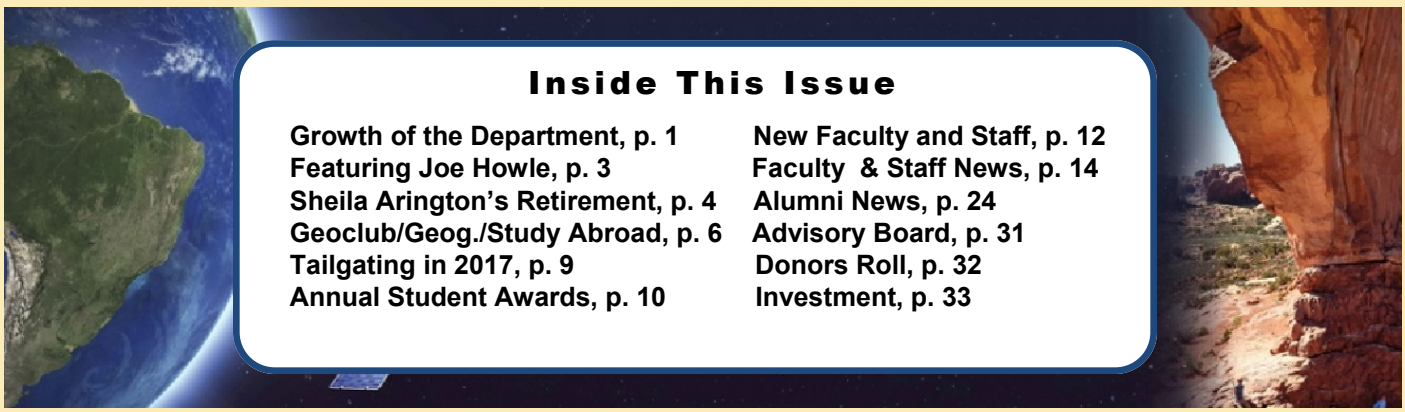
eGEOTIGER

January 2018

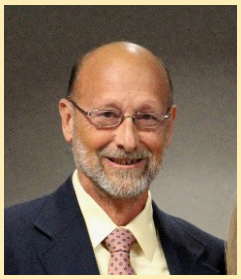
New Faculty/Staff



Inside This Issue

eGEOTIGER

Greetings from the Chair!



Hello All! It is amazing that another year has flown by and here we are with the 6th edition of the eGeotiger newsletter reporting departmental news from 2017! It was another eventful year, with historical growth in many ways: undergrad and grad student enrollments, GTA positions, instrumentation, new faculty members and several searches to hire more, multiple visiting scholars, and even a new vehicle added to our fleet. Such growth doesn't come overnight but, rather, was planned strategically to prepare us for launching our new PhD program this coming Fall (2018). We are all very excited about this new phase in the evolution of our department.

I remain amazed by the continued dedication and energy of members of our Geosciences Advisory Board (GAB). This wonderful group of friends of the Department gave their time, treasure, and talents to find many new ways to serve our students and our programs. The GAB Fund for Excellence Endowment is now pledged at well over $200K, making the $250K goal an achievable one in 2018. We are already drawing off the annual interest earnings to the benefit of our students and programs. Our faculty are thankful that last year the Board made a significant step toward helping us to improve the diversity and inclusiveness of our student body. The GAB met on October 8, 2017, to approve funding for the new GAB Diversity and Multicultural Award, which provides $2K annually toward the recruitment and/or support of the scholarly activity of diversity students. The idea for such an award has been discussed by the GAB for some time, and last summer they provided funding to support Ms. Tasha Williams to participate in our Study Abroad course in Scotland - In the Footsteps of Hutton (See article in this issue - New Geosciences Diversity and Multicultural Award gives students a life-changing opportunity). Finally, I am humbled by the selfless efforts of the GAB to organize a new committee dedicated toward helping our students in their quests to find internships, jobs, and their basic "dream" careers. For years now, members of the GAB have presented forums for our students wherein they provide information and answer questions about jobs and careers in all sectors of the geosciences. This spring, however, the Student Jobs and Careers Committee will additionally provide interview tip sheets for our students and will come to campus to perform mock interviews for energy, minerals, environmental and government jobs. We are truly blessed to have such a wonderful group of friends who work so hard to support our department. Thank you!

Dr. Marilyn Vogel (Stanford) joined our faculty in January 2017. She was hired to coordinate the AU science-core course Concepts of Science (SCMH 1010). Concepts of Science had previously been housed under the College of Sciences and Mathematics (COSAM) administrative umbrella, which made it awkward to manage and to modify. Moreover, two-hour lab sections were desired in order to make this course a truly science-based experience for the students. COSAM administrators decided that Concepts of Science needed to be transferred into an academic department, and Geoscience was chosen since we are a multifaceted science incorporating the more fundamental sciences such as chemistry, physics, and biology. Additionally, we already have GTA's equipped to handle the set of diverse labs that now accompany the lectures.

Dr. Adam Payne (Oklahoma State University) joined our program in 2017. Adam is a Lecturer in Geography who is interested in the historical geography of North America, urban studies, and tourism. His research is in areas of gentrification and commodification, place promotion, and heritage tourism. I particularly enjoy hearing him talk about his research on tourism along Route 66, which we intersect and drive along in spurts heading out west during summer field camp. Dr. Payne has taught a wide range of courses including Global Geography, Physical Geography, Economic Geography, Introduction to Geography, and Cultural Geography.

Following a national search, Dr. Stephanie Rogers (University of Fribourg, Switzerland) was hired as a lecturer to help teach courses in geography. Dr. Rogers taught for us in 2017 as an instructor and demonstrated exemplary abilities as a teacher. Her students love her, and we are very fortunate to have her now in her new faculty role in our department.

Dr. Matthew DeCesare (LSU) was hired to manage and maintain Dr. Martin Medina's paleoclimatology isotope laboratory here in the Beard-Eaves Memorial Coliseum. Dr. Medina was hired last year as a paleoclimatologist in AU's Climate, Human, and Earth System Science (CHESS) cluster research group (see INTRODUCING Martin Medina in the 2016 eGeotiger). Dr. DeCesare also is a paleoclimatologist who uses stable isotopes in his research and he has extensive experience using and maintaining the same mass spectrometers that Dr. Medina has in his lab (Thermo Scientific Delta V Plus Gas Isotope Ratio Mass Spectrometer and a PICARRO L213-I high precision stable isotope analyzer). He is extremely well qualified; thanks to Dr. DeCesare, together with Dr. Mehmet "Zeki" Billor, our highly sensitive instruments, valued at ~$2.5M (see http://www.auburn.edu/cosam/departments/geosciences/Equipment/index.htm), are in good hands.

You can learn more about each of our new faculty elsewhere in this newsletter.

Growth in our enrollments required us to purchase a new van, a 2017 Ford Transit, expanding our departmental fleet to four vehicles. Yes, we still have the 2000 Ford Excursion, which is our only FWD vehicle, but with its rugged V-10 engine it remains a dependable workhorse for us for field research and for towing our supply trailer during summer field camp. Our 2010 Chevy van still works fine for helping to haul students and gear around on fieldtrips, and our 2002 Ford Ranger pickup truck has proven invaluable for short hauls of rocks between our facilities now spread across campus. We also purchased a golf cart, which helps out a great deal in our daily operations that require numerous back-and-forth trips for administrative purposes and for transporting GTAs and their teaching props to labs that are also broadly dispersed around campus.

In late 2017 we saw the hiring of a new AU President, Dr. Steven Leath (former President of Iowa State University), and a new Provost, Dr. Bill Hardgrave (previously AU's Dean of the College of Business). Both of these folks each spent a full afternoon with the COSAM leadership team and left me with a great deal of optimism about the future of the University, COSAM, and our department. The very clear message from both leaders is that AU will become a top-tier (R1) research institution and that this will be accomplished through added emphasis on Ph.D. research and interdisciplinary research. This bodes well for us since the geosciences are naturally interdisciplinary and many of our faculty already work with faculty in other departments; also, our new PhD program in Earth Systems Sciences should facilitate this even more when it starts this coming Fall (2018).

We now have multiple opportunities for you all to come visit us and some of your former classmates during 2018. Everyone is always invited to our annual Spring picnic, which will be held this year on Sunday afternoon, April 8th. The picnics are fun, family friendly events (burgers and hot dogs, horseshoes, cornball, etc…) that also highlight awards and honors won by our faculty and students; please watch your email for updates and directions. The GAB now has 32 members, so the chances are pretty high that you'll run across friends if you attend one of their biannual meetings. GAB meetings are held in the Fall and in the Spring, and they include fieldtrips within a short drive of campus. If you're interested in attending a GAB meeting, contact information is placed near the end of this newsletter. For local and passersby alums, we hold weekly seminars every Thursday afternoon; see our webpage for speakers and topics. Finally, thanks to SGE, our tailgates have become a very popular affair, drawing a good many alums during football season (see the article by current SGE president Mr. John Whitmore).

In closing, it's with a bit of melancholy that I write this report since it will be my last one as Chair. After having served as Chair of Geosciences (and the former Department of Geology and Geography) for eight years, I will rotate off the position this coming August (2018). I truly enjoyed serving the Department, but I also eagerly await being placed back on faculty status, where I can once again focus on my students and research. Last term our faculty selected Dr. Ming-Kuo Lee as our next Chair, so the immediate future of our department is in excellent hands. I am very thankful for having been blessed with the overwhelming support from students, faculty and staff during my tenure as Chair; the successes achieved over the years could not have happened without the hard work by these very collegial, selfless, and dedicated individuals. Thank you all!

Featured Geosciences Advisory Board Member

The Geoscience Advisory Board (GAB) has served the Department well since its establishment. We appreciate the interest, guidance, and financial support provided by the Board's members. As a token of our appreciation, we feature a member in each issue. This year we highlight Joe Howle.

Joe Howle

I believe that this is a practical world and that I can count only on what I earn. Therefore, I believe in work...hard work."

First, let me tell you what I am NOT. I'm not a geologist (even though I took three classes at AU) or a geographer by education or trade. So, as a member of the Geosciences Advisory Board (GAB), I'm somewhat of an outsider, but I have the advantage of viewing things from the outside looking in…and to an organization like the GAB, that can be a valuable asset.

So who am I? I'm Joe Howle, an Auburn Man through and through. My Auburn "street cred" runs deep and is

unquestionable. It starts with my grandfather, who graduated in the 1930s, extends to my father who graduated in the late 1950s, then to me who wrestled for AU and graduated in 1982, and to my oldest son who graduated in 2016 (and, hopefully, I will be able to add my youngest son to the list when he graduates in 2019). If you were counting, that's FOUR generations of Auburn graduates and Auburn Men!

But my story doesn't stop there. I met my wife, Fayne Love (Howle), in our freshman year, and we dated throughout our time at Auburn. We were married in 1983 shortly after we graduated. Her Auburn legacy is much the same as mine. Her grandfather attended AU in 1916-1919 (a letterman on the baseball team). Both of her parents graduated from AU in the 1950s. Fayne graduated from AU in 1982 (an Education major), and our oldest son graduated in 2016. Again, if you were counting, that's four generations of AU grads…**ON BOTH SIDES** of our family! It goes without saying (but I'll say it anyway), we bleed Orange and Blue!

I am a proud 1982 graduate of COSAM, with a BS degree in Marine Biology and Biological Sciences. I have been an environmental science professional for 34 years and worked in several industries. I have been involved with industry groups that helped shape environmental law. I have been involved in establishing a community relations strategy for a mining company. I have walked the halls of Congress in Washington, D.C., and the Statehouse in Montgomery as an advocate for the mining, construction, and road-building industries. Most recently, I represented the citizens of Alabama as a member of the Alabama Water Resources Commission (the last three as its Chairman) wrestling with water quantity issues in the state during a critical time in our history. Protecting and conserving our environment and natural resources has been my passion since I graduated from AU.

So you may be asking yourself, "Why is Joe on the Geosciences Advisory Board?" Well, for the last 26 years I have worked for the largest producer of construction aggregates in the country (Vulcan Materials Company). We are a mining company focused on providing quality crushed stone to various construction industries. We literally make little rocks out of big rocks! So there is the hook.

Vulcan has had a relationship with the Department of Geosciences at Auburn for some time. We have provided annual scholarship money to assist students in pursuit of their degrees. We've partnered with researchers in the Department and COSAM generally to find answers to questions that puzzled us. Referencing my biology roots, we have had a "symbiotic" relationship for quite a while!

As a result, I was asked to join the GAB as a charter member in 2013. What a daunting task for the group in the beginning and what a tremendous honor! We were certainly steering into some uncharted waters as we were the initial department in COSAM (and still the only one in COSAM) to embark on such an endeavor. There were no models in COSAM to use as a guide, but we were eager to move forward in service to a great institution. We spent a lot of time and expended a lot of energy developing a model that would be useful, ever growing, forward thinking, inclusive and most importantly, sustainable. We had and still have an overarching goal of helping students be the best that they can be. Realistically speaking, these students are the future of our businesses…they are the ones we will hire to continue the legacy. There it is again, the "symbiotic" relationship reference!

In the short time we have existed, I believe we have made a difference. However, we are nowhere close to where we want this experience to go. We have so much more to do! I believe we have created something that can be a model for others…and I hope that they also take that leap of faith as we did on the GAB in 2013.

The members of the GAB believe in these goals. So pardon me as I take some literary liberties at the expense of Dr. Petrie…"And because the GAB men and women believe in these things, I believe in the GAB and love it."

War Eagle!

Sheila Retires






On January 30th, 2017, we marked a milestone in the history of the Department of Geological Sciences — the retirement of Sheila Arington. Hired by Jack Carrington in the mid 1970's, Sheila devoted 42 years of service to our community. The event was well attended by Sheila's many co-workers, friends, family members, and alumni.

It came to our attention months earlier that Sheila and some old friends were planning a trip together and that she was concerned about the strain this would put on her finances. So we decided to set up a GoFundMe site to try to raise the anticipated cost of $2,400. This would also be a way to have alumni thank her by writing a message. Not surprisingly dozens of people responded with pledges and thank-you notes (see example). We were happy to present her with a check for over $3,400! Below is Sheila's account of her cruise.

Sheila, Thank you so much for taking care of me when I first arrived in Auburn in 1981...just moved away from home, knew no one, starting graduate school in the middle of the year. You were kind to me and supportive. You helped me solve problems from financial aid through housing. You always showed an interest in me and what I was doing and how I was getting along. Always had time for me and always made me feel welcome and "at home". Congratulations on your long career with us odd geologists and best wishes for your retirement. Mike Gibson

My Alaska Cruise

By Sheila Arington

My Alaskan cruise in June 2017 was definitely one of the highlights of my year. I would like to once again thank everyone that helped make this wonderful trip with my childhood girlfriends possible. The inside passage to Juneau, Skagway, Ketchikan and Victoria on the Ruby Princess was so much fun! Every day of the 7-day cruise was an adventure…scenic bus and boat tours, seeing gorgeous glaciers, eagles and whales, enjoying great food and entertainment…just an unforgettable trip!

Our trip began with a smooth flight out of Atlanta to Seattle. Despite the many attractions in Seattle, my friends and I made our way directly from the airport to the cruise terminal to board our ship, The Ruby Princess. After a day at sea, we docked at the Alaskan capital, Juneau. We boarded a bus and our group made the trek to Mendenhall Valley and spent our port time at Mendenhall Glacier. We learned this beautiful glacier is 12 miles long, a half-mile wide and from 300 to 1,800 feet deep. The Mendenhall Valley not only provided an awesome view of the glacier but stunning views of waterfalls and mountains as well. While in Juneau we also learned that Alaska's capital city is 3,248 square miles in size, which makes it the 3rd largest city in the world by size. After a few hours, our time in Juneau was up and we headed back to our ship.

Just west of Juneau, our ship sailed into the emerald green waters of Glacier Bay National Park. From the deck of our ship

Here we are in Juneau at the Mendenhall Glacier. Left to right:) Gaye Ann Washington, Becky Cain, Me (Sheila Arington), Patti Price, Mary Prather, Melanie Cadenhead.
(We all went to elementary school thru high school together in Auburn and went our separate ways with jobs and colleges later. It was a wonderful reuniting for this cruise).

we could see spectacular tidewater glaciers, eagles and seals. With all the natural beauty I could see around us, it is easy to see why Glacier Bay National Park is a UNESCO World Heritage Site. It was a beautiful day on the water.

Our next port of call was Skagway, the gateway to the gold fields. Several from our group decided to make friends with professional mushers and their amazing canine companions in an introduction to Alaska's state sport, dog sledding. Leaving the mushers behind, the rest of us boarded a comfortable tour bus, got on the Klondike Highway and made our way to the Klondike Summit. Also known as the White Pass Summit, at 3,292 ft above sea level, it was awesome to think that this is

the same route that thousands of gold stampeders used over a 100 years ago in their search for the mother lodes. The Klondike Highway runs parallel to the White Pass & Yukon Route Railroad. As we traveled to the summit we saw breathtaking views of waterfalls, glaciers and scenic valleys. Maybe it was all those years in Geology, but I thought I could still feel the spirit of the gold rush and the miners that came looking for riches.

The next morning, we landed in Alaska's "First City", Ketchikan. The native heritage was on display everywhere in the form of totem poles and beautiful native artwork. The girls and I took a short trek down to historic Creek Street. The Creek Street Boardwalk was a Red-Light District during the Gold Rush. Now, it's a quaint place to tour Dolly's House museum, view totem poles, and shop at locally owned stores and galleries, which we did. We boarded a Duck Boat and toured the city and surrounding shore by land and water. The tour was a load of fun and we saw picturesque views of the shorelines, boats, homes and lush green forests that lined the shores around Ketchikan. Back on board the Ruby Princess, we departed for foreign shores. By 7pm we were on the docks of Victoria Island in the city of Victoria, British Columbia, Canada.

With only a few hours available in Victoria, some of us chose to tour one of Victoria's most popular attractions, Butchart Gardens. The rest of us decided to take a double decker bus tour of the city. What a beautiful city, filled with well-preserved buildings displaying old world architecture and charming well-kept homes! Everywhere you looked there where flowers and greenery all lit by the soft glow of the street lamps as the sun had already set. Such a beautiful place and all too soon it was time to leave. Back on the ship, it was one last night of good food and drink with great friends. The next morning would be the 7th day and, as they say, "all good things must come to an end" and so we sailed back to Seattle and then headed home.

This trip with 6 childhood friends getting back together on a fun adventure and catching up the years was a blast. We traveled together, laughed together, had adventures together and best of all renewed the life-long bonds that 6 little girls made so many years ago. And so, my Alaskan cruise was now complete and certainly has been the highlight of my year. I will never forget my Geoscience family that helped make this unforgettable experience possible. I do miss you all and promise we will stay in touch. Thanks to all for getting this new chapter of my life started with such a memorable experience.

GeoClub *by John Hawkins*

The Geoclub continues on a successful trajectory in the Department. We focused on outreach programs again this year. We continued our involvement with Kay Stone at the Wehle Center and repeated the Junior Mad Scientists program here on campus. We did expand our outreach programs in 2017 to include assisting with Science Olympiad on both middle- and high-school levels, and we are already committed to do so again for 2018. We ran a rock-cutting demonstration booth at the COSAM STEM event held at the Beard Eaves Memorial Coliseum in Fall semester. During this event, we cut small geodes on a rock saw, and we gave away the cut geodes to students who visited our booth. All of these events were very successful, and I am extremely proud of the work that the Geoclub has done this past year.

In addition to service, we hosted several events for students to come together and get to know other students in the Department. This past year, we held cookouts at Chewacla State Park, and we had several rock-cutting parties where members got to bring rocks from home and cut them on a wet saw. We went on a backpacking trip in the mountains of northwest Georgia, and we enjoyed several group dinners at a local Mexican restaurant. We are now looking ahead to planning our events for 2018!

Colt Morton, Nick Hood, and Matthew Prausa on a trail in northwest Georgia.

Nick Hood operating the wet saw for the middle school students at the COSAM STEM event in Fall 2017.

Chelsea Comans, Grant Copeland, and Tristan Orndorff work in the fossil dig station at the Junior Mad Scientists event.

Geography Awareness Week *by Carmen Brysch*

The Department of Geosciences hosted activities November 12-18, 2017, for Geography Awareness Week. Established by a joint resolution of the U.S. Congress in 1987, Geography Awareness Week is designed to promote what geography is, why it is important, and why geography education is vital to preparing citizens to understand pressing social, political, and economic issues.

On day one, a video poster gallery and audio tour of "Geography and Civil Rights: Montgomery's Symbolic Landscape" detailed the events that took place during the Civil Rights movement in relation to various cities in Alabama. The Department also welcomed ESRI representative, Keith Cooke, who gave a presentation on the transition from ArcGIS Desktop to ArcGIS Pro. His presentation explained the new functions within ArcGIS Pro and how the software might be best used by students and professors alike. The Department also hosted activities on Cater Lawn for G.I.S. Day. Faculty and students engaged in various geographic experiences including AmericaView map puzzles, world map Twister, a scavenger hunt, and a drone demonstration. With over 200 students in attendance, the events were a big success and helped to promote the discipline and its importance.

Visitors are challenged to world map Twister!

Dr. Brysch (center) with Geography students.

Study Abroad — Scotland *by John Hawkins*

Students sitting right above the Siccar Point unconformity. From left to right (bottom row): Tasha Williams, Chelsea Comans, Sarah Baxter, Grant Copeland, Lily Beaman, Tristan Orndorff, Wes Sandlin, (top row) Edward DeMetz, Chandler Purtle, Dan Knight, John Hawkins, Dustin Bowers, Briar Cranston.

In the summer of 2017 we had the opportunity to run the Scotland Study Abroad program for the second time. We had 12 students join us for the trip, and 6 of these students participated in the pre-trip adventure to Ireland. The main goal of the Ireland trip was to visit the Giants Causeway. The volcanism responsible for the columnar jointed features that have made this location famous is the same event that caused features we would see later in the Inner Hebrides on the Isle of Skye. I also hoped that a trip to Northern Ireland would expose our students to some of the cultural issues that

have plagued that region in recent decades. In addition to visiting Giant's Causeway, we also visited the Ulster Natural History Museum, and visited several Irish pubs to guarantee that we would round out the cultural experience.

I decided that we would do some site seeing on our journey from Northern Ireland to Scotland by taking an indirect route. Our transition day started out by taking 3 Uber vehicles at 5 am to the ferry terminal in Belfast. We boarded a very large ferry for the 2-hour crossing of the Irish Sea. For many of the students, this was their first time on a sailing vessel. Several got to experience the joys of mild sea sickness. Upon arriving in Scotland we took several trains across the country side and eventually arrived in Edinburgh for the night. At this point we met up with the rest of the students in the study abroad course.

After everyone arrived, we jumped into the geology of Scotland the first day. We spent our time in Edinburgh visiting many of the outcrops around Arthur's Seat that were made famous by James Hutton, as well as taking a trip down to Siccar Point. In the evenings, students were required to work with the data and observations collected at these locations, and simple base maps were produced. The field map for Siccar Point usually proves difficult for the students. After these two exercises and one cultural day for the city, we picked up our rental vans and headed for the Highlands.

This year we stopped at Ben Nevis, Scotland's highest point, for some sightseeing and gondola rides to the top. Once we got off the mountain, we continued our journey to the Isle of Skye. We would spend several days on Skye conducting mapping projects and going on sightseeing day trips. While on Skye, the students stayed in a hostel located in Broadford. During this time, they were able to cook meals in a large group kitchen, and this not only fostered group bonding, it allowed for them to interact with other locals who were staying and working in the hostel. This community aspect of the trip is one that I will be looking to expand upon for the 2019 trip. Once we finished up on Skye, we were off to trek further north into the highlands.

The area around Ullapool became our base of operations for the next several days. We looked at thrust sheets made famous by Peach and Horn, and the students got to map 3-billion-year-old basement rocks that transition into a series of younger thrust sheets. This is one of our more challenging mapping projects, but the students work together and pool their experiences and knowledge to figure it out. It is important to note that most of these students have not had a structural geology class. So they are learning in the field by doing, and it is very challenging for some. After a few other exercises, we headed back south to Edinburgh to prepare for our journey home. This group should be commended because they were hit with some of the best examples of harsh Scottish weather. Even with the rainy weather and hungry midges, excellent attitudes prevailed.

This year we had two non-departmental students joining us for the program. It is always interesting to see how a non-geology major views what we do and how we do it. It generates an excellent system whereby our Geology and Geography majors get to become peer teachers and reinforce the basic concepts they have learned by teaching others. We were happy to have Tasha Williams with our group. Tasha joined us as a biology major, and she was an absolute joy to have on the trip. She was funded by a joint effort from our Advisory Board and COSAM Office of Diversity and Multicultural Affairs. We are very hopeful that she will soon join in the Geosciences family.

Here the group is learning about the various rock types and contacts found within and around Arthur's Seat in Edinburgh. It is an ancient volcanic center with excellent exposure.

Over Spring Break 2018, I will be leading a group of our students back to San Salvador, Bahamas, continuing in the tradition established by Ron Lewis (see last year's eGeotiger) so that our students can learn about carbonate depositional systems and sequence stratigraphy. Within the next few months, we will enter the planning stage for our study abroad program for 2019. We are looking into going back to Iceland and expanding on that program as well as continuing to teach our Scottish course.

Left: Grant, Chelsea, and Tasha working on their field maps of Siccar Point. Students are sitting in the café on the bottom floor of our Edinburgh hostel.

Geosciences 2017 Tailgate Season *by John Whitmore*

The Department of Geosciences and the geosciences honor society Sigma Gamma Epsilon (SGE) continued to build on our strong tradition of fun tailgating events for home football games this past year (see last page of this newsletter). Initially after the Department moved to Beard Eaves Coliseum, tailgates continued to be held outside of Petrie Hall; but for 2017, it became necessary to move closer to our new home. Fortunately, a place was found that ended up serving us well just outside the coliseum's west entrance.

The Geosciences tailgates provide a time for students, faculty, and alumni to socialize and just have a good time. To promote the tailgates, our SGE chapter invested heavily in improving the experience. A portable satellite dish and TV subscription were purchased so people who don't have tickets can watch the games. Two new tents were needed to accommodate the increasing attendance. For our biggest games, SGE provided BBQ and arranged for a friend of the department to provide homemade craft beer.

With the season over and seven tailgates hosted, SGE has concluded another successful Fall semester where faculty, students and alumni were able to meet and mingle. Grilling, games, and cheering on our favorite Tigers has helped us create better student-alumni relations and a stronger sense of community among us all. We hope for a great season in 2018 packed with even more fun, winning, and networking opportunities. War Eagle!

John Whitmore is the current President of our chapter of the SGE.

Spring Picnic and Annual Student Awards *by Mark Steltenpohl*

At our annual departmental picnic each Spring we hold an awards ceremony to honor our outstanding students. Thanks to gifts from our alums and other friends of the department, donations are used to support our students and our programs in many different ways. One way of recognizing students who distinguish themselves through their academics, research, service, and/or leadership is with scholarships or other types of awards, including plaques and cash. At the picnic we recognize students who received awards in various award categories within our department.

Thanks to the hard work of our departmental Awards Committee (Co-Chairs Phil Chaney and David King, and committee members Chandana Mitra and Chuck Savrda), we have established very well organized nomination, application and voting mechanisms to assure that deserving students are appropriately rewarded for their efforts. *Note that 2017 was the first year of awards funded by our 3-year AU award for teaching excellence (Departmental Award for Excellence in Education, or DAEE), explained in last year's eGeotiger.* We invite our alums to attend each of the Spring picnic and awards ceremonies.

Student Awards 2016-2017

***International Student Association Award*:** **Karena Gill** (Dr. King)

***COSAM Awards*:**

2016 COSAM Undergraduate Research Fellowships: **Caleb Eldridge**

2016 COSAM Dean's Medalist: **Abigail Smith**

2016 COSAM Dean's Outstanding Junior in Geosciences: **Jennifer Lewis**

Department of Geosciences Awards:

2016 Charles "Chuck" Savrda Outstanding Graduate Student Award: **Allen Clements**

David W. Icenogle Student Travel Grants: **Nicholas Barbre** and **Seth Greer**

David W. Icenogle Student Research Grants: **Michael Salisbury**

Spencer Waters and Dan Folse Memorial Awards:
Justin Brundin
Sara Speetjens

Geology Alumni Scholarships
Sara Baxter
Allison Wolf
Sophie Milich

Vulcan Scholarships
Sara Baxter
Allison Wolf
Tristan Orndorf

Departmental Award for Excellence in Education (DAEE):

Apprenticeship Awards: **Sarah Asher** (Geology)
Wesley Sandlin (Geology)
Ethan Burt (Geography)
Mentors: **Jennifer Lewis** (Geography)
Lyric Peete (Geography)
Anabelle Kline (Geology)
Lilian Beaman (Geology)
Kenny Moss (Geology)

Geosciences Advisory Board Awards:

GAB Outstanding student awardees

GEOLOGY
Outstanding Undergraduate: **Anabelle Kline**
Outstanding Graduate: **David Adrian**

GEOGRAPHY
Outstanding Undergraduate: **Abigail Smith** Outstanding Graduate: **Benjamin Swan**

GAB Chair's Outstanding Leadership award

GEOLOGY
Outstanding Undergraduate: **Sarah Asher**
Outstanding Graduate: **John Whitmore**

GEOGRAPHY
Outstanding Undergraduate: **Jennifer Lewis**
Outstanding Graduate: **Nicholas Barbre**

GAB Research awards: **David Adrian**
Leticia Pacetta De Marchi
Samantha Eckes
Rylleigh P. Harstad
Shifat Jahan Monami
Mustuque Munim

GAB Travel Grants: **Morgan Barkley**
Austin Bush
Leticia Pacetta De Marchi
Rylleigh Harstad
Nick Soltis

Faculty and Staff Awards

Special Recognition by SGE: **Dr. David King**

Special Recognition by SGE: **Dr. Stephanie Shepherd**

Spring Picnic and Annual Student Awards *(cont.)*


Ron Lewis and Caleb Eldridge


Abigail Smith


Chuck Savrda and Allen Clements


Sarah Asher


David Adrian


Anabelle Kline


Sara Speetjens and Ron Lewis


Leticia De Marchi, Nick Soltis, Rylleigh Harstad, & Austin Bush


Leticia De Marchi, Rylleigh Harstad, David Adrian & Shifat Monami


John Whitmore


David King


Stephanie Shepherd and Karena Gill

Faculty and Staff News: New Faculty Members

INTRODUCING
Adam A. Payne

I joined the Department of Geosciences in January of 2017 as a lecturer in Geography focusing on the teaching of the global geography class. I received my Ph.D. in 2015 from Oklahoma State University. Before coming to Auburn, I had been an Adjunct Professor at a variety of universities while I worked my way through graduate school. In the past, I taught Cultural Geography, Physical Geography, Introduction to Geography, and World Regional Geography. In addition to the Global Geology sections, the appointment here at Auburn has given me a chance to teach upper-level classes such as Economic Geography and Political Geography, which I have thoroughly enjoyed.

My geographical interests include cultural and historical geography and quantitative and qualitative methods. More specifically, I am interested in heritage tourism, gentrification, commodification, Route 66, the Lincoln Highway, and the geographical imagination. My research interests have been varied. I recently finished two projects. One examined gentrification in Deep Deuce, a historically African American neighborhood near downtown Oklahoma City, using concepts of third-wave gentrifiers and new-build gentrification. The other project examined place-based imagery in the form of postcards that promoted the Lincoln Highway, one of the first improved transcontinental highways in the United States. The project focused on understanding early place promotion and the contribution of the Lincoln Highway to the American collective imagination. For 2018, I am hoping to start a project examining the impact of literature on the geographical imagination.

Here is a bit of personal information in case you have read this far. I am originally from Oklahoma, where I lived my entire life. I grew up an Oklahoma State Cowboy fan, meaning I led a depressing fan life as we lost…a lot. Thus, it was nice moving to an SEC school with a history of winning. The move to Auburn had its challenges, as my wife and daughter stayed in Oklahoma for the first semester I was here. However, the family is now living in Auburn, and we love it. We have fully embraced the city and its team (between my wife and daughter, we own 20ish items of Auburnness). My wife, Angela, works at Auburn Early Education School as a 2nd grade teacher, and my daughter Natalie (9) attends Yarbrough Elementary School.

INTRODUCING
Stephanie Rogers

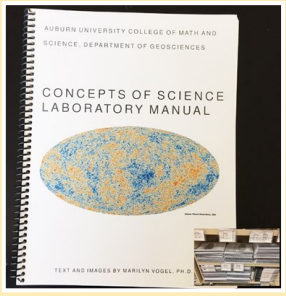
Hello everyone! I have officially just commenced my second year here in the Geosciences department at Auburn. Previous to this position, I was living in Switzerland for six years. During that time, I completed my PhD at the University of Fribourg, which focused on using geospatial methods for modelling glacial archaeological potential in the Alps. Working on an international project with experts from different academic backgrounds gave me a great appreciation for interdisciplinarity and collaboration. I then went on to work at the Universal Postal Union (a sector of the United Nations) where I assisted in the development of GIS databases and addressing platforms while participating in a project tracking and predicting international postal flows by analyzing big data. Near the end of my time in Switzerland, I worked as a Post Doc with both the Universities of Geneva and Bern developing applied GIS projects. Prior to Switzerland, I stuck close to home in Nova Scotia, Canada, where I first learned to love the geosciences and geospatial technologies.

Now I am settling back nicely into the North American lifestyle – yet to purchase a pick-up truck, but that could be next on the to-do list. Needless to say, my first year in Auburn flew by as an Instructor teaching Physical Geography and Geographic Information Systems (GIS) classes, all while trying to get my bearings in a new country. As of the beginning of 2018, I am a Lecturer in the Department and continuing to teach the previously mentioned classes as well as GIS Applications. In the coming year, I have plans to further develop my active-learning teaching skills and to launch a project for collecting high-resolution geospatial data using drones. My colleagues in the Department of Geosciences have welcomed me with open arms, and I am happy to now call Auburn home.

Editor's Note: *In support for her active-learning efforts, Stephanie recently won an award from our DAEE fund (the Departmental Award for Excellence in Education, which we announced in the last issue). Other faculty awardees for similar teaching initiatives this past year were Karen McNeal and Martin Medina for their development of the new course Climate Change and Society (GEOL/GEOG 4970/7930).*

INTRODUCING
Marilyn Vogel

Greetings. My name is Marilyn Vogel, and I joined the Department of Geosciences in 2017 as a lecturer and course coordinator for Concepts of Science (COS), a core science course that surveys the natural sciences. The college assigns administration of the course to our department because of the interdisciplinary nature of our field. Because most Auburn undergraduates are non-science majors, Concepts of Science is a popular offering that many students use to satisfy one of their science course and lab requirements. As a core science course, COS teaches basic science literacy and scientific methodology. To meet these objectives, I have recently redesigned the COS labs and written a new COS laboratory manual. The redesign has included updating the teaching laboratory space, developing scalable lab activities for non-science majors, ordering new equipment, and training Geoscience TAs. These activities benefit our Department in several ways. First, along with Dynamic Earth, COS is a pillar of undergraduate education at Auburn, meaning that Geosciences is responsible for a considerable portion of basic science instruction at the university: every year, we now teach science core to over 2500 undergraduate non-majors! Second, COS is unique among course offerings of this type in that it has a hands-on lab (very few science survey courses have associated lab components). As such, Auburn University now has unique teaching resources, including a versatile lab manual that serves this niche. Finally, COS employs a number of Geoscience graduate students who gain experience teaching a broad range of subjects beyond traditional geological sciences. As the coordinator for this course, I have been inspired by the breadth and depth of scientific knowledge possessed by our COS TAs. Witnessing how hard they've worked during this transitional period has convinced me that they will be a great credit to our department when they go out into the world.



I have a broad background in both science and non-scientific areas, which is helpful in getting the message of science out to non-scientists. I earned my Ph.D. in Earth Science from Stanford University, taking time off in 2002 to intern at National Public Radio in Washington, D.C. After graduate school, I served as a Research Associate in the NASA Astrobiology program, where I worked closely with biologists, chemists, cosmologists, and science outreach coordinators. I have taught Earth and environmental sciences at California State University, Stanislaus, as well as a number of other institutions in northern California. I also worked (and continue) as a free-lance writer and editor. You can read some of my reflections on language, abstraction, and the framing of environmental issues in the Fall 2017 issue of The Cold Mountain Review, an environmental-literary journal published by Appalachian State University.

Teaching Concepts of Science poses the continual riddle of how to get students and the public in general more interested in science. One way was illustrated by my teaching experiences last summer when I was very privileged to teach COS in the Auburn Abroad program in Rome, Italy. Adapting the hands-on lab component in this context drew me to learn more about the great Italian scientists Galileo Galilei, Luigi Galvani, Alessandro Volta, and Enrico Fermi, to name a few. We also read Primo Levy, an Italian chemist considered one of the foremost modern Italian writers, and we learned about CERN's Large Hadron Collider, whose Director-General is the Italian physicist, Fabiola Gianotti.

COS students with Galileo at St. Mary's Basilica of the Angels and Martyrs, where we saw an 18th-century gnomon that still lights up every day at noon to function as an accurate solar calendar (bright yellow spot on crab in floor tiles).

Right- Myself at Herculaneum as Vesuvius lurks.

We visited the Galileo Museum in Florence where we saw the world's largest collection of 16th–19th century scientific instruments, including Galileo's telescope. We saw several gnomons [*a type of solar calendar*] as part of our exploration of Earth-Sun relations and how scientists helped develop critical technology during the Enlightenment. Seeing Galileo's finger, eternally raised at the Galileo Museum, was quite a reminder about the importance of science and the challenges of getting it out there.

Continuing Faculty and Staff

Stefanie Brueckner

The first full year for me at Auburn has been a very busy and rewarding one. In Spring 2017, I received a $2,000 USD teaching grant that was used to buy plotting software (SigmaPlot) for students to use during their undergraduate and graduate studies. Furthermore, I have been extremely busy with teaching throughout the year ranging from freshman classes to graduate-level courses. During the Economic Geology course in Spring 2017, students took a field trip to the near-by orogenic gold prospect of Hog Mt., and the trip was well received among students. Also, the staff of Wellborn were extremely supportive during the field trip, and students got a chance to see an active drilling program as well as do some core logging of their own.

I also started to become more acquainted with the geology of the Appalachians and its economic potential. Discussions with Josh Poole and Mark Whitney resulted in a MS thesis project at the Hog Mt. gold prospect near Ashland, AL. Since August 2017, **Anabelle Kline** (B.S. 2017) has been working on the mineralized veins at Hog Mt to determine the mineral assemblage, sulfur isotopic signature, and genesis of the prospect. In relation to her thesis, Anabelle attended a highly acclaimed short course on hydrothermal ore deposits held in October in Ottawa, Canada. Besides Hog Mt., I have been visiting Imerys at Andersonville, Ga, and Haile gold mine, SC, to become more familiar with the economic potential of the southwestern Appalachians.

Carmen P. Brysch

This past year was my first full year as Undergraduate Program Officer in Geography. It has been fulfilling to advise students and be an advocate for our Geography majors. Part of this year's effort has gone into supporting our undergraduate majors through the development and teaching of the Professional Development sophomore-level course, in which Geosciences majors get a start on developing their resumes and professional portfolios. We have also worked hard this year to increase student interest and collaboration in geography more broadly through Department-sponsored events (see the Geography Awareness Week article). Other events to further the undergraduate Geography program include representing the Department at COSAM's STEM Minority High School Visitation days. I continue to teach the Global Geography course, which draws large numbers of undergraduates from all majors. I also teach Human Geography, a required course for social science education majors. We hope they leave the course with a better appreciation of the world in which we live and a passion for teaching the social studies.

Chris Burton

Being that I am a relatively new addition to the Auburn Geosciences faculty, my year was spent developing a research program in natural hazards and disasters. This meant taking on a number of graduate students (**Sumaiya Siddique**, **Khan Mortuza Bin Asad**, and **Robin King**), publishing research, and collaborating to submit a number of research proposals. I'm proud to say that the first proposal was funded by the NOAA Mississippi-Alabama Sea Grant Consortium. This will allow Dr.'s Ming-Kuo Lee, Marzen, Mitra, and myself to work with a graduate student to conduct research on the characteristics that influence resilience to climate-related hazards along the MS/AL Gulf Coast. This project is expected to start in March 2018.

Aside from scholarly activities on the Auburn Campus, I dedicate a portion of my time scientifically advising various interdisciplinary research projects. One such project, led by the United Nations Educational, Scientific and Cultural Organization (UNESCO), provided me with the year's highlight. Here, I was invited to South America to oversee and participate in the application of methods to study disaster risk in the border region of Chile and Peru. The trip also entailed training Disaster Risk Reduction officials from Chile, Peru, Ecuador, and Uruguay on methods to assess disaster risk and resilience within their communities.

A community resilience training workshop in Tacna, Peru .

My travels didn't stop with South America, however. I was also invited to the University of Iowa, the University of Alabama, to Italy twice, and to the Dominican Republic to present my work, mentor graduate students, and to draft papers with colleagues in the respective universities and countries. While in Italy, I worked with the Global Earthquake Model Foundation (GEM) to make the Auburn Geosciences Department a GEM Center of Excellence for the development of Integrated Earthquake Risk Analytics. It is within this context that GEM would provide funding for graduate students, particularly students who enter into the new PhD. Program. These talks are currently ongoing and in an advanced stage, so keep your fingers crossed!

Phil Chaney

The big news this year is that **Nick Barbre** and **Khalid Hossain** both finished grad school this summer! Nick is out in the "real world" and Khalid is in a Ph.D. program at Mississippi State University. **Jarrett Roland** wrapped up the Lee County 911 mapping project and entered the graduate program this summer. He is picking up where Nick left off by investigating irrigation in the Tennessee River Valley region of North Alabama. **Meredith Moore** decided to the escape the frozen north for a little while and moved to Auburn to begin graduate school this fall. She has a background in environmental science and conservation, and plans to study sustainable management of water resources for her thesis. She is loving the warmer weather conditions in Auburn this winter (compared to Minnesota and Wisconsin). Hope she still loves it next summer when the dog days of August get here!

Dexter Thompson (left) and Jarrett Roland

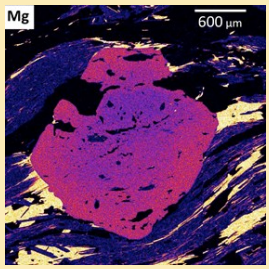
Bob Cook

The past year has been relatively uneventful. I visited Nevada twice examining high-grade gold occurrences, both times with former student **Will Neal.** I authored several book reviews and a longish paper on the occurrences of large gold nuggets and masses. A long-standing project -- a paper on gold-associated minerals -- continues to move forward at a snail's pace. Little was done with the Leadville property other than to suffer a serious tax increase. Betty and I are spending more and more time at Lake Martin. We occasionally talk about moving up there permanently, but we likely do not have the energy at this point. Consulting is slowing down, but I am still doing regular work for Oldcastle and several law firms. One case that is becoming very interesting is the talc-ovarian cancer issue. Another former student, **Bob Fousek**, and I are in the midst of several conservation easement projects. Our son Lee has relocated to this area and is working for a contractor to the City of Auburn. It is nice to have him nearby. The old eyes continue to deteriorate, but everything else seems to be working as would be expected at 72. I would love to see old alumni and if you are in town, please call and drop by.

Bill Hames

Greetings from the frontiers of mineralogy, petrology, and geochronology! Geosciences has made mighty strides in pushing back the forefronts of science in these disciplines in 2017. The new digs in the Coliseum opened up over 3000 sq. ft. of lab space for the Auburn University Electron Microprobe Analysis Lab (AU-EMPA) and the Auburn Noble Isotope Mass Analysis Lab (ANIMAL). We accepted specifications from the manufacturer on our JEOL8600 microprobe in February, and now see it in daily use in geoscience courses and research, and to support research in other departments of COSAM and across Auburn University (including physics, biology, and materials engineering in this past year). The electron microprobe is used to obtain a quantitative chemical analysis of an ~ 1 μm spot in a mineral or other solid material, and can be used to map elemental distribution, as in the accompanying image of Mg-distribution among Gar-Bio-Mus from a schist. ANIMAL is in its 14th year of operation, and continues to provide geochronologic data for internal and external researchers with federal government and industry-sponsored research. I'm presently working with several graduate student research projects, and with two students as their committee chair: **Kayla Griffin** is completing her thesis on the Oligiocene-Miocene extensional evolution of the Ruby Mountains metamorphic core complex (Nevada). **Jacob Thompson** joined us this past fall, and is studying the sedimentation history and sedimentary provenance of the Arkoma-Ouichita basin. The biggest news for me is that I became a grandfather in 2017, and our youngest child is finishing graduate school (and has a job!). Everything else pales in comparison. Please come and visit us!

Bill



John Hawkins

Last year seemed to come and go in a flash. In the first part of 2017, I was busy preparing for our Scotland abroad program. Since this was the second time we were running a similar program, we were able to learn from our earlier mistakes and improve on it. The amount of logistics involved with this course consumed the early part of 2017. This time I decided to take the students to

Northern Ireland to visit Giants Causeway as the study abroad extension. I have wanted to visit Giants Causeway since I was young, so that was rewarding for me. Once all of our students arrived in Scotland, the program went according to plan; however, you cannot plan the weather during a Scottish summer. In spite of challenging rainy weather conditions, we all had a great time.

In 2017, I had the privilege of teaching 1,381 students! I am very proud of that number. I enjoy what I do, and I hope to have even more students in the future. Most of those students were intro level students taking Dynamic Earth. I am thrilled that our program is growing in the way that it is. In addition to Dynamic Earth, I was also involved with the summer field course for 2017. I do enjoy teaching field camp, and I was lucky that my schedule allowed me to do so this past summer.

In addition to my teaching, I participated in several outreach programs in the area. Most of them were campus and/or teaching related, but one stood out to me more than the others; namely I was asked to give a Master Naturalist class for the County Extension Coordinator of Tallapoosa County this past spring. It was exciting to be able to share the regional geology with the 30+ adults who participated in the class. The morning was taught lecture style, with loads of samples from the area, but the afternoon was a guided field trip around the Smith fire tower at Lake Martin. This experience reconfirmed the importance of local outreach.

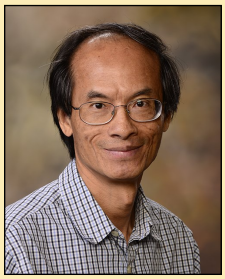
David King

During the past year, we continued research with funding from the following sources: the Belize Natural Energy and the Big Creek Group of companies for stratigraphic research in Belize, and NASA through the USGS Flagstaff for work on drill cores taken at Flynn Creek impact structure in Tennessee. New ACS-PRF funding started last year for a project with Haibo Zou on detrital zircons in Cretaceous strata in Arkansas.

I have three graduate students this year: **Leticia de Marchi** and **Matthew Adams**, who are working on the Flynn Creek impact structure; and **Neeraja Chinchalkar**, who is working on the Wetumpka impact structure. Ms. de Marchi is the recipient of the Barringer Award for Crater Research, which is a prestigious honor for her. My former student, **Erik Heider**, was honored by the GCAGS with the Grover Murray award for his paper on Wetumpka impact crater, Alabama. Three of my graduate students graduated last spring: **David Adrian**, **Jason Fisher,** and **Karena Gill**.

I am starting to work on a joint project with Aerospace Engineering professors that will include digital modeling of impact events such as Wetumpka and Flynn Creek. I have started a collaborative project that may lead to some new funding in the area of carbon sequestration in the deep subsurface. I enjoy hearing from alumni and former students, so keep in touch with our department … and me. Best wishes.

Ming-Kuo Lee



Along with Geology faculty members James Saunders and Ashraf Uddin, I continued our NSF-funded project investigating how bio-mineralization and geochemical sorption may work together to remove arsenic and other toxic metals from groundwater at an industrial site in Florida.

The NSF grant supported four graduate students: **Shahrzad Saffari**, **Eric Levitt**, **Ted Wilson**, and **Mahfujur Rahman** for their thesis research. Graduate student **Allen Clements** completed his Master's project on delineating the recharge zones and flow pathways of complex karst carbonate aquifers at Redstone Arsenal in northern Alabama. A new NSF big-data grant supports new graduate student **Collin Sutton** for his thesis research on developing a web-based geoscience data management system. With new funding from NOAA's Sea Grant Consortium, I will work with Geosciences faculty Chris Burton, Luke Marzen, and Chandana Mitra to assess community resilience to climate change hazards along the Mississippi and Alabama Gulf Coast. I also received a new grant from the USGS (through the Alabama Water Resources Research Center) to investigate the socio-environmental factors contributing to a children's leukemia cluster in Cleburne County, Alabama. With the efforts by Dr. Zeki Billor, ICP-MS and XRD-XRD research facilities continue to serve faculty, students, and our industry partners for their research and project needs. At the end of the year, I was elected as the next Chair to serve the Department of Geosciences, effective August 2018.

Ron Lewis

I continue teaching paleontology courses (the undergraduate course, now called Introduction to Paleobiology, and Micropaleontology, which replaced the taphonomy course). I now teach an online version of the historical geology course in addition to the service courses for our own majors (Senior Seminar) and graduate students (Geocommunication). Additionally, John Hawkins, Carmen Brysch, and I started a new service course in Fall 2017. It is a sophomore-level course named Professional Development and is designed to get our younger students focused on professional, long-term objectives. As Associate Chair for Geology, I administer the Department's Award for Excellence in Education (DAEE), among other things.

I may have led my last Spring Break trip to San Salvador to teach the field course on carbonate depositional systems (see last year's eGeotiger issue), but I am confident that John Hawkins will do a fine job in carrying on the tradition. My research on encrusting foraminifera in the Bahamas continued in 2017. **Eric Eubanks** and I struck off for a new island, Mayaguana, where no previous workers had studied the

foraminifera. Further south and larger than San Salvador, it is only sparsely populated, but we were able to complete our field work in one week in early June. Unlike in previous work on San Salvador and Cat Island, this time we took sediment and water samples from underneath the sea-floor cobbles in addition to recovering the cobbles in an effort to examine potential food items, which we suspect helps determine the foram's distribution patterns. On the way back to Auburn,

Eric and I attended the end of the Geology Conference at San Salvador, and I presented a poster on the research we did on the effects of Hurricane Joaquin, a study co-authored by AU students **Sara Speetjens** (B.S. 2017, now a graduate student in our department), **Sarah Asher** (B.S. 2017), and **Sally Sundbeck** (B.S. 2017). Eric has been working hard to gather data, as shown below with his DAEE undergraduate Apprentice **Travis Barefield.** We were able to present a poster at national GSA and plan another presentation in 2018.

Eric Eubanks (left) with DAEE Apprentice Travis Barefield.

Luke Marzen

This past year was the first year of the GIS Fellowship with the City of Auburn, with **Ethan Burt** filling the position. I also worked with faculty in the Department to implement a new Graduate Certificate in GIScience, which will be offered in 2018. In line with the Certificate, Donn Rodekohr, and I developed an online Intro to GIS Course and eventually plan to offer the entire GISc Certificate online as well. Finally, I have had funding the past several years through the US Forest Service that funded Ph.D. student **Tyler Jones**, who is doing an interdisciplinary project mapping urban tree canopies. We hope to finish up his dissertation work this Spring semester.

Karen McNeal

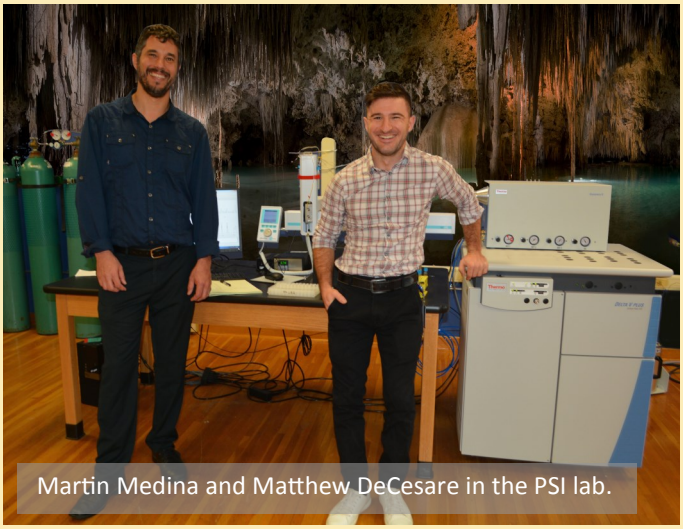
I am in my second year here at Auburn University, and it has been wonderful (and very busy!). My lab group is growing; I now have three graduate students (two Geology M.S. candidates, **Stephanie Courtney** and **Elijah Johnson**, and one Ph.D. student, **Nick Soltis**, who is currently enrolled in Science Education but will transfer to the new Earth System Science Ph.D. program in Fall 2018). I have another Ph.D. student finishing up at NC State. She plans to join the group at Auburn as a Post-Doctoral Scholar this summer. Last year, I successfully taught an online graduate-level course titled "Climate Change Literacy and Communication," and I am currently teaching a split undergraduate/graduate course with Dr. Medina titled "Climate Change and Society" in the new Mell active learning classroom building.

My group had several recent peer-reviewed papers accepted -- most notable was one published in the Journal of Research in Science Teaching, which examined undergraduate students' risk perceptions and knowledge of climate change. I also attended and presented invited talks/ workshops at the Earth Educator's Rendezvous, the Geological Society of America, and the American Geophysical Union. We have also built two augmented-reality sandboxes, which were deployed at recent COSAM outreach events and will be further examined during a graduate student research project aiming to learn how it can be used to support the development of student spatial thinking skills in geology. We have two funded research projects; one is an NSF project led by the University of Texas at Austin, which aims to offer field-geology experiences to underrepresented high school students and evaluate their impact. Our role in this project is to measure student affective and cognitive learning experiences as a result of participating in the program. The second project is a USGS-funded project, the Southeast Climate Science Center (SE CSC), led by North Carolina State University. I am the consortium PI for Auburn, and we just hosted an on-campus symposium bringing together over 35 faculty members and students from Auburn in the Food-Energy-Water and Global Change Research areas in order to learn about new opportunities the SE CSC brings to Auburn researchers and explore ways we can strengthen the community of researchers at Auburn.

Additionally, I have been quite busy submitting numerous research proposals to the National Science Foundation and other federal agencies. This year alone the submissions have totaled nearly $10M in pending funding. Fingers crossed that some of these proposals are funded! Lastly, I have been busy chairing a search committee for the next Discipline-Based Education Research (DBER) hire.

Martin Medina

During the past year, I set up a new laboratory facility: the Paleoclimatology and Stable Isotope laboratory (PSI Lab). The PSI laboratory, currently hosted in the coliseum, is equipped with a Thermo Gas Isotope Ratio Mass Spectrometer with a Gasbench II system for carbonate preparation, and a PICARRO Water Stable Isotope analyzer. The PSI lab is up and running and already supports various research projects led by Auburn University and international graduate students and faculty. The PSI lab currently supports projects concerning (1) tracing the origin of stream and groundwater in Alabama (project led by Dr. Ming-Kuo Lee), (2) assessment of the origin of the Bonanza Epithermal Vein Textures in Northern Nevada (Dr. James Saunders), (3) tracing the origin of plaster materials from ancient Maya temples (Dr. Michael Brennan), and (4) assessment of the influence of the hydrological cycle on karst speleogenesis (Ph.D. student Fernanda Lases, UNAM, Mexico). One of my students, M.S. candidate **Morgan Hill,** is currently reconstructing past climate variability in the Mexican Maya lowlands using isotope proxies from stalagmites. She has completed a paleoclimate record that extends 300,000 years into the past, representing one of the oldest hydrological records in North and Central America. In all, the PSI lab currently supports international research in México, Cuba and Belize.



Martin Medina and Matthew DeCesare in the PSI lab.

Chandana Mitra

The highlight of 2017 was getting tenured and becoming an Associate Professor. It was a relief to get that behind me. Now I can begin thinking of what I will do in the next five years and beyond, for which I am very excited. One of the ongoing projects is the publication, 'Asia: An Encyclopedia of Culture and Society' (3 volumes), which I am co-editing and co-authoring with a colleague from Kent State University. It is near completion, and I am looking forward to this coffee-table book and how fancy it will look.

My team of graduate students did a good bit of research this year, which I am very proud of. I had two new students join me in Fall 2017: **Al Emran** and **Megha Shrestha**, both from south Asia, are going to work on applications of remote sensing in understanding landforms and landcover change. Seth Greer graduated in December 2017. He did a robust study on cool roofs and their applicability to Auburn University buildings. **Austin Bush**, another student, is working on an exciting Master's thesis using unmanned aircraft systems (UAS) to assess rainwater-harvesting potential for urban multi-family housings. Below are a series of videos that Austin created for outreach purposes, funded by USGS through the AmericaView consortium: https://www.youtube.com/watch?v=RLSROJUDjfg&list= PLEHyYp32clJGUJOnex6hsvgoKuE_kRpK The videos show how not-so-expensive UAS can delineate potential rainwater harvesting capabilities for buildings in Auburn. Overall 2017 has been a very productive year for me and my students.

Jim Saunders

Well, I guess I am back to "just" being an alum as opposed to a Geology faculty member at AU. I retired from AU at the beginning of 2016, but I am still in the office a good bit, as I have been working to finish up our NSF grant and other research projects. Mostly I have been trying to get all the backlog of data from my prior research efforts written up and published. I am doing some consulting as well in the area of metals and metalloid (lead, cadmium, arsenic, selenium, etc.) geochemistry in groundwater, and also some work on how to implement our arsenic bioremediation strategy in actual field settings. AU has finally agreed to search for my tenure-track replacement to start in Fall of 2018, so I have been helping to find and encourage well-qualified candidates to apply for the job. We are beginning to see the retirement of the Baby Boomers in the Department, so perhaps we are in the process of starting to get younger as a faculty. But a lot will be expected of the new hires, as the "brave new world" of academia changes. Time will tell if that is an improvement or not.

I can't believe it has been >40 years since I was an AU student. What I remember the most from those days were those 7-8 day departmental field trips that we took every September in the early '70s. They don't happen so much anymore, although perhaps the field camp requirement serves the same purpose. That's my story and I am sticking to it….

War eagle,

Jim (B.S. Geology 1975)

Charles ("Chuck") Savrda

Hello again. I hope this issue of the eGeotiger finds you well. It has been a busy and reasonably productive year for me. Daniel Sedorko completed his stint here as a Visiting Scholar in June and is now wrapping up his dissertation back in Brazil. He made considerable progress during his visit, which included preparation and submission of several papers concerning the ichnology, paleoenvironments, and sequence stratigraphy of Siluro-Devonian strata of the Paraná Basin of southern Brazil.

MS student **Justin Brundin** is making good progress on his wood-implant studies in the Mobile Bay area. Despite losing all or parts of some of his implant cages to hurricanes and other storms, Justin has thus far obtained interesting results regarding factors that impact the character and degree of wood bioerosion, mainly by teredinid bivalves (shipworms). **Trey Foster**, a new M.S. student and perhaps the last one I will take on with impending retirement, joined my group this fall after completing his B.S. here at AU. Under the auspices of my new ACS-PRF grant, Trey is working on ichnologic and sedimentologic aspects of chalks and marls in the famous Moscow Landing K-T boundary section exposed along the Tombigbee River, western Alabama. Two outstanding undergraduate students — **Ed DeMetz** and **Wes Sandlin** — are assisting Trey and I on that project (photo below). My work on bedrock bioerosion in modern freshwater aquatic settings has slowed down a bit. However, I and undergraduate **Rebekah Rawlinson,** a geology/engineering double major, are planning some experiments designed to evaluate the impact of insect-larva burrows on the physical erodibility of bedrock substrates. Hopefully, we will have more to report on this and other projects in the next issue of eGeotiger.

Ed DeMetz (left), Wes Sandlin (center), and Trey Foster (right) meticulously excavating an extensive system of usually large *Thalassinoides* in the Lower Paleocene Clayton Formation exposed at Moscow Landing.

My family is mostly well. Most notably as it pertains to geosciences, Department alum (BS 2008) **Amanda Savrda** completed her Master's degree in Science Education here in December and is serving this semester as a part-time lecturer for Dynamic Earth while she discerns her next steps. Her office is just down the hall from mine; it is really cool to see her most days and to discuss introductory geology and teaching strategies. She is learning that it is, unfortunately, hard to teach this old dog "new tricks."

Stephanie Shepherd

This has been an exciting year for me and my students. We started the year with a very cold excursion to my Buffalo National River research site in Arkansas. Conducting field work with snow flurries and temperatures in the teens is not for the faint of heart. I was awarded an Auburn University IGP grant to investigate utilizing ground penetrating radar (GPR) to study floodplain function after restoration. The grant supported summer salaries for two of my graduate students – **Sam Eckes** and **Mike Salisbury**. Also over the summer, my first Geography graduate student, **Benjamin Swan**, successfully defended his thesis and was hired by Oak Ridge National Laboratory. As usual, I spent a significant amount of time tagging along with my students in the field though out the year. We finished up the year with the arrival of Isobel in early December. Like her brother, she tagged along on several field adventures in utero.

Mike Salisbury and Sam Eckes getting a little help from a back hoe to dig a trench for a GPR buried objects experiment at the EV Smith Experimental Farm.

Dr. Shepherd enjoying the warm fall temperatures for field work at EV Smith in October.

Mark Steltenpohl

I am happy to announce that I have begun looking forward to my retirement in 2020. Currently, I am prioritizing my research and teaching aims and my students' work in order to bring closure to projects and to gauge what I can leave for dabbling in during this next phase of my life. I currently have two M.S. students, and these will likely be my last ones. **John Whitmore** (B.S. Geology 2016) was an RA for me last year funded by my USGS-EDMAP grant to map the geology of the Milltown, AL 1:24K Quadrangle. As this was written, he was busily dating gold-bearing veins at the Hog Mountain gold mine using Dr. Hames' isotope lab. John is on track to graduate this spring, and he is looking for employment in the mining industry. My second MS student, **Ben Weinmann** (William & Mary 2017), currently is an RA funded by an EDMAP grant to map the Alexander City Quadrangle. Next year Ben will date zircons from select samples to help place needed temporal constraints on the tectonic features found in the region within and around his map area.

This term I will be closing out my National Park Service grant, which involves workers at the Alabama Geological Survey; we are mapping the geology of the Little River Canyon National Preserve along Lookout Mountain in northeast Alabama. This three-year grant has funded a host of our undergraduate students, including **Bobby Sharp**, **Kenny Moss**, **David Charlton**, **Ed Demetz**, **Ben Smith**, and **Wes Sandlin**, and my graduate students **John Whitmore** and **Ben Weinmann**. We have been able to map some neat geology in a spectacular area. I am very appreciative for everyone's help, especially my postdoc Dr. Chong Ma and departmental alumna Ms. **Lainey LeBlanc** (M.S. Geology 2016) who aided in supervising the mapping expeditions. **Herb Martin** (Geology 1979) provided gratis lodging for us in his beautiful cabin on Lookout Mountain, located smack-dab between Lick Skillet and Dogtown Alabama. I am scheduled for another few weeks of fieldwork in Norway this coming summer to help me wrap up some research in the Scandinavian Caledonides. Since my impending retirement will not allow me to recruit any new grad students this spring, which in itself is a bittersweet milestone for me, I am thankful that John Hawkins has graciously agreed to help me out this summer with the Norway field work.

On the home front, all is well! Laura remains busy enjoying teaching physics and chemistry at Auburn High School. She's enjoying her spaces in the new AHS building, which lies practically in our backyard. Our daughter Natalie (25) is an instructor/manager at Premier Spirit Academy here in Auburn. Her daughter Adelynn (6) is in 1st grade at the Auburn Early Ed Center. In her spare-time, Adelynn enjoys playing (especially Mommy-Baby, where I'm always the baby and she bosses me around, helping her grandparents walk their dogs in the woods behind their house, and practicing for cheer competitions. Our son **Greg** (24 and a 2017 alum of our department) works for NOVA, an environmental geotechnical firm, in Raleigh, NC; his girlfriend, Amanda Thomas, is on the far right of the recent Thanksgiving photo (below, right).

Ashraf Uddin

The Petroleum Geology course (GEOL 5500/6500) was taught for the third year in Fall 2017 with the help of industry experts (Joe Beck and Neville Crowson from Energen, and Erik Kvale from Devon Energy) who taught their specialized topics. The NSF-funded project with Drs. Ming-Kuo Lee and James Saunders continued with success, enabling **Eric Levitt** (M.S. Geology 2017) to complete his thesis research. **Ted Wilson** continued to work on the project as well.

Zachary Calhoun, for his Masters' thesis, started working on hydrocarbon characterization and depositional environments of the upper Wolfcamp Formation in the Midland basin, TX. He is also trying to recognize hybrid event beds in these gravity-flow lithofacies. Energen Resources is funding his thesis research.

Shifat Monami joined us to work on Appalachian clastic wedges in Pennsylvania. Her work will be important because it will compare the Pottsville Formation from a northern Appalachian basin with units in the southern Appalachian basin (Black Warrior basin). Also we recruited **Mahfuj Rahman**, who will be working on our NSF-funded project on bioremediation in Macon County.

Our efforts with the Imperial Barrel Award competition continued in 2017. Here is the team: from left to right: John Whitmore, Sara Gilley, Zachary Calhoun, John Johnson, Ted Wilson, and Ashraf Uddin.

Our alumni are doing well. **Mustuque Munim** (M.S. Geology 2017) started a Ph.D. program at Florida State University in August 2017. Two former AU graduate students published papers on their thesis research. **Ziaul Haque** (M.S. Geology 2016) published on provenance and hinterland tectonics of the Pottsville conglomerates in the Cahaba basin:

> *Haque, Z., and Uddin, A., 2017, Carboniferous history of the Appalachian-Cahaba system: Conglomerate clasts from the Upper Pottsville Formation, Cahaba synclinorium, Alabama: Journal of Geology, v. 125, p. 45-63.*

Shakura Jahan (M.S. Geology 2016) published on petroleum source-rock evaluation in the Bengal basin:

> *Jahan, S., Uddin, A., Pashin, J.C. and Savrda, C.E., 2017, Petroleum source-rock potential of Upper Eocene Kopili Shale, Bengal Basin, Bangladesh: International Journal of Coal Geology, v. 172, p. 71-79.*

Lorraine Wolf

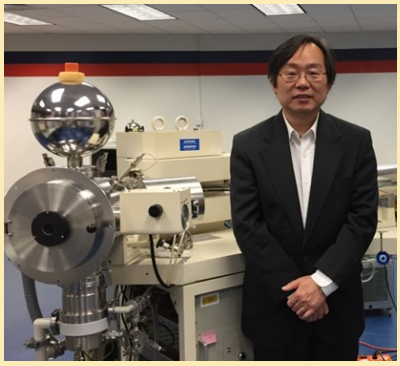
It's hard to believe that another year has passed! The former geophysics home in the Petrie "East Wing" has successfully transitioned to the Coliseum "Outer Ring." The Coliseum loosely resembles the Pentagon, with the rough edges smoothed out and a clear lack of spit and polish. Unlike the Pentagon, we do not yet require higher security clearance to navigate the inner circles, only our computer logins. At any rate, we are now fully functional in the space and going strong. **Jian Chen** completed his M.S. degree this past year. His thesis focused on an unusual seismic swarm in Greene County, Alabama. He used a variety of signal processing and analysis techniques to analyze these earthquakes. Although they look like induced quakes from a repeating source, he has found no clear "smoking gun" to explain the events. Second-year graduate student **John Johnson** finished his data collection of a seismic reflection profile at a paleoliquefaction site in the New Madrid seismic zone. He is currently processing the lines and is hoping to finish up this summer or sooner. Joining our group in the fall was **Rahul Bhattacharya** from Bangladesh. He is beginning his research, which will carry forward a gravity and magnetic modeling project started by former geophysics student, **James Taylor** (M.S. Geology 2013). We are also pleased to add **Caleb Eldridge** to our group this semester. Caleb was an undergraduate here at Auburn. He has been processing recently acquired LiDAR data from the New Madrid seismic zone as an undergraduate, and will likely continue this or a related effort for his thesis project.

To serve our students better, Stephanie Shepherd and I applied for and received an NSF grant to purchase a Ground Penetrating Radar System. We are very pleased to have this added capability in our equipment pool.

In my other university position, I continue as the Director of Auburn University's Office of Undergraduate Research (OUR). I am proud to say that we awarded 72 research fellowships this past year, funded 4 faculty grants for adding research components into the curriculum, and hosted over 340 student presentations in last year's "This is Research: Student Symposium." For more information about undergraduate research at Auburn, please visit the OUR website at our.auburn.edu.

Editor's Note: *Dr. Wolf was awarded the Lawrence C. Wit Endowed Professorship in 2017 in recognition for her many and varied contributions to research and teaching.*

Haibo Zou



In 2017, I spent a big chunk of my time running the Radiogenic Isotope Lab at Auburn University. The thermal ionization mass spectrometer (TIMS) facility has produced high-precision Sr isotope data for five research projects spanning rock types from limestone, granite, basalt, andesite, to rhyolite. I hosted two Visiting Scholars: Associate Professor Yongwei Zhao from the Institute of Geology, China Earthquake Administration, and Dr. Hong Yu from the Institute of Geology and Geophysics, Chinese Academy of Science.

Along with Professor David King, I have begun studying the provenance of Cretaceous sandstones of the Arkansas coastal plain using zircon geochronology and petrology. This project is funded by American Chemical Society - Petroleum Research Fund.

In 2017, I was promoted to Full Professor. I gave one invited talk at Virginia Tech, ten invited talks at Peking University, one oral presentation at the annual meeting of the Geological Society of America in Seattle, and one oral presentation at the fall meeting of the American Geophysical Union at New Orleans. In the summer of 2017, I did field work at Mount Changbai, a famous volcano at the border of China and North Korea that produced one of the two largest explosive eruptions on Earth over the past 2000 years.

Graduate students have made major progress with their theses. **Jennifer Cartwright** is working on the pre-eruption conditions of the Bandelier Tuff from New Mexico. She has obtained Sr isotopic compositions and volatile contents of melt inclusions preserved in quartz crystals from Bandelier Tuff. **Sara Speetjens** is studying magma chamber processes at Ashi Volcano in the northwest Tibetan Plateau using Sr isotopes in plagioclase crystals. Both students are expected to graduate in Spring 2018.

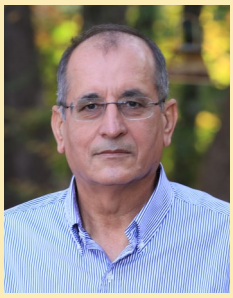
INTRODUCING Matthew DeCesare

In October of 2017, I joined the Department of Geosciences as the lab manager of the Paleoclimatology and Stable Isotope Laboratory, currently in the Beard-Eaves Coliseum. Before joining Auburn University, I attended Louisiana State University as a Ph.D. student where I studied the retreat of the West Antarctic Ice Sheet during the Pleistocene and Holocene using stable and radiocarbon isotopes in foraminifera. I earned my Master's degree at the City University of New York, Queens College, researching Antarctic paleoceanography using stable isotope ratios of foraminifera from the middle and late Miocene.

Currently, I am using a high-precision gas isotope ratio mass spectrometer to generate oxygen and carbon isotope data using calcite samples drilled from stalagmites recovered from caves on the Yucatan Peninsula. In addition, I am analyzing rain-water samples to obtain deuterium and oxygen isotope ratios using a high-precision cavity ring-down spectrometer. These data will be used by Dr. Martin Medina and his students to help understand current and past climate changes and the interaction between climate and civilization and, in particular, how climate affected ancient Mesoamerican civilizations. Also I am excited to learn about and perform uranium-thorium dating at MIT to establish the age range of the stalagmites collected by Dr. Medina. Teaching and training undergraduate and graduate students on laboratory procedures, processing samples, and using the instruments is another task I perform in the lab – one which I find very rewarding. In the coming months, we would like to start to run samples from other Auburn University faculty and students as well as from outside the University. Our plans also include investing in a gas chromatograph to analyze the stable isotope ratios of organic samples collected in cave systems.

When not in the lab, I enjoy exploring the beautiful state of Alabama with my backpack, bicycle, running shoes, and rock climbing equipment.

Zeki Billor



I have intensively worked on learning to use the Inductively Coupled Plasma Mass Spectrometry (ICP-MS) and running samples. ICP-MS elemental analysis technology helps researchers to analyze almost the whole periodic table of elements at the milligram to nanogram level with greater speed, precision, and sensitivity. This is achieved by ionizing the sample and sending ions to quadrupole mass spectrometry to separate the ions based on their masses.

During this period, I worked with our students including **Shahrzad Saffari, Brian Miller**, **Eric Levitt**, and **Ted Wilson** on the determination of trace metals from ground and stream water with ICP-MS. Recently ICP-MS Mashunter software has been upgraded to analyze nanoparticles. With this new upgrade, we will be able to operate the ICP-MS to analyze compositional variations and size distributions of naturally formed and engineered nanoparticles. I believe this new upgrade will create new exciting research projects and collaborations with other researchers.

Our XRD and XRF labs have benefited not only our own students but also graduate students from other departments as well, including Chemical Engineering, Biosystem Engineering, Physics and Chemistry.

I am currently collaborating with Turkish researchers on two major research projects: the geochronology of plutons in northwest Anatolia with Dr. Ozdamar, and spatial and temporal relationships between ophiolites and metamorphic soles along the Taurid Mountains with Dr. Parlak. I am also working with Dr. Lee on environmental geology and trace metal contamination in particular. I have already contacted several researchers in Turkish universities to establish a new interdisciplinary research project, Holocene climatic change and human impact in central Anatolia.

Anthony (Tony) Hall

This year I continued developing and modifying the Dynamic Earth distance learning course, GEOL 1103. It has grown from one to two sections each semester and is running a bit smoother than it did originally. As for the rest of the departmental duties, my job has new twists and turns with every week. I spent the beginning of the year on the committee to construct a new building for the Geosciences Department, but that project had been put on hold temporarily.

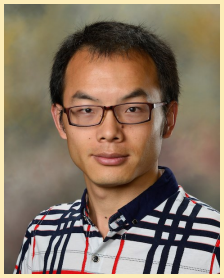
In March, I had the opportunity to travel to Swaziland, Africa to see a friend, a missionary, get married. While I was there, I got to see some of the children they support.

I also got to go on a safari. And Yes! I took many photos, such as the elephant below. He was not happy that we were following him so closely. We did make it safely away before we began following him again. It was a moment that got your blood pumping for sure!

During the Summer semester, I was able to assist John Hawkins with his Scotland Study Abroad course. The trip was great, but it rained a lot, and the midges were horrendous. The students seemed to enjoy the trip, and I enjoyed driving on the left side of the road as well as seeing many interesting people and structures.

I continued to spend my time after hours with the Athletics Department as a sports photographer. War Eagle!!

Chong Ma



In 2017, I had the pleasure of developing and teaching Structural Geology in the Spring and Field Camp in the summer for the second time. It was easier and less time-consuming in preparation compared to my teaching in the previous year. Students gained a lot — not only knowledge from the lectures and skills from the field work, but also abilities of visualization of geologic features in 4D (3D plus time) and critical thinking. I also participated in teaching a graduate course, Tectonics, in the fall. The academic environment in my classrooms and field trips are appealing to students who have shown great enthusiasm. (they may dance in the field right after completion of a successful project, see the picture below).

Regarding research, I attended the annual meeting of the Geological Society of America in September and presented research about structural and thermochronologic constrains on the deeply subducted Seve Nappe Complex in Sweden in collaboration with Dr. Steltenpohl and other colleagues from the University of Alaska at Fairbanks and Uppsala University. I also went to the American Geophysical Union annual meeting in December and presented the results of research on the exhumation of the metamorphic core of the southernmost Appalachians in collaboration with Dr. Hames and other colleagues from the University of Florida. Additionally, I have been working on a research proposal with Drs. Steltenpohl and Hames to be submitted to the Tectonics program of the National Science Foundation. Overall, my research is moving forward along with progress in my teaching. I am looking forward to 2018 and aim to further strengthen my abilities in teaching and research.

Alumni News

Note to all alumni: Please let us hear from you so we can include you in the next eGeotiger!

Rue Anne Beyer (M.S. Geology 2012). It's been another adventure-filled year out here in Nevada. My husband, Mike, and I have been keeping busy at work here. Mike left the exploration department and returned to underground production geology, working at the same underground mine where I used to work. I am still working on the Carlin Surface and received a promotion to Project Geologist in July. My primary project area is Newmont's North Area of the Carlin Trend and more specifically, the Genesis pit. The focus of work has been on running drill programs, QAQC, reconciliation, waste rock, a little ore control here and there, and training newer geos in ore control. Mike and I also decided to finally plant some roots in Elko and built our first home. I returned to Ouray, CO a couple of times during the winter and gained more backcountry ice climbing experience.

The main adventure of the year for me was a month-long expedition in Denali National Park in Alaska. I went with RMI Expeditions again on a private trip with five climbers and three guides. On the very first day, we moved from base camp to 7800 camp, carrying all of our weight plus an assortment of group gear that totaled about 100 lbs each between a pack and a sled. My sled kept pulling to the left, which made me have to work that much harder to take each step. Thankfully from that point on, the loads were relatively lighter since we made our ascent up the mountain in stages with cache loads. Once we'd reached 11k camp, we got our first bit of inclement weather, and I woke up in the early morning feeling like I was suffocating. It turned out, the entire camp was getting buried by fresh snowfall, so we had to dig ourselves out. By day 8 we had made it to 14k camp, which was the best holding spot for a summit bid since 17k camp is way too exposed on the high ridgeline to stay long term. At 14k, I got to experience an earthquake and, a few hours later, stand on the Edge of the World (a granite peak that plummets 7,000' down to the glacier floor). We did a cache carry up to 17k camp and got to witness a couple of F-22's buzz by at eye level.

Once we were back at 14k camp, we thought we'd have a rest day and then make our summit bid, but the weather had other plans. Instead we ended up stuck at 14k camp for 15 days and a second RMI team managed to move in next to our camp. By day 23, one of my teammates needed to descend for work so it was the last chance to bail or else wait the weather out to summit. Our food rations were running low and so ordinarily the whole team would go down by day 23, but since it was a private trip, we managed to stay longer by acquiring food from other teams who were bailing on their climb. I also needed to get back to work so I decided to forfeit waiting on the weather for a summit attempt. My teammate, one of our guides, and a guy from the second RMI team went with me to make the descent.

It was supposed to be an eight-hour walk from 14k to base camp, but it turned into three days. The weather turned ugly on us very quickly, and the other climber who came down with us became a bit of a liability. With the help of two more RMI teams staged at 11k and 7800 camps, we didn't starve when our food rations ran out, and they helped us make it back to base camp safely. We had one final scare when the other RMI climber took an overhead swinger fall into a crevasse, and my teammate and I had to hold an anchor stance for at least 30 minutes before we brute-hauled him out to safety. After 26 days we made it off the mountain. I've always heard that the best climbers have the worst memories. I was so relieved to be on the plane back to Talkeetna, but as soon as it took off, I already felt amnesia setting in, and I know I'll go back to that mountain and try again. It was a true adventure!

James Edward Clark, Jr. (B.S. Geology 1972; M.S. Geophysical Sciences—Earth and Atmospheric Sciences, Georgia Tech). This has been another adventurous year for Kathy and myself with field geology trips in April to Ventura California for the Channel Islands and to Sequoia and Yosemite National Parks. In October, we traveled east to Boston and

Bangor, Maine, to see Acadia National Park, a granite basement rock with pre-glacier ridges transformed into mountains and beautiful lakes and surrounded by the Atlantic Ocean.

In November, we traveled with AU Alumni for "The Legends of the Nile" tour and did our own geology-of-Egypt review. From the Eocene limestone blocks of the Giza Great Pyramids outside Cairo and up the Nile to Aswan Dam, where the basement granite rock is exposed at the Nile River blocking navigation due to the cataracts. While in Luxor at The Temple of Karnak, we found salt corrosion in the permeable Nubian sandstone building stones, causing foundation problems for the historical structure. In April 2018, we will be with Georgia Tech Alumni group aboard the National Geographic Quest for the Columbia and Snake Rivers Expedition following the Lewis and Clark Expedition path. Because of Thomas Jefferson's instructions to Lewis, the USGS mission is the successor to the Lewis and Clark survey. As we say good-bye to 2017, we are looking to the future geology trips in 2018!

Joseph Crawford (M.S. Geology 1981). Congratulations to the Department for being about to launch its Ph.D. program! My gracious and continuing mentor, Dr. Robert Cook (with Dr. Jack Carrington), lured me into the first class of M.S. candidates in 1979. My son actually leafed through my thesis a while back and said, "Dad, you really didn't write this, did you?" Truth be told, it was as tough to do as it should have been, and the experience was the solid foundation for an entire career in geology. Through the years, I have noted that Auburn's geoscience program has thrived during the rough times when more than a few university geoscience programs cut staff, funding, or disappeared altogether. This is a credit to the Department faculty and its visionary leaders. As an alumnus, I'm proud to be associated with AU Geosciences: it has been around long enough to have a true academic legacy with a capital "L".

After circumnavigating the continent with mining companies and projects, I have settled in Florida with my wife, Mikki. This past June, we traveled to Mikki's homeland of Romania where we visited old friends and relatives, and saw the incredible Carpathian Mountains as well as the cultural cities of Brasov and Bucharest. Roman influence is mostly expressed in the language, which is close to classical Latin, but borrows from modern French. The *Museul Geologic* in Bucharest was well worth the time for a visit—one huge room is devoted to fluorescent minerals, and the section on karst systems has truly elegant presentations.

My career in geology has grown around the exploration for and mining of evaporite-hosted minerals, construction aggregates, and performance carbonates. I spent 19 years in elemental sulfur and potash (sylvite) and about 16 years in hard-rock mining (surface and underground). During the later career phase, I was manager of mining and geology for USG, Vulcan Materials, and Imerys North American Carbonates. Needs often dictate what is done during a career, so I absorbed mining engineering functions at times by building mine plans and working on surface and underground geotechnical projects (underground pillar design, pits slope stability, ground control). I was also heavily involved with subsidence measurement and remediation projects in several states, all related to legacy mining issues.

Near the royal palace in the Carpathian Mountains, Romania.

During my tenure with one company, I adapted the use of nuclear borehole logs to estimating in-situ stone qualities. This was based on an empirical approach and seemed to work well for Middle Ordovician and Silurian carbonates in the midwestern states. Interestingly enough, petrophysical variations were often seen that were not observable in cores…very helpful in mine planning and resource estimates.

Opportunity knocked a few times for academic departures. During the Frasch sulfur mining years with Freeport-McMoRan, I collaborated with Dr. Ming-Kuo Lee and then M.S. student Daphne Williams on heat transport in sulfur "solution" mining systems, and with Jack Sharp and Rich Kyle (Univ. of Texas at Austin) on the hydrogeology and economic geology of West Texas. During employment with Vulcan Materials, I collaborated with Paul E. Potter (University of Cincinnati) on the character of the Middle Ordovician Maquoketa Shale in Illinois during the first petroleum shale boom a few years ago.

In closing, I wish all well and best of luck to Geoscience's students as they embark on their careers: never stop learning, be open to new ideas, and always verify your boundary conditions!

Richard (Rick) Espositio (B.S. 1984; M.S. 1987). My graduate work was under the direction of Dr. King, studying the stratigraphy of the Jurassic Smackover Formation in South Alabama. After leaving Auburn in 1987 with my M.S. degree, I worked at the Alabama Department of Environmental Management (ADEM) as a geologist in the Hydrogeology Group. Around that time, the oil and gas industry was at an all-time low with hiring. Working at ADEM was a tremendous opportunity to learn environmental regulations related to geology and be a part of environmental management. After 4 years with ADEM, I accepted a job offer from Southern Company Services, in Birmingham, in the Earth Sciences and Environmental Engineering Group. Lots of interesting work in that group with permitting and compliance issues as well as with groundwater & soil remediation, foundations analysis, and water supply.

I am still living here in Birmingham and working at Southern Company, but for the past 10 years I have been working in the Research & Development Group and as the Program Manager of Geosciences. Being in the research area of the company has been very rewarding and was a great fit for me. It allowed me to stay engaged in geology but to be involved in the development of technologies in the electrical utility sector that may be needed for environmental compliance in the future. Southern Company is one of the few electrical utilities that maintains a robust R&D program, and it has been an amazing opportunity to be a part of that effort. It has allowed me to manage many very interesting R&D projects and to travel to very interesting international destinations. My favorite projects have been the deep geologic resource assessment drilling projects for the purposes of geothermal resource evaluations, carbon-dioxide geologic storage, and deep well injection of wastewater. I suspect over the last 10 years I have been involved in around 11 deep well drilling projects around the Southeast into various geological formations. There is nothing like being around those big rigs at night under all the lights. Especially in the fall and spring. With all this said, I would highly recommend both ADEM and Southern Company as good-quality jobs opportunities if you are a student or simply looking to make a job or career change.

I am sheepish to admit, in this forum, that I went back to school and got a Ph.D. in Engineering from UAB in the Department of Mechanical Engineering. While still full time at Southern, I am a full Research Professor at UAB and serve as the committee chair for several Interdisciplinary Engineering Ph.D. students. To balance out the good karma, I have also served on several Geology M.S. committees at universities such as at the University of South Carolina, Oklahoma State University, University of Alabama, Mississippi State University, and even Auburn University. I developed and now teach two separate classes at Samford University in the Environmental Management Master's program, where I serve as Adjunct Professor. These classes include Environmental Geology and a class called Energy & the Environment. I am also currently the President of the Alabama Geological Society and also did my civic duties and served on the Professional Geology Licensing Board for several years.

I wish I could get back to Auburn more often, but like everyone I stay very busy with all that I have going on. I enjoy serving on the Geosciences Advisory Board, which has been great for networking and staying in touch with old friends, but I am guilty of not having enough time to participate as often as I would like to. If anyone wants to reach out to me, my email address is raesposi@southernco.com. I guess I am getting old, as I would now rather watch the games on TV then deal with the traffic and parking. None the less, Cheers and War Eagle!!

Mike Gibson (M.S. Geology 1983). Hi everyone! I am beginning my 30th year at the University of Tennessee at Martin, making me the "senior, senior" in the program. I have now taught every class in our curriculum, even though I am primarily a paleontologist and sedimentologist. Yes, I have now taught mineralogy, structural geology, ig/met, geophysics, and more! Research on middle Paleozoic invertebrates continues, as does my Cretaceous work with the Coon Creek Formation, plant fossils from the Claiborne Formation, and vertebrate fossils of West Tennessee. I am in my eleventh year teaching Marine Geology at the Dauphin Island Sea Lab, so I get to return to Alabama yearly. My wife, Edie, whom I met and married in Auburn, is in her 29th year in the Chancellor's Office at UT Martin as the Executive Assistant to the Chancellor (she is working with her 8th chancellor). Our daughter, Kesley, finished her M.S. degree in Environmental Science from Troy University two years ago and is now a Ph.D. candidate at the Center for Sportfish Science & Conservation in the Harte Research Institute for Gulf of Mexico Studies at Texas A&M, Corpus Christi, where she studies big game fish and sharks. She was featured on a recent episode of Shark Week ("Lost Cage Episode") if you get a chance to watch. My son, Brandt, just finished his M.S. in geobiology from Vanderbilt University and has begun their Ph.D. program. He spends his summer between the San Salvador, Bahamas, field station doing field taphonomy experiments and Namibia, Africa, doing field work on Ediacaran fossils.

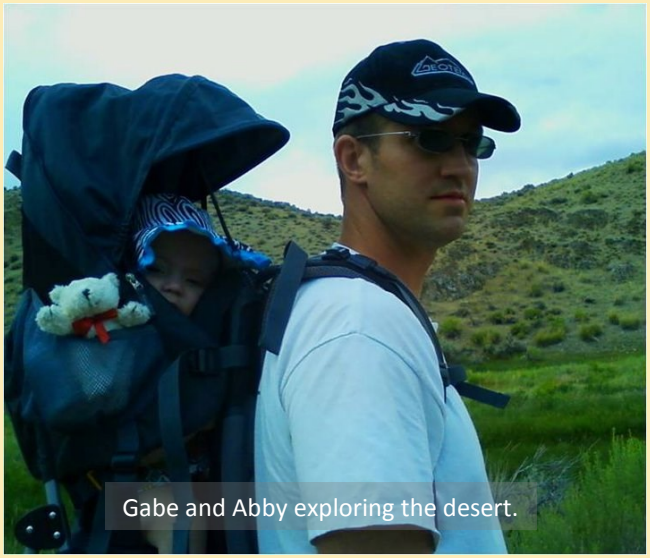
Rylleigh Harstad (M.S. 2017). Hey there everyone, and War Eagle! I just graduated with my M.S. in Geology this past summer, and I went on a bit of a frightful journey to live in Tuscaloosa, AL (eek!) shortly thereafter to be with my boyfriend and fellow Auburn Geosciences Alum, Dane VanDervoort (M.S. 2016). While geology is my first love, I have always felt the urge to pursue a career in secondary education so that I can share my passion for science with others and perhaps inspire them to love it just as much as I do. I accepted a teaching position with the Tuscaloosa City Schools District, teaching Earth and Space Science and Environmental Science to juniors and seniors at Central High School. While I may have a view of Bryant-Denny as I walk into work each day, I LOVE my job. It has been a huge challenge (most days I feel like I have more work than I did in grad school), but I feel like I'm truly making a difference and contributing to something bigger than myself. Outside of work, Dane and I have been discovering that Tuscaloosa is a great place to call home. We have met so many wonderful people here (including several fellow Auburn alumni!), and already feel so welcome and loved. My time at Auburn includes some of my most fond memories, and I truly miss being around the geosciences family every day. I am so thankful for the amazing people that Auburn has brought into my life, and I especially want to thank Dr. Mark Steltenpohl for bringing me on as one of his students- his guidance and faith in me has helped get me where I am today. There is no better family than the Auburn family, and I am so proud to be a part of it!

Andy Hug (M.S. Geography 2014). I currently live in Gadsden, AL. During my time at Auburn, I worked with Dr. Chandana Mitra studying the effects of different-sized urban areas (specifically Auburn-Opelika and Birmingham) on surface and atmospheric temperatures (urban heat island effect). I am grateful to Dr. Mitra and other Geography faculty members for keeping me on part-time until I was hired as a Land Steward for the Georgia-Alabama Land Trust in August of 2015, where I currently serve as the GIS Specialist and Regional Stewardship Manager. I enjoy visiting properties where we hold conservation easements, providing GIS technical support and training to fellow staff, and increasing my GIS skillset. I look forward to employing Python scripting to develop a model for wetland mitigation sites in the state of Georgia this year.

When I am not working, I enjoy traveling, volunteering, and mountain biking. Volunteering at Browns Park National Wildlife Reserve in northwestern Colorado in 2015 and visiting Iceland and Denmark in 2016 were excellent experiences. A particular highlight of 2017 was my trip to Driggs, Idaho, to view the solar eclipse in totality. A line from a 1966 Wilson Picket song comes to mind when recalling this occurrence: "ninety-nine and half just won't do -- got to have a hundred!" Totality is a truly surreal experience. War Eagle!

Gabe Kassos (B.S. Geology 2002, M.S. Geology 2008) & **Jennifer Kassos (nee Hansom)** (B.S. Geology 2001, M.S. 2004). Greetings from beautiful South Carolina! It's been a busy 13 years (!) since Jen and I moved away from Auburn, and I regret not having stayed in touch more. During that time, we've seen quite a few changes. After spending a few years doing environmental remediation work in Andalusia and Montgomery, we decided to try our hand in the mineral exploration and mining business. Our first foray, facilitated by fellow Auburn Geology alum Jamey Turner, was spending a year as contract core loggers at Barrick Gold's Donlin Creek project in a remote corner of Alaska. Talk about a thrilling change! I still remember tightening my seat belt as our "shuttle-bus," a single-engine Cessna, dove towards the bumpy, uphill runway at camp as I arrived on my first day. After that contract expired, we found some work with a contract-exploration company based in Edmonton, primarily looking for uranium in northern Saskatchewan and Alberta. That was also an exciting job, but I don't think I would move to Alberta in the middle of January again.

Jen and I decided to come back to the States and got hired by Newmont Gold based in Elko, Nevada. Jen worked in the ore control team at the Chukar and Pete Bajo underground operation, and I worked with the development teams for the Emigrant and Long Canyon open-pit mines. After three years at Newmont, Jen (temporarily) retired in 2011 to raise Abigail, our first child. We added two more, Alex and Eleanor, to the mix in 2013. In 2014, I left Newmont to create and lead the surface exploration program at the Fire Creek mine (the highest-grade active gold mine in the world!) owned by Klondex Gold & Silver, an up-and-coming junior mining company. We had a great team, ably assisted by summer intern and current Auburn student John Whitmore, and ultimately had good success there. As much fun as Klondex was though, after eight years in the desert, Jen and were ready for a change. I was lucky enough to get hired by OceanaGold at their newly acquired Haile Gold Mine in Kershaw, South Carolina. Gold was first discovered at Haile in 1828, and it was part of the first North American gold rush. The mine has seen several periods of operation since then and recently started official production. I've been at Haile for just over a year and am currently leading the exploration geology team. We are trying to jump start the next gold rush in the southeast. Jen, although still "retired," is staying more than busy taking care of our three young kids, starting a local Girl Scouts chapter, teaching at church, and studying computer science and database management. She plans to un-retire as soon as Alex and Ellie start full-day school. We hope to travel back down to Auburn soon to reconnect, meet some current students, and see the new Geoscience Department home, temporary though it may be. Best wishes and War Eagle!


Gabe and Abby exploring the desert.

Xia Li (M.S. Geography 2015). I joined the Department of Geosciences in August of 2013 as a graduate student with Dr. Mitra, studying climate change. I was not quite familiar with Auburn when I first came, but life at Auburn University ended up making precious memories for me. I fell in love with geography, and I continue working in the same field even now.

My graduate study and research experiences at Auburn University have exposed me to a wide variety of research topics including geographic information systems, land use/cover change, and climate change. During my graduate period, I focused on understanding how land-use conversions have affected climate systems. I processed Landsat TM images of the city of Kolkata, India, and analyzed how population growth changed land use/cover in this region and how the climate system responded to urbanization and associated land-use changes.

After two years, I graduated and accepted a job as a geospatial analyst at the University of Maryland. I am pleased to be continuing my academic research by putting my skillset and experience to use in wetland biogeochemistry.

My recent work applies remotely-sensed data and multiple geospatial GIS datasets to investigate how wetland hydroperiod and topographic parameters affect soil-carbon storage in wetlands.

There are four members in my family; myself, my husband, and our two children. My husband also graduated from Auburn University and is a big Auburn football fan. I had my first child, Edward Yang, while I was in Auburn. He loves to listen to stories and music, and sometimes he watches football with his father. My girl was born last October. Although she is a little baby, we've brought an Auburn flower clip for her. We hope she can wear it when we return to Auburn someday.

I still think about the days I was at Auburn University – the friendly people, the peaceful life, and the beautiful nature. I am proud to be an Auburn Geography grad! War Eagle!

Dane VanDervoort (M.S. Geology 2016). I am currently living in Tuscaloosa, Alabama with my girlfriend and fellow Auburn Geosciences Alum, Rylleigh Harstad (M.S. 2017). Shortly after graduation, I accepted a position as a Geologist in the Geologic Investigations Program at the Geological Survey of Alabama, where I continue to develop my interest in southern Appalachian geology by (1) conducting and assisting with detailed geological mapping investigations of the Valley and Ridge and Piedmont provinces, (2) assisting with geological research, fieldwork, data collection, and data analyses of statewide groundwater and karst investigations, (3) compiling digital databases, maps, and reports for statewide geologic resource assessments, and (4) assisting with statewide geologic resource information requests. I am eternally grateful for the opportunities afforded me by Dr. Steltenpohl and the Department of Geosciences, and am so proud to be part of the Auburn family! WDE!

Devon Verellen (B.S. Geology 2015). After finishing an undergraduate research project with Dr. Steltenpohl in Norway and my B.S. in Geology, I started a master's program at UGA. At UGA I've spent my time investigating the lithospheric structure of the southern Appalachians using global seismic phases generated by earthquakes, applying numerous standard and non-standard seismic processing techniques. The past two years have been incredible not only because I was able to join a local nonprofit, Athens Tutorial Program as their Program Specialist but also because I was able to learn valuable technical skills through my thesis work and participate in the IBA program, which helped me obtain a summer internship with Chevron. At Chevron, I worked in the exploration geophysics team of the Deepwater Business Unit on a Reservoir Properties from Seismic (RPFS) project that allowed us to quantitatively analyze seismic amplitudes and provide insight into fluid and rock properties. My passion for the industry grew with that experience, and I will happily be rejoining the same team (now named the Gulf of Mexico Business Unit) in Houston, Texas, for a full-time position starting in February 2018. I'm excited to start this career path, and I look forward to all of the opportunities that may arise! War Eagle!

Alumni Stories

Midline in Wyoming's Eclipse: Close Encounter of an Auburn Kind

By Bob Gastaldo

Elvira and I, along with some colleagues from Colorado, headed early on the morning of Monday, 21st of August, to Guersney State Park in eastern Wyoming to witness this year's total eclipse. Even at this (very) early hour, traffic was reminiscent of what used to be the pattern around Atlanta shortly after we moved to Auburn in the late 1970s. The midline of the eclipse and, hence, totality, was projected to be between Guersney and Glendo State Parks. We arrived on site a bit after 9 am and a 5-hour drive, and wound our way down to the dam site on the southern side of the park. The park staff had developed four viewing areas on the western side of the park, with each successive area opening up once the previous one had filled with viewers. But, we decided not to head to one of these and remain in the parking area of the dam where there were fewer cars. As the morning crept towards the bewitching hour, a few additional cars parked in the dam area, with six cars on the southern side of ours and 8 –10 cars to the north. Park officials had been directing cars to the viewing areas on the opposite of the lake, but at the last minute a car arrived, parked, and the occupants got out to begin the vigil. Our friend, who is a avid amateur astronomer, began a conversation with these folks, while I headed off to look at the Permian paleosols and carbonates of the Hartville Formation. When I returned, I heard that the man had seen the 1982 full eclipse as a student in Alabama, and had used two polarizing lenses taken from a petrographic microscope. Polarizing lenses only come from one place, but as the eclipse was beginning its show, we all focused our gaze to the sky and didn't think that much about it.

As daylight began to return to Wyoming and the eclipse passed, the guy came over to us to thank us for providing an enjoyable experience. He and his girlfriend had left Denver later than expected, hit traffic reminiscent of Atlanta,

and had stopped first along the side of the road to witness the event. There, they ran into some "Bubbas" and decided to continue north. Glendo State Park was their second choice spot, and Guersney their third. As the time to the eclipse continued to countdown, they decided to enter Guersney State Park and park at the dam.

The guy had a strong southern accent, and Elvira asked him where he was from. The conversation went something like this:

Elvira: So, where are you from?
X: We're from Georgia, but I grew up in Jasper, Alabama.
Elvira: We lived in Alabama for 21 years.
X: I went to Auburn University.
Elvira: Really? My husband was a professor at Auburn University. What did you study?
X: Geology.
Me: Geology. I don't recall if we were on campus in 1982 or out of the country.
Elvira: What's your name?
X: Dennis
Me: Popham

At which time his eyes widen significantly, I remove my hat and say:

Me: Gastaldo

Dennis: I still think I owe you $5 you lent me for lunch on a field trip when I was an undergrad!!

Needless to say, there was some catching up to do some 35 years later. Dennis owns his own consulting business in the Atlanta region and had decided to come to Colorado for some fishing and Wyoming for another total eclipse of the sun. His second since his time at Auburn.

Now, what's the probability of an Auburn Geology alumnus being at the midline of the solar eclipse in a sparsely populated parking lot in eastern Wyoming and running into one of his former instructors? Apparently, 100%. Here's what we look like all these years later.

An Aggie Ring and the Auburn Family

By Eric Levitt

On September 24, 2016, the Auburn Tigers played the LSU Tigers at Jordan-Hare Stadium in each teams' fourth game of the season. Auburn's ranking at the time was #24, and visiting LSU was ranked #13. The teams began the contest at 5 pm that day, and I was a lucky student in attendance for what turned out to be an exhilarating game that featured a wild finish. The game's implications were huge, given that both head coaches were rumored to be in jeopardy of losing their jobs depending on the outcome of this highly crucial conference game. Late in the fourth quarter, Auburn was hanging on to an 18-13 lead thanks to 6 field goals made by the Auburn kicker, but LSU's offense was threatening to score and secure the win for LSU. In the final seconds of the game, the LSU quarterback rolled out to pass. He found an open receiver, and successfully completed a touchdown pass, seemingly sealing a 19-18 win for LSU. Fellow graduate student Ted Wilson and I were devastated. However, the ensuing replay review led to the officials to determine that LSU had not begun the final play in time, and the game clock ran out of time. Because of this, Auburn was declared the winner! Our elation was at an all-time high! In the ensuing celebration, we met with fellow graduate student Sara Speetjens and her husband Korey to go to the famous Auburn oak trees and roll the trees, as tradition mandates. When I got the opportunity to throw a roll into the trees, the force of my throw caused my Texas A&M Aggie Ring to be dislodged from my finger, and it flew out into the crowd and into the darkness.

At Texas A&M, the Aggie Ring stands for the most important traditions of the University. Every Aggie student who makes the effort to earn the ring wears it with a sense of pride and accomplishment, and it serves as a way for students to always maintain a vital connection to the University, and the students who attended it, well after they graduate and leave campus. So I was very disheartened to be suddenly separated from this important piece of my educational and life story. I spent the next few hours searching for the ring and went back the next day, but that night a person maliciously lit fire to the same Auburn oak tree where I had lost my ring. The scene that next morning when I returned to search for the ring was disorienting, as burnt paper and burnt bark littered the area around the tree, making my attempts at searching nearly impossible. After some time had gone by, I had reached a point of acceptance that the ring would not be found.

It was to my great surprise when, five months later, in February of 2017, I received an email from the Auburn landscaping division saying that they had recovered a class ring while excavating the area by the burned tree and found my name engraved on it. This was a moment where I truly felt grateful that I had chosen to attend Auburn University. My time as a graduate student at Auburn was tremendous in many ways that I cannot even begin to articulate, and to find myself in a situation where I was the beneficiary of the wonderful kindness of the Auburn Family was something that overwhelmed me. I feel extraordinarily fortunate to have the opportunity to be a part of both the Aggie and Auburn Families, and this is just one of the more incredible stories that I imagine many other people have that showcase the great strength of the Auburn Family.

Department of Geosciences Advisory Board

GAB members and some spouses enjoying a field excursion at Linville Falls, NC, during last Spring's business meeting in Asheville. Standing, left to right: Jonathan Collier, Daphne Williams, Marynm Martin, Herb Martin, Brook Moates (COSAM Development), Jill Johnson, Alex Wood, Paige Walton, Diane Savrda, Mark Steltenpohl, and Laura Steltenpohl. Kneeling, left to right: Chuck Savrda, Tim Demko, and Larry Prince.

The Geosciences Advisory Board (GAB) continued to play an important role in the growth of the Department as shown by the articles in this issue of the eGeotiger, starting with the Chairs report (p. 1-2). The contributions of Charter Member Joe Howle are gratefully acknowledged in the feature on p. 3. Through Joe's efforts and those of Vulcan Materials Company, current and past students have benefited materially, and Joe continued to shape the GAB in 2017. Along with other alumni, GAB members contributed to the GoFundMe account that made Sheila Arington's dream of an Alaskan cruise with old friends come true (p. 4). As described in the Chair's report, the board established the GAB Diversity and Multicultural Award in October 2017, providing funds for the recruitment and/or support of the scholarly activity of diversity students. This year's awardee, Ms. Tasha Williams, was one of the students who went to Scotland with John Hawkins as a participant in John's Study Abroad course (p. 7). In 2017, the GAB continued to give encouragement and financial support to undergraduate and graduate students of the Department (p. 10). Contributions of GAB members and other alumni and friends of the Department continued in 2017 (p. 32); in fact, the GAB Fund for Excellence Endowment is now pledged at well over $200K!

Many of the ambitious goals set out in the GAB news section in the last issue of the eGeotiger have been addressed this past year. In 2017 the board took important steps to ensure that current graduate students and undergraduate majors are on the right path to be successful professionally. In early October, a group of board members visited campus to offer a highly successful symposium called "Jobs and Careers in the Geosciences" (photo above). The Co-op and Intern Committee is planning additional opportunities for our students at their upcoming April meeting, including mock interviews. The goal is to leverage GAB members' experience, expertise, and financial support to better the lives and futures of our students.

Geosciences Donor Honor Roll 2017

Thank you! The Department of Geosciences gratefully thanks our generous donors who have supported its students, faculty, research, and programs in fiscal year 2017.

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GAB FUND FOR EXCELLENCE ENDOWMENT

Graduates of Auburn University value the "Auburn Experience" - the place where we forged friendships, started traditions and laid the foundations for success. From this foundation grows the Geosciences Advisory Board ***Fund for Excellence***. The earnings from this permanent endowment will aid the Department of Geosciences in enhancing educational and research capabilities, recruiting exceptional undergraduate and graduate students, growing and enhancing the department's size and reputation, and maximizing employment opportunities for graduates.

Since its inception in 2015, many alumni have already made significant contributions to the *GAB Fund for Excellence*. The Geosciences Advisory Board encourages you to consider making one, as well. ***Our goal is to reach $250,000, and currently we have $226,924 pledged and $170,824 "cash in the bank" and interest from the latter is already generating funds for our programs!*** Making a gift is easy. You can donate online via credit card at www.auburn.edu/cosam/gab,

Invest in the Geosciences at Auburn!

State funds and tuition pay only a small part of the costs to recruit and retain the best faculty and graduate students and support the undergraduate programs that are the hallmarks of the Auburn experience. Private funds sustain and enhance these extraordinary opportunities for students and faculty. The Department of Geosciences continues to provide the best possible education for our undergraduate and graduate students. Each year, private support provides the funding that helps support Auburn's margin of excellence. With our new Ph.D. program in Earth System Science coming online in August, 2018, private giving is now more critical than ever. Please make your gift today via our secure website:
http://www.auburn.edu/academic/cosam/departments/geosciences/Giving to the Department/index.htm

We continue to welcome your gifts to any fund in the Department of Geosciences, and we hope you will consider any of the following funding priorities:

Geosciences Department: This unrestricted account provides the Chair with the most flexibility to apply support to the Department's most immediate needs, such as student and faculty travel, research, and equipment.

Geosciences Advisory Board: Our Advisory Board includes alumni, corporate, governmental, and community members who help support students, faculty, and staff in our department. The Board serves as a liaison with the geoscience business community and government entities to promote the interests of our department within Auburn University, the state, and beyond. The Board helps in our recruiting and retaining the most talented, motivated, and competent students and faculty by providing scholarships, grants-in-aids for research, CO-OPs, and internships, as well as support for our departmental seminar series and the GeoClub. In addition, the Board recently set a goal to raise a $250,000 "Fund for Excellence" endowment to further support our research and instructional enterprise; see previous page.

Geology Alumni Endowed Scholarship: Provides scholarships for deserving undergraduate students in geology.

Cook Professorship: The Robert B. Cook Endowed Professorship recognizes excellent geology and geography faculty by providing competitive salaries and resources for research, travel, and professional development. Financial support from the Cook Professorship allows us to continue to attract and retain top-quality instructors and researchers. Recipients are exceptional individuals who have earned their recognition through continued outstanding leadership in research, instruction, and outreach.

For questions about creating scholarships and professorships, stock or estate gifts, specific programs, and suggestions on how you can support the Department of Geosciences, please contact COSAM development at the address below:

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