

Geology Department Newsletter



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December 2013

Greetings from the Department Head!

It has been longer than usual since our last communication. We made a decision to switch to a fall newsletter and so we bring you news of the department from the last year and a half.

We celebrate the accomplishments of all of our alumni and I want to highlight a couple here. **Chris Bolhuis (Geology 1994)** was awarded the AAPG teacher of the year award and was recognized at the annual AAPG meeting in Pittsburgh last May. Chris has been an inspiration to many aspiring Hudsonville High school students – many enthusiastically pursuing the geosciences at GVSU and elsewhere. **James Ashley (Geology 1987)** received the Distinguished Alumni Award by the GVSU Alumni Association in May 2012. He is currently a Postdoctoral Research Fellow at the Lunar Reconnaissance Orbiter Camera Science Operations Center with the School of Earth and Space Exploration at Arizona State University. James' career has taken him from environmental consulting to study of Martian asteroids.

The last year has been an active one. We are updating our strategic plan and, as part of that process, we brought in two external consultants with the support of the Dean. The consultants spent ~3 days at GVSU, talking with faculty, students, and administrators, and looked over our department documents to provide recommendations related to curriculum, facilities, staffing, and general planning. The consultation provided us with an excellent framework for moving forward and we are working to examine and implement the suggestions.

Our endowed funds continue to grow and it is our pleasure to let you know that the Richard H. Lefebvre Geology Field Education fund is now endowed and we should be able to start using the income from it this year. This is an important milestone for us. Field trips are our biggest departmental expense and we would not be able to offer field trips without charging field trip fees. We intend to use some of the new fund to reduce student costs as well as saving some toward departmental field trips in the future. The Gibson Scholarship also continues to grow and we were able to support 3 student research projects during both the summers of 2012

and 2013. The Tremba fund continues to reward our most promising students. Finally, we have had large numbers of students attend field camps in the last few years and so our Field Camp Endowed fund has been much appreciated in providing some financial help to students who attend. Thank you to all of you who have contributed to these funds in the past – we hope you know that your support is greatly appreciated by our students.

An exciting development is that we now have a new X-ray Diffraction unit to replace the instrument that has been in the department since the 1970's. The instrument was installed at the end of July and should serve our class and research needs for many years (see page 17).

Other exciting news is that the department was awarded a new faculty position and we have started the process to hire an Aqueous/Environmental Geochemist to start in Fall 2014. We should have a new addition to the department to announce next year.

For many years the faculty have been talking about making changes to our department curriculum and our consultants recommended that we make this a priority. As a result we are focused this semester on figuring out changes that serve our students well and continue to challenge them, with more flexibility and opportunities. We welcome your perspective on what our graduates need most and what aspects of your experience here were most beneficial.

We regularly have faculty on sabbatical, pursuing projects that enrich their scholarship and teaching. Last year, **Peter Riemersma** developed a partnership with the Allendale Public schools that brings geoscience investigations onto the middle/high school campus. This fall, **Figen Mekik** is on sabbatical at Princeton University, collaborating with a colleague there to explore a new geochemical direction using Arctic and southern ocean cores. **Pablo Llerandi-Román** is on sabbatical this year in Puerto Rico, exploring a variety of geology and geoscience education research projects, including one that explores impacts and understanding of sea-level rise.

Please check out the rest of the newsletter to explore the excellent work of our faculty, students and alums. We always enjoy seeing and hearing from you. Please keep in touch (see page 17) and send your news. Also, let us know if you plan to be in the vicinity of GVSU. We would love to see you or hear from you.

My best wishes for 2014!

Ginny Peterson

Geology Faculty Updates

Kevin Cole (colek@gvsu.edu) - Last summer I went out west as usual. Susan and I took many hikes in Central Oregon where we did some rock collecting (Glass Butte obsidian and Newberry Crater) and spent some time reconnoitering for future field trips. We reconnected with our daughter Rachel who was at the time residing in Portland but has since moved to Oakland. Besides her social work she is in a fire dancing troupe and travels quite a bit. She continues to love geology. In Washington we continued hiking and connected with son

Sean who is a physics major at Whitman College. We took many hikes in the Olympic Mountains and hiked in a new area for us, the Goat Rocks Wilderness. We had stunning views of the Cascade volcanoes.

On our way back east we drove through Utah and visited a rock shop in Moab where I picked up a few specimens for my classes. Our next stop was Colorado where we spent several weeks hiking in the Aspen-Vail region including the Maroon Bells and the Holy Cross Wilderness. We met up with my aunt and uncle from Traverse City for some hiking and backpacking. We visited many old mine sites and did some rock collecting. We also visited the Leadville National Mining Museum which showed the rich mining history of Colorado with funky dioramas, relics and many ore samples from Colorado (some very rich). We also went to a very nice rock shop and purchased some rare ore minerals for use in mineralogy.

In mineralogy we did the annual collecting trip to Bancroft (great weather, one evening of rain). We visited the new Chamber of Commerce Mineral Museum (after a 10-year remodeling hiatus!). It was great, many spectacular specimens for the region. We continue to add collecting sites to our itinerary to make up for those that have been closed or depleted in minerals to the point they are no longer worthwhile.

Patrick Colgan (colganp@gvsu.edu) - The last year has been an excellent one for Kelly and me. In fall of 2012, I was lucky and blessed to receive a kidney transplant after waiting for nearly nine years on the wait list. After a year, I am doing much better and feel like I have a new chance at life. Please consider organ donation by being a live donor or by making your wishes known to your family. I missed teaching in Fall 2012, while I recovered from surgery. Thanks so much to **Peter Wampler** and **Figen Mekik** for taking over my classes while I was on medical leave.

In Winter of 2013 I taught Quaternary & Glacial Geology to the largest class I have ever had (16 students). We spent half the class looking at modern glaciers and their current response to climate change. We spent the second half of the class focusing on glacial sediments and landforms, as well as the Quaternary history of the Great Lakes region. I also taught a full class of Earth History students. We have some pretty impressive freshman Geology and Earth Science majors out there! Our Earth History trip to Grand Ledge was wet and cold as usual but the students didn't complain and we had a great time.

This spring, I presented a paper at the NC GSA meeting in Kalamazoo summarizing results from research I have been doing with researchers at Western Michigan University. A complete sediment core through the glacial section in Ottawa County shows that we have some glacial tills older than 45,000 years old. This summer I worked with **Chris Vanderlip** and **Katelyn Braunschneider** on obtaining more radiocarbon dates, examining organic sediments, and doing clay mineral analyses of clay-sized material in glacial tills. With these data we are correlating the core with other sections and learning about the interstadial organic deposits and environments.

Kelly and I spent a month in the South Island of New Zealand exploring glaciers, braided streams, moraines, kiwis, and even a ~100-year-old eel. It was fun to travel abroad once again and to see things I have read about for years. I would love to go back even with the 15.5 hour flight from L.A.

I also worked with GVSU alum **Brad Stevens (B.S. Earth Science 2010)** on a research project as part of the Target Inquiry Program. Brad and I collected 8 sediment cores in alluvium from Pigeon Creek valley at Hemlock Crossing Park in Western Ottawa County. We had lots of help collecting the cores from geology students and faculty **Greg Wilson**, **Tara Kneeshaw**, and **Peter Riemersma** (thanks guys!). Brad then described the cores, collected magnetic susceptibility profiles, and obtained four AMS radiocarbon ages on organics at the bottom of the cores. These ages came back as between 6,500 and 7,000 years before present. These sediments and ages probably record the backfilling of the valley as Lake Michigan rose from the Chippewa Low Stand (~9 ka) to the Nipissing High (~5.5 ka). Brad and I will present his work at a couple of meetings in the future. At the end of the summer Kelly and I spent a couple of blissful weeks at our rental cabin on the north shore of Lake Michigan. We love this place because there is no internet, poor phone coverage, and lots of time for reading, walking, kayaking, and exploring. So it has been a truly great year, with both ups and downs, but overall the ups have far outweighed the downs. Hope everyone is healthy in the coming year. Please stop in if you are around, best wishes for the new year!

Kelly Heid (heidke@gvsu.edu) - This past summer Pat and I were able to take a long awaited trip to the south island of New Zealand to see the glaciers before they melted. We were able to see the Able Tasman, Frans Joseph and Fox glaciers. The trip was full of beautiful mountains, beaches, and wonderful people. I also fell in love with the pukeko bird (odd little iridescent blue feathered birds with bright orange beaks and long orange legs). Pat survived our month long adventure in the 22 foot camper van mainly by making sure he was in the driver's seat and I was the navigator. I'm not sure why he would be nervous having me at the wheel while driving on narrow curvy roads that involved crossing numerous one lane bridges???

This will be my ninth year with the Grand Valley Geology Department and second as an Affiliate Lecturer. I feel lucky to be working in such a great department with very talented students and colleagues. I still enjoy the adventure of taking the GEO100 and GEO111 students on field trips and sharing fun weather demos with the GEO203 group.

Tara Kneeshaw (kneeshta@gvsu.edu) - I can't believe I am starting year 3 as a visiting professor at GVSU! I've had a great time getting to know the faculty, staff and students and being part of such a thriving department. I have had no trouble keeping busy with classes and involvement in student and faculty research projects. Most notably, I have enjoyed teaching geochemistry in addition to the big intro classes and even got to try my hand at teaching "Living with the Great Lakes" which has been so much fun. I've also had the opportunity over the last 2 summers to work with Peter

Wampler and a crew of students monitoring water quality in the constructed wetlands on GVSU's campus and have the privilege to mentor over 8 students on their seminar research projects. I have had so many great opportunities at GVSU so far, I can't wait to see what the rest of this year has to offer.



Pictured: Tara in Glacier National Park, summer 2013.

Pablo Llerandi-Román (llerandp@gvsu.edu) - ¡Saludos! I write from Puerto Rico where I am working on three sabbatical projects related to field-based geoscience education, coastal geohazards education, and the geology of the Sabana Grande region in SW Puerto Rico. I began my sabbatical activities in July after receiving the news that I was awarded tenure at GVSU. Then I stopped at Georgia Southern University's Applied Coastal Research Lab to participate in a coastal ecology workshop at Sapelo Island. After the workshop, I had the chance to enjoy the history and culture of Savannah, Georgia, with my host, Dr. Chester Jackson. I arrived in Puerto Rico in August where I co-taught a field geology course for graduate and undergraduate students of the University of Michigan-Dearborn, in collaboration with Dr. Jacob Napieralski. Currently, we are working on a geoscience education manuscript related to this project. I am also giving the final touches to a survey to be sent to teachers in Puerto Rico to study their coastal geohazards knowledge and teaching practices. This is the first step in preparation for interviews with the teachers. In addition, I have been busy serving the local education/academic community. I have presented at a high school in Morovis, I have taught climate change concepts to graduate students of Caribbean University in Vega Baja, I have served as a mentor and discussion leader in a grad school skills workshop for graduate students at the University of Puerto Rico (UPR) Medical School, and have visited the karst region with students and colleagues of the UPR-Arecibo. My last field activity was a museum-and-field study of serpentinite archaeological artifacts in Guayanilla. The artifacts are believed to be either from pre-Columbian times or an astute falsification by a local priest in the 19th century. This is a really cool study led by an archeology professor of the UPR-Utuado who is an expert in the origin/petrology of stone artifacts in the Caribbean. Finally, my family is well adjusted

to their new life in Puerto Rico. Yulaiza is playing volleyball at her school and a local club, Sebastián is playing soccer, and Katsí is taking swimming lessons. Yulaiza and Katsí were recently included in the honor students list at Colegio San Felipe in Arecibo. Miriam is spending quality time with her parents and siblings and is working hard and diligently in helping the kids, and the family as a whole, adjust to their new environment and school.

Steve Mattox (mattoxs@gvsu.edu) - Hard to believe I'm starting my 15th year at GVSU. Time flies. The quality of our Earth science, geology, and Integrated Science students are a constant source of energy. I couldn't ask for a better career. I continue to grow the network of high schools offering a dual-credit physical geology course. With the support of NSF funds, about ten teachers will be testing their students this spring. At a minimum these students gain insights into geoscience that are rarely provided in Michigan schools; many of these students continue their interests in geology as they start their college careers. Earth science students **Hilary Lenzo (2012)**, **Kristine Haataja (2013)**, and **Laura Donker (2013)** have contributed to the success of this program. For the last four summers I have served as an Adjunct Instructor for Michigan Tech. I appreciated my time learning with volcanologist Bill Rose and talented graduate students. Most of all we have trained skilled science teachers in Grand Rapids, Kalamazoo, and Jackson. These quality teaching experiences translate into my training of preservice teachers at GVSU and help me build a network of collaborations and possible student placements for our GVSU students. I'm delighted to be loosely collaborating with GVSU alum **Mike Morris (Geology 1970)** in exploring the geology of the north shore of Lake Huron. Mike's efforts took me along a transect to Elliot Lake, Canada earlier this summer. As he works on an ebook I hope to gather new field experiences for our students.

It was a pleasure in May to travel to the national AAPG meeting in Pittsburg to see GVSU alum **Chris Bolhuis** (Geology 1994) receive that organization's Teacher of the Year Award, recognition well deserved. My summer travels included a week in the UP, a week in Jackson and Kalamazoo, and two weeks in China. Wonderful. As we move forward into the new academic year I am focused on Integrated Science students and field trips to Marquette, the east shore of Lake Superior, and Grand Ledge and the gypsum mine.

Figen Mekik (mekikf@gvsu.edu) - "Dear students, alumni, friends and colleagues, it's been an eventful year since I last wrote. I lost my father this year and spent a lot of time in Turkey for this reason. And now I am away on sabbatical leave at Princeton University where I am working on foraminifer-bound nitrogen isotopes. How's that for a mouth full! The Geosciences Department at Princeton is housed in Guyot Hall which was home to Harry Hess as he was developing his ideas of sea floor spreading. The building was named after Arnold Guyot, founder of geosciences at Princeton, in 1909, 25 years after his death. Professor Hess named flat-topped seamounts as "guyot"s in honor of Guyot

Hall because it too has a flat top. A portrait of Hess hangs in the hallowed Great Hall of the Guyot Building. And the friendly face of this dinosaur greets folks entering the building.



I am working on cores from the Arctic as well as the Southern Ocean here, in Princeton, and hope to bring home some exciting new science! Meanwhile, my two undergraduate researchers have also been productive even though I can only skype with them from here. **Ashley Brady** will be presenting her poster on radiocarbon dating of forams at AGU in December this year and **Jenna Newman** will present her results on Mg/Ca-based paleothermometry at the same meeting. I am very proud of both of them! Until next year, stay well, stay happy!"

Dominike Merle-Johnson (merled@gvsu.edu) -

"Saludos! 2012-2013 was my first year as a visiting faculty at GVSU. My husband and my 5-year old daughter got settled in Grand Rapids and we are enjoying meeting new people and Michigan traditions. Prior to 2012, I was living with my husband and daughter in Columbia, Missouri, while my husband and I completed our PhD degrees. Before living in Missouri, I lived and worked as a Geology Instructor of the University of Puerto Rico in Mayaguez, Puerto Rico, where I obtained my BS and MS degrees, and where I am from. During this past year at GVSU, I taught general education courses, GEO 111 and Geo 100, and taught GEO 300 with Dr. Tara Kneeshaw from which I had the opportunity to interact with many students from all levels. Teaching is my passion, so I loved the interaction with students, in particular while teaching the GEO 111 labs. I learned so many things from the department, students, and all GVSU! I also learned a lot about Michigan, fieldtrip places, its culture, weather, and people. Besides teaching at GVSU, I was engaged in finishing up some publications from research that I was involved while pursuing my PhD. I served as a co-author in three peer-reviewed research papers and one presentation at the 2013 National Association for Research in Science Teaching Conference. One of my big news is that I was able to submit my PhD dissertation during fall 2012 and complete all the requirements for my PhD in Science Education! So it's good to be able to complete all the requirements for graduation

and have a new title! My PhD research focused on studying students' understanding of volcanoes and magma while taking introductory geology courses, such as the ones I am currently teaching at GVSU and how the teaching strategies used contribute to the students' understanding of these topics. Right now, I am working on writing at least one manuscript from my dissertation results, which is the line of research I am interested in. I enjoy hearing students' experiences while learning geology and what they get out of their courses. It been a great year and I am looking forward to be involved in new collaboration with my new colleagues and students at GVSU, as well as to learn more about Michigan and its people!"

Heather Miller (millehea@gvsu.edu) - "One more trip around the sun. – Jimmy Buffett" Here we are again and I'm starting my fifth year here at GVSU. I continue to teach science courses for pre-service teachers, as well as, one of our general education oceans courses, oceans. I enjoy the students, challenges, and rewards each course offers. This past year I was able to travel to San Antonio, TX for the National Science Teachers Association national conference where a biology colleague and I presented about our unique integrated Earth and life science course that we offer for non-science focused elementary education students. The emphasis of our presentation was on course development and progress since the course conception. It was a successful and fun filled time in San Antonio. This year also afforded me time to continue research in the classroom, where I focused on student's understanding of the greenhouse effect. I followed 48 students from prior understanding of the greenhouse effect through the end of the course by looking at their expressed conceptual model drawings. Conceptual models are internalized understandings; expressed means they are drawn out. The students showed true learning by moving from naive understandings of this process (e.g. drawing a greenhouse with plants in it) to exhibiting higher level thinking. For example showing greenhouse gases evenly distributed throughout the atmosphere; incoming solar energy transformation occurring at the Earth's surface; and greenhouse gases absorbing and re-emitting energy. These were among other factors that we observed that shows higher order thinking and understanding about the greenhouse effect. I enjoyed presenting this research at the Geological Society of America conference in Denver, CO. This year will be capped with another journal submission not too far down the road. This upcoming year I will be continuing research with this unique course (SCI 225 integrated Earth and life science course) with several GVSU colleagues. We plan to look at overall content understanding prior to the course and after the course, student understanding of how science works (nature of science), and their self-efficacy (how to they feel about teaching science). Look for this to be finishing next year with presentations and journal articles to follow as well. On a personal note, Mason (7) just started second grade and Logan (5) started kindergarten. They are both excited to see what they learn this year in school. My family continues to enjoy our beach outings, hiking, fishing,

camping, and gardening. Just recently Matt enjoyed a day full of fly fishing on the Manistee River; what a happy husband bringing home all of those salmon. I look forward this upcoming year in the classroom and field with my students, as well as, continuing to explore Michigan and the surrounding areas."



GEO 202 students outside Mammoth Cave, KY, Fall 2012 (Photo by H. Miller)

William Neal (nealw@gvsu.edu) - "This year's highlight has to be the birth of great-grandchild number 4, this time a boy! On the professional front, Pat Videtich and I finally finished our simple paper on the 'unknown sand' sieving exercise in Sed-Strat. Even a procrastinator like myself faces up to completing a task. And thanks to other colleagues and collaborators, I made small contributions to efforts of other projects resulting in publications. I continue to do articles for the Coastal Care web site. The GSA meeting in Charlotte, NC, was a chance to participate in a book signing for "Beaches of the World" (University of California Press) with coauthors Orrin Pilkey, Joe Kelley, and Andrew Cooper. And it was an honor to be a guest of alumnus **Ron Green (Geology 1978)** when he was inducted as a GSA Fellow at the meeting. And we enjoyed a reunion there with a good number of GVSU alumni and students. Other meeting highlights included attending the Southeastern GSA in San Juan, Puerto Rico followed by three days of visiting beaches around the island. Perhaps this will lead to continued projects. North-Central GSA met in Kalamazoo, so couldn't pass that meeting up, and enjoyed seeing geology alumni **Jeff Spruit (Geology 1975)**, **Kyle Siemer (Geology 2011)**, and **Kent Walters (Geology 2011)**. Although I missed their papers – sorry guys. Then capped off the meetings with the annual AAPG convention in Pittsburg where alumnus **Chris Bolhuis (Geology 1994)** was awarded the AAPG's Excellence in the Teaching of Natural Resources in the Earth Sciences Award. Was good too to visit with **Andy McCarthy (Geology 2000)** and catch up on his career. Likewise, several alums visited the department over the past year, and I especially enjoyed seeing **Cheryl Youngblood (Geology 1992)** and hearing of her work in the North Carolina coastal zone, and the return of the prodigal **Rick Peters (Geology 1997)**, coming off an interesting time in SE Asia. The same goes for those alums with whom we've

communicated with by e-mail --- sometimes after a hiatus of several years. On the family front, last summer we had our 'California girls' visit, including a trip to Greenfield Village and Henry Ford Museum, after 41 years in Michigan! And this summer did a busman's holiday with family in Alberta (e.g., Dinosaur National Park, the Royal Tyrell Museum, the Canadian Rockies – Precambrian to Cretaceous, the Frank Slide, Athabaska Glacier, etc. etc.), truly a geologist's ideal vacation. Should have gone there when younger!!!"

Ginny Peterson (petersvi@gvsu.edu) - "I am doing really well in my 11th year on the faculty at GVSU. I continue to enjoy teaching Petrology and to explore new field trip locations. In 2012 I took the whole petrology class on a SE GSA field trip in western North Carolina (I was a co-trip leader) and then to the SEGSA meeting in Asheville.



Students **Shelby Van Zalen** and **Chris Churches** presenting information about a stop on the 2013 Petrology trip near Mt. Rogers, VA. (Photo by G. Peterson)

This year (2013) we spent more time at some new (to me) exposures in the Mount Rogers area. Before taking students to these new outcrops, I went there in December to field check the stops and managed to give myself an amazing black eye with a rock hammer that slipped as I was sampling – my glasses were destroyed and probably saved my eye – a good reminder about the value of safety glasses. I continue to pursue research in the Southern Appalachians with a focus in recent years on understanding the Chunky Gal Mountain Fault zone and its role in emplacing the nearby ophiolite fragments. **Carlene Gilewski** (Geochemistry 2013) worked with me during summer 2012, collecting microprobe data to determine the metamorphic conditions during fault movement. She presented her results at the GSA meeting in Charlotte and we are working on a journal article. Interesting results from that research led me to take two students, **Eric Armstrong** and **Karen Musser** (current juniors), to North Carolina to collect additional samples and constrain field relations. Eric and I collected some new microprobe data this past summer and he is building on Carlene's work with rocks of different compositions. Karen is working to better characterize fault movement. Last summer I also had the opportunity to teach a part of the North Carolina System field

camp near Taos, New Mexico. Two GVSU students, **Carlene Gilewski (Geochemistry 2013)** and **Caitlin Leslie (Geology 2013)** participated in the camp.

It has been a time of change on the home front. Last year Jon and I sold our house and bought a different house, closer in to Grand Rapids. We really like the new space and are adjusting to different environs, including a close bus stop. Jon's employer of the last several years folded this year and so he is actively looking for a new direction. Our daughter, Casie, is now a sophomore at DePaul University in a pre-physical therapy program and recently started a job as an aid in a physical therapy clinic. She is enjoying school and loves living in Chicago – Jon and I are adjusting to our new status as empty nesters. Our old dog, Mica, died around Christmas 2011 and we have replaced her with an 80-lb sweet and enthusiastic male puppy named Chaco (now almost 2). He was from a litter abandoned at a shelter and was so cute that we could not resist. He fills the empty nest a bit."

Janet Potgeter (potgetej@gvsu.edu) - "2013 has been a controlled whirlwind both in the office and at home. At least things seem to be under control. This is my 10th year with the Geology department and it makes me proud to see where we've been, and the numbers of students who have graduated and gone on to work in industry or an institution of higher education. The updates and success stories from our alumni are treasured.

Growth on the Allendale campus is rivaling that of the downtown campus. The new Mary Idema Pew Library Learning and Information Commons opened during the summer. This is a wonderful and beautiful building with incredible technical resources as well as stacks of books. At present, there is a big hole in the ground where the new science building will stand between Campus Drive and the field house. Rumor has it that Biology will move there and the rest of the sciences will take up the available spaces in Padnos and Henry halls. The Zumberge (former library) building is undergoing heavy renovations and will eventually house the Administration and Business and Finance Offices. Ausable Hall is getting an addition, as well and renovation to existing spaces. Most of these projects will be completed by Fall of 2014; the science building will be done in 2015. If you can imagine, there isn't anywhere to go on this sprawling campus where you can't see evidence of growth and progress. For the very curious, check out the major campus projects

website: <http://www.gvsu.edu/facilitiesplanning/current-major-projects-under-development-28.htm>.

Family life keeps moving forward as well. My husband of 34 years continues to farm as well as have a fulltime career in transportation in the agriculture industry. The crop farming we do is affected by weather and wildlife. We have floods in May, drought in July and then the deer and raccoons have their way. Wow. It's amazing when the crop turns out to be okay in the end. My very determined daughter, Molly, is in her second year at GVSU furthering her education in the Health Sciences. Son Troy is a high school senior, longing to

move on (to GVSU, of course), but not before he gives me one more year of high school bowling and baseball events. As parents, we know the expected progression, but it's still a shock when they are actually "grown up." The highlight of the year for my family was the trip we took with my mom, brother and sister-in-law to Switzerland and Italy. We saw the amazing scenery from our bus and trains and spent quality time in Montreux, Zermatt, St. Moritz, Lucerne, and swimming in Lake Como, Italy. Beautiful! I wish you all a happy and healthy 2014!"

Peter Riemersma (riemersp@gvsu.edu) - "Highlights in 2013 include my collaborative sabbatical project on outdoor education at the Allendale schools. As part of this project I developed and organized with my colleague Keith Piccard (6th grade science teacher at Allendale) the Second Annual Community Field Day in which over 100 community members came together and worked on 4 different projects in support of outdoor education at the Allendale K – 8 campus.



These activities included 1) planting a butterfly garden, 2) building bird feeders 3) building bat houses from kits and 4) planting 130 oak trees along Pierce Street. The bat houses and bird feeders were constructed as "kits" to facilitate construction during the Field Day. We worked with GVSU biology bat researcher Amy Russell to select a bat house design and coordinated efforts with Boy Scout Alex Sias who prepared the bat house kits as part of his Eagle Scout project. I also worked with GVSU mechanical engineering Prof. Joo, who made bird feeders his class design project and helped to line up the ASME club to build the bird feeder kits. GVSU illustration student Kyla Traina developed a flyer to advertise the event. I started a facebook site to advertise the event and post pictures from the event.

(<https://www.facebook.com/AnnualAllendaleCommunityFieldDay>) . We also received a lot of media attention concerning the

event: <http://www.gvsu.edu/gvnow/index.htm?articleId=2F5698FD-D9EF-38EE-1741FC12853E4A49>.

Connections made during my sabbatical have enabled me to provide service learning opportunities for my Fall 2013 integrated science Hydrosphere students. I wrote and received two grants, one from the Allendale Community Foundation in support of the Community Field day and a 2nd from the Michigan AIPG in support of a geology rock garden at the Allendale schools. I used grant and PTO money to bring a local butterfly expert and bat conservation group to give presentations to students prior to the Community Field Day. On other fronts, I presented with Peter Wampler a poster at GSA in Charlotte on the Geology Departmental Photo contest, attended the ILSG Field Conference in Houghton, MI,

prepared and acted as a reviewer for a 1 week workshop on Teaching Hydrogeology, Soils and Low Temperature Geochemistry activities and accompanied Pat Videtich and Pat Colgan on class field trips. I am vice president of the Tulip City Gem and Mineral Club this year, in charge of arranging programs and speakers for the club monthly meetings."

Patricia Videtich (videticp@gvsu.edu) - "I am sure a lot has happened since our last newsletter came out, but it all seems to be a blur! The time went by so fast! But I do know I very much enjoyed working with **Adam Davis (2012)**, **Caitlin Leslie (2013)**, and **Kayla Lockmiller** the last couple of summers. But, sadly, all good things come to an end and Adam and Caitlin both moved on to Baylor University. But Kayla will still be at GVSU a few more years. Summer 2013 she was awarded an OURS "Modified Student Summer Scholars Grant", which is for students in their early years at GVSU. Kayla worked on some very interesting data (TOC, C/N, $\delta^{13}C$, and $\delta^{15}N$) from shales from the gypsum mine, so, see, I am expanded away from dolomite! Bill Neal and I had a publication come out in the Journal of Geoscience Education about the benefits of using sieving exercises in sedimentation courses, so thanks to all you alums out there who did sieving exercises all these many years! On the "light side" I also had a fun publication in Farm and Ranch Living about a much-loved family tractor my nephew secretly restored as a surprise for my parents and the rest of the family. See, I always have told y'all that I'm a country girl! The past two summers alum JoAnn Webb and I again ran the **FRESH** (Field Research in Earth Science Happenings) Program for middle school students, summer 2013 with the able assistance of Janet Potgeter. That makes five years of FRESH!



Students enjoyed a wavy ride on the D. J. Angus Research Vessel, from the channel in Grand Haven onto Lake MI. (Photo by P. Videtich)

The last two summers FRESH was funded by Kris Spaulding, co-owner of the Brewery Vivant in Grand Rapids. Thank you, Kris! As usual we all take great pleasure in seeing alums at GSA, AGU, and other meetings, as well as those who stop by GVSU! The latest to stop at my door were the combo of **Kate Amrhein (Geology 2009)** and **Christie Kroskie (Geology 2011)**! Together again! I had a nice time catching up on all their news. In October Kevin and I led a couple of field trips

in the gypsum mine for members of the Michigan Basin Geological Society. A highlight was that **Jeff Spruit (Geology 1975)** was in the morning group! And we got to talk carbonates! My buddy, Colby the dog, is getting old (13), but still manages to sneak in to school some Saturdays and Sundays to get some attention from our dog-loving geo students hard at work in the lab. Colby always thinks that they need a break, and he needs some petting!"

Peter Wampler (wamplerp@gvsu.edu) - "The highlight of my year this year was travelling to Haiti in June with my youngest daughter to install two new wells and work on reconstruction near Carrefour, Haiti (one of areas hardest hit by the 2010 earthquake). The wells were constructed using local labor and equipment and are a promising alternative to expensive drilled wells in many parts of Haiti. I have high hopes that this will be a part of sustainable water solution in Haiti. You can keep up on the Haiti activities at www.gvsu.edu/haitiwater.

I undertook a Student Summer Scholar (S3) project with **Christopher Churches** to study natural hydraulic controls on the Grand River. This work was associated with the proposal to remove several dams from the Grand Rapids area to restore more natural flow and sediment transport. We spent several weeks mapping bathymetry and sediment sampling along the river between Ada and Lowell. We also dug into the geomorphic history of the Grand River and have found some very interesting boulder-rich sediment deposits that warrant follow up.

It has been a productive year of publications with three articles coming out and a fourth article which should be out by year's end. Three of the four articles have undergraduate or graduate student lead authors. I am working on an article which summarizes the recent well installation work in Haiti which I am excited to get out so that others can try the technique."

John Weber (weberj@gvsu.edu) - "In addition to our regular offerings that I still teach (structure, field methods, global tectonics), I enjoyed developing and teaching a new course on Global Petroleum Geosystems. The new course is based on my ~2 decades of working in Trinidad on the fringes of the eastern Venezuelan petroleum system, and my new experience over the past four summers teaching a summer field structure course for BP-Azerbaijan in the South Caspian petroleum system. I also continue to teach externally in Montana every summer at the University of Houston/YBRA (Yellowstone Bighorn Research Association) field station. My research continues in Trinidad and Tobago, with several new papers and several big projects that include GVSU undergraduate researchers in "the mill". I've also started new research in the Absheron peninsula and Caucasus mountain range, Azerbaijan. 2013 alum **Caitlin Leslie (Geology 2013)** (now a graduate student at Baylor University) won a NASA Regional Space Grant Best Poster Award last year when she presented our results from some of this new research. I also led AAPG and GSA field trips to the Kentland impact structure in 2012-13, published a nice GSA Kentland

field guide, and hope to soon get a new tectonic geomorphology/ thermochronology project in the Ozark “mountains” of Missouri “off the ground”.

Teya Li is now a big second grader and had a big summer 2013, learning how to swim, bike, and tie shoes (finally). She now wants to find out how tough she is by playing ice hockey this winter. Sarah continues to help “grow” Teya Li and teach part-time at “The Yoga Studio” in Grand Rapids. We traveled across most of southern Canada last summer on the Trans-Canada highway (great trip), and voyaged to southern California and Hawaii this past summer.



Pictured: John Weber at sunset on top of the world on Haleakala volcano, Maui.

I continue to work on fund-raising as a YBRA board member and, through new connections in Trinidad, also on the board at Sustainable Innovation Initiatives, who produce documentary videos and run a new field station in Trinidad. See: http://www.sii-inc.org/research_teaser/ for a peek at the fascinating science that is going on in Trinidad that we are filming/documenting.”

Greg Wilson (wilsong@gvsu.edu) - “Life is going well for my family. I continue teaching the Honors Geology course and with the assistance of a group of dedicated student workers, we are keeping the Geology labs running. It will be a busy year as we are actively planning for changes associated with the new science building and the remodeling of Padnos. My wife continues with her cancer treatment, and is doing well. Cooper is working for Americorps at Cherry Street Health Clinic, and Luke is working as an aviation mechanic at the Greenville Airport.”

2013 Geology Department Faculty and Staff

Ginny Peterson - Associate Professor & Chair

Jeffrey Barney – Adjunct Instructor

Kevin Cole – Associate Professor

Patrick Colgan – Associate Professor

Kelly Heid – Affiliate Faculty

Tom Hendrix – Emeritus Professor

Tara Kneeshaw – Visiting Assistant Professor

Pablo Llerandi-Román – Assistant Professor

Steve Mattox - Professor

Figen Mekik – Professor

Dominike Merle-Johnson – Visiting Assistant Professor

Heather Miller – Assistant Professor

Bill Neal – Emeritus Professor

Janet Potgeter – Department Coordinator

Peter Riemersma – Associate Professor

Norm TenBrink – Emeritus Professor

Patricia Videtich – Professor

Peter Wampler – Associate Professor

John Weber – Professor

Greg Wilson – Instructor & Lab Coordinator

Currently there are 97 Geology, 4 Geochemistry majors, and 21 Earth Science majors, and 6 Geology minors. There are 151 students in the Integrated Science Program (pre-service teachers served by our faculty).

2013-2014 Geology Club Officers

President: Brad Morsink- morsinkb@mail.gvsu.edu

Vice President : Katie Beck- beckk@mail.gvsu.edu

Treasurer: Eric Armstrong- armseric@mail.gvsu.edu

Events Coordinator:

Steve Ossim- ossims@mail.gvsu.edu

Sales Representative:

Chris Churches- churchec@mail.gvsu.edu

Secretary: Karen Musser- musserka@mail.gvsu.edu

Faculty Advisor: Dr. Kevin Cole- colek@gvsu.edu

In Memoriam

On May 17, 2013, we lost a beloved member of our GVSU geology family. Nina Hendrix, the wife of Professor Emeritus Tom Hendrix, passed away following a short illness. Tom and Nina had been married for 57 years.

Tom and Nina came to GVSU in 1978 when Tom replaced Jack Henderson as our structural geologist. In 1995 Tom retired and he and Nina soon bought a condo in Allendale. Pre and post retirement, Nina and Tom came to every geo picnic they could with Nina always carting a delicious homemade dish. After retirement, Tom and Nina did a lot of traveling and, in the summer of 1997, made trips to all of the major league baseball parks! Nina also remained a big Laker football fan accompanying Tom to almost all of the home games. Nina was a wonderful person and is greatly missed. We extend our condolences to Tom and his family.



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.

2012: Adam Davis, Adam Mulling, AmberJane Pontius, Scott Simonson, Mike Stockoski.

2013: Carlene Gilewski, Kristine Haataja, Caitlin Leslie, Kaitlyn Sterley.

The Norman and Helen Gibson Field Studies

Scholarship is awarded to support undergraduate geology students in conducting scientific research.

2012: Caitlin Leslie, Carlene Gilewski, Neal Ringerwole, Nick Anderson.

2013: Katelyn Braunschneider, Saray Morales, Chris Vanderlip.

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

2012: Nicholas Anderson, Jeffrey Alexander, Adam Davis, Laura Donker, Robert Fortney, Kayla Frisinger, Tiffany Hackett, Joshua Klosinski, Clay Lipski, Zack McCurley, William Monroe, Adam Mulling, AmberJane Pontius, Neal Ringerwole, Connor Rowlader, Scott Simonson, Ben Steavenson, Mike Stockoski, David Trudeau, Jon Vrugink and Chad Williams

2013: Kaitlyn Bertram, Jacqueline Bussey, Karl Campbell, Philip Conrad, Eli DenBesten, Joshua Ehlich, Carlene Gilewski, Joseph Klumpstra, Jordan Koster, Caitlin Leslie, Jenna Newman, Kyle Newman, Mitchell Schneider, Kaitlyn Sterley and Nicholas Weiss.

Geology Department Scholarships (2013-2014)

Eric Armstrong, Karl Campbell, Laura Chan, Christopher Churches, Kayla Deciechi, Kayla Lockmiller, Brad Morsink, Steve Ossim, Natalie Renkes, McKenna Smith, Shelby VanZalen.

Outstanding Geology Major

Winter 2012: Adam Mulling

Winter 2013: Caitlin Leslie

Outstanding Earth Science Major

Winter 2012: Hillary Lenzo

Congratulations Graduates!

Our Graduates: 2012 through August 2013

2012	2013
<u>B.S. Geology</u>	<u>B.S. Geology</u>
Jeffery M Alexander	Jacqueline M. Bussey
Nicholas R. Anderson	Philip E. Conrad
Matthew S. Boike	Eli J. DenBesten
Erica M. Dalman	Robert R. Fortney
Adam J. Davis	Joshua A Klosinski
Kayla J. Frisinger	Kase Knochenhauer
Tiffany M. Hackett	Jordan A. Koster
Clayton A. Lipski	Caitlin E. Leslie
Zachery S. McCurley	Kyle R. Newman
William Monroe	Mitchell Schneider
Adam D. Mulling	Bruce S. Shultz
AmberJane Pontius	Kaitlyn M. Sterley
Neal A. Ringerwole	David S. Trudeau
Conner D. Rowlader	Nicholas Weiss
Scott L. Simonson	Rachell L. Nagorsen (Minor)
Michael E. Stockoski	<u>B.S. Geology and Earth</u>
Elizabeth N. Vanderhoef	<u>Science</u>
Jonathon M. Vrugink	Laura A. Donker
Jody Wycech (Minor)	Kristine Haataja
<u>B.S. Earth Science</u>	Joseph F. Klumpstra
Hilary R. Lenzo	<u>B.S. Geochemistry</u>
	Carlene A. Gilewski
	<u>B.S. Earth Science</u>
	Kristine M. Haataja

Graduates across the years: 1968 to 2013

Approximately 392 Geology/Geochemistry degrees, 100 Group Science, and 82 Earth Science degrees have been awarded.

"Grand Valley State University is a public institution with a local, regional and state commitment, and a global perspective. We are dedicated to providing our students with the highest quality undergraduate and graduate education."

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

Winter 2012: *AmberJane Pontius, Neal Ringerwale.*

Winter 2013: *Jacqueline Bussey, Michelle Poterek, Mitchell Schneider.* (Pictured with Peter Riemersma.)



Indian Mounds Rock and Mineral Club Scholarship gives support to a research active senior.

Winter 2012: *Caitlin Leslie*

Winter 2013: *Christopher Churches*

MAS4 Scholarships funds and academic support to academically-talented students enabling them to complete a baccalaureate-level degree in math, science or engineering.

2011-2012: *Kaitlyn Sterley*

2013-2014: *Chris Churches, Devin Gerzich, Kase Knochenhauer.*

Peace and Justice Activist Scholarship (2012): *Kristine Haataja*

NAGT Field Camp Scholarship (2012): *Laura Donker*

AIPG Student Scholarships (2013): *Karl Campbell, Kase Knochenhauer*

GSA/ExxonMobil Bighorn Basin Field Award (2012): *Caitlin Leslie*

Great Mid-western NASA Space Grant Regional Meeting Undergraduate Poster Competition (2012): *Caitlin Leslie won first place (\$500).*

Michigan AIPG Best Student Poster Award 2012: *David Trudeau*

Student Research Support

2013 Student Summer Scholar Award (\$3) 2013:

Christopher Churches - Mentor Peter Wampler

GVSU Modified Student Summer Scholar Award (MS3)

2013: *Kayla Lockmiller – Mentor Patricia Videtich*

Michigan Space Grant Consortium Fellowship, a competitive research award to students working with a faculty mentor.

2012: *Caitlin Leslie (John Weber)*

2012-2013: *Jacqueline Bussey (John Weber)*

Ronald E. McNair Scholars Program (2013): *Saray Morales, with mentors Pablo Llerandi-Román and John Weber.*

U of M REU Program (Summer 2013): *Devin Gerzich*

Student Research and Activities

Eric Armstrong and Karen Musser (2013) *Constraining the temperatures and pressures of deformation of the Chunky Gal Mountain Fault, North Carolina.* Supported by an internal grant to Ginny Peterson. Eric and Karen began research during the summer 2013, starting with field work in North Carolina. Eric collected mineral chemistry data using the electron microprobe at the University of Massachusetts and continues a project to constrain temperatures and pressures of fault movement. Karen is working to better understand the deformation character of the fault.

Katherine Beck (2012/2013) worked with Tara Kneeshaw on: *Evaluating the role of ancillary drainage into a constructed wasteland system.* Geochemical analysis of runoff water from GVSU turf fields into the campus constructed wetland system.

Kaitlyn Bertram (2013/2014) worked with Tara Kneeshaw on: *Evaluation of total petroleum hydrocarbon diesel range organics (TPH-DRO) and chloride concentrations from the Porter Field Landfarm in Midland Michigan following Chevron's excavation remediation.*

Ashley Brady (2013/2014) worked with Tara Kneeshaw on: *Effects of orthophosphate in the municipal water supply on surficial aqueous systems.*

And

(2013) Under the direction of Figen Mekik, and funded by a National Science Foundation grant, Ashley investigated the effect of bioturbation, calcite

dissolution and sedimentation rate on the age disparity of co-existing foraminifers in two cores in the tropical Pacific. She picked, weighed and sent her foraminifers to Woods Hole Oceanographic Institution where they were analyzed for C14/C12 or what is otherwise known as radiocarbon age. She found that on top of the things listed, sediment redistribution also plays a significant role in creating age offsets among co-existing components of sediments. She will be presenting her results at the American Geophysical Union's Annual Fall Meeting in San Francisco in December.

Katelyn Braunschneider (2012-2013) studied Quaternary organic sediments in a core collected at Hemlock County Park this past summer with Pat Colgan. She obtained three radiocarbon ages for the sediment that are about 45,000 years old. She is currently studying the sedimentology of the sediments and will present her results next year at a scientific conference. Katelyn had support from the Norman and Helen Gibson Field Study Scholarship Fund.

Chris Churches (2012-2013); Wanxio Sun; Andrew Smith – Forest Cover in Haiti – A comparative study to evaluate the forest covering in Haiti using Satellite imagery and state of the art land use classification techniques.

And
(2012-2013) Worked with Peter Wampler on: *Geomorphic History of the Grand River and Grand River Valley: Natural and Anthropomorphic Hydraulic Controls*. This study provides a detailed explanation of the geomorphic setting and history of the entire Grand River, including new mapping and sediment data for five natural hydraulic controls that were identified during preliminary investigation of the region.

Philip Conrad (2012/2013) worked with Tara Kneeshaw on: *Methods for Extraction of Hydrocarbon Compounds from Soil at a Crude Oil Impacted Site*. Developed a chemical extraction method to extract hydrocarbons from soil contaminated by the 2011 crude oil spill along the Kalamazoo River.

Adam Davis (2012) worked with Patty Videtich on studies of enigmatic laminae and framboidal pyrite in dolomite from the Michigan Formation exposed in the gypsum mine in Wyoming, MI. Adam presented the results at the 2012 meeting of the Michigan Academy of Science at Alma College and the 2012 GSA Annual Meeting in Charlotte, NC. Adam was also involved in a study with Bill Neal and Patty helping to determine the age of the Michigan Formation using strontium and

sulfur isotopes. Patty presented the results (suggested age: Chesterian) at the 2013 meeting of the Michigan Academy of Science at Hope College. Adam had support from the Norman and Helen Gibson Field Study Scholarship Fund.

Earth science students **Laura Donker**, **Kristine Haataja** and **Christina Sobolak** worked with Steve Mattox to develop teaching materials, run professional development workshops, and test high school students for college credit. The students are supported by a National Science Foundation grant.

Josh Ehlich (2013/2014) worked with Tara Kneeshaw on: *Evaluation of BTEX attenuation under different redox conditions as determined by in-situ microcosms in a crude oil contaminated wetland*.

Robert Fortney (2012/2013) worked with Tara Kneeshaw on: *Effects of Ethanol on BTEX Compounds in Contaminated Groundwater*.

Determination of degradation rates of benzene, toluene, ethylbenzene and xylenes with ethanol as a co-contaminant using data from push-pull tests in a crude oil contaminated aquifer

Carlene Gilewski (2012-2013) *Constraints on P-T conditions during deformation within the terrane-bounding Chunky Gal Mountain Fault, Central Blue Ridge, North Carolina*. Carlene was supported by a Gibson Scholarship in 2012 and used the funds to cover the expenses of data collection using the Electron Microprobe facilities at the University of Massachusetts. Carlene presented her results at the GSA meeting in Charlotte (2012). She continues to work with Ginny Peterson on a manuscript for publication.

Caitlin Leslie (2012) Best Undergraduate Student Poster/Paper Award, NASA, Scholarship Research Creative Activity, Regional, included monetary award. (October 12, 2012). Caitlin won an award for her invited poster/talk at Great Midwest Space Conference meeting: *Interaction between Recent Folding, Geomorphology, and Climate: Apsheron Peninsula, Azerbaijan*. GVSU Faculty Mentor: John Weber And

(2013) worked with Patty Videtich and Adam Davis on an unusual "composite" gutter cast containing two calcite-cement-filled cephalopods oriented parallel to the long dimension of the gutter. The gutter cast, collected by Adam on a Sed-Strat (GEO 312) field trip in northern Kentucky, is from the Upper Ordovician Kope Formation. Caitlin presented the results at the 2013

GSA Annual Meeting in Denver. Caitlin had support from a grant awarded by the GVSU Office of Undergraduate Research and Scholarship (OURS).

Kayla Lockmiller (2013) worked with Patty Videtich on determining the depositional environment of shales from the Michigan Formation exposed in the gypsum mine in Wyoming, MI, using total organic carbon (TOC), carbon/nitrogen ratios, and $\delta^{13}\text{C}$, and $\delta^{15}\text{N}$. Kayla presented the results at the 2013 GSA Annual Meeting in Denver. Kayla had support from a MS3 grant awarded by the GVSU Office of Undergraduate Research and Scholarship (OURS).

Jenna Newman (2013) Under the direction of Figen Mekik, and funded by a National Science Foundation grant, Jenna investigated the effects of calcite dissolution on the Mg/Ca ratio in foraminifera shells in core tops from the Atlantic Ocean. Mg/Ca ratios are used as a paleo-thermometer, and dissolution of the shell leads to temperature estimates that are colder than they really were. Jenna visited the paleoceanography lab at Texas A & M University where she helped a graduate student with cleaning and running Jenna's forams through the mass spectrometer. Jenna will also be presenting her results at the American Geophysical Union's Annual Fall Meeting in San Francisco in December.

Chris Vanderlip (2013) worked on a project with Pat Colgan this past summer using clay mineralogy as determined by XRD analysis to correlate glacial tills in western Michigan. The glacial till was collected in a continuous 43 meter core collected in 2012. Chris will be presenting his research results next year at a professional conference. Chris was supported by the Norman and Helen Gibson Field Study Scholarship Fund.

Distinguished Alumni in Residence: Molly (Helbing) Sherwood

Molly Sherwood earned her B.S. in Geology in 1994 and an M.S. in Geosciences from Western Michigan University in 2013. She also earned a B.A. in Social Science/Prelaw from Michigan State University in 1991. Molly has more than 18 years of experience in environmental management working in both the private and public sectors. In 2000 she became the Environmental Compliance Manager for the Kent County Department of Public Works. Her areas of expertise include Superfund site management, groundwater monitoring and remediation, storm water management, environmental management systems,

landfill construction and management, air permitting, underground storage tanks, Brownfield redevelopment, and solid waste management. In her position with Kent County, Molly oversees all environmental programs and permitting for open and closed County landfills (two Superfund Sites) as well as for the County-owned Waste to Energy facility.



Molly also has been involved in the redevelopment of property in Millennium Park, which includes numerous abandoned oil wells in the Walker Oil Field and the assessment of numerous contaminated properties. From 2005-2007, she was the project manager for four EPA Brownfield grants for Millennium Park properties. Molly is a member of the National Ground Water Association, the Geological Society of America, the American Institute of Professional Geologists, and is on the Board of Directors for the West Michigan Air and Waste Management Association.

On October 18 Molly spent the day in the department and gave two talks:

- * *The Development of a Successful Career in Environmental Geology*
- * *Control of Vinyl Chloride at the Kentwood Landfill Superfund Site.*

She also met twice with groups of Geology and Earth Science majors to answer questions about working in the environmental field and about how to land that first professional job. Thank you, Molly!

Not the Cover of



The Grand Rapids Press may not have the circulation of the Rolling Stone, but it rocks locally, and two of our alumni have made the front page in the past year. Adam Wygant [Geology 1993] is adjusting to the 'hot seat' that goes with his job as Section Chief with the Michigan DEQ's Office of Oil, Gas and Minerals. He is the 'go to official' for the media every time the fracking issue comes to the forefront in Michigan, and he's been quoted in over half a dozen articles between March and September of 2013, including the front page of the Press. We suspect that this is true with the media across the state.

- [Can fracking water use affect the Great Lakes water levels?](#)
- [Fracking can co-exist with environmental protection and would add Michigan jobs \(guest column\)](#)

More recently, Tom Dykstra [Earth Science 2002] was featured in a front-page article in the Press (November 5th) regarding the issue of Upper Peninsula wolves, their impact on cattle farms, and the up-coming wolf hunt to control packs. In addition to the Dykstra cattle farm near Zeeland, they also run a 2000 acre cattle ranch in the U.P. Whereas 10 years ago when they bought the property there were no wolves there; three packs now live in the area. Tom gave a very balanced perspective of the losses sustained by farmers, and an understanding of the conservationist point of view. Read the article: West Michigan cattle farmer says wolf numbers, attacks growing at Upper Peninsula Ranch.

http://www.mlive.com/news/grand-rapids/index.ssf/2013/11/post_452.html. We just hope that the losses sustained aren't too great to prevent Tom from bringing those nice pieces of beef to the Geology Picnics! And by the way, the article featured a nice photo of Tom, Tracy, and their two sons.

ALUMNI UPDATES

Roger and Sue Haskins (Geology 1973). Roger dug up a copy of the [1972 GEO Club newsletter, "The Swamp."](#) The one page herald, on the back cover of this letter, has been added to our archives. Thanks Roger and Sue!

Richard (Dick) Williams (Earth Science 1973). "Retired and footloose!"

Mark Bishop (Earth Science 1974). Retired Vice President of Operations, Hovenga Business Systems. From 2012: "Retired, but not tired of checking out the geology of all my travel destinations. The Chihuahuan Desert and Big Bend National Park have been the back yard these last 3 winters. Found some killer Marcasite nodules on our Sunrise Trail hike near Amistad. Still participate in energy investing and hoping for a pro-exploration administration in 2013 and beyond."

Steve VanderLaan (Group Science, Geology 1976). Now retired after 37 years in the Caledonia, MI schools. In 2012, Steve Wrote: "Dear Pro. Neal, I'm very honored that you remember me. It's been a very long time. About ten years ago, I dropped by and by luck found you in your office. You hadn't changed a bit. That day, I also ran into Pro. Carl Bajema, of the Biology department. He gave me a short tour of the new science additions. It had to be extreme luck that the only two teachers at GVSU, that might remember me, were both "home" during my short visit. Both of you had a long lasting impact on my career. I'm indebted to you both. I've fond memories of long talks in your office in the early seventies about my desire to teach elementary school with a Earth Science major. It was considered very unusual at the time, and still would be considered "different" for an elementary teacher. I'm encouraged by the news of the growing interest in the Major at GVSU. The knowledge I gained by the training served me well for many years. I read with keen interest all information in the GVSU and GEO newsletters. I hope they never quit sending the personal information about what's happening with teachers and classmates. It makes me smile and feel good.

One of my two daughters, Jenny, is a secondary science teacher for Clark County Schools on Las Vegas, Nevada. After getting her Masters degree at MSU, she changed directions from their Ph.D. track to High school science teacher. Eventually, she became certified to teach all HS science classes. She has taught in North Carolina, Michigan and now Nevada. It a very fun place to look at rocks! My point in this is this: your influence on me has been passed to another generation of teachers and students two thousand miles away. You and Dr. Bajema changed my life, my daughter's, and is now changing the lives of students in Nevada. While I'm very proud of all three of my kids; but I can't help being a little more close to the one that teaches."

Ronald T. Green, Ph.D. (Geology 1978). Named a fellow of the Geological Society of America in 2012. Read the announcement at:

<http://www.swri.org/9what/releases/2012/rgreen.htm>. Congratulations Dr. Green!

Ann Bykerk-Kauffman Ph.D. (Geology 1980). Ann continues to teach at Chico State University in Chico California and recently completed a sabbatical that engaged her in field work in California.

Blaine Campbell (Geology 1986). Blaine works as Principal Geoscientist for TransCanada - Process & Storage Engineering in Mancelona, Michigan. Blaine writes, "I am now celebrating my 5th anniversary back in my native state of Michigan.... My BS degree in geology received from Grand Valley State (colleges before it became a university) in 1986 has served me well in the petroleum exploration and production industry." Blaine recently visited the department.

James Ashley Ph.D. (Geology 1987). Jim returned to campus in the May of 2012 as recipient of the 2012 Distinguished Alumni Award from the GVSU Alumni Association, and was recognized during the commencement ceremony. Jim completed his M. S. in Geology at Michigan State in 1995 and compiled 15 years as an environmental consulting hydrogeologist. In 2000, he started a non-profit to aid in the search for near-Earth objects, and moved to Arizona to help facilitate operations at Lowell Observatory, while continuing work in the consulting arena full time. Ultimately this led him back to planetary geology and graduate school to earn his Ph.D from Arizona State University in 2011. Jim is currently a Postdoctoral Research Fellow at the Lunar Reconnaissance Orbiter Camera Science Operations Center with the School of Earth and Space Exploration at Arizona State University. <http://www.gvsu.edu/alumni/spotlight.htm?entryid=B2084BEC-C853-BD69-58FB6C364FA7EC99>

Jim's classmates will remember his fascination with both planetary geology and karst from his undergraduate days, and two of his recent papers (2011) demonstrate how one's interests as a student can come together in a career. He is the lead author of "Evidence for chemical alteration of iron-nickel meteorites on Mars: Process insights for Meridiani Planum" published in the Journal of Geophysical Research, and "Lunar Caves in Mare Deposits imaged by the LROC Narrow Angle Cameras" published in the First International Planetary Cave Research Workshop.

Cheryl A. Youngblood (Geology 1992). Sr. Project Geological Engineer, North Carolina Department of Transportation.

Branislav Jurista (Geology 1993). Project Manager in a medium-sized environmental company, working on site characterization and remediation projects. Brani's wife is a teacher, and they have a boy, 12, and a girl, 9.

Adam Wygant (Geology 1993). Adam has accepted position of Section Chief, Permitting and Technical Services Section, Office of Oil, Gas and Minerals, Michigan Department of Environmental Quality. Adam is excited to be back in the area of oil, gas and mining.

Chris Bolhuis (Geology 1994). 2013 American Association Petroleum Geologists Foundation Teacher of the Year. Congratulations Chris!



Pictured: Nick Ceglarek (Superintendent of Hudsonville Schools), Bill Neal (Professor Emeritus), Chris Bolhuis (AAPG Teacher of the Year), Jenny Bolhuis, Steve Mattox (GVSU Geology), Matt Blood (Principal, Hudsonville High School).

The AAPG article can be found at

<http://www.aapg.org/explorer/2013/02feb/toty0213.cfm>.

Molly Sherwood (Geology 1994). Environmental Compliance Manager for the Kent County Department of Public Works; 2013 GVSU Distinguished Alumna-in-Residence.

Richard Peters, Ph.D. (Geology 1997). Rick stopped by the department during the summer (2013) on his return to Michigan. After completing his M. S. in Geology at Loma Linda University some years ago, Rick changed directions into Philosophy. He continued at Loma Linda to get a second Masters, then completed his Ph.D. in Science, Philosophy and Religion at Boston University in 2010. Rick taught in Thailand for one year before returning to the States this year. This academic year he

is participating in GVSU's Religion and Science discussion group, led by former Dean, Doug Kindschi.

Nicole (Heller) Rottet, P.G. (Geology 1998) Project Manager and Health Safety Coordinator at AMEC Environment and Infrastructure, Inc. Greater Detroit Area Environmental Services.

Andrew McCarthy, Ph.D. (Geology 2000), Vice President, Exploration at BVX Operating, LLC.

Cari Roughley (Geology 2000). Cari is a graduate student at California State University-East Bay, and an employee of Napa Valley College. Cari wrote: "I started another quarter yesterday and thought of you. One of my classes is Graduate Seminar and the class consists of reading, presenting, and debating papers, (all related to earthquake hazards). It's cool to be studying earthquakes while sitting on so many faults out here. And I have to say, I love presenting and leading discussion, so I'm really looking forward to the next 10 weeks. Anyway, my class reminds me of the Geology Readings class that I had with you and the tools you taught us for analyzing/comparing various papers and I wanted to say thank you for preparing me."

Michael Durham (Geology 2001). University of Georgia, Geology Department, Principle Research Assistant – Water Resources and Remote Sensing.

Shaun Lehman (Geology 2004). Shaun has been hired as a field geologist for the state of Michigan at the Lansing District Office. Shaun brings his geological consulting experience from Atwell Hicks and MACTEC, where he carried out geological investigations. He has spent the last four years working Resources in the Minerals Management Section.

Ryan Sleeper (Geology 2005) Ryan is working for Groundwater and Environmental Services, Inc. as a staff hydrogeologist in the Detroit area.

James Rinke (Geology 2006). Earned Masters at Central Washington Univ. in 2012. Now working as a geologist with Freeport-McMoran, Dillon, CO.

Kevin Weiss (Earth Science 2007). Addressed the NSTA Conference in San Antonio, April 2013.

Eric Hojnacki (Geology 2008). Eric reported that recently he worked as a Project Geologist for West Kirkland Mining, a junior gold exploration company out of Vancouver. He is currently pursuing business

opportunities in the iphone app world. He said "let it be known that exploration for metals is strong, booming and lucrative. It can be a bit risky and volatile."

Naoma Leonard (Geology 2008). Well-site geologist, Ohio & Pennsylvania. "I am contracted as the Well site Geologist from spud to TD. I call formation tops based on sample and correlate with gamma at the end of the well and then help pick a landing point for laterals. I'm pretty good at it, considered the "idiot savant" of formations from NW Pennsylvania to Michigan. I usually work (kind of) for 4- 6 weeks straight, living on site and strolling around in my pink steel toed cowboy boots, I then take 4-6 weeks to recoup. It's a lot of fun right now, and I get to see some incredible geology. The Evaporites in Ohio kicked my butt the first time, I had to look up sylvite, and I am a Michigan pro when it comes to dolomite, gypsum and anhydrite. I really wanted to thank you because the operator sent their senior geologist to monitor me during this last core section, they were impressed with my microscope skills and the ability to pinpoint structure, fossils and anomalies. That's all GVSU training I proudly explained to them."

Sarah Nagorsen-Rinke (Geology 2008). Earned Masters at Central Washington Univ. in 2012. Now working as structure and production geologist with Freeport-McMoran, Bagdad, AZ.

Kate Amrhein (Geology 2009). Earned Masters Degree in Geology at Kansas State University in 2013.

Christy Barszewski (Geology 2009). Completed Masters at University of Wisconsin – Milwaukee and is currently working on her Ph.D. at the University of Wisconsin – Madison.

Brad Stevens (B.S. Earth Science 2009) completed a project looking at the influence of Lake Michigan water levels on Holocene sediments of the Pigeon River in western Ottawa County. He showed that the last was rising towards the Nipissing High between 7,000 and 6,000 years ago based on radiocarbon ages obtained on organic stream sediment. Brad presented his work at the West Michigan Undergraduate Research Conference in November 2013. Brad is a teacher at Zeeland High School and was supported by the Target Inquiry Program (NSF).

Liz Carr (Geology 2010). Works for Geo-Link as a Well site geologist in the Williston Basin.

Andrew DeWitt (Geology 2010). Finished graduate program at Missouri State University, Geospatial Sciences in Geology and Geography. Employed as a staff geologist in contaminated site management with Environmental Resources Management in Holland, MI.

Mallory Morell (Geology 2010). Finished MS with University of Arizona in 2013. Now working as an Acquisition Geophysicist at BP, Houston.

Nathan Noll (Geology 2010). Project leader for American clothing company, Gooder Labs, LLC, in Johnson City, TN.

Esther Posner (Geology 2010) Esther Posner sends a big thank you to the GVSU Geology Department for providing a high quality and diverse undergraduate education! She graduated magna cum laude with her M.S. in Geosciences from the University of Arizona in December 2012 and is now working on her Ph.D. in Experimental Geosciences at the Bayerisches Geoinstitut at the Universität Bayreuth in Germany. Esther's graduate research involves the experimental determination of chemical diffusivity in minerals and melts at a range of pressures and temperatures with applications towards better understanding the timing of geological processes, such as planetary core formation and the chemical evolution of planetary cores during cooling.

Mary Russo (Geology 2010). Geologist for EA Engineering, Science, and Technology out of Warwick, RI.

Kyle Eno (Geology 2011). Geosteering on rigs for Sunburst Consulting, North Dakota.

Jeremy Espinoza (Geology 2011). Works for LT Environmental in Arvada, Colorado.

Elizabeth Koeman (Geology 2011). Currently a Ph.D. student at Notre Dame University.

Christie Kroski (Geology 2011). Is a "Field Specialist in Measurement while Drilling" on a directional drilling team working for Baker Hughes out of Pittsburgh.

Steven Shields (Geology 2011). Completed his Masters in Geospatial Sciences in Geography and Geology at Missouri State University and is now working in South Bend, IN.

Kyle Siemer (Geology 2011). Another successful alum, showing leadership and working on Coastal Vulnerability Index... Kyle wrote in 2012: "I have finally had some more time to devote to the PR project, and currently I am helping Beth and Ryann prepare the GIS layers for the modified CVI. I told them that we should aim to have the CVI layers put together by August 1st, so that is the current goal we are working towards. I am going through the list of islands in the proposal, doing my best to classify them based on the modified CVI parameters. I look forward to hearing how you are doing, and catching up soon." Kyle finished his grad program at University of Toledo in 2013.

Kent Walters (Geology 2011). Kent completed his M.S. in Geology at the University of Cincinnati in 2013 under the supervision of Tom Lowell, a leading glacial geologist and climate researcher. His thesis involved creating a glacial geologic map of a large area of upper Michigan and dating the retreat of the Laurentide ice sheet using radiocarbon and cosmogenic exposure dating methods. The map and age analyses test models of climate-ice sheet interaction. Kent recently won awards from GSA both for his photographs of the Juneau Ice Field, as well as his geologic map. He also worked as a geomorphologist with the National Parks System in Maryland this past summer.

Michael Wicker (Geology 2011). Environmental Geologist at LT Environmental, Arvada, CO.

Erica Dalman (Geology 2012). Ph.D. student at Kansas University.

Adam Davis (Geology 2012). Ph.D. student at Baylor University.

Hilary Lenzo (Earth Science 2012). Teaching Science and Math near Lansing, MI.

Adam Mulling (Geology 2012) Married Hadley O'Brien in 2013, and started M.S. program at Missouri State University. Congratulations Adam & Hadley!

AmberJane Pontius (Geology 2012) Environmental Technician with Fleis & VandenBrink Engineering, Inc., Kalamazoo, MI. She works with project managers on a variety of projects: site reconnaissance, slug testing, soil and groundwater sampling, monitoring well installation and drilling oversight, creating boring logs and cross sections, etc.

Neal Ringerwole (Geology 2012) Wellsite/Geosteering Geologist at Sunburst Consulting.

Scott (Louie) Simonson (Geology 2012). Working on Masters in Geography in China. He spent last year learning Chinese and is starting on his graduate research. Louie met up with Steve Mattox last summer (see picture below) in Guangzhou, China, and recently visited the department after his poster presentation at GSA in Denver.

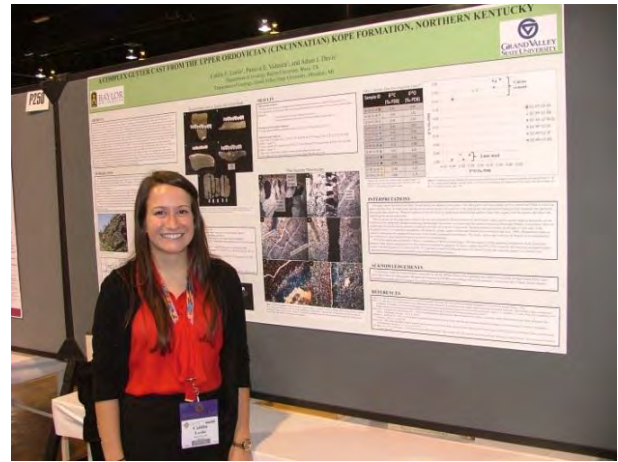


Elizabeth Vanderhoef (Geology 2012). Geologist with AECOM.

Jody Wycech (Geology Minor 2012). Ph.D. student in Geochemistry at University of Wisconsin – Madison.

Robert Fortney (Geology 2013). “Since graduation I have been working as a field geologist on the Enbridge project along the Kalamazoo River and I am now looking to attend grad school in the Fall of 2014. After taking global tectonics with you and how that class was designed really motivated me to want to continue onto grad school. Something about doing a research paper while talking about research papers weekly has me wanting to learn more.”

Caitlin Leslie (Geology 2013). Ph.D. student at Baylor University. Caitlin presented a poster in October, at GSA: A Complex Gutter Cast From the Upper Ordovician, (Cincinnatian) Kope Formation, Northern Kentucky.



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 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, or
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.

Our New Addition:

In a collaborative effort, spearheaded by the Geology department, the college has purchased a new X-ray Diffraction (XRD) unit, replacing the aging unit that has been with us since the 1970's.

The XRD was funded in large part from dollars that we have accumulated over several years from the spending account generated by the Geology Development fund, from the CLAS Dean's office, and by contributions from the Geology, Anthropology, and Physics Departments. We purchased a Rigaku MiniFlex Desktop XRD with a graphite monochromator and sample chamber. Faculty and staff members from several departments helped to decide on which unit to purchase. The unit was installed at the end of July and



was used for a student research project a week later. Recently the Mineralogy class used it to collect data on their samples from Bancroft. Your contributions to our development account have made a significant difference for our students.

Guest Speakers Bring Global Perspective

Guest Speakers in 2012

Jay Famiglietti, Ph.D., Bridsall Dreiss lecturer. *Water Cycle Change and the Human Fingerprint on the Water Landscape of the 21st Century: Observations from a Decade of GRACE*

Guest Speakers in 2013

Gregory Hempen, Ph.D., Richard H. Jahns Distinguished Lecturer. *What's My Line? Site Assessment.*

John Jansan, Ph.D., PG. McElhiney Distinguished Lecturer. *Keeping the Pump Primed: Aquifer Sustainability.*

Nigel Noriega, Ph.D., Director of Sustainable Innovation Initiatives www.sii-inc.org. *The Natural Laboratory: Value-assignment and the Ecology of Trinidad.*

Bruno Tomljenovic and Igor Vlahovic, from the Faculty of Mining, Geology and Petroleum Engineering, University of Zagreb. *Dinarides Orogeny: From the Adriatic Carbonate Platform to the Fold-Thrust-Belt.*

Blaine Campbell (Geology 1987). Principal Geoscientist TransCanada – Process & Storage Engineering. *Underground Natural Gas Storage – TransCanada (ANR Pipelines US) Overview.*

GVSU Celebrates Earth Science Week

The Geology department hosts talks by GVSU Alumni, faculty and notable outside speakers.

Earth Science Week 2012, October 15 – 19

Dr. Peter van Keken, University of Michigan. *Dynamics of Subduction Zones and the Recycling of Water to the Deep Earth*

And

When Earth Attacks: Why an Old Planet Causes Volcanoes and Earthquakes

Dennis McKee, Area manager for Governmental and Public Affairs, Consumers Energy. *The Realities of Electricity Generation*

Luke Miller, Miller Energy Company, Kalamazoo, Michigan. *Oil and Gas Production in Michigan: Learning from the Past and Looking to the Future*

Dr. Peter Wampler, Associate Professor, Department of Geology, GVSU. *Hungry Dogs Don't Play – Water Culture and Practices in Haiti*

Dr. Bopaiah Biddanda, Associate Professor, Annis Water Resources Institute, GVSU. *Observatories for Earth Science Studies: Example of Muskegon Lake Observatory*

Norman Christopher, Executive Director, Sustainability Community Development Initiative, GVSU. *Beyond Greening of the Campus.*

Earth Science Week 2013, October 14 – 18

Dr. Steve Mattox, Professor Department of Geology, GVSU. *Twenty-five Years, Four continents, and Twelve Jobs: Insights into Finding a Career in Geology.*

Molly Sherwood, (Geology 2001), 2013 Alumni-in-Residence, Environmental Compliance Manager for the Kent County Department of Public Works. *The Development of a Successful Career in Environmental Geology*

And

Control of vinyl chloride at the Kentwood Landfill Superfund Site

Alumni Advisory Group?

Are you interested in taking a leading role in a Department Advisory Board? Please Contact Ginny Peterson, petersvi@gvsu.edu.



Doug Hall, Dick Lefebvre and Tim Baker

Please Support Geology & Earth Science Funding

Thanks to the 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. In recent years, both the **Norman and Helen Gibson Geology Field Study Scholarship** and the **Richard H. Lefebvre Geology Field Education Fund** have reached the endowed level. Information about each fund and guidelines for contributing are provided below. In this challenging economic climate the support from these funds is particularly critical and any support you can provide is very welcome. 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.

The following endowments support the department:

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 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 2012 and 2013 Donors

(Our list is from the University Development office. Please let us know if your name was not included.)

Larry and Mary Austin
 Thomas Baldwin
 Robert Bodziak
 Ann Bykerk-Kauffman
 Jonathan Carlisle
 Kevin C. Cole and Susan Jansen
 Jennifer L. DeLoge
 Larry A. Fegel
 Ronald J. Gibson
 Patrick Colgan and Kelly Heid
 Thomas E. Hendrix
 Patricia Hossink
 Jeff Lefebvre
 Naoma Leonard
 Dale and Lynnette Mason
 Judith Mast
 Stephen R. Mattox
 Figen Mekik
 William J. and Mary E. Neal
 Suzanne N. Pearce
 Ginny Peterson and Jonathan Burr
 Pioneer Natural Resources
 Steven Polkowski
 Carolyn G. Shapiro-Shapin
 Ronald Sheets
 Richard Stolarz
 Stephanie Surine
 Edward L. Tremba
 Tulip City Gem & Mineral Club (Julia Sherwood)
 Patricia Videtich
 James Walters
 Gregory Wilson

Join our LinkedIn Group

Our department has its own [LinkedIn](#) Group called, GVSU Geoscience Professionals. It is designed to connect students, faculty, alums, and friends of the department. We also hope that alums will post job ads, new items, and professional career advice for our current geology, earth science, and geochemistry majors. At this time we have 194 members.

Chili Contest Winners

We had another fun and exciting chili contest in February. Thanks to Kevin Cole for again providing the trophies! I believe this is the first time that a vegetarian recipe won "Most Popular". We also had our youngest student winner, 10 year old fifth grade student Dakota, who picked out the recipe and prepared everything himself. This is the first meal he ever cooked! Names submitted by Peter Riemersma (Chili Coordinator)

2013 Chili Award Winners

Best Overall: Dakota Riemersma
Best Student Chili: Dave Trudeau
Silver Certificate Student Chili: Brad Morsink
Most Popular: Rachel Moran
Best Vegetarian: Rachel Moran
Hottest Chili: Dave Trudeau
Most Geological Chili: Brad Morsink
Most Geological Dessert: Ashley Henkel
Best Side Dish: Susan Jansen

2nd Annual Photo Contest

The 2012 contest was conducted through the Photoscramble website where participants could upload photographs <http://www.photoscramble.com/contests/geologist-at-play/entries>

Geology alumni participated in the voting process for the 2013 contest, and will be invited to submit photos to the contest in 2014. Watch for instructions to be emailed early in January. This year, contest awarded first and second prizes for student submissions in each category and first prize to faculty in each category.

You can see the first place photo contest winners here:

http://www.gvsu.edu/cms3/assets/D6E8414C-AF66-B551-1E348F48454A2E42/2013_photo_contest_winners_.pdf

GSA 2013 – Denver, CO

Oct 27 – 30

Late breaking news: Space was saved in the newsletter for a report of happenings at the 2013 GSA. conference in Denver. Numerous alumni, friends, students and faculty were spotted at the get-together. We were pleased to see the following, most of whom also attended the GVSU Reunion:

Kat Barnard, Christy Barszewski, Chris Bolhuis, Chuck Bunker, Ann Bykerk-Kauffman, Erica Dalman, Ron Green, Eric Hojnacki, Joel Kenyon, Elizabeth Koeman, Caitlin Leslie, Jim Rinke, Scott "Louie" Simonson, Greg Swayze, Jim Walters, Kent Walters, Chris Waythomas, Al Werner and Abdul Wahab – (took one semester of classes at GVSU; now a Kansas Ph.D. student.)

Faculty in Attendance

Kevin Cole, Steve Mattox, Heather Miller, Ginny Peterson (also an alum!), Peter Riemersma, Patty Videtich (also an alum!), Peter Wampler and Greg Wilson (also an alum!).



Students in Attendance

Katelyn Braunschneider, Chris Churches, Devin Gerzich, Kayla Lockmiller, Saray Morales, Michelle Poterek and Joseph Spadafore.

GSA Denver 2013: A good time was had by all!

Together again!

Chris Waythomas (Geology 1979, Project Chief, USGS, Alaska) and Al Werner (Geology 1979, Professor, Mt. Holyoke College) gave back-to-back talks at GSA in the session commemorating Dale “Dusty” Ritter, longtime geomorphology professor at Southern Illinois University.



In addition to advising Chris and Al for their M.S. degrees at SIU, Dusty also served as GVSU Geology Professor Emeritus Norm Ten Brink’s M.S. advisor at Franklin and Marshall College. Norm was Dusty’s first graduate student.

2012 – 2013 Faculty Awards

Michigan Earth Science Teacher of the Year

(2012): Steve Mattox

Tenure: Pablo Llerandi-Román

Alpha Sigma Alpha Recognition of Faculty Who Have Made an Impact: Heather Miller

2012 – 2013 Publications by Students and Faculty

GVSU Geology faculty authors are indicated by bold.
Students are indicated with an asterisk.

2012 Journal Articles, Books & Book Chapters

Laó-Dávila, D. A., **Llerandi-Román, P.A.**, and Anderson, T. H.
2012. Cretaceous-Paleogene thrust emplacement of

serpentinite in southwestern Puerto Rico. *Geological Society of America Bulletin*, v. 124, no. 7-8, p. 1169-1190.

- Jackson, C.W., Bush, D.M., and **Neal, W.J.**, 2012, Documenting Beach Loss in Front of Seawalls in Puerto Rico: Pitfalls of Engineering a Small Island Nation Shore: Chapter 4, p. 53-71, in Cooper, J.A.G., and Pilkey, O.H., eds., *Pitfalls Shoreline Stabilization: Selected Case Studies v. 3 in Coastal Research Library, Springer Science + Business Media*, Dordrecht, The Netherlands, 333p
- Llerandi-Román, P.A.** 2012. Las rocas nos cuentan su historia [Rocks tell their stories]. *The Science Teacher*, v. 79, no. 4, p. 49-52.
- Mattox, S.**, Jenerou*, K., and Lenzo*, H., 2012. Using a Desktop Explosive Volcano Model to Explore Eruptions, *Science Scope*, v. 36, no. 12, p. 44-52.
- Mattox, S.**, Jenerou*, K., Lenzo*, H., and King, C., 2012. Michigan’s Ride on the North American Plate. *Michigan Science Teachers Association Journal*, v. 57, no. 2, p. 5-15.
- Mekik, F.A.** 2012. Book Review: Deep Sea Sediments. *EOS*, v. 93, no. 17, p. 24.
- Mekik, F.A.**, Anderson, R., François, R., Loubere P., and Richaud, M. 2012. The mystery of the missing carbonate deglacial preservation maximum. *Quaternary Science Reviews*, v. 38, p. 60-72.
- Sisson*, A. J., **Wampler, P.**, Rediske, R., and Molla, A. 2012. An assessment of long term biosand filter use and sustainability in the Artibonite Valley near Deschapelles, Haiti. *Journal of Water, Sanitation, and Hygiene for Development*, v. 3, no. 1, p. 51-60.
- Videtich, P.E.**, and **Neal, W.J.**, 2012, Using sieving and unknown sand samples for a sedimentation-stratigraphy class project with linkage to introductory courses: *Journal of Geoscience Education*, v. 60, p. 325-336.
- Wampler, P.** 2012. Rivers and streams - water and sediment in motion. *Nature Education Knowledge Project*, v. 3, no. 5, p. 18.
- Weber, J.**, Giorgis, S., and Farfan, P. 2012. Proceedings, 5th Geological Society of Trinidad and Tobago Conference. *Central Range, Trinidad: Examining the mix of recent and old tectonics*. Port-of-Spain: Geological Society of Trinidad and Tobago, 39 p.

2012 Conference Abstracts of Presentations

- Colgan, P.M.** 2012. Mapping Glacial Lakes and Drainage Ways in Southwestern Lower Michigan. *Michigan Academy of Sciences, Arts, and Letters Conference*, Alma College, Alma Michigan, March 2, 2012.
- Davis*, A.J. and **Videtich, P.E.**, 2012, Enigmatic Laminae in Dolomite in the Mississippian Michigan Formation: Subsurface of Western Michigan (abs): *Geol. Soc. America Annual Meeting and Exposition Abstracts with Programs*, v. 44, p. 223.
- Davis*, A.J. and **Videtich, P.E.**, 2012, Framboidal Pyrite Associated with Organogenic Dolomite in the Mississippian Michigan Formation, Subsurface of Western Michigan (abs): *Michigan Academician*.
- DeGood*, J. and **Colgan, P.M.** 2012. The Grand River: A Study of River Channel Change in Downtown Grand Rapids over

- Time. *Michigan Academy of Sciences, Arts, and Letters Conference*, Alma College, Alma Michigan, March 2, 2012.
- Gilewski*, C. and **Peterson, V.L.**, 2012, Constraints on P-T conditions during deformation within the terrane-bounding Chunky Gal Mountain Fault, Central Blue Ridge, North Carolina, *Geological Society of America Abstracts with Programs*, Vol. 44, No. 7, p 282,
- Mattox, S.** and Rutherford, S., 2012. Supporting High School Geology Courses to Earn College Credit. Metropolitan Detroit Science Teachers Association area conference, p.9.
- Mattox, S.** and Hazel-Skrodenis, M., 2012. Making the Burning of Coal Visible to Students. National Science Teachers Association Area Conference, p. 53.
- Mattox, S.** and Ketelaar, J., 2012, Teaching Basic Mineralogy and Map Skills While Searching for a Diamond Deposit, National Science Teachers Association national conference, v. 3, p. 45.
- Mattox, S.** and Standriff*, S., 2012, Modeling the Melting of Permafrost by Climate Change with Data from Thermochron iButtons®, National Science Teachers Association national conference, v 3, p. 97.
- Mattox, S.** and Rutherford, S., 2012, College Credit by Exam for High School Geology Courses, Michigan Science Teachers Association 59th Annual Conference Program, p.33.
- Mekik, F.A.**, 2012. Radiocarbon age modeling: dissolution, bioturbation and sediment redistribution, American Geophysical Union, Fall Meeting, San Francisco.
- Miller, H.R.** 2012. Conceptualized Toposequence of Laguna Atascosa National Wildlife Refuge in South Texas. November 2012 Geological Society of America meeting in Charlotte, NC, *Geological Society of America Abstracts with Programs*, v. 44, no. 7, p. 433.
- Perison-Parrish, E.M., Runyan, R.M., Siemer*, K.W., Jackson, C.W. Jr, Bush, D.M., **Llerandi-Román, P. A.**, and **Neal, W.J.**, 2012, A Modified Coastal Vulnerability Index for Small Associated Islands of Puerto Rico and the U.S. Virgin Islands: *Abstracts with Programs*, v. 44, no. 7, *Geological Society of America Meeting, Charlotte, NC*, p. 243 (92-46).
- Runyan, R. M., Perison-Parrish, E.M., Locurto, P.L., Siemer*, K.W., Jackson, C.W. Jr., Bush, D.M., **Llerandi-Román, P.A.**, and **Neal, W.J.**, 2012, Characterizing Small Associated Islands of Puerto Rico and USVI: Providing a Basis for Forecasting Shoreline Response to Sea-Level Rise: *Abstracts with Programs*, v. 44, no. 7, *Geological Society of America Meeting, Charlotte, NC*, p. 244 (92-49).
- Ryan, J. G., **Peterson, V.L.**, and Collins, N., 2012, Helping define Blue Ridge terranes using amphibolite chemistries – An experiment in the Central Blue Ridge of Western North Carolina, *Geological Society of America Abstracts with Programs*, Vol. 44, No. 4, p. 64,
- Williams*, C. and **Peterson, V.L.**, 2012, Deformation and metamorphic constraints on Aluminous rocks from the Chunky Gal Mountain Fault in the Jake Ridge exposure, southwestern North Carolina, *Geological Society of America Abstracts with Programs*, Vol. 44, No. 4, p. 8,
- Zwart* B., **Colgan P.M.**, and Brashler J. 2012, Searching for the Pomona: How Three Disciplines Came Together. 2012 *Midwest Archeology Conference*, Lansing, Michigan, October 17-21, p. 21.
- 2013 Journal Articles, Books & Book Chapters
- Churches*, C.E. and **Wampler, P.**, Sun, W, Smith, A. 2013. Forest Cover in Haiti: A Comparative Study. *International Journal of Applied Observation and Geoinformation*. Submitted July 2013.
- Colgan, P.M.**, 2013. New evidence for the age and duration of the Two Creeks interval in the Great Lakes region. *Interchange*, GVSU Regional Math & Science Center, March issue.
- Jackson, C.W., Bush, D.M., and **Neal, W.J.**, 2012. Documenting Beach Loss in Front of Seawalls in Puerto Rico: Pitfalls of Engineering a Small Island Nation Shore: Chapter 4, p. 53-71, in Cooper, J.A.G., and Pilkey, O.H., eds., *Pitfalls Shoreline Stabilization: Selected Case Studies* v. 3 in Coastal Research Library, Springer Science + Business Media, Dordrecht, The Netherlands, 333p.
- Merschat, A.J., Hatcher, R.D., Jr., **Peterson, V.L.**, Stahr, D.W., III, Cyphers, S.R., and Jubb, M.G.V., 2012, Tectonics of the central and eastern Blue Ridge: Geotraverse from the Hayesville fault to the Brevard fault zone: *Geological Society of America Southeastern Section Meeting*, 64 p.
- Sisson*, A. J., **Wampler P.**, Rediske, R., and Molla, A. R. 2013. Long-term field performance of the Biosand Filter in the Artibonite Valley, Haiti. *American Journal of Tropical Medicine & Hygiene*. 88: 862-867.
- Sisson*, A. J., **Wampler, P.**, Rediske, R., and Molla, A. R. 2013, An assessment of long-term biosand filter use and sustainability in the Artibonite Valley near Deschapelles, Haiti. *Journal of water, sanitation and hygiene for development*. 3 (1): 51-60.
- Wampler, P.** and **Kneeshaw, T.** 2013. Storm Water Management Complex 2012 Monitoring - Final Report. 44 pages.
- Wampler, P.**, Rediske, R., and Molla, A.R. 2013. Using ArcMap, Google Earth, and Global Positioning Systems to select and locate random households in rural Haiti, *International Journal of Health Geographics*. 12 (3).
- 2013 Conference Abstracts of Presentations
- Bolhuis, C, and Mattox, S., 2013, Building a High School Geology Course that Earns College Credit, *Geological Society of America Abstracts with Programs*. Vol. 45, No. 7, p. 242.
- Bush, D.M., **Neal, W.J.**, and Richmond, B., 2013, Multiple Coastal Hazards of Puerto Rico: *Abstracts with Programs*, v. 45, no. 2, *Geological Society of America Southeastern Section Meeting, San Juan, Puerto Rico*, p. 1.
- Bush, D.M., Jackson, C.W., and **Neal, W.J.**, 2013, Puerto Rico's Vulnerable Coast: *Abstracts with Program*, v. 45, no. 2, *Geological Society of America Southeastern Section Meeting, San Juan, Puerto Rico*, p. 2 (1-4).

- Bush, D.M., Webb, R. M.T., Hyman, L., Liboy, J.G., and **Neal, W.J.**, 2013, Living with the Puerto Rico Shore: Abstracts with Programs, v. 45, no. 2, Geological Society of America Southeastern Section Meeting, San Juan, Puerto Rico, p. 24.
- Churches*, C.E. and **Wampler, P.**, 2013. Geomorphic History of the Grand River and Grand River Valley: Natural and Anthropomorphic Hydraulic Controls. Geological Society of America Abstracts with Programs. Vol. 45, No. 7, p.239.
- Colgan, P.M.** 2013. Evidence for distribution and thickness of Athens Sub-episode and older sediments in Ottawa County, Michigan. Geological Society of America Programs and Abstracts, v. 45, no. 4, p. 4.
- Colgan, P.M.**, 2013, Radiocarbon evidence for Athens Sub-episode (MIS-3) and older sediments in Ottawa County, Michigan. Michigan Academy of Sciences, Arts, and Letters Conference, Alma College, Alma Michigan, March 22, 2013.
- Dobson, C., **Miller, H.R.**, **Llerandi-Román, P.A.**, and **Mattox, S.** 2013. Integrating Climate Change for Elementary Pre-Service Teachers: Tales from the Field. National Science Teachers Association Annual Meeting, April 10-13, San Antonio, Texas.
- Leslie*, C.E., **Videtich, P.E.**, and Davis*, A.J., 2013, A Complex Gutter Cast from the Upper Ordovician (Cincinnatian) Kope Formation, Northern Kentucky (abs): Geol. Soc. America Annual Meeting and *Exposition Abstracts with Programs*, v. 45, p. 136.
- Leslie*, C.E., **Weber, J.**, **Wampler, P.**, and Aliyeva, E. 2012. Recent Folding, Geomorphic Evolution, and Paleoclimate: Apsheron Peninsula, Azerbaijan. Geological Society of America *Abstracts with Programs*. Vol. 44, No. 7, p.239
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Those Were The Days

While cleaning out old files and such, we are lucky to find long lost copies of Geology Department Newsletters. Check out some old issues and the current one at our website:

<http://www.gvsu.edu/geology>.

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We hope to hear from you soon!

The Terminal Moron

We wish to dedicate this final issue of fall, 1972 to an evaluation of courses and instructors during this term of continual mental, emotional, and in the case of Geology 315, physical agony.

Unconformity

HOT FLASH

Mysterious one footed elephant have recently been reported in the vicinity of Allendale, Michigan. This conclusion was based on the discovery of large round holes in neat straight lines at ten foot intervals extending for one hundred to two hundred feet.

Unbeknownst to the fair citizens of Allendale, these strange vestiges have been produced by the hopeless, confused wanderings of the GVSC tamper used by the Field Methods class. Geology 315, Field Methods, or Ten Easy Lessons in How to Fudge a Contact, was the inspiration of Herr Doktor Professor J. R. Henderson. As we finish our two credit, fifteen hour per week course, we wish to express our gratitude to same J. R. Henderson for overwork, wet feet, and several recent cases of multiple pneumonia. As an aside, we wish to add that any resemblance between our maps and reality is purely accidental. On the other hand, those of us who have not as yet had the opportunity to face Herr Doktor Professor Henderson in open debate over our efforts, will continually pray to his door every sunrise to express our appreciation of not having to participate in verbal combat, and pray that he has mercy on our eternal soles. (vibram that is).

Only kidding Jack!

DATELINE: BASEMENT OF LOUITT---HALL OF SCIENCE?

Observing mass hysteria on 12-7-72, your reporter went seeking the reason WHY. Coming upon a young geologist, same reporter could extract nothing but incoherent phrases. I quote, "Abiddy--abiddy--abiddy--abiddy--aah." This seemed to the reporter to be business as usual in the Mineralogy class at lab final time. Other signs supporting above conclusion were students chewing on arsenopyrite, taking the specific gravity of halite with the Jolly Balance, getting accurate hardness of corundum with the ear of erstwhile lab assistant Thomas Michael Bee, finding optic axis of garnet with a petrographic microscope, and obtaining titanium lines from graphite with the spectroscope.

In general, the exam ran true to form. Your roving reporter attempted to interview several students as they were leaving the exam on their opinion of their instructor. If anyone wishes to hear the results of that poll, the reporter may be found in the Student Health Center, located in the basement of Seidman House---visiting hours are 2:05 A.M. - 2:10 A.M. GVCT (Grand Valley Confusion Time.)