Welcome

I want to thank everyone for their overwhelming response to our newsletter last year. It is great to hear from so many alumni, and to see all of the wonderful things you are doing these days. One of our big developments this past year has been the creation of an interdisciplinary Sustainability certificate that is housed in the department and consists of a range of courses from across the university. By adding this to our other recent program additions, the GIS certificate and Geophysics minor, we believe that we are providing exciting opportunities for even more students from across the university to learn and develop concepts and skills from GGE disciplines.

I hope you will enjoy reading about the ongoing activities in the department in the pages of this newsletter. We look forward to hearing from you.

Dr. Michael Zieg, Chair
Department of Geography, Geology, and the Environment

The GGE Department will be publishing an annual Newsletter in November of every year. We would love to hear from any alumni with news.

Send Communications to:

GGE Newsletter
1 Morrow Way
GGE Department
Slippery Rock University
Slippery Rock, PA 16057
Phone: 724-738-2048
Email: gge-info@sru.edu

Help us send students to field camp!

The GGE Department has decided to create a scholarship for Geology majors who are in need of funding to attend field camp. Geology field camp can be a costly component of finishing your geology degree. If you are interested in donating to our new Geology Field Camp Scholarship, please follow this link: https://raise.sru.edu/project/2923. We greatly appreciate any donations that help the students in the Geography, Geology, and the Environment Department.
Sharing memories and experiences

Student Jeff Henderson's photography takes his SRU education to the next level

Picture this, you are sitting around a campfire with some of your good friends. Backdropped by the smooth sound of a stream, the hoots and howls from the night time critters and the many laughs. Stargazing up into the sky, while reminiscing about old stories. I have been fortunate enough to have spent many nights like this. It is through these experiences that I have developed a strong passion for photography and the environment.

I was introduced to the outdoors at a young age. My family spent many weekends road tripping and camping across the states. Since then I have been planning adventures and exploring new places every chance I get. I have witnessed the sun rise on the East Coast and set on the West. I have encountered bears and moose in Alaska along with alligators and flamingos in the Everglades. I have walked amongst the giant redwoods in California and on sidewalks beneath skyscrapers in New York City.

By exploring new places and seeing new things I am able to broaden my horizon. With these amazing places I have gotten to visit, I wanted everyone to be able to see what my eyes were seeing. Photography is a large part of my life. Not only does it allow me to save memories, but it allows me share experiences with others. Through my photographs I try to create an emotion, one that inspires and motivates.

Today’s society is filled with cameras and phones making it relatively easy to take a photo. However, I believe what separates a good photograph from a photograph is the story being told. With every photo I take I strive to tell a story. Whether it be by shooting from a unique and unseen perspective, incorporating human interactions, long exposures, or a black and
white composition. I want people to be able to connect to my photos.

I am currently an environmental geoscience undergrad here at Slippery Rock. The courses provided in the GGE department are informative, interactive, and interesting. By taking classes such as Hydrology, Meteorology, Environmental Problems, and Earth History I have gained immense knowledge into my future career field.

Spending time outdoors has allowed me see a variety of different environments, landscapes, and terrains. I have been able to observe ecosystems that are thriving yet others that are suffering. It is because of the classes I have taken and currently taking that I am able to understand why environments are the way they are.

The connection between environmental geoscience and my love for the outdoors is pretty clear. Being able to see in real life what we are being taught in class is exciting to me. But being able to understand what something is, why it is like that, how it became that way, and why it is important is the greatest part.

The relationship between environmental geoscience and photography may not be as clear. A photograph is physical evidence. Evidence that could be used for research or education. Environmental problems, geological formations, fossils, seasonal changes, urbanization, pollution, melting are just some of the things that can be captured through photography that can provide insight or proof for people outside of this field.

As I pursue a career my main focus is in the environment. However, I am working hard to find a way to incorporate photography. The ultimate goal would to earn the profession title of ‘environmental photojournalist.’ Being able to use photography to inform, educate, and enlighten others about issues pertaining to the environment is something I am passionate about.
Sabbatical Report: Good Advice, While We're Losing Our Ice

Dr. Patrick Burkhart

I had a good idea. I wanted to write a book about Charles Darwin, but it would take a lot of time to do it. I felt that I needed a sabbatical to get the job done. I proposed one, but I didn’t get it. So, I tried again. No luck. So, I tried again. BINGO, third time was the charm.

After 25 years of teaching, Slippery Rock University awarded me a year-long sabbatical – a glorious time during which my job was to think and write. Well, time flies, but if one is crafty, catching a ride on the wing can lift you higher. It was really big fun to be a full-time scholar. It takes 14 years to qualify for such a gift. I’ll retire long before I will log that length of service again. This fine gift was a once in a lifetime. My lifetime.

During my year, a good metaphor popped into my head. As I have watched students mature from an exploratory mindset, within which they have no idea what they want to do for the rest of their lives, to a more focused mindset, some of them grow into passionate scholars. Such was my path exactly, and with extensive reflection, I have realized how to sagely describe it. I call that progression Climbing Darwin’s Ladder, because the master himself walked that path too. First, one needs an awareness that a discipline even exists, after which a triggered curiosity may incite exploration leading to familiarity. If all goes well to this point, particularly under conducive life circumstances, a student can choose to become deeply engaged within a scholarly community. It’s really fun to watch this occur, as it can lift a student to the brink of greatness. For some fortunate few, they will fall off that cliff into the ocean of true passion. Once such occurs, astounding goals become within reach. That’s how you climb Darwin’s Ladder.

Want to hear more? The book will tell. I’ll pass along publication details, as they become available.

If you’ve ever gotten to know this Dr. B, you probably appreciate that I usually have many projects in the works. Well, life is short, so I simply choose to fill it full. Before I knew a sabbatical was coming my way, I involved myself with the Geological Society of America. Upon small successes, they invited me to assume greater responsibility. As my release approached, I was busy working as Technical Program Chair, arranging around 4,000 abstracts into 350+ oral and poster sessions for the Annual Meeting, Baltimore ’15. I recollect that there we some sixty revisions to that matrix, attempting to make everyone happy. It was a true delight when we called the job done. Compensation for my effort included two trips to Vancouver in ’14, plus a first class, week-long stay within the Inner Harbor. Some great deeds do get rewarded!

More importantly to me, over this time, I was also chasing a dream to bring a team of pre-eminent scientists together to disclose what is happening to glaciers on Earth. Have I told you how much it plagues my
soul to hear disparaging remarks leveled against science, such as anyone saying that Climate Change is pseudoscience? Worse yet, some knuckleheads accuse us of malicious deception, but the opposite – deniers trying to hide reality – is much more the case. In February 2015, I received the largest grant ever provided to build a Pardoe Keynote Session at a GSA meeting. Please find the time to watch *Chasing Ice*. The first time I saw it, I cried. I knew then that I wanted to meet James Balog personally. When he agreed to come to Baltimore, I was on my way! I also landed Richard Alley from Penn State and Lonnie Thompson from Ohio State. Two of my buddies from graduate school, Paul Baldauf and Greg Baker, agreed to help me host the panel. I had done it – succeeded in convening a panel with many of the finest scientists studying ice! We recorded interviews and a webinar, whose links can be found below. What a fun project for me. As I told the audience at the end of Q&A, all those gents were on the stage together chiefly because they are all my heroes. Everyone of the hundreds in attendance was invited to come forward to shake panelists’ hands.

After that fine day, the next step was obvious – write a manuscript. I always tell students that writing well is not like running a race. You never simply cross a line and then are done with it. Honestly, it took a whole year of massive rewrites, countless edits, requisite additional scholarly research, dozens of consultations, and truly, an undefeatable spirit, to get my paper published. (I just heard from the Editor, that despite his continuing concern, he will shortly convey an acceptance!!!) The paper title, and the entire project, is known as *Savor the Cryosphere*.

Actually, the title conveys the root of my struggle with the Editor. I want the paper to be published on the cover of *GSA Today*, a prestigious international journal. I wanted photo couplets of time lapse to show the retreat of glaciers all around the world. Well, to me the title is an imperative sentence and YOU are the implied subject. I want YOU to savor the cryosphere. Immediately, Richard coached me, “Patrick, you shouldn’t tell people what to do. They won’t accept it. Rephrase your discussion as an invitation.” The journal Editor was even less enthused for my message than Richard. He did not like the rhetorical prose – an argument intending to convince. I understood that the place I chose to submit the article was typically reserved for reports of science, but I wanted more. Several months of revisions were required. Schwoo, I finally thought I was done with the peer review. Dag, it was then that I realized that all the rewriting to date was just what the Editor required to then put the article out for peer review. He did not want me to try to convince anyone of anything, but simply rather to just report what can be seen in nature. The paper went out for review. One of my fellow scientists thought the message was spot-on, while another one thought it was completely inappropriate. Then, the Editor himself dissected every word. I was sent back to the library. My coauthors all stepped-up with more insights about the science of climate change, the response of glaciers, and the implications to our children on Earth. More months dragged on during what felt like endless revisions. I was so deeply invested in the story that each wave of harsh criticism, constructive as each was, knocked me down for couple weeks until I could muster the strength to return to rereading the reviews and restitching the growing tapestry of arguments. Struggle continued even to the end, for the Editor just revealed to me that he will offer a reticent acceptance of the article. Reticent. Even now, he’s not too enthused to accept it. Why?

Well of course, it’s me, Dr B. I admit it. I’m just like that. I teach science all day, every day, but that’s not all. I want to throttle people with a realization of Earth. Everyone can hear me bugling down the hallway, well beyond the closed classroom door. I get very fired-up. I want them to care. I want them to choose wisely. I want them to see both the science explaining nature and then to engage in avoiding senseless additional degradation to our big back yard. Savor the Cryosphere is not a shy expose. We clearly state that human combustion of fossil fuels IS altering the atmosphere, which IS warming air temperatures, which IS melting ice, virtually everywhere we look. The retreat of glaciers IS emblematic of a rapidly contracting cryosphere - the realm of frozen Earth.
Shorelines are moving landward, destined to chase over 100 million people from their homes during my daughters’ lifetimes. Those people will NOT be welcomed by their uphill neighbors; somebody already lives there. This September, Pittsburgh has felt like July – hot nights of 90 degrees with little cooling – difficult to sleep through easily. August just became the 16th straight record hottest month ever. Ditto with the string of many hottest years since Y2K. The evidence, the observations, the data are overwhelming. We can see it everywhere we look. All that is missing is for people to open their eyes, trust what they can see, stake an opinion based upon value, and to choose to affect the future with care for their grandchildren – to EMBRACE the Golden Rule. Such is how I have used my sabbatical – great advice, while we’re losing our ice. Oh yeah, I skied a lot, paddled a lot, travelled, and built the prettiest dock on the lake in front of my modest little camp in New York. It’s usually ten degrees cooler up there. Sleet that falls on the Rock flies as snow up there. The white stuff sticks around to play! My 60’ feet of waterfront is pure Heaven. Let me know if you want to come paddle. I’m also looking for a little sailboat in case you don’t want to use your arms. (Ha, don’t believe it!) Be well my fiends. Live long and prosper! Peace, out. Dr B.

Dr. Patricia Campbell

My current research is focused on structures at the base of a Pennsylvanian age sandstone in western PA. Out of the Southern California desert for now! We are planning to offer another field trip to Death Valley soon. Hope all is well with you.

Dr. Xianfeng Chen

My interest areas include remote sensing, geomorphology, and GIS. My recent researches focus on wetland delineation with high spatial resolution multispectral and Synthetic Aperture Radar (SAR) satellite data in western Pennsylvania, and an international collaborative research on desert vegetation coverage using remote sensing model in Xinjiang, China.
Dr. Stentor Danielson

This year I continued my work on wildfire management with a student-faculty research grant from SRU. I also kicked off a new research project on geocaching, turning a longtime hobby into a project on how people interact with geographical space. I hope to make this an international comparative study with research in Australia and Sweden.

Speaking of turning hobbies into work, this year I successfully Kickstarted a roleplaying game (co-written with Cheyenne Wall-Grimes) called Laser Kittens, based on our years of fostering kittens for our local humane society. I have been working to bring tabletop roleplaying games into the classroom in my Economic Geography classes, to help students understand geographical processes in a more fun way.

Dr. Heike Hartmann

I am a physical geographer with research interests in hydroclimatology and Asia. In the last academic year, I had the chance to present my work on seasonal precipitation forecasts in the Tarim River basin during a conference in Urumqi, China. I was able to discuss my results with scientists from China, Kyrgyzstan, and Germany and with stakeholders from the Tarim River Basin Authority and the China Meteorological Administration. In March 2016, I was elected the first Da Vinci Faculty Fellow for Undergraduate Research, Scholarship, and Creative Activity. I am very much looking forward to officially promoting undergraduate research on behalf of SRU.

Dr. Jack Livingston

It is great to be back to teaching. Spring semester was a challenging time but I received so much support from the department and the University as a whole. I feel healthy and strong although my voice is not what it used to be. I continue to work with Xianfeng on land cover change in Xinjiang Uyghur Autonomous Region. We received funding for a summer field experience in the region through AsianNetwork and will be conducting research there in the summer of 2017 with six SRU students. I continue to focus on applications of GIS across disciplines.
Dr. Brian Miller

This past year has been a busy and productive one. At last year’s Geological Society of America meeting I co-authored two abstracts with student’s that were given as oral presentations. One of the talks was based upon using surface waves to identify abandoned mine tunnels and the other a ground penetrating radar investigation of the internal sedimentary features of the Jacksonville esker. In addition I chaired a session with a colleague titled “Utilizing 2D and 3D near-surface geophysics to generate improved surface and subsurface geologic maps.” This year’s GSA proved just as eventful where I gave an oral presentation in regards to undergraduate geophysics education and a poster detailing our continued geophysical investigation of abandoned coal mines on the campus of SRU. Additionally three papers have been accepted for publication, one based on 3-D near-surface seismic reflection, one based upon our work with the abandoned coal mines and the other based on our work along the Lake Erie bluffs. As we move toward the end of the year myself and several students have submit an abstract for the seismic surface wave work we have been performing along the Lake Erie bluffs to be presented as a poster for the Regional Science Consortium at Presque Isle.

Dr. Tamra Schiappa

Ciao from Italy! I am on sabbatical for the year and am spending one month visiting Italy. While I am here I will be taking language classes, writing, teaching and investigating the potential and feasibility for a natural history of Italy spring break trip. The rest of my sabbatical will be spent in Pennsylvania completing several research projects and submitting them for publication. While in Pennsylvania, I will work as a researcher in the Invertebrate Paleontology lab at the Carnegie Museum in Pittsburgh. I will not only complete my own research but will work on some of the museum’s collections helping to identify and put names to late Paleozoic fossil cephalopods and conodonts. In last year’s newsletter, I made reference to organizing and co-teaching a field investigations course to the Southwest. Dr. Smith and I successfully taught another summer field course and exposed students to the beauty of 7 national parks and the surrounding landscapes. Some of the highlights for me were visiting the Grand Canyon, Zion and Arches National Park. Auguro a tutti buona salute!
**Mrs. Cynthia Schnur**

I am celebrating 11 years at Slippery Rock University this April and am still working at Schnur's Greenhouse.

She is still holding down the fort and taking care of all the GGE students. Thanks Cindy!

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**Dr. Michael Stapleton**

Hello again, another year has passed. I have given up on pictures of myself and decided to put up something better to look at instead. The picture is from Maple Pass outside of the North Cascades National Park in Washington. It was taken during a hike when we stayed in the Methow Valley last summer. Summers in the Methow Valley are great, but the winters may be even better. We hope to return in the winter to x-country ski, SOON. At SRU, Dr. DeNicola and I continue to work with students on AMD research. Last year we received a CHES Research Grant for the development of a field method to examine the effects of metals and nutrients on algae in streams. Aaron Onufrak (Biology Major) was the research student on the project. He assumed the project would focus on biology but he ended up doing mostly chemistry. The more interesting part of the project, but don't tell Dr. DeNicola. Aaron presented his research at the 25th Annual Sigma Xi Undergraduate Student Research and Creative Accomplishment Conference in Erie in the spring and was awarded a first place honor. While Aaron has graduated (graduate student Wright State University, Biological Sciences), his project has resulted in several new directions for research. Dr. DeNicola and I also had a paper published in *Restoration Ecology*, “Using macroinvertebrates to assess ecological integrity of streams remediated for acid mine drainage” in the spring.

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After Dr. Livingston spent an afternoon deep in research (Googling fun things) and found YouTube videos of an augmented reality sandbox, we had to have one! Thus I built a model we will use to assists us in our basic classes. Using software downloaded, an old computer, Linux operation system, 500 lbs. of sand, projector and an x-box connect camera. It is live. The system will draw contour line and shade by elevation the shape of the sand in the sand box in real time. Very cool, it also has the ability to pour water (electronically created) to show drainage patterns. One hitch with the system was I forgot to add an updated video driver for the video card (NVIDIA GeForce GTX 970). Not to worry, Dillon Carr (Geology major) found the problem. Who said long nights of gaming (instead of structural geology) would not pay off. I will post a video on my SRU web site soon.
**Dr. Langdon Smith**

My last year was spent continuing my research of public land issues and working on a long-term book project about my experiences driving and camping through Canada in an old VW Camper van. In June I taught a field course with Dr. Tamra Schiappa in the Southwestern U.S. We explored several national parks and monuments, including Bryce Canyon, Arches, Zion, Capital Reef, Grand Canyon, and Staircase Escalante. A highlight of the trip for me was getting to interact with people of the Navajo Nation. For my next public lands research I plan to investigate the many new national monuments created by President Obama during the final months of his presidency.

**Dr. Julie Snow**

This last year has been somewhat of a transition for me. I’ve finished my research with Dr. Livingston on the transport of mercury throughout the PA region and have shifted over to a climate related topic; carbon sequestration. I have begun working with the Smithsonian Institution’s Migratory Bird Center to look at rainforest redevelopment in Central America. We are focused on the regrowth of the rainforests at coffee plantations, particularly in Nicaragua. There will be more to come on this topic in the next few years! I’ve also started working on a new book. This time it is a family-backpacking book for New England. My daughter and I did our first big trip for the book this summer; we hiked 10 days on the Appalachian Trail across the Presidential Range in New Hampshire.

**Katie Tamulonis**

I completed my Ph.D. in Earth and Atmospheric Sciences at Cornell University in 2010, which focused on Appalachian Basin stratigraphy and geomorphology. After graduate school, I was employed by several oil and gas companies, where I worked on unconventional shale gas exploration and development, reservoir modeling, the interaction of natural and engineered systems, and geologic carbon dioxide sequestration potential. I am excited to join the department as a sabbatical replacement for the 2016-2017 academic year, during which I am teaching Historical Geology, Sedimentology and Stratigraphy, Physical Geology, and Paleontology.
Dr. Jialing Wang

I have continued my research on the urban growth, urban open space, and sustainable urban development of China during last year. I have participated in an international conference, “Sustainable Development Conference 2015”, in Bangkok, Thailand in the summer of 2015. I also visited Taiwan as a member of the Association of Chinese Professors of Social Sciences in the United States (ACPSS) in July of 2015 to observe the social, economic, and political development of Taiwan and to communicate with local people regarding the relationship between Taiwan and mainland China.

IN THE NEWS

First Year students visit Gettysburg

The GGE Freshmen field trip headed to Gettysburg, PA this year. Highlights of the trip included a full day walking tour of the historical sites, including the Pennsylvania State Memorial and several notable outcrops. Students spent time with faculty exploring the park and sitting around the campfire while camping at Gifford Pinchot State Park.
Ashley Beal, Victoria Yeager, Dr. Jack Livingston and Dr. Julie Snow were selected for the CUR Posters on the Hill Competition. 750 students applied for the program and only 50 were selected. They spent 2 days on Capitol Hill talking with staff members from Senator Toomey, Senator Casey, Congressman Kelly, and Congressman Doyle’s offices. They also attended a panel discussion held by the White House Office of Science, Technology, and Policy. The event concluded with the students presenting their research on mercury emissions from coal-fired power plants at a poster session in the House Building in Washington DC, April 22-23, 2015.

Aaron Onufrik, Slippery Rock biology major, captured first-place honors for his poster, “A Field Bioassay Method for Examining Effects of Metals from Acid Mine Drainage on Benthic Algae” at the 25th Annual Undergraduate Student Research and Creative Accomplishment Conference. Penn State Behrend and the Northwest Pennsylvania Chapter of Sigma Xi, an international research society, sponsored the conference. Onufrik’s project entailed designing and evaluating substrates that leak metals to algae, which can be used for bioassays in streams. Onufrik worked with faculty advisers, Dr. Michael Stapleton, SRU associate professor of Environmental Geoscience and Dr. Dean DeNicola, SRU professor of Biology on his project. The research was supported by a grant from the College of Health, Environment and Science to support student/faculty research.

Kushner, B. and Schiappa, T.A., Department of Geography, Geology and the Environment, Slippery Rock University, Slippery Rock, PA 16057, Baylee is the 2016 Geological Society Outstanding Student Presenter, she Presented April 20, 2016 at the PGS Student night.

Geology majors Michael Chojnacki, and Logan Jacobs were awarded “Best Poster” for “Does the Pennsylvanian-aged Morgantown Sandstone Record Rapid Transport into the Depositional Basin formed due to Uplift of the Appalachian Mountains? Depositional and Structural Features of the Basal Morgantown Sandstone, Mt. Nebo Pointe, Pittsburgh, PA” presented at the 14th Annual PGS/AEG/ASCE Student Night. The Pittsburgh Geological Society (PGS) sponsored the event. The project mapped the basal structural and sedimentary features of the Morgantown Sandstone of the 315-meter long outcrop at Mt. Nebo Pointe. The objective was to better understand the emplacement of the Morgantown Sandstone into the Appalachian Foreland Basin. Chojnacki and Jacobs worked with Dr. Patricia Campbell.

Publications


**Stapleton, Michael**; and DeNicola, Dean; (In press). "Using macroinvertebrates to assess ecological integrity of streams remediated for acid mine drainage." *Restoration Ecology*.


**Conferences**

**Danielson, S.** (2016) Entitlement to space in geocaching, presented at the Institute of Australian Geographers Conference, June 30, Adelaide

**Danielson, S.** (2016) Fantasy maps of real places: tensions over space and place in a cartographic art project, presented at the Association of American Geographers Annual Meeting, April 2, San Francisco.

DeRose, Frankie J., Russo, Nicholas E., **Miller, Brian E.**, 2016, Seismic Investigation of the Lake Erie Bluffs, Regional Science Consortium.


Kerns, Curtis S., **Miller, Brian E.**, 2015, The Application of Multichannel Analysis of Surface Waves to
Identify Abandoned Mine Tunnels, Geological Society of America Annual Meeting, Baltimore, Maryland, USA.

**Miller, Brian E.,** 2016, Geophysical Field Methods: Experiences from an Undergraduate Course, Geological Society of America Annual Meeting, Denver, Colorado, USA.

**Miller, Brian E.,** DeRose, Frankie, Russo, Nicholas, Geophysical Investigation of Abandoned Mine Tunnels, 2016, Geological Society of America Annual Meeting, Denver, Colorado, USA.

**Schiappa, Tamra.** Invited by the Pennsylvania Council of Professional Geologists to teach a portion of the professional geologist review course. Geologists take this course as they prepare to take the professional geologist exam. Mars, PA, February 5, 2015


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### AWARDS & HONORS

#### 2016 Scholarships

- Alumni Scholarship in Geology - Kelsie McGranahan
- Flash Yager Scholarship - Jessica Schottanes
- William Anderson Scholarship - Shelby Schettler
- Michael A. Starker Scholarship (Bartramian Audobon Society) - Nicole Klimowicz
- Paul A. Rizza Scholarship - Victoria Yeager
- Robert Davis Scholarship - Samuel Hone
- Environmental Geoscience Scholarship - Nicole Klimowicz
- Gene & Joanne Wilhelm Scholarship - Trevor Chambers
- Timothy Trautman Scholarship - Blake Wallrich
- Veltri Scholarship - Chandler Sendek

#### Outstanding EGEO Student Awards

- Freshman - Samuel Hone and Clare Clark
- Sophomore - Trevor Chambers
- Junior - Blake Wallrich and Jaclyn Burke
- Senior - Baylee Kushner

#### Outstanding GES Student Awards

- Freshman - none
- Sophomore - Robert Parquette
- Junior - Arie Uber
- Senior - Laura Faessel

#### Outstanding Service Award

Victoria Yeager
Allie Bernstein (2009)

Hi GGE department!
Here's a little GGE alumni update. Since graduating from SRU in 2009, I have been living in Florida just outside Daytona Beach. I work at a sea turtle hospital doing rehabilitation for sick and injured turtles. I also work at a local veterinary clinic as a vet tech and started a pet sitting company in 2010. I just got back from canoeing in the boundary waters in Minnesota with Steve Roberts last week. Was a really beautiful place, and felt good to be out on the water and camping again. Florida is a good place to be, I get SRU alumni that come visit, it's much warmer than PA and the wildlife is unbeatable. I have nothing but great experiences from my time at SRU. GGE department was a great place to spend my days at SRU. I cannot thank the professors and staff enough for their patience, guidance and would not have the opportunities now without my background built at SRU.

Chris Hortert (2006)

After completing my B.A. in Environmental Geoscience in 2006, I started working for The Hutchinson Group in Pittsburgh conducting geophysical surveys. I worked all over the country conducting electrical resistivity tests on dams to identify potential breach points and identify buried strip mine high walls, seismic surveys to determine proper base construction for commercial wind turbines, and electromagnetic surveys to identify buried tanks and AMD plumes. After that I moved on to work for MACTEC Inc. (now call AMEC, Foster, and Wheeler) as an environmental consultant. Work included the delineation of a TCE plume for a chemical company, delineation and remediation free oil on the water table at oil refineries, and overseeing the removal of former hazardous waste dumps. After a 5 year sentence I moved on to my current position with Civil & Environmental Consultants, Inc. in Pittsburgh. My work consists of the oversight of groundwater monitoring networks for the oil and gas industry, conducting Phase I Environmental Site Assessments (ESAs), environmental permitting and performing large scale delineations and clean ups for industrial, chemical, and power companies. While working full time I decided to complete a Master’s Degree in Geology with a focus on hydrogeology at the University of Pittsburgh. As I am writing this I am preparing to present an abridge version of my thesis “Contaminated Groundwater flow control across an inverted groundwater divide with three groundwater control systems” at GSA 2016 where I plan to catch up with Dr. B and hopefully others. I am currently married to my lovely wife Sarah and we have a beautiful baby girl Eleanor who is 18 months old now. I am currently helping my company promote new technology for groundwater and waste water in the treatment of 1,4-Dioxane, PFCs, and metals.
Bethany Evans Lott (1999)

I graduated Slippery Rock in 1999 and have been a wildlife rehabilitator ever since. I first began as an intern at the Wisconsin Humane Society in their wildlife dept. I was an intern for 6 months and then hired as staff; I worked there until the end of 2002. In December of 2002 I moved to Florida to take a job with Audubon Center for Birds of Prey as a Raptor Technician and I am now also the Volunteer Coordinator. I work in the clinic and take care of all the sick, injured and orphaned birds of prey that come to us, last year just under 900 birds, over 100 of those were Bald eagles. I’ve been married to husband Jim for over 10 yrs. and he helps me at work by climbing trees to put back baby owls, hawks and Eagles in the nests they fell out of. We have no children but are owned 3 cats.

Clint Forsha (2007)

I left Slippery Rock University in 2007 with a bachelor’s degree in Geology, a minor in Environmental Science, a handful of athletic honors, and a remarkable curiosity about the natural and built environment. I owe a tremendous debt of gratitude to the faculty and staff of the GG&E department for cultivating my interest in geology while supporting my football career at The Rock.

After graduation, I headed south to enroll in Virginia Tech’s Geotechnical Engineering graduate program where I was fortunate enough to obtain a graduate research assistantship. My research supported investigations for the rapid stabilization of contingency airfields and the mechanisms that led to failure of the 17th street canal in New Orleans during Hurricane Katrina. This research led me to my first job at the United States Army Corps of Engineers Engineering Research and Development Center in Vicksburg, MS. The Corps of Engineers introduced me to a number of large infrastructure projects and I quickly sought an opportunity that would allow me to be more involved in design and construction.

I then joined MWH Global, a world leader in the design of hydropower dams and navigation structures. At MWH, I worked on run of the river hydropower projects on the Ohio river, a copper mine tailings dam in Peru, and spent three years in Panama working on the Panama Canal Expansion. After repatriating to the United States I was invited to join my current company, HDR, as a geotechnical engineering project manager for the hydropower practice. Our practice helps utility owners identify and develop new hydropower projects and maintain Federal Energy Regulatory Commission compliance for existing facilities. Somewhere in the mix I carved out enough time to study and sit for the Professional Engineering exam and am now a licensed PE. I live and work in Charlotte, NC and enjoy long motorcycle rides through the Blue Ridge Mountains and the occasional snowboarding trip to... well, anywhere the slopes are steep and the powder’s deep.
**Dawn Strength (2002)**

I graduated in 2002 with a BS in Environmental Studies and in 2004 with a MS in Sustainable Systems from the Rock.

Dawn currently works as a Green Building Specialist with the U.S. Green Building Council. She serve as a technical subject matter expert for all USGBC and GBCI published guidance related to LEED and WELL certification and accreditation. She utilizes cutting edge knowledge in the design, construction, and real estate industry to serve as a resource for solving technical LEED issues. Before joining the USGBC, she was a LEED Project Manager with Wells Fargo. There she was responsible for documenting all East Coast LEED NC and CI Volume projects for the Wells Fargo’s retail bank portfolio. She also helped to develop their internal waste management plan, indoor air quality standards, green cleaning and sustainable purchasing procedures and policies. Prior to Wells Fargo, Dawn worked as a landscape designer at a landscape architecture and engineering firm focusing on integrative, pedestrian-friendly streetscape designs and native plantings for educational institutions. In addition to her work, she is a board member on the Central Piedmont Community College Sustainable Technologies Advisory Committee. She developed a deep passion for conservation and environmentally conscious design at a young age and hopes to pass on that awareness to her family. She currently lives in Fort Mill, South Carolina with her husband, Matt, two and a half year old son, Landon. In her free time she likes to do yoga, soccer, cycling, kayaking, photography, or just about anything outdoors.

**Eric Itle**

I work at Letterle Associates, Inc in Allison Park, PA, and I’ve been here for just over 10 years. I’m a Project Manager and mostly manage underground storage tank sites, from characterization through closure. I’m also a Registered Professional Geologist in Pennsylvania.

I have a beautiful wife, Heather, and one son, Ian (9 years old).

**Katie George**

I finished my M.S. in Atmospheric Science at UC Davis in 2013 and I’m currently working at the California Air Resources Board in the Monitoring and Laboratory Division. My section is responsible for CA's motorcycle and off-highway recreational vehicle regulations.

I dig CA. My wife, Kay, and I married in July. She’s a high school English teacher and soccer coach. We own a little pad in West Sacramento. It’s close enough to my work that I can bike my bootie in almost everyday. We have 4 happy pups and like to spend our free time working out, gardening, and playing in the mountains.
**Jack Ferrell**

For the past twenty-three years of having provided direction to companies and career seekers in the greater horticulture industry. First, as a publisher of career newspaper and website, and for the past sixteen years as an executive recruiter. The enjoyment is speaking with people all across the United States and some internationally where the discussions touch on many geographically related topics: climatology, pedology, biogeography, environmental concerns, hydrology and economic geography. Thank you SRU, Department of Geography for providing tools I continue to use in my work and personal life!

**Evan Weiss**

I am Director of Site Acquisition for Safari Energy (large scale solar developer) in New York City.

**Sarah Lawlor Johnston (2009) and Tyson Johnston (2010)**

Sarah (Lawlor) Johnston (B.S. Geography/Env. Studies ’09) is a Water Quality Specialist in the Environmental Cleanup and Brownfields Program at the Pennsylvania Department of Environmental Protection Northwest Regional Office in Meadville. Sarah has been with the DEP in varying capacities since graduating from Miami University of Ohio with a M.A in Geography in 2011.

Tyson Johnston (B.S. Geography/Env. Studies ’10) is the Land Stewardship Coordinator for the Western Pennsylvania Conservancy at their new Northwest Regional Office in Franklin. Tyson has been with WPC since graduating from SRU, working for several years at the Pittsburgh headquarters as a GIS Specialist.

Tyson and Sarah are now proud parents of a beautiful daughter, Morgan Lee Johnston, born July 12, 2016. All three reside near Meadville. GO ROCK!!!
**Kelly Blake**

Just made it to 5 years working for the government in China Lake, CA as a geologist within the Navy’s Geothermal Program Office. In the last year, I have collected gravity measurements, GPS measurements, temperature logged 50+ wells and helped produce two final report for Phase 1 of DOE’s FORGE project at China Lake Naval Weapons Station and the Naval Air Station Fallon. Myself, and our office, are gearing up to collect shallow temperature measurements in New Mexico for DOE’s Play Fairway project that includes land within Fort Bliss and White Sands Missile Range.

The position within the Navy continues to be a challenge, but the continued effort to find geothermal resources (whether low or high temperature) on Department of Defense lands to decrease energy costs and increase energy security for installations also continues to be interesting and rewarding.

Attached is a picture of a GPS point being collected in the field (small yellow tripod in the left portion of the picture).

Also, a blogger did a short description of what I do for a living, and that link can be found here: http://rockheadsciences.com/blake-geothermal/

**Kris Macoskey**

Kris is a Vice President and the Environmental Practice Lead at the Civil & Environmental Consultants, Inc. corporate headquarters in Pittsburgh, PA. In that capacity he has administrative responsibilities for a team of about 35 scientists and engineers. The practice serves clients in the power, natural gas, manufacturing, solid waste, and real estate markets through expertise in multimedia compliance and permitting, environmental engineering, due diligence, hydrogeology, and site remediation. Kris’ technical work focuses on air quality compliance and permitting with emphasis on shale gas development in the Marcellus and Utica plays. Kris lives in Mt. Lebanon, PA with his wife Judy where they raised two children. Rebecca teaches art and music at an international school in Shanghai, China and Jonathan is pursuing a PhD in biomedical engineering at the University of Michigan.
Lizbeth Pyle (1975)

Lizbeth A. “Betsy” Pyle – BA 1975 Geography
Slippery Rock, MA 1977 Geography
University of South Carolina, PhD 1983
Geography University of Minnesota.
Resident of Morgantown WV for 32 years,
retired emerita faculty at West Virginia
University following appointments in
geography and in institutional research. My
retirement “hobby” – improving my
proficiency in Spanish with native-speaker
tutors. I’ve accompanied the WVU Dental
School on 6 faculty-led student dental service
trips to Guatemala serving as one of the
group’s interpreters. My next goal: visit the
Incan ruins at Machu Picchu. I saw slides of this place in the first geography class I took at SRU in 1971
with Dr. Jim Hughes, and it’s been on my bucket list since then!

Photo in San Lucas Toliman, Guatemala, elevation 5,600 feet, April 2016. Peak of Volcan Atitlan,
elevation 11,500 feet, visible in upper left of photo.

Maggie Nicholson (1975)

Hi. I am retired from working as a Business Manager at Forever
Broadcasting in State College, PA. Now moved to New Bern, NC where I am
enjoying warmer weather and beach days whenever I want. Also
volunteering as a Literacy Tutor in my spare time.

This summer I traveled with my husband Bill to Amsterdam, Germany and
Italy for 3 weeks. The photo of me was taken at the Kinderdijk windmills in
the Netherlands this July 2016.
Marah Vecenie

Marah Vecenie secured a position with the Western Pennsylvania Conservancy shortly after graduating from SRU. As Community Forestry Coordinator, Marah works in communities across the region to administer grants to neighborhoods seeking trees for their parks, streets and other open spaces.

Matt Boyer (2013)

After graduating from the department of Geology and Environmental Science at Slipper Rock University, I earned gainful employment at the Bermuda Institute of Ocean Sciences as a Research technician. At this position, I performed the hands-on work for a variety of air quality and atmospheric science research projects for government agencies and independent researchers from around the world. Later, I began graduate school at Dalhousie University in Nova Scotia, Canada. My time as a graduate student has allowed me to have a variety of incredible experiences, including participation in a 6 week campaign in the Arctic on board a Canadian Coast Guard ship to carry out cutting-edge climate change research. All of these experiences would not have been possible without the education and support I received from the department of Geology and Environmental Science during my time as a student at Slippery Rock University.

Megan Burns

For 3 years after graduation, I worked in an environmental chemistry lab in Youngstown, Ohio. I moved to Rochester, New York in April of this year and have been working for the company Terracon as an environmental field technician. Which is basically being a field inspector for construction sites. I caught their eye with my experience in chemistry and geology. This branch of Terracon is the first in the state of New York and has been looking to extend their environmental side of the company and that was part of the reason I was brought on board.
Pamela Dawson Normile (1978)

Pam has been a Presbyterian clergy for 32 years. She is now Pastor of First Presbyterian Church in Pauls Valley, OK. Her husband continues as Editor of International Gymnast Magazine. Her daughter, Hayley, is an Environmental Engineer in Tulsa, and son, Ian, is a junior at University of Oklahoma majoring in history. For Pam’s 60th birthday she hiked the Grand Canyon.

Rachel Zappone

I have been living in Seoul, South Korea and teaching English at a private academy to students ranging from kindergarten up through sixth grade. I will be finishing my second year of teaching here in December.


Manager Master Pumps & Power- Aliquippa, PA

Reside in Ellwood City, PA
Wife, Stacey (1990 SRU Grad- 1st grade teacher in Seneca Valley School District)
Son, Austin (18) College Freshman
Son, Audie (11) 6th grade
Sharon Goldstein (1991)

My name is Sharon Goldstein and I was part of the class of ’91 – majored in Environmental Education.

I am currently the Sr. Manager for Events & National Programs for Walt Disney Studios – I oversee advanced ticketing as well as Educational Programming that helps promotes the movies nationwide. I am part of the team that develops and implements the Red Carpet Premieres as well as all programming at the El Capitan Theatre in Hollywood.

Ted Morus

I serve as Planning Manager for the Crawford (County, PA) Area Transportation Authority. My position involves Transportation Planning for Fixed Route and Shared Ride Bus Service covering Rural Crawford and Venango Counties, PA. I work with PennDOT extensively in Grant Management, and Compliance(s).

Prior to this I worked for Pashek Associates,Ltd., Landscape Architects and Community Planners, Pittsburgh, PA., (based out of the Mercer County office), as a Recreation Planner, developing Comprehensive Recreation, Park, Open Space and Greenway Plans.

Rose Iksic

My husband and I have a new little one, Luka Andree Saville-Iksic, born 8-28-16. I am also starting work at Penn State this coming January as an International Student Advisor.
Ben Baker (2010)

Two weeks after graduating from SRU I married my wife (Charlie) and started graduate school at WVU in August 2010. I completed a Master's Degree with a focus in GIS & Remote Sensing under the direction of Dr. Timothy Warner, ultimately culminating in a journal publication (citation below):


After completing my Master's I accepted a job at a small civil engineering/environmental consulting firm based in Morgantown, West Virginia as their GIS Coordinator. Since then the need for GIS data management and mapping workload has allowed the hiring of additional GIS staff. I primarily am the liaison between Environmental, Engineering, and Survey Departments and have also been managing the company's pipeline as-built projects for 3 years.

Charlie and I welcomed our son, James Alan Morris, into the world on July 21, 2015. Since then we have been getting less sleep but have graciously been enjoying every moment of this new phase of life!

Jenna Rindy and JT Douglas (2016)

Jenna and JT graduated in May 2016 and moved to Denton, TX. Jenna is currently a teaching assistant at the University of North Texas, pursuing her M.S. degree in Geography, with a focus in Urban Environmental Management. She will begin her research assistantship next semester, as well as propose her thesis research on the ability of trees to remove elemental carbon from the atmosphere and deliver it to the soil. JT is currently working for the City of Denton in the water/wastewater department. He is an industrial pretreatment specialist, responsible for permitting inspecting and sampling industrial-process wastewater discharge to guarantee local pollutant limits are met. The job ensures that receiving waterways are protected, and eventual drinking water is chemically safe. JT and Jenna want to thank the GGE department for providing them with the skills they are using now in their work. They are looking forward to furnishing their apartment, planning a trip out West, and adopting a dog.
Doug Goetz

I'm hoping to graduate in December from Drexel. Working on my final papers and dissertation now and have hopes to get a post-doc finalized in the upcoming months. I've been busy with field campaigns in the last couple of years with trips to NE PA to investigate Marcellus Shale emissions (2012 and August 2015), a trip to Nepal to investigate aerosol emissions and a trip to Antarctica to investigate ambient aerosols. How detailed of a summary would you like for the newsletter? I can share a lot or a little. For now here are a couple of pictures and some description of the measurement campaigns I’ve been involved in.

1. The first picture is from my time in Nepal in April 2015 (yes, I was there for the earthquake) as part of the NAMaSTE (Nepal Ambient Monitoring and Source Testing Experiment) campaign. We had a team of scientists from ICIMOD in Nepal, University of Iowa, and the University of Montana. I was there to investigate aerosol emissions from prevalent, but under characterized emission sources like cookstoves, agricultural residue burning, brick kilns, and garbage burning. I had a suite of instruments, but the highlight was a mini aerosol mass spectrometer (mAMS). I’ll be submitting a paper on this work in the next couple of months.

2. The remainder of the pictures are from my time in Antarctica at McMurdo Station. I was there in August-October of 2015 during the transition from the austral winter to summer. I was helping out with the 2odiac campaign (http://www.2odiac.com/) and assisting with aerosol measurements with a focus on operating the an HR-AMS. I have a ton of good pictures if you’re interested in nacreous clouds and emperor penguins! It was an amazing experience and you could say you don't know cold until you're in -40 F with high wind.

3. My work in the Marcellus Shale is almost complete. I published this last year: http://pubs.acs.org/doi/abs/10.1021/acs.est.5b00452 I recently submitted another paper that looks at ambient concentrations of methane, CO, and VOCs in the summer of 2012 and 2015.