin C. Cole and Susan Jansen
Patrick M. Colgan and Kelly Heid
Beverly J. Gibson
Patricia Hossink
Judith A. Mast
Stephen R. and Tari Mattox
Figen A. Mekik
William J. and Mary Neal
David L. Olivier
Peter E. Riemersma
David E. Rogers
Carolyn G. Shapiro-Shapin
Virgil L. Sharpton
Chester A. Smith, with a matching gift from the GE Foundation
Richard J. Stolarz
Timothy and Stephanie A. (Tassier) Surine
Edward L. and Rose Tremba
Patricia E. Videtich
John P. Vrona
James C. Walters
Gregory C. Wilson

Fall 2017 Majors Field Trips

Fall may be the best time to run geology field trips. We have many great resources within a day's drive from Allendale. Here are a few photos from Fall semester's experience rich outings. Our students pay an additional field trip fee with tuition to offset the cost of these trips. You can also support field education by making a contribution to the Richard H. Lefebvre Field Education Fund.

Peter Riemersma's Earth History (GEO 112) students at Einstein Mine near Silver Mine, MO.

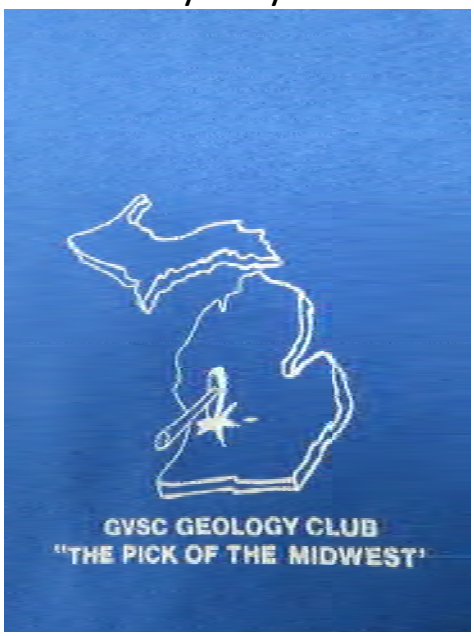
Kevin Cole and Ginny Peterson guided the pioneer class of Solid Earth Materials and Systems (GEO 214) in Bancroft, ON.

Figen Mekik led the first Earth Surface Materials and Systems (GEO 220) students to explore sandstone with cross-stratification in Grand Ledge, MI.

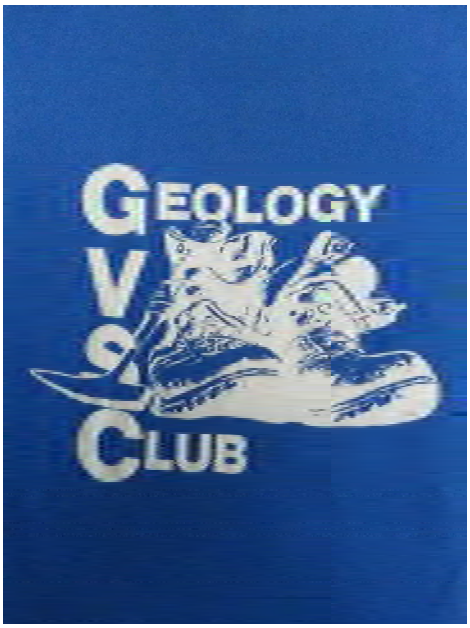
Ginny Peterson's Structural Geology (GEO 311) class having a successful field trip in Baraboo, WI.

Peter Wampler's students study beach erosion on Lake Michigan for Geomorphology and Earth: A Global View (GEO 320/HNR 241).

GV GEO Mystery Memorabilia



Do you recognize this artwork from a Geology Club t-shirt? Do you know who the designer was? Do you know who came up with, "The Pick of the Midwest"? Do you know what year the t-shirt was made? I am quite sure it was made after I graduated, and Grand Valley became a university in 1987, so that would put its production sometime between fall 1976 and 1987. If you know anything about the t-shirt, please let me know (videticp@gvsu.edu) and I will share the information. Or if you have artwork from another t-shirt from back in the Pleistocene, or any other GV GEO memorabilia, please send a photograph and whatever information you have about the item and we will include it in next year's newsletter. Thank you!



Patty V.

What are you up to these days? New job? New school? New city and state? We love to hear from you! Please stay in touch.

You can send information about yourself in one of the following three ways: 1. Email to Janet Potgeter at: **geodept@gvsu.edu** 2. Mail it to us @ Geology Department, Grand Valley State University, 118 Padnos Hall, Allendale, MI 49401 3. We have an online form for direct electronic submission at: **http://www.gvsu.edu/geology/**	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.